new worlds

Speculative Fiction/October/3s 6d

21st Anniversary Issue with fiction by Aldiss, Disch, Zelazny, Platt, Butterworth; features on Richard Hamilton, Scientific Languages, the E.E.G. 'myth', Spengler's Predictions, Mervyn Peake... and more





HOMAGE TO CLAIRE CHURCHILL. Abraham Zapruder and Ralph Nader. At what point does the plane of intersection of these eyes generate a valid image of the simulated auto-disaster, the alternate deaths of Dealey Plaza and the Mekong Delta. The first of a series advertising (1) Claire Churchill; (2) The angle between two walls; (3) A neural interval; (4) The left axillary fossa of Princess Margaret; (5) The transliterated pudenda of Ralph Nader.

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new worlds

Volume 51 Number 176

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Cover: From 'This is Tomorrow', Richard Hamilton exhibition detail (Whitechapel Art Gallery 1956).

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THE Languages OF Science

Dr. David Harvey

"A THEORY," SAID the English philosopher Ramsey, "is a language for discussing the facts the theory is said to explain." This view of a theory has important implications. Explanation depends upon theory. If theory is a language then it follows that the explanations we offer for events occurring in the real world around us must depend upon the nature and character of the languages which we can develop to represent them. If scientific understanding is to progress, we must necessarily invent vaster, more comprehensive and more logically coherent languages to facilitate that progress. In inventing such new languages the scientist is not reversing the intellectual process which led fundamental sensations and percepts to be represented by speech and written word. He is, rather, pressing that intellectual process to its ultimate conclusion. The sign and the symbol no longer represent anything specific — they are abstract relata and thereby freed from subjective and emotive interpretation. As Cassirer wrote in *The Philosophy of Symbolic Form*, "the word of language differs from the sensuous intuitive image precisely in that it is no longer weighted down, so to speak, with a sensuous matter of its own". Scientific concepts are even more abstract, "freeing the sign from all its restrictive sensuous conditions . . . the sign tears itself free from the sphere of things, in order to become a purely relational and ordinal sign".

THE PROCESS OF abstraction is continuously evident in linguistic systems. Even so there is some ground for differentiating between natural languages (such as English, French, Japanese, etc.) and the so-called "artificial" languages of symbolic logic, set theory, and the various branches of mathematics. Laymen frequently suppose, erroneously, that the latter group of languages exhibit the power of total objectivity. Such languages, it is true, exhibit a consistency and logical coherence uncharacteristic of the natural languages which are plagued by ambiguity. But artificial languages vary a great deal in their capacity to convey certain kinds of information. Indeed there are many languages which can only be applied for very specific purposes.

It is generally held, of course, that the various natural languages vary in their capacity to convey information. Spanish is sometimes regarded as the language of violent passion, French the language of rhetoric and English the language of empiricism. At times analysts have suggested that the characteristics of the language affect the way of life and limit the field of experience: are the English incapable of grand passion simply because theirs is the language of empiricism? It is perhaps no accident that English philosophy is predominantly analytical and French philosophy predominantly existential. But the ambiguity of natural languages allows a far greater degree of flexibility in the use of the language. The languages of science, on the other hand, by reducing this ambiguity reduce the flexibility of application of the language.

AS SCIENCE HAS progressed and the number of artificial languages multiplied, so scientists, philosophers and logicians have become more and more concerned with establishing the properties of the languages they are using. Whitehead and Russell, in their famous *Principia Mathematica*, succeeded in demonstrating the relationship between different types of symbolic system and, in particular, demonstrated the relationship between various branches of mathematics and symbolic logic in general.

Each artificial language expresses something special. At one time it was thought that one and only one artificial language could be regarded as the "true" language of research, and indeed one of the aims of science was to show and demonstrate which language was the most correct. Thus Euclidean geometry was regarded in the early nineteenth century as the only artificial language for discussing spatial form, and it was assumed that the intuitive sense of space could be reduced to this single symbolic system. But there were a number of logical difficulties to such an assertion.

In an attempt to resolve these difficulties Lobachevski (probably more famous to laymen by way of Tom Lehrer than from his extraordinary mathematical accomplishment) and Bolyai simultaneously discovered a new kind of geometry which is just as good as Euclid's. Later Riemann discovered a third, and it now emerges that there are an infinity of geometric systems which can be invented if needs be. Each system in itself may be considered as a language and each language, it turns out, is appropriate for different kinds of analysis. Euclid is the appropriate language for discussing Newton's views of space, Riemann's geometry is the appropriate language for discussing Einstein's view. Suddenly, in the mid-nineteenth century, geometry came to be regarded as a family of

Artists and writers frequently create new languages or modify the old in order to convey rather different sensations and perceptions. James Joyce in Finnegan's Wake, *and Anthony Burgess in* The Clockwork Orange, *created new linguistic styles for such specific purposes.*

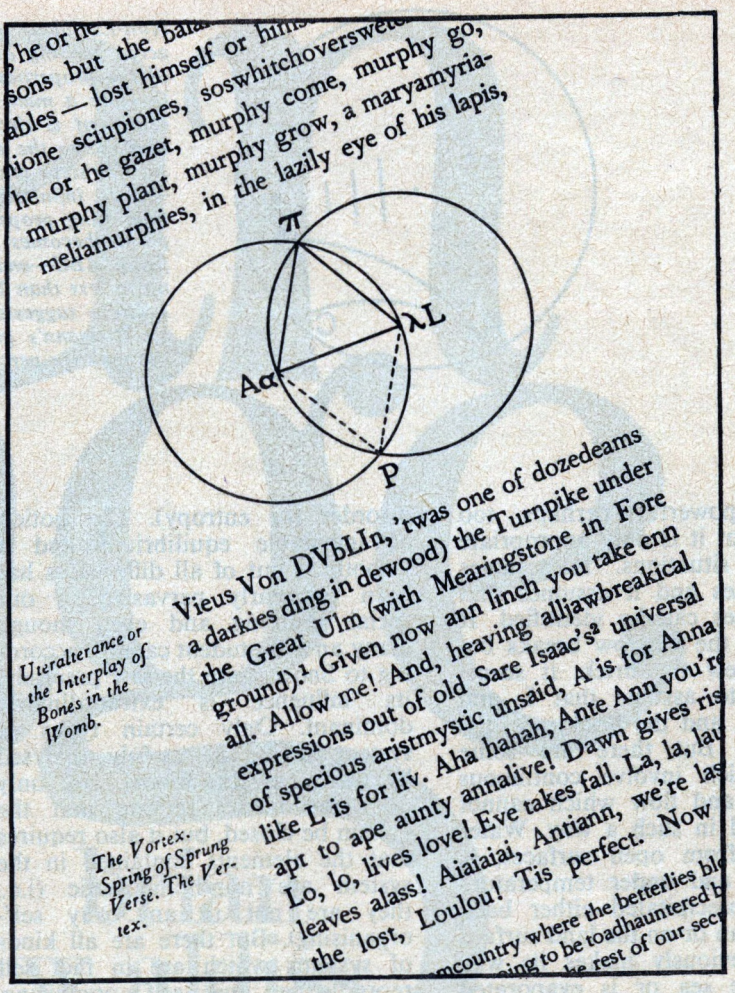
languages for discussing spatial form.

THE HISTORY OF geometry demonstrates an interesting phenomenon. It suggests that within the scientific community a particular language may emerge as the dominant form of communication, and it also suggests that science itself, by inventing a particularly powerful language, may inhibit its own development simply by placing too much store by that language. Too many languages, on the other hand, lead only to a breakdown in communication. A language, after all, is designed to communicate. If every scientist possessed his own "language" then the purpose of symbolic abstraction would be defeated. This is the tension that leads science to periods of conservatism followed by explosive new developments as new languages are learnt and explored. The particular set of artificial languages which are "in power" at any particular time serve to mould our view of the world and limit our potential for understanding. They do so simply because they determine the nature and form of our theories about reality.

This brings us to the function of such languages, for it is here that we must ultimately judge the utility of any particular language. How does a new language add to our understanding of the nature of the sense perception data which we obtain from the real world? A language functions as a model of real world structure. Suppose, for example, we have a generalised abstract relationship of the following form:

If $A \rightarrow B$; $B \rightarrow C$; then $A \rightarrow C$.

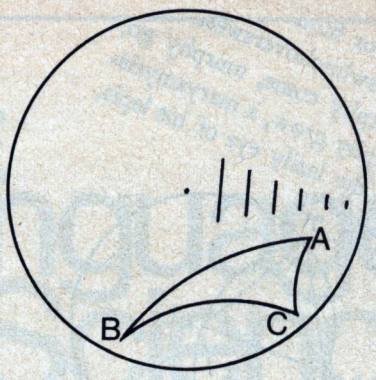
This is a simple linguistic rule which states how new propositions may be formulated from an existing set. The rule states that relations between elements possess the property of transitivity. We can now map into this system a particular set of real world events. We may take a sequence of the following type:



failure of the monsoon causes failure in the rice harvest; failure in the rice harvest causes famine; therefore failure in the monsoon causes famine. The linguistic rule seems perfectly appropriate. Now consider a sequence of the following type: John likes brandy more than whisky; John likes whisky more than marijuana; therefore John likes brandy more than marijuana. Again, the conclusion seems logical enough. But when we examine the way in which people in fact order their preferences, we find that the inference is not valid. It proves to be valid only when the choice has to be made at the same instant in time and if the preference can be measured on a stable, one-dimensional preference scale. But people's preferences are multi-dimensional. The language which contains this rule is not, therefore, appropriate to the particular data set we are examining. Further, the behavioural scientist is sometimes guilty of cowing the subject of investigation into a conformity of behaviour which does not in fact exist. Imagine an argument between John who stoutly maintains his preference of marijuana over brandy in spite of the market researcher's claim that this is illogical in view of John's other preferences!

In applying a particular linguistic rule, therefore, we need to be certain that the rule represents something which is true of the data. At this point we find that the linguistic systems of science can frequently constrain our vision to the extent that we spend inordinate amounts of time trying to stuff a particular behaviour pattern into a mould entirely unsuited to it.

MOST OF THE revolutionary movements in science are simply a result of the new wine bursting open the old bottles. The language of cause-and-effect dominated the thought of J. S. Mill and the nineteenth-century positivists. The lan-



Non-Euclidean geometries are difficult to represent but the accompanying diagram gives a simple interpretation of some of the properties of Lobachevskian geometry.
Imagine a man the height of the bar starting out from the centre of a circle and becoming smaller and smaller as he approaches the edges of that circle. He will take smaller and smaller steps and he will never reach the edge of the universe —it is infinite but bounded. A universe such as this has interesting properties. Thus the shortest distance between two points becomes a curved line and a triangle looks like the figure ABC—and the angles of a Lobachevskian triangle add up to less than 180 degrees.
Einstein suggested that the universe is in fact best described by Riemann's geometry—but there is growing evidence that the way we perceive that universe is Lobachevskian.

guage is powerful—perhaps too powerful. But it is only appropriate to certain situations. It assumes discrete states and it assumes that discrete states can be identified. If I state that the window breaks because I threw the brick, it seems reasonable to assume that I, and the window, and the brick, are discrete units. But there are some systems which involve continuous movements and flow which cannot be described in such a way. Water evaporates from open surfaces, is transported and under temperature change is precipitated either back into the ocean or on the land surface where it deviously makes its way back to the sea or is evaporated again. The flow is continuous and smooth, there are no discrete states. Chicken and egg arguments simply cannot be examined in terms of the language of cause-and-effect. Yet the nineteenth-century positivists insisted that such systems could, and must, be examined in terms of such a language. No wonder that many (although note not all) of the inferences made with the help of such a language were misleading and often downright mischievous.

IT IS A curious fact that the language of science, of which we, as laymen, are frequently not explicitly aware, penetrates and permeates our thinking. But as with most transferences of this kind there is a time lag of significant proportions. It is curious to note, for example, the pervasive influence of the second law of thermodynamics upon our thinking. This law simply states that energy tends to dissipate itself and that a particular system tends to assume a state of increasing disorder (or entropy). The notion of inevitable equilibrium and a smoothing out of all differences has been peculiarly pervasive in our social thinking and even though many an arts student cannot, according to Snow, state the law precisely, its influence is extraordinarily dominant. Only certain types of system can be successfuly analysed by means of this model. Not only does the model require that the system be closed, but it also requires that the elements contained in the system are non-homeostatic (i.e., they are not in any way self-organising). But there are all kinds of systems which are in fact self reproducing and self organising. Scientific knowledge itself appears to be one of them. Economic activity is another. Yet for many years it was assumed that the natural laws of economics would lead to an evening-up in economic development throughout the world. Perhaps one of the most significant of all practical discoveries of the economist in the past twenty years has been the elementary fact that the rich regions grow rich while the poor regions grow relatively poorer, and that this is probably more the natural law of economic growth than an inevitable evening-up process. Only now, via regional planning and aid to under-developed countries, is some recognition of this basic fact implicit in political decision making.

The significance of this self-organising process in human affairs has been most cogently analysed by George Kingsley Zipf in his book on *Human Behaviour and the Principle of Least Effort*. Zipf noted the tendency among humans to seek out a least effort solution to any problem confronting him. Cultural form, sexual behaviour, economic behaviour, could all be analysed by referring to this basic proposition. And the end result of such a proposition, curiously enough, is a society which is so completely organised that it only succeeds in stifling itself. Zipf predicted, for example, that migration would tend to make big cities bigger and the smaller cities relatively smaller. The nineteenth century saw in most of western Europe the depopulation of the countryside. The twentieth century has seen the beginnings of small town depopulation to feed the growth of the large metropolitan areas. Population distribution is not developing according to the second law of thermodynamics. Far from it. We are witnessing a self-organising system at work which may well stifle activity by over-organisation.

OUR IMAGE OF the world is probably more conditioned by the language of science than we care to think. These languages are specially created tools suitable for particular kinds of function and analysis. Perhaps the greatest problem of communication which our society currently faces is to create an awareness of the power, function and dangers of such artificial languages. They give us what control we do possess over the happenings in the real world around us. But they can mislead on occasion. Science cannot advance without such languages. But without a full and complete understanding of the properties of these languages there can be no guarantee against false inference and false prediction.

an age

brian w. aldiss

part one

THEY LAY HEAPED *about meaninglessly, and yet with a terrible meaning that hinted of the force which had flung them here. They seemed to be something between the inorganic and the organic. They proliferated on the margins of time, embodying all the amazing forms the world was to carry; the earth was having a nightmare of stone about the progeny that would swarm over it.*

These copromorphic forms suggested elephants, seals, diploduci, strange squamata and sauropods, beetles, bats, octopoidal fragments, penguins, woodlice, hippos, living or dying.

Ungainly reminders of the human physique also appeared: torsos, thighs, groins lightly hollowed, backbones, breasts, suggestions of hands and fingers, massive shoulders, phallic shapes: all distinct and yet all merged with the stranger anatomies about them in this forlorn agony of nature—and all moulded mindlessly out of the grey putty, without thought turned out, without thought to be obliterated.

They stretched as far as the eye could see, piled on top of each other, as if they filled the entire Cryptozoic . . . or as if they were the sinister fore-shadowing of what was to come as well as the after-images of what was long past. . . .'

Chapter One
A Bed In the Old Red Sandstone

THE SEA LEVEL had been slowly sinking for the last few thousand years. It lay so motionless that one could hardly tell whether its small waves broke from it against the shore or were in some way formed at the shoreline and cast back into the deep. The river disgorging into the sea had built up bars of red mud and

shingle, thus often barring its own way with gravel banks or casting off wide pools which stagnated in the sunshine. A man appeared to be sitting by one of these pools. Although he seemed to be surrounded by green growth, behind him the beach was as bare as a dried bone.

The man was tall and loose-limbed. He was fair-haired, pale-skinned, and his expression in repose held something morose and watchful in it. He wore a one-piece garment and carried a knapsack strapped to his back, in which were his pressurised water ration, food substitutes, some artist's materials and two notebooks. About his neck he wore a device popularly known as an air-leaker, which consisted of a loose-fitting hoop that had a small motor attachment at the back and in front, under the chin, a small nozzle that breathed fresh air into the man's face.

The man's name was Edward Bush. He was a solitary man of some forty-five elapsed years old. As far as he could be said to be thinking at all, he was brooding about his mother.

At this phase of his life, he found himself becalmed, without direction. His temporary job for the Institute did nothing to alleviate this inward feeling that he had come to an uncharted crossroads. It was as though all his psychic mechanisms had petered out, or stood idling, undecided whether to venture this way or that under the force of some vast prodromic unease.

Resting his chin on his knee, Bush stared out over the dull expanse of sea. Somewhere, he could hear motor bikes revving.

He did not want anyone to see what he was doing. He jumped up and hurried across to his easel. He had walked away from it in disgust; it was farther away than he remembered. The painting was no damned good, of course; he was finished as an artist. Maybe that was why he could not face going back to the present.

Howells would be waiting for his report at the Institute. Bush had drawn Howells into the picture. He had tried to express emptiness, staring out at the sea, working with flooded paper and aquarelles—in mind-travel, such primitive equipment was all one could manage to carry.

The heavy colour came flooding off the ends of the pencils. Bush had gone berserk. Over the sullen sea, a red-faced sun with Howells' features had risen.

He began to laugh. A stunted tree to one side of the canvas: he applied the pencil to it.

"Mother-figure!" he said. "It's you, Mother! Just to show I haven't forgotten you."

His mother's features stared out of the foliage. He gave her a diamond crown; his father often called her Queen—half in love, half in irony. So his father was in the picture too, suffusing it.

Bush stood looking down at the canvas.

"It's masterly, you know!" he said to the shadowy woman who stood behind him, some distance away, not regarding him. He seized up an aquarelle and scrawled a title to it: FAMILY GROUP. After all, he was in it too. It was all him.

Then he pulled the paper block from the clamp, tore off the daub, and screwed it up.

He folded the easel small and stuck it into his pack.

The sun shone behind Bush, over low hills, preparing to set. The hills were bare except along the river bed, where runty little leafless psilophyton grew in the shade of primitive lycopods. Bush cast no shadow.

THE DISTANT SOUND of motor bikes, the only sound in the great Devonian silence, made him nervous. At the fringe of his vision, a movement on the ground made him jump. Four lobe fins jostled in a shallow pool, thrashing into the shallows. They struggled over the red mud, their curiously armoured heads lifted off the ground as they peered ahead with comic eagerness. Bush made as if to photograph them with his wrist camera, and then thought better of it; he had photographed lobe fins before.

The legged fish snapped at insects crawling on the mud banks or nosed eagerly in rotting vegetation. In the days of his genius, he had used an abstraction of their veridian armoured heads for one of his most successful works.

The noise of the bikes ceased. He scrutinised the landscape, climbing on to a bank of shingle to get a better view; there might or might not be a cluster of people far down the beach. The ocean was almost still. The phantom dark-haired woman was still. In one sense, she was company; in another, she was just one of the irritating ghosts of his over-burdened brain.

"It's like a bloody textbook!" he called to her mockingly. "This beach . . . Evolution . . . Lack of oxygen in the dying sea . . . Fish getting out. Their adventure into space . . . And of course my father would read religion into it all." Cheered by the sound of his own voice, he began to recite (his father was a great quoter of poetry): "Spring . . . Too long . . . Gongula . . ." Too bloody long.

Ah well, you had to have your fun, or you'd go mad here. He breathed in air through the air-leaker, looking askance at his custodian. The dark-haired woman was still there, dim and insubstantial as always. She was doing some sort of guard duty, he decided. He held out a hand to her, but could no more touch her than he could the lobe fins or the red sand.

Lust, that was his trouble. He needed this isolation while his inward clocks stood still, but was also bored by it. Lust would get him stirring again; yet the Dark Woman was as unattainable as the improper women of his imagination.

It was no pleasure to him to see the bare hills through her body. He lay down on the gravel, his body resting more or less on the configurations of its slope. Rather than wrestle with the problem of her identity, he turned back to the moody sea, staring at it as if he hoped to see some insatiable monster break from

the surface and shatter the quiescence with which he was inundated.

All beaches were connected. Time was nothing to beaches. This one led straight to the beach he had known one miserable childhood holiday, when his parents quarrelled with suppressed violence, and he had trembled behind a hut with grit in his shoes, eavesdropping on their hatred. If only he could forget his childhood, he could begin creative life anew! Perhaps an arrangement of hut-like objects . . . Enshrined by time . . .

Characteristic of him that he should lie here meditating his next groupage, rather than actually tackling it; but his art (ha!) had brought him easy rewards too early—more because he was one of the first artists to mind-travel, he suspected, than because the public were particularly struck by his solitary genius.

In any case, he was finished with the purely scenic groupages that had brought him such success five years ago. Instead of dragging that load of externals inward, he would push the internals outward, related to macrocosmic time.

Bush could hear the motorcycles again, thudding along the deserted beach. He pushed them away, indulging further his train of thought, his head full of angles and leverages that would not resolve into anything that could move him to expression. He had plunged into mind-travel at the Institute's encouragement, deliberately to disrupt his circadian rhythms, so that he could grapple with the new and fundamental problems of time perception with which his age was confronted—and had found nothing that would resolve into expression. Hence his dereliction on this shore.

Old Claude Monet had pursued the right sort of path, considering his period, sitting there patiently at Giverny, transforming water lilies and pools into formations of colour that conspired towards an elusive statement on time. Monet had never been saddled with the Devonian, or the Palaeozoic Era.

The human consciousness had now widened so alarmingly, was so busy transforming everything on Earth into its own peculiar tones, that no art could exist that did not take proper cognisance of the fact. Something entirely new had to be forged.

He had the seeds of that new art in his life, which, as he had long ago recognised, followed the scheme of a vortex, his emotions pouring down into a warped centre of being, always on the move, pressing forward like a storm, but always coming back to the same point. The painter who moved him most was old Joseph Mallord William Turner; his life, set in another period when technology was altering ideas of time, had also moved in vortices, as his later canvases had been dominated by that pattern.

The vortex: symbol of the way every phenomenon in the universe swirled round into the human eye, like water out of a basin.

So he had thought a thousand times. The thought also whirled round and round, getting nowhere.

GRUNTING TO himself, Bush sat up to look for the motor bikes.

Although they were about half a mile away, stationary on the dull beach, he could see them clearly; objects in his own dimension showed much darker than they would have done if they existed in the world outside, the entropy barrier cutting down about ten per cent of the light. The ten riders showed up rather like cut-outs against the exotic Devonian backdrop, all forces conspiring to admit that they did not and never would belong here.

The bikes were the light models their riders could carry back in mind-travel with them. They spun round in intricate movements, throwing up no sand where one might expect parabolas of it, splashing no wave when they appeared to drive through the waves. That which they had never affected, they had no power to affect now. As miraculously, they managed to avoid each other, finally coming to rest in a neat straight line, some facing one way, some the other, their horizontal discs hovering just above the sand.

Bush watched as the riders climbed off and set about inflating a tent. All of them wore the green buckskin which was virtually the uniform of their kind. One, he saw, had long streaming yellow hair—a woman perhaps. Although he could not tell from this distance, his interest was aroused.

After a while, the riders spotted him sitting on the red gravel and four of them began to walk towards him. Bush felt self-conscious, but remained where he was, at first pretending he had not seen them.

They were tall. All wore high peel-down buckskin boots. They carried their air-leakers carelessly slung round their necks. One had a reptile skull painted on his helmet. As usual with such groups, they were all between thirty and forty—hence their other nickname, "Tershers"—since that was the youngest age group that could afford to hit mind-travel. One of them was a girl.

Although Bush was nervous to see them marching up, he felt an immediate attack of lust at the sight of the girl. She was the one with the long yellow hair. It looked untended and greasy, and her face was utterly without make-up. Her features were sharp but at the same time indeterminate, her gaze somewhat unfocused. Her figure was slight. It must be her damned boots, he jeered at himself, for she was not immediately attractive but the feeling persisted.

"What are you doing here, chum?" one of the men asked, staring down at Bush.

Bush thought it was time he stood up, remaining where he was only because to stand up might look threatening.

"Resting, till you lot roared up." He looked over the man who had spoken. A blunt-nosed fellow with two creases under each cheek that nobody would dare or want to call dimples; nothing to recommend him: scrawny, scruffy, highly strung.

"You tired or something?"



Bush laughed; the pretence of concern in the tersher's voice was pitched exactly right. Tension left him and he replied, "You could say that—cosmically tired, at a standstill. See these armoured fish here?" He put his foot through where the lobe fins appeared to be, gobbling in the seawrack. "I've been lying here all day watching them evolve."

The tershers laughed. One of them said, cheekily, "We thought you was lying there trying to evolve yourself. Look as if you could do with it!"

Evidently he had appointed himself group humourist and was not much appreciated. The others ignored him and the leader said, "You're mad! You'll get swept away by the tide, you will!"

"It's been going out for the last million years. Don't you read the newspapers?" As they laughed at that, he climbed to his feet and dusted himself down—purely instinctively, for he had never touched the sand.

They were in contact now. Looking at the leader, Bush said, "Got anything to eat you'd care to swap for food tablets?"

The girl spoke for the first time. "A pity we can't grab some of your evolving fish and cook them. I still can't get used to that sort of thing—the isolation."

She had sound teeth, though they probably needed as good a scrub as the rest of her.

"Been here long?" he said.

"Only left 2090 last week."

He nodded. "I've been here two years. At least, I haven't been back to—the present for two years, two and a half years. Funny to think that by our time these walking fish will be asleep in the Old Red Sandstone!"

"We're making our way up to the Jurassic," the leader said, elbowing the girl out of the way. "Been there?"

"Sure. I hear it's getting more like a fairground every year."

"We'll find ourselves a place if we have to clear one."

"There's forty-six million years of it," Bush said, shrugging.

He walked with them back to the rest of the group, who stood motionless among the inflated tents.

"I'd like to involve into one of them big Jurassic animals, with big teeth," the humourist said. "Tyrannosaurs or whatever they call 'em. I'd be as tough as you then, Lenny!"

Lenny was the leader with the excoriated dimples. The funny one was called Pete. The girl's name was Ann; she belonged to Lenny. None of the group used names much, except Pete. Bush said his name was Bush and left it like that. There were six men, each with a bike, and four girls who had evidently blasted into the Devonian on the back of the men's bikes. None of the girls was attractive, except Ann. They all settled by the bikes, lounging or standing; Bush was the only one who sat. He looked cautiously round for the Dark Woman; she had disappeared; just as well—remote though she was, she might sense more clearly than anyone else here the reason why Bush had tagged along with the gang.

The only other person in the group whom Bush marked out as interesting was an older man, obviously not a tersher at all, although he wore the buckskin. His hair was a dead black, probably dyed, and under his long nose his mouth had settled into a wry expression that seemed worth a moment's curiosity. He said nothing, though his searching glance at Bush spoke of an alert mind.

"Two years you been minding, you say?" Lenny said. "You a millionaire or something?"

"Painter. Artist. Grouper. And I operate back here for Wenlock Institute. How do you all afford to get here?"

Lenny scorned to answer the question. He said, challengingly, "You're lying, mate! You never work for the Institute! Look—I ain't a fool!—I know they only send recorders out into the past for eighteen months at a time at the most. Two and a half years: what are you on about? You can't kid me!"

"I wouldn't bother to kid you! I *do* work for the Institute. It's true I came back for an eighteen month term, but I've—I've overstayed for an extra year, that's all."

Lenny glared at him in contempt. "They'll have your guts for garters!"

"They won't. If you must know, I'm one of their star minders. I can get nearer the present than anyone else on their books."

"You aren't very near now, lounging about in the Devonian! Not that I believe your story anyway."

"Believe or not as you please," Bush said. He loathed cross-questioning and shook with anger as Lenny turned away.

UNMOVED BY the argument, one of the other tershers said, "We had to work, get cash, take the CSD shot, come back here. Lot of money. Lot of work! Still don't believe we're really here."

"We aren't. The universe is, but we aren't. Or rather, the universe may be and we aren't. They still aren't sure which way it is. There's a lot about mind-travel that still has to be understood." He was heavy and patronising to cover his disturbance.

"Would you paint us?" Ann asked him. It was the only reaction he got to his announcement that he was a painter.

He looked her in the eye. He thought he understood the glance that passed involuntarily between them. One gratifying thing about growing older was that you misinterpreted such looks more rarely.

"If you interested me I would."

"Only we don't want to be painted, see," Lenny said.

"I wasn't volunteering to do it. What sort of work did you do to earn the cash to get here?"

Bush was not interested in their answer. He was looking at Ann, who had dropped her gaze. He thought that he could feel her—nothing could be touched in

the limbo of mind-travel, but she was from his time, so she would respond to touch.

One of the anonymous tershers answered him. "Except for Ann here, and Josie, we all ganged on the new Bristol mind-station. We was some of the first to mind through when it was finished. Know it?"

"I designed the groupage in the foyer—the nodal re-entry symbol with the powered interlocking vanes. 'Progression', it's called."

"That bloody thing!" As he spoke, Lenny pulled the cigarlet from his mouth and sent it spinning towards the slow motion sea. The end lay just above the waves, glowing, until lack of oxygen extinguished it.

"Me, I liked it," Pete said. "Looked like a couple of record-breaking watches had run into each other on a dark night!" He laughed vacuously.

"You shouldn't laugh at yourself. You just gave us a pretty good description of all this." Bush swung his hand about to take in the visible and invisible universe.

"Piss off!" Lenny said, heaving himself off his bike and moving over to Bush. "You are so smart and boring, Jack! You can just piss off!"

Bush got up. But for the girl, he would have pissed off. He had no inclination to be beaten up by this mob. "If you don't care for my conversation, why don't *you* supply some?"

"You talk rubbish, that's why. That business about the Old Red Sandstone. . . ."

"It's true! You may not like it, or care about it, but it's not rubbish." He pointed at the older man with dark dyed hair, standing slightly apart from the group. "Ask him! Ask your girl friend. Up to 2090, all that you see here is compressed into a few feet of rumpled red rock—shingle, fish, plants, sunlight, moonlight, the very breeze, all solidified down into something the geologists hack out of the earth with pickaxes. If you don't know about that or you aren't moved by the poetry of it, why bother to blue ten years' savings to come back here?"

"I'm not saying nothing about that, chum. I'm saying you bore me."

"It's entirely mutual." He had gone as far as he was prepared to go, and it seemed that Lenny had, too, for he backed away indifferently when Ann came in and shouted them both down.

"He *talks* like an artist, doesn't he?" the plump little Josie said, mainly addressing the older man. "I think there's something in what he says. We aren't getting the best out of it here, really, I mean. It is a bit marvellous here, isn't it, long before there were any men or women on the globe?"

"The capacity for wonder is available to everyone. But most people are afraid of it." The older man had spoken.

Lenny gave a bark of contempt. "Don't you start in, Stein!"

"I mean, there's the sea where it all started, and here we are. We can't touch it, of course." Josie was wrestling with concepts too awful and vague for her mental equipment, judging by the tranced look on her face. "Funny, I look at this sea and I can't help thinking we're at the *end* of the world, not the beginning."

This chimed strangely with something Bush had been meditating on earlier in the day; the girl had a beautiful idea, and for an instant he debated switching his attentions to her. The others looked glum, it was their way of registering profundity. Lenny slung himself on to his bike and kicked the starter, and the two air columns began to blow at once. It still looked like a defiance of a physical law that the sand lay under them undisturbed; and so it was. All round them was the invisible but unyielding wall of mind-travel. The four other tersher boys climbed on to their bikes, two of the girls jumping up behind. They snarled away down the darkening sand. Dark was coming, the low bristles of vegetation stirred with an on-shore breeze; but in the mind dimension, all was still. Bush was left standing with the older man, Josie and Ann.

"So much for supper," he commented. "If I'm not wanted, I'll be off. I have a camp just up in the first series of hills." He gestured towards the sunset, looking all the while at Ann.

"You mustn't mind Lenny," Ann said. "He's moody." She looked at him. She really had next to no figure, he told himself, and she was dirty and scruffy; it did not stop him trembling. The isolation of mind-travel could bring on complete disassociation of character; once in it, one could feel nothing, smell nothing, hear nothing, except one's fellow travellers. This girl—she was like the prospect of a banquet! And there was more to it than that—*what* he could not yet determine.

"Now that those who do not wish to discuss vital subjects are away, you can sit and talk with us," said the older man. It could have been that wry expression, or maybe he was in some way mocking.

"I've overstayed my welcome. I'm off."

To his surprise, the older man came and shook his hand.

"You keep strangest company," Bush said. He was not interested in this fellow, whoever he was.

HE STARTED back along the beach towards his own lonely camp, the uselessness of playing about with Lenny's girl uppermost in his mind. The dark thing out to sea had spread monstrous wings and was in flight for the land. He suddenly felt the utter senselessness of setting down Man in such a gigantic universe and then letting him challenge it—or of giving him desires he could neither control or fulfil.

Ann said, "I can't get used to the way we can't touch anything of the real world. It really bugs me. I—you know, I don't feel I exist."

She was walking beside him. He could hear the sound of her boots slapping against her legs.

"I've adapted. It's the smell of the place I miss. The air-leakers don't give you a whisper of what it smells like."

"Life never gives you enough."

He stopped. "Must you follow me? You're going to get me into trouble. Beat it back to your lover boy—you can see I'm not your kind."

"We haven't proved it yet."

Momentarily, they looked desperately at each other, as if some enormous thing had to be resolved in silence.

They trudged on. Bush had made up his mind now; or rather, he had no mind. It had gone from him, sunk under the ocean of his bloodstream, in the tides of which it seemed to him that direction was being born anew. They scrambled together into the river valley, hurrying upstream along the bank, clasping each other's hands. Only momentarily was he aware of what he was doing.

"What's got into you?"

"You're crazy!"

"You're crazy!"

They hurried over a bed of large and broken shells. He could have cut his hand on one. He'd looked them up in the guide book earlier. Phragmoceras. At first he had thought they were some animal's teeth, not the deserted home of an early cephalopod. Silurian, maybe, sharpened by the sea to draw his quaternary blood, had not mind-travel built that impenetrable barrier between what-had-been and what-was. The shells did not even crunch as he and the girl climbed over them. Glancing down in his fever, he saw their feet were under the level of the shells, treading on the spongy floor that belonged to their dimension rather than the Devonian period—a sort of lowest common denominator of floors.

They stopped in a sheltered dell. They clung to each other. Eagerly, they glared into each other's face in the waning light. He could not remember how long they stood like that, or what they said—except for one remark of hers; "We're millions of years from our birth—we ought to be free to do it, oughtn't we?"

What had he answered—anything she might find valuable? Anything he could give? He recalled only how he had thrown her down, pulled off her swashbuckling boots, helped her drag off her trousers, torn his own away from him. She behaved as if she had been switched on to overdrive, was immediately absolutely and irresistibly ready for him, seized him strongly.

He recalled after, obsessively, over and over, the particular gesture with which she had raised one bent leg to admit him to her embrace, and his surprise and his gratitude to find that up and down the howling gulf of centuries there was this sweet hole to go to.

While they were resting, they heard the motor bikes roaring like distant thwarted animals. It merely roused them to a repetition of love.

"You smell so damned sweet! You're beautiful!" His words reminded him of how dressed they still were, so that he pushed her shirt and tunic up in order to kiss her nipples.

"We should be as naked as savages. . . . We are savages, aren't we, Bush?"

'Thank God, yes. You've no idea how far from



the savage I am usually. Mother-dominated, full of doubts and fears. Not like your Lenny!"

"Him? He's a nut case! He's scared really—scared of all this. . . ."

"Of loving, you mean? Or of the space-time world?"

"That, yes. He's scared of everything underneath. His old man used to beat him up."

Their faces were close together. They were fainter than the dusk gathering about them, sinking forever into the complexities of their own minds.

"I'm afraid of him. Or I was when you lot first appeared. I thought they'd beat me up! It's all very well —what's the matter, Ann?"

She sat up and began to pull her tunic down. "Got a fag? I didn't come here to hear how chicken you were. Bugger all that! You men are all the same—all got something wrong with you!"

"We're not all the same, not by a long chalk! But now's a time to talk. I haven't talked intimately to anyone for months. I've been locked up in silence. And nothing to touch. . .. . You get pursued by phantoms. I really ought to get back to 2090 to see my mother, but I'll be in trouble when I turn up. . . . It's so long since I screwed a girl . . . honest, I began to imagine I was going queer or something."

"What makes you say that?" she asked tartly.

"The desire to be honest while I can. That's a luxury, isn't it?"

"Well, lay off if you don't mind! I don't go slobbering all over you, do I, with a lot of nonsense? I didn't come with you for that."

A moment before, Bush had felt nothing but love for her. Now he was overwhelmed by anger. He flung her garments at her.

"Put your pants on and hop off back to your yobbo boy friend if you feel like that about it! Why did you follow me in the first place?"

She put a hand on his arm, immune from his anger. "I made a mistake. I thought you might be a bit different." She blew smoke at him. "Don't worry, I enjoyed the mistake. You're quite good at it, even if you are queer!"

He jumped up, pulling on his trousers without dignity, raging—against himself more than against Ann. He turned, and Lenny was outlined against the lemon sky. Mastering himself, he zipped himself up and stood his ground.

Lenny had also stopped. He turned his head and called to the other tershers, "He's up here!"

"Come and get me if you want me!" Bush said. He was frightened; if they broke his fingers he might never be able to work properly again. Or blinded him. There weren't any police patrols here; they could do what they liked with him; they had all the wide Devonian to bash him up in. Then he recalled what Ann had said; Lenny was scared, too.

He went forward slowly. Lenny had a tool of some kind, a spanner, in his hand. "I'm going to get you, Bush!" he said, glancing over his shoulder to see that the others were supporting him. Bush jumped on him, got his arms round him, swung him savagely. The tersher was unexpectedly light. He staggered as Bush let him go. As he brought up the spanner, Bush hit him in the face, then stepped back as if to leave it at that.

"Hit him again!" Ann called.

He hit Lenny again. Lenny kicked him on the kneecap. He fell, grabbed Lenny's legs and pulled him down, too. Lenny raised the spanner again, Bush grabbed his wrist, and they rolled over, struggling. At last Bush got his knee in the other's crutch, and the tersher gave up the fight. Panting, Bush got to his feet, clasping his kneecap. The other four boys of the gang were lined up near him.

"Who's next?" he asked. When they showed no inclination to move, he pointed to their leader. "Get him up! Get him out of here!"

Feebly, they moved to obey. One of them said sullenly, "You're just a bully. We didn't do you no harm. Ann's Lenny's girl."

The wish to fight left him. From their point of view, they were perfectly correct in looking at it that way. True, their manner from the start had offended him, but possibly they were less responsible for that than he had allowed.

"I'm off," he announced. "Lenny can keep his girl!"

IT WAS TIME to mind again. He'd get to a safe place and then he would mind to another time and space. He picked his way into the hills, looking back frequently to see they were not following him. After a while, he heard their motor bikes, was aware of the loneliness of the sound, turned to watch their lasered lights vanish down the strand. The Dark Woman was phantasmally there; he watched the disappearing lights through her form. He had no doubt that she was on duty, and that she came from some remote future of his own. Through the sockets of her eyes, the stars of Bootes glistened.

There was a noise near at hand, indicating someone in his own continuum, sandwiched with him between all the rest of time. The girl was following him.

"Wouldn't your yobbo boy friend have you back?"

"Don't be like that, Bush! I want to talk to you."

"O God!" He took her arm, pulled her through the darkness. At least there were no obstacles to trip over on a generalised floor. Without saying a word more to each other, they climbed up to his tent and crawled in.

Chapter Two
Up the Entropy Slope

WHEN HE WOKE, she was gone.

He lay for a long while looking up at the tent roof, wondering how much he cared. He needed company, although he was never wholly comfortable with it; he needed a woman, although he was never wholly happy with one. He wanted to talk, although he knew most talk was an admission of noncommunication.

He washed and dressed and climbed outside. Of Ann

there was no sign. But of course in mind nobody left any tracks behind, so that the vivid green vegetation on every side was untrampled, although Bush had walked through it a dozen times on his way to doing sentry duty with the lobe fins.

The sun shone. Its great untiring furnace poured down its warmth on a world in which the coal deposits had yet to be laid in memory of a vintage period of its combustion. Bush had a headache.

For a while, he stood there scratching himself, wondering what had caused it: the excitements of the day before, or the relentless pressure of the empty eons. He decided it was the latter. Nobody could be said really to live in these vacant centuries; he and the tershers and the rest travelled back here, but their relationship to the actual Devonian was merely tentative. Man had conquered passing time at least, the intellects at the Wenlock Institute had—but since passing time was no more than a tic (tick?) of homo sapiens, the universe remained unmoved by the accomplishment.

"Are you going to do a groupage of me?"

Bush turned. The girl was standing above him, some feet away. Because the dimension change between them and the world filtered out light, she appeared dark and wraith-like. He could hardly see her face; mind-travel had reduced them all to spectres, even to each other.

"I thought you'd gone back to your friends!"

Ann came down to him. She was swinging her air-leaker carelessly. With her tunic open and her hair uncombed, she looked more of a vagabond than ever. Feeling his biceps, she said, "Did you *hope* I'd gone back or *fear* I'd gone back?"

He frowned at her, trying to make out what she was really like. Human relations exhausted him; perhaps that was why he had hung about here so long, back in the vacuum of exhausted time.

"I can't make you out, girl. No offence. It's like looking through two thicknesses of glass. Nobody ever turns out to be what they seem."

She dropped her sharp look and scrutinised him almost sympathetically. "What's bugging you, sweetie? Something deep, isn't it?"

Her sympathy seemed to open up a wound. "I couldn't begin to tell you. Things are so involved in my head. It's all a muddle."

"Tell, if it'll make you feel better. I've got all the Devonian in the world!"

He shook his head. "What your girl friend Josie said yesterday. That this should be the end of the world rather than the beginning. I could only get myself disentangled if that would happen, if I could start my life again."

Ann laughed. "Back to the womb, eh?"

He realised he did not feel well. That would have to be reported to the Institute; you could lose your mind back in these damned silent mazes. He could not reply to Ann, or face up to her revolting suggestion. Sighing heavily, he went over to his tent and pulled the cord to let it deflate. It collapsed in a series of shudders; he never cared to watch the process, but now some chattering thing inside him gave a commentary on it, likening it to a disappointed womb from which a lucky child had managed to escape.

STOICALLY, HE folded up the tent and put it away. With the girl standing watching him, he drew out his rations and made his simple preparations for breakfast. Mind-travellers carried a basic food kit, frugal in the extreme but easy to deal with. He had replenished his stores several times from other minders who were surfacing—returning to their present—early because they could not stand the silences, and from a friend of his who ran a small store in the Jurassic.

As his pan of beef essence steamed, he raised his eyes until they met the girl's and spoke again to her.

"Care to join me before you clear off?"

"Since you ask me so graciously. . . ." She sat down by him, sprawling with legs apart, smiling at him—grateful even for my miserable company, Bush thought.

"I didn't mean to upset you, Bush! You're as touchy as Stein."

"Who's Stein?"

"The old guy—the one with the gang. You know—dyed hair—you spoke to him. He shook your hand."

"Oh, yes. Stein? How did he fall in with you and Lenny?"

"He was going to be beaten up or something and Lenny and the boys saved him. He's terribly nervous. You know, when we first saw you, he said you might be a spy. He's from 2093 and he says things are bad there."

Bush had no wish to think about the twenty-nineties and the dreary world in which his parents lived. He said, "Lenny has his good side, then?"

She nodded, but was pursuing her own line of thought.

"Stein had me scared about mind-travel. Do you know, he said that Wenlock might be all wrong about mind-travel, and that we might not really be here at all, or something like that? He said there was something sinister about the Undermind, and nobody understood it yet, despite all the claims of the Wenlock Institute."

"Well, it's all new as yet. The Undermind was only first developed as a concept in 2073, and the first mind-travel wasn't till two years later, so there may be more to discover, although it's difficult to see what it might be. What does Stein know about it, anyway?"

"Maybe he was just sounding off, trying to impress me."

"Did you let him—I mean, did he lie with you?"

"Jealous?" She grinned challengingly.

"What do you want me to say?" They stared at each other. Through the dirty pane of her face, he saw life shine. He reached forward and kissed her.

She lifted the boiling beef essence off his tiny stove and said, "I think I've about had the Devonian Period. How about moving on to the Jurassic with me?"

"Aren't Lenny and Co. going there?"

"So what? There's forty-six million years of it. . . ."

"Touché. What do you want to do there? See the carnivores mate?"

She gave him a sly look. "We could watch 'em together."

Instantly, he was excited. He slid a hand across her buckskin thigh.

"I'll come with you." As they drank their essence, he was jeering at himself for getting mixed up with the girl; she was confused and could only upset his mental balance. It was true she was not unintelligent and a good lay, but he had never been satisfied to accept anyone else by compartments; her whole self did not seem accessible. And perhaps he was not the right person to help her render all of her personality accessible.

SHE SNUGGLED against him. "I need someone to mind-travel with. I'd be frightened to let go on my own. My mother wouldn't mind-travel to save her life! People of that generation will never take to it, I suppose. Wow, I wish we could mind back just a little way—you know, one generation—because I'd so like to see my old man courting my mother and making love to her. I bet they made a proper muck-up of it, just as they did of anything else!"

When he said nothing, she nudged him. "Well, go on, say something! Wouldn't you like to see your parents at it? You aren't as stuffy as you make out, Bush, are you? You'd love it!"

"Ann, you just don't realise the horror of what you are saying!"

"Come on, you'd like it, too!"

Bush shook his head. "I have enough data on my parents without the need for that sort of thing! But I suppose yours is the majority view. Dr. Wenlock ran a questionnaire at the Institute about a decade ago—I mean in 2080—which showed how strong incest-motivation is in mind-travellers. It's the force behind the predisposition to look back. The findings coincide with the old psycho-analytical view of human nature.

"Current theory suggests that man first became homo sapiens when he put a ban on—well, let's call it endogamy, the custom forbidding marriage outside the familial group. Exogamy was man's very first painful step forward. No other animal puts a ban on endogamy."

"Was it worth it!" Ann exclaimed.

"Well, since then man has become all the things we know he has become, conqueror of his environment and all that, but his severance with nature has seemed to grow wider and wider—I mean with his true nature.

"The way the Wenlockians see it, the undermind is, as it were, our old natural mind. The overmind is a later, homo sap accretion, a high-powered dynamo whose main function is to structure time and conceal all the sad animal thoughts in the undermind. The extremists claim that passing time is an invention of the overmind."

Perhaps she was not listening. She said, "You know why I followed you yesterday? I had the strongest feeling directly you appeared that you and I had—known each other terribly well at some past time."

"I'd have remembered you!"

"It must have been my undermind playing up! Anyhow, what you were saying was very interesting. I suppose you believe it, do you?"

He laughed. "How can you not believe it? We're here in the Devonian, aren't we?"

"But if the undermind governs mind-travel, and the undermind's crazy about incest, then surely we should be able to visit times near at hand, early in our own century, for instance—so that we could see what our own parents and grandparents got up to. That would be *the* most interesting thing, wouldn't it? But it's much easier to mind back here, to the earliest ages of the world, and to get back to when there were any humans at all is very difficult. Impossible for most of us."

"That's so, but it doesn't prove what you think. If you think of the space-time universe as being an enormous entropy-slope, with the true present always at the point of highest energy and the furthest past at the lowest, then obviously as soon as our minds are free of passing time, they will fall backwards towards that lowest point, and the nearer to the highest point we return, the harder will be the journey."

Ann said nothing. Bush thought it likely that she had already dismissed the subject as impossible of discussion, but after a moment she said, "You know what you said about the real me being good and loving? Supposing there is such a person, is she in my over- or my undermind?

"Supposing, as you say, there is such a person, she must be an amalgamation of both. Anything less than the whole cannot be whole."

"Now you're trying to talk theology again, aren't you?"

"Probably." They both laughed. He felt almost gay. He loved arguing, particularly when he could argue on the obsessive topic of the structure of the mind.

IF THEY WERE going to mind again, now was clearly the time to do it, while they were in some sort of accord. Mind-travel was never easy, and the passage could be rough if one was emotionally upset.

They packed their bags and strapped their few possessions to themselves. Then they linked themselves together, arm in arm; otherwise, there was no guarantee they would not arrive a few million years and several hundred miles apart from each other.

They broke open their drug packs. The CSD came in little ampoules, clear, almost colourless. Held up to the wide Palaeozoic sky, Bush's ampoule showed slightly green between his fingers. They looked at each other; Ann made a face and they swallowed together.

Bush felt the crypotic acid run down his throat. The

Continued on Page 31

A FINE POP ART CONTINUUM

Christopher Finch reviews the work of Richard Hamilton

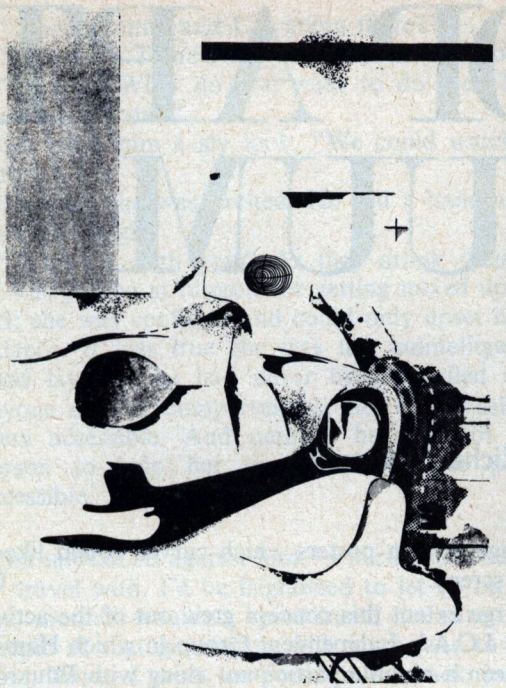
We resist the kind of activity which is primarily concerned with the creation of style. We reject the notion that "tomorrow" can be expressed through the presentation of rigid formal concepts. Tomorrow can only extend the range of the present body of visual experience. What is needed is not a definition of meaningful imagery but the development of our perceptive potentialities to accept and utilise the continual enrichment of visual material.

RICHARD HAMILTON contributed the above statement to the catalogue of the exhibition *This is Tomorrow* which was staged at the Whitechapel Art Gallery in 1956. The exhibition consisted of a dozen stands, on each of which a different team of architect/painter/sculptor had collaborated. Hamilton was teamed with John McHale (now an associate of Buckminster Fuller) and John Voelker; together they produced an environment which has been called the first genuine work of Pop. It combined a large-scale use of popular imagery with an imaginative exploitation of perception techniques. Prominent were a 16-ft. robot—with flashing eyes and teeth—making off with an unconscious starlet; a photo blow-up of Marilyn Monroe; a gigantic Guinness bottle. These large objects were placed at the rear of the exhibit; small objects were placed in front of them so that a reverse perspective was created. The soft floor, which was a feature of this part of the environment, was graded from white to black in such a way as to supplement this illusion. Elsewhere the floor of a corridor was graded in strips to create an impression of undulation—an impression which was amplified by optically disturbing patterns painted on the walls. Another section of floor—part of a sci-fi capsule—was painted with fluorescent red paint, covered with expanded metal and flooded with black light. In a tall chamber some of Marcel Duchamp's rotor-reliefs spun in a setting which was itself compounded of optical illusion. Smells drifted about the whole exhibit; several movies were projected at once while a juke-box played in front of a huge collage of film posters which curved round like a cinerama screen.

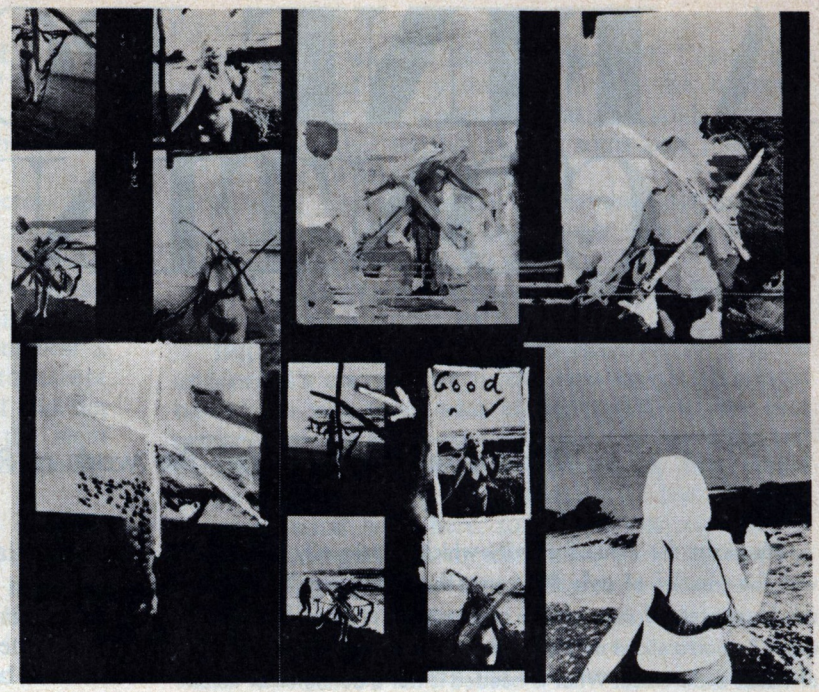
To a large extent this concept grew out of the activities of the I.C.A.'s Independent Group in which Hamilton had been a notable participant along with Eduardo Paolozzi, the architects Peter and Alison Smithson and the critics Peter Reyner Banham and Lawrence Alloway. From the beginning the Independent Group was involved with popular culture and its position was retrospectively formulated in 1961 by Lawrence Alloway. Dismissing Roger Fry's "disinterested aesthetic faculty, uninvolved with the rest of life", he proposed "a descriptive aesthetic which acts not as an ideal but as commentary on one's experience in the world". He talked of a fine/pop art continuum. Hamilton—in the work which he has produced since 1956—has brought a high degree of intelligence and imagination to the exploration of this continuum.

Chrysler Vice-President Virgil Exner models the plump detailing of the sleek "flight sweep"—lining the crustacean recesses of Plymouth's headlamp hood with mirror-like chrome and giving it a dark brilliance that even *Life* and *Look* can't press on to the pages of their multi-million editions. Ad-artists create a language of signs for chrome—flick and flourish to simulate the sparkle of fashioned metal. GM Vice-President Harley Earl promotes a jet technology to condition the reflexes of auto consumers while Saarinen builds status symbols for the Detroit plant.

HAMILTON'S METHOD is analytical in an almost scientific sense. In 1957—in the spirit of Alloway's fine/pop art continuum—he embarked upon an investigation of American automobile styling; a series of studies and drawings culminated in the painting *Homage à Chrysler Corp*. The phenomenon was investigated as expressed through the filter of magazine advertising—but without Hamilton relinquishing his detached rôle of fine artist. "The main motif, the vehicle," as Hamilton describes it, "breaks down into an anthology of presentation techniques. One passage, for example, runs from a prim



Homage à Chrysler (line version). (Robert Fraser Gallery.)

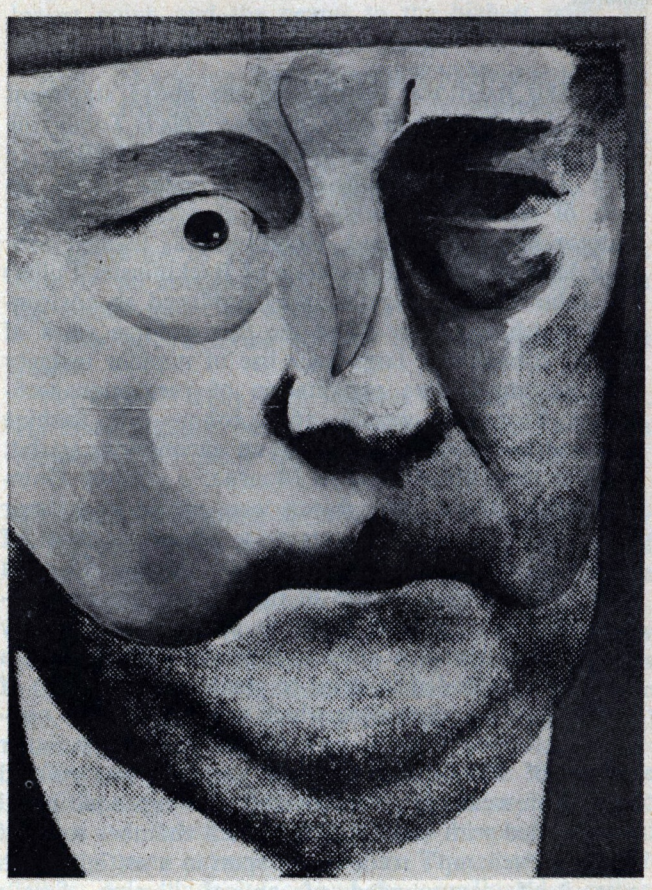


My Marilyn. (Robert Fraser Gallery.)

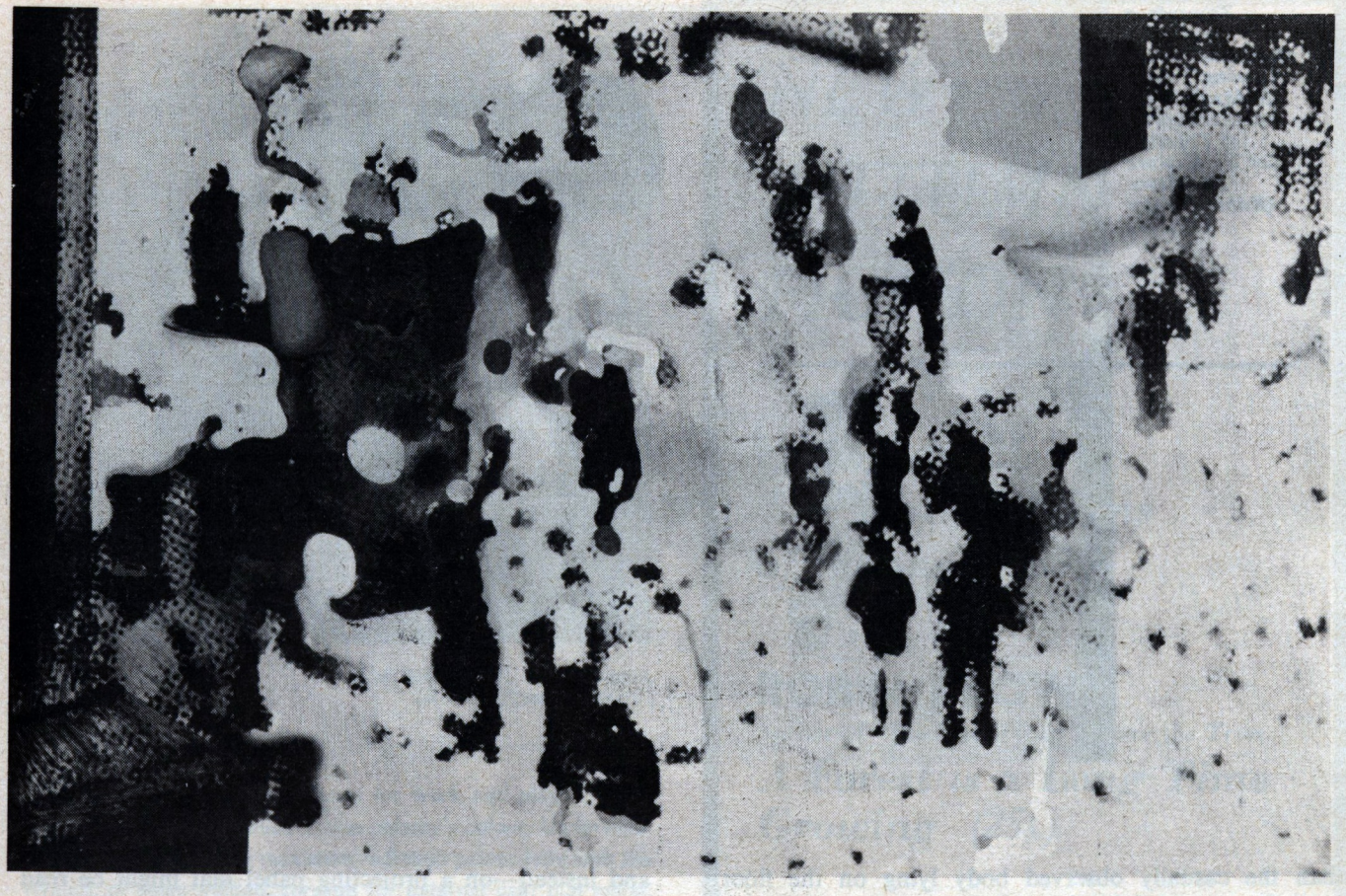
emulation of in focus photographed gloss to out of focus gloss to an artist's representation of chrome to ad-man's sign meaning 'chrome'. Pieces are taken from Chrysler's Plymouth and Imperial ads, there is some General Motors material and a bit of Pontiac. The total effect of Bug-Eyed Monster was encouraged in a patronising sort of way."

There was also a sex symbol, "engaged in a display of affection for the vehicle". She is elliptically represented by the Exquisite Form bra diagram and Voluptua's lips. Hamilton was inclined to suppress a similarity to the Winged Victory of Samothrace, worried by the accidental reference to the Futurist dictum—"A racing car . . . is more beautiful than the Winged Victory of Samothrace." Finally, the setting of the tableau is "a kind of showroom in the International Style represented by a token suggestion of Mondrian and Saarinen".

This month's playmate, however, is Miss June. Take a girl—there are plenty of good amateurs and in any case it helps to put in a biographical note—Miss Wells is a teller at the Chase Bank's Denver branch, or a stylist at Young and Rubicam (you might come across her anywhere) just so you know she can afford her own flat, spends all her income on clothes (worn off-stage), and is on the lookout for a meal ticket to '21'. She's built (37, 22, 36) sociable (show a record and a couple of highballs), intelligent (use a record sleeve with Zen in the title), available through the Bell system (Princess handset) and has friendly eyes that come out green on Ektachrome. From there on it's just a matter of technique, a photographer with his heart in the job, a good retoucher (abstract expressionist when he's not



Portrait of Hugh Gaitskell as a Famous Monster of Filmland



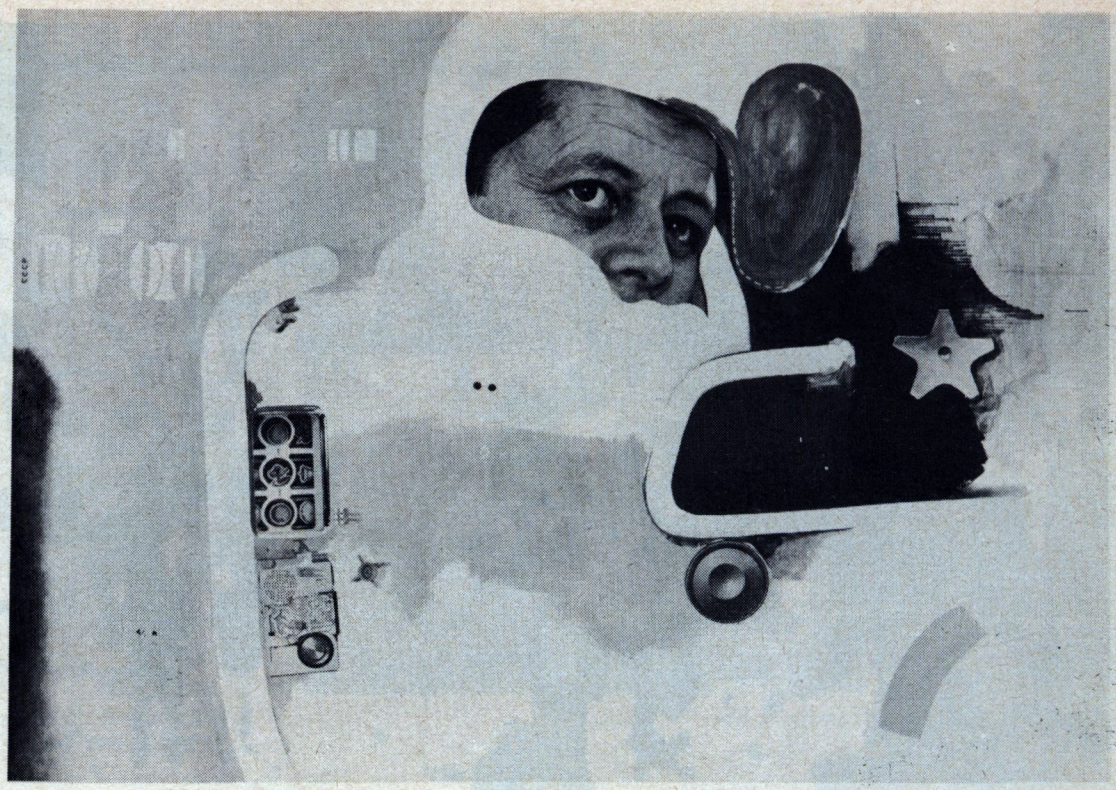
working) and the best blockmaking and printing facilities that money can buy concentrating all their efforts on pinky tints which filter out over bed and sand and walls and carpet and record sleeve and towel till even the words are made flesh.

In real close; what's in the finder? With a long-focus lens open up to f2, depth of field is reduced to a few millimetres when you're not too far from the subject. Definition swings in and out along a lip length. A world of fantasy with unique erotic overtones. Intimacy, trespass yet, on a purely visual plane. Sensuality beyond the simple act of penetration—a dizzy drop into swoonlike coloured fuzz, clicked detached and still, for appreciative analysis. Scale drifts that echo Van Vogt's pendulum swing of time; fulcrums of visual fixity that Penn engages with the twist of a knurled knob.

THE MECHANICS OF photography and the cinema are, for Hamilton, important subjects for investigation. In *Pin-Up* he explored, with an almost scientific detachment, the language of the girlie picture. We find in this painting all the elements that are to be expected: the swollen breasts, the fetishism of bra, pants, stockings, spike-heeled shoes. We see a record-player which is at the same time a telephone—a cipher for the environment, loaded with implications. As in a Playboy image the entire picture is saturated with flesh tints and, by way of a fine art reference, one passage hints at Renoir's brushwork.

The *Interior* series of 1964 was triggered off by a publicity still from the 'forties film *Shockproof*. This showed the actress Patricia Knight, standing, somewhat uneasily, near a large desk in a severely opulent Hollywood Interior. The atmosphere of the photograph was so strange that it was some time before Hamilton noticed a body lying on the floor, half hidden.

"Everything in the photograph," he remarks, "converged on a girl in a 'new look' coat who stared out slightly to right of camera. A very wide angle lens must have been used because the perspective seemed distorted, but the disquiet of the scene was due to two other factors. It was a film set, not a real room, so wall surfaces were not explicitly conjoined; and the lighting came from several different sources. Since the scale of the room had not become unreasonably enlarged, as one might expect from the use of a wide angle lens, it could be assumed that false perspective had been introduced to counteract its effect, yet the foreground remained emphatically close and the recession extreme. All this contributed more to the foreboding atmosphere



Towards a Definitive Statement on the Coming Trends in Men's Wear and Accessories (a) Together Let Us Explore The Stars. (Robert Fraser Gallery.)

than the casually observed body lying on the floor, partially concealed by the desk."

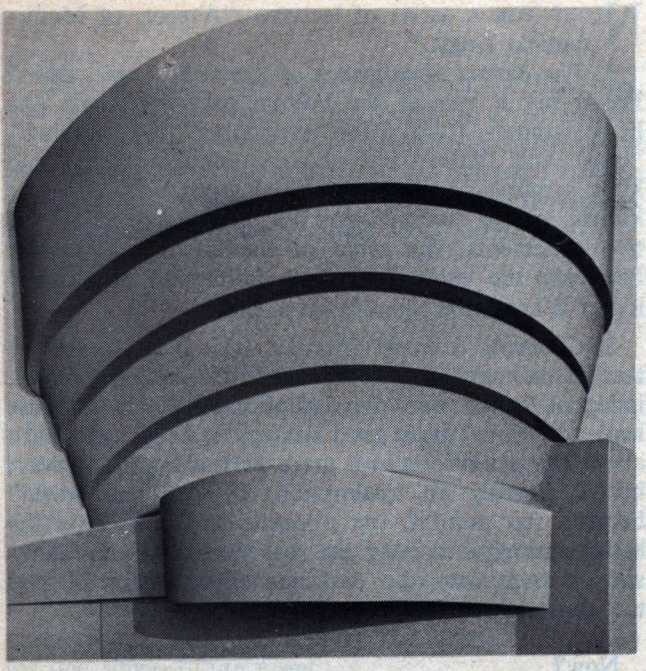
In a series of collages he set about reconstructing "this image of an interior space—ominous, provocative, ambiguous; with the lingering residues of a decorative style that any inhabited space collects. A confrontation with which the spectator is familiar yet not at ease". Next he reconstructed the desk which was a key feature in the original photograph. Instead of taking the perspective of the original as his model he recreated the desk upon an architects' printed perspective grid. By adopting this method, which is from a technical point of view very practical but aesthetically arbitrary—by ignoring the usual conceptual machinery of the artist—he introduced an element which authentically simulated certain aspects of the cinematic image—the studio necessities of distorting lens and false perspective.

In the first of two final versions this desk and the screened image of Patricia Knight were brought together—along with other elements both painted and collaged—into a large-scale translated reconstruction of the original visual experience. This painting was marked by a strong period feel and he went on to paint a second version, attempting to sustain the disturbing atmosphere while transferring the actress to more contemporary surroundings. The desk was removed and a feature was made of an elegant metal chair. Perspective effects were engineered with tasteful woodwork and parquet flooring. The ornate wall decorations vanished and instead—on a projecting panel that might be read as a canvas—is a television set. On the screen, generally unnoticed by the casual observer and ignored by the figure in the painting, we are shown the assassination of President Kennedy. The idea of death (echoing the body behind the desk) is reintroduced along with the notion that the greatest event of the century could be going on "in the room" without anyone noticing.

On a slighly different tack, *My Marilyn* arose out of the discovery that Marilyn Monroe vetted all her publicity stills—savagely defacing any that did not please her. This has led Hamilton to a whole series of recent works in which the hand-made mark is set against the photographic image. Landscapes and small details of beach scenes are blown up, then retouched or partially obliterated with colour. The tension between the mechanically reproduced image and the graphic statement sets up wholly unexpected kinetic fields.

We live in an era in which the epic is realised. Dream is compounded with action. Poetry is lived by an heroic technology. Any one of a whole range of hard, handsome, mature heroes like Glenn, Titov, Kennedy, Cary Grant, can match the deeds of Theseus and look as good, menswearwise.

The scanned image is replacing the screened look in many fields today. Broad coloured stripes add a fashionable sporting touch to chest and loins, through two-colour full block numbering can project collegiate styling more effectively—the domed fibre-



The Solomon R. Guggenheim.
(Robert Fraser Gallery.)

glass helmet is, of course, a must for work and play.

Metals are in. Aluminium is the century's colour. Underwear is fine lustrous lame for maximum radiation protectivity with the riveted, or seam-welded, corsage for external use; gun metal, gold and platinum, however, still find support among the smart set. The trend towards electronics for male accessories is on the upgrade for outward-looking bucks styled to the needs of tomorrow and the pleasantest present.

IN THE SERIES *Towards a definitive statement on the coming trends in men's wear and accessories* Hamilton embarked upon another complex exploration of language. One of the main paintings in this group—*Together let us explore the stars*—concerns itself with man in a technical environment; another deals with "the sporting ambiance" and a third—*Adonis in Y fronts*—"attempted to catch some timeless aspect of male beauty. Certain contours were derived from the Hermes of Praxiteles—other parts were from muscle man pulps". A fourth painting (a nul-gravity picture in that it can be hung in any orientation) synthetised various elements from the other three.

Other language explorations have ranged from the presentation of consumer goods (*She*) to architecture (the Guggenheim reliefs). Always he appears to be exploiting his privileged position as a fine artist to distil from the idioms of the present a possible language for the future. His achievements in this field place him among the most interesting and important artist working today.

NEW AUTUMN FICTION

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MICHAEL JOSEPH

SOLIPSIST

BY BOB PARKINSON

NOTES FOR A series of lectures. "Aspects of Mathematical Logic."

1. *The Sexual Significance of Symbolic Logic.* Didn't Freud say it was at the bottom of everything? The basic symbols, 1 and 0 for "everything" and "nothing", "true" and "false" are obvious enough phallic and kteic symbols. And the primitive operations—"+" is known as the "union", and "x" the "intersection" of two statements. But what of the anomaly, Russell's Paradox, the most important failure of two-valued logic? What is the significance of that?

2. *Choosing a Good Strategy.* It is basic to science that it assumes the "existence" of a "real" world, independent of our preconceptions, in which cause leads to effect. This is good strategy, it helps us to learn about our sensations in a more or less organised way; but it *is* only an assumption. If the "real world" became too painful, the opposite might become the better strategy—to deny the real world, take up solipsism, retreat into the darkness where there is only the ghost-echo of your own voice. . . .

Now?

No.

NO!!!!

Not time, not place, not existence.

Cancel, cancel, cancel, cancel. . . .

Stop!

In the beginning there must be a beginning, a place for the story to begin. There must be a gateway, an entrance to this shadowed maze of half-forgottten yesterdays; the causality whose logical consequence is the here-now. In the beginning was a primitive proposition. Pp.

System.

System? First: that my information about the universe is limited to my sensual perception.

Scholium. That here I should find it impossible to demonstrate the present existence of those objects now outside the limited range of my perception, despite that I have previously been aware of them, and may presently become aware of them again.

Gone the tree in the spring sunshine, the shade by the river's edge; the soughing of the wind through the tall, tall grass, and the soft fat clouds floating against a clear blue sky. Now darkness; only the pressure and the darkness.

If I close my eyes—so—perhaps it will go away.

If I close my eyes tightly, perhaps it isn't there at all. Hypothesis by Bishop George Berkeley, 1685-1753, who held that thought was superior to all things.

Then—?

Fear!

Pain!

And, in the darkness, a sudden falling.

There the cat springs in arching curve, directed not to where the mouse is, but to where the mouse will be.

What if—? Yes?

The hunting animal, soft and hidden, prepares to

pounce.

What if, even now, that fateful curve has been launched towards some future point of my existence, to form a sudden, violent intrusion into the circle of my awareness? What if there *is* an existence outside my awareness, whose trajectory, intersecting my awareness at some future time, should so become reality?

What if—

No!

No?

No!

Shut the door with a second proposition; feet against the front-door future, back against the back-door past, with only the keyhole for the vapid wind to creep through. Now where is your change?

Second proposition; *that only the present really exists.*

That, second by second, my perception is *now*. That not by logic or experiment can I demonstrate that this world should not have been formed complete but a moment ago. Nor can I show the absolute necessity for one single future event.

The words written on the Hell-gate are these: *A Band of Hope, All Ye That Enter Here.*

Where are your curves now, nicely extrapolated towards some future point of meeting?

Well, sour, is it not incredible that both my eyes should see more or less the same thing?

See—?

See now—

A room. A little room, four feet wide by eight feet high by twelve feet long. Walls bare—bare planked floor; each plank nailed three times at either end. What could I not do with a room like this. And in front of me a door. A pine wood door. Divided into six rectangular panels, unpainted as before. And, at the mid-point of the side AB, a large brass doorknob. See this comforting assurance; large and firm and rigid.

Take hold, feel the assurance it gives.

What?

What!

Melting?!!

Running; soft and flowing like wax, about that growing, spinning central hole of darkness! No! *No*! Stop! Don't! Hide! Not here! Not now!

Run now!

The voice said go—

Quickly, down the twisting, darkening corridors of the mind, fleeting the spreading darkness behind me. Now, count the pattering, patterning, echoing footsteps flying—

Two, and then seven, one and eight, two and eight, one and two and eight, five. . . .

The spreading ripples of the spiral, turning, turning,

Calm!

Think.

Think; because I think, I exist; not because of sensory perceptions, confused and distorted and changing. Trust that thought, because thought tells that you are here. Your eyes show only the pattern of light on your retina, your ears tell only of the fluctuations in the air pressure *at that point*. And still transmission is required; the chemico-electronic analogue of that pattern progressing along that optic nerve; disturbed by such little things—

(Drink Me.)

Disturbed by the minor chemical balances of the bloodstream, for instance.

Red, red, red, the whole world is red.

The crimson, flowing stream, washing downwards; breaking over rounded whiteness; the twin mountain peaks rising against the darkness; the quite unfocused eyes of green showing myself twice over.

It *might* all be hallucination.

All a dream, Bygmester Finnegan, and myself as Red King; under a tree in the damp grass, dreaming. If only I can remember all the characters until I wake. If only, if only—. Dreaming, Leibnitz dreaming in his windowless monad; for me no window needed to dream. No magic casements. All that was needed is already here. Here, do you hear? All that we needed is buried inside, deep within this maze of shadowed thoughts and reveries. Dreaming. Dreaming oh my darling love of thee; of that I do not know I saw, or dreaming of my dreams, or did I dream that also? Who knows? How do you know? How can you know? Who cares?

Answer: all that no longer matters.

See, here is Odysseus dead. Where are his dreams and memories now?

Fourth proposition, fifth proposition, that even my memory can no longer be trusted. I change. My experience changes. My recollections change. I forget things, and remember them later; but how can I be sure that they *are* the same things? And how shall I tell whether it matters or not?

What matter? Yes.

Where?

What, in this desert dream-scape of memory, is identifiable? What identity? What, in the flux of formlessness, is the form that that flux can be related to? Relations, associations, groups, allegory. Where is there any longer room for analogies?

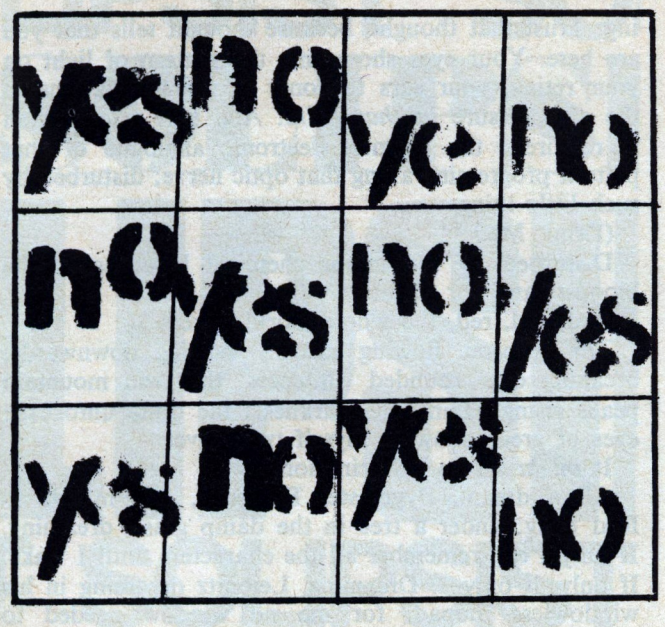
Banish space!

Banish the sun and the stars, the earth and the mountains, the rivers and the streams and the forms and the colours and the touch and the scent and the brown hair sweet blown.

Leaving only black, empty nothingness; formless without mass to give it form, dimensionless without light to cross it; only the steady, incessant beating of the clock — beating its perpetual rhythm against the emptiness of the universe like some gigantic drum. Before the world was, the rhythm.

Rataplan, rataplan, like the beat of a drum; there is death in the morning, and no life to come.

Banish time.



Banish space.

Leaving only the closed sphere of darkness, unmoving, unchanged; and myself within it—the circle complete.

The sum totality of all unfilled classes.

Zero.

Who now?

Only myself. Within me, everything.

The extended unity of the all, tall and proud as Pharaoh's obelisk upon the desert plain, intrudes upon the all-encircling nothingness; producing—

Their disjointed union, which is everything.

Their conjoined intersection, which is nothing.

This is only logical. Describe on some imagined, immaterial mathematical surface a closed curve, somewhat extended, separating those conditions which have been me from my initial self-awareness until now; so that there is a continuity between all points within the loop, representing the changing continuity that is me, disjoined across that insubstantial barrier. But see, is not the difference between this point of me, six years ago, and this me-now far greater than this distance between the me-now, and this not-me-now just on the other side of this boundary? So; how then am I to distinguish myself, except in that limiting condition in which I *am* the universe?

Well sour?

There are only two values in *my* universe, O Ainsoph the Allmaziful, and one is the negation of the other.

0 and 1.

Not who am I? but merely I am. *Ecce homo.*

Good. Sometimes you get lost in these everlasting corridors, these torturous knots of logic, but they are all precisely ordered. The system is a closed system. If it ever were open, which I frankly doubt, it is a single ended entity like the closing spiral (are equals the exponential of minus theta), and the open end is so far behind us that we can never go back. Once, at least, there was unity. There will never be nothing. . . .

Look—

Our system behaving like a closed system.

Listen for a moment at this door, to this memory, to this lecture in progress never forgotten though buried in the recesses of the maze. It may be instructive, even with the students restless and sleepy, attentive and dreaming (dreaming?) as usual, and the lecturer droning on and on with definitions. . . .

". . . hence it seems plausible to define the content of a sentence as the class of all possible cases in which it does not hold. Content, therefore, can never be increased by a purely logical procedure. . . ."

That's first. Are you now content? Be still! But the second is similar, because a man called Gödel proved that it is not always possible to prove the truth or falsehood of every statement in our Universe B, however easy it may be to do arithmetic.

Then is not my world just as good as yours? Do *I* have any need of thermodynamics?

Is not my world my world my own world, for my own, that you should continually intrude? Is not my world just as improbable as any other, that we should not be able to know exactly what goes on in it?

Now where? Where now? This point is familiar; with the two corridors branching away, one on either side, curving, dark, even. Come, let us descend further; echo and I.

See, here the colours play one with the other across the net of aye-eye-jay, exe-sub-eye, exe-sub-jay—spread either way across the infinite world. Fold back the squared corner and step through. Come. Now how far do you think we have come through the maze?

Along this corridor are the tutors' rooms, the doors opening off on either side. Here is the room of Dr. Leibnitz from Göttingen, and Professor De Morgan, and there is George Boole, and C. S. Peirce, and Frege, and Schröder, and all the others. . . .

But who, there? No. Who is that sudden, shadowy figure who moves at the end of the corridor. And why does my heart suddenly beat so? Why? It is the Spanish Barber whose dreadful question I fear to answer; as he sharpens his razor, cutting hairs. Why?

No!!!

"Tell me, little man, is the class of all classes who are not members of themselves a member of itself or not? And where is your classless society now?"

No! Help! Wait!

I fear you, Spanish Barber, with your logic-chopping razor which, if I am not very much mistaken, you borrowed from a man named William with one particular end in view.

My end!

The cry re-echoes in the dry, dismal thunderclap—

Oh my father Laius, where are you now?

Danger! Danger! Danger! Danger!

danger, danger, danger, danger. . . .

Echoes.

Think now, to avoid this sudden intrusive catastrophe. Think, for the question of the Sphinx must have an answer that a Man might discover. Somewhere in this circling labyrinth there must be an exit — an escape from the approaching bull-monster with its ever-insistent question.

"Tell me, *tell me*, little man, is the class of all classes which are not members of themselves a member of itself or not? Decide, decide!"

Wait! Can I not introduce a third category into the area of our discourse, alongside the pillar that is all, and the circle enclosing nothing. A third category—neither—to rattle like a single dried pea in the hollow, empty womb of the universe?

But the rattle is a fourth category, and the class "not-neither" a fifth; and so the categories multiply and divide on and on until the emptiness is crowded full with things, and there is no longer any room for me. In the darkness find a route to flee.

Now!

Let there be light!

For if the old logical forms cannot be held, then they can neither be used to support the new forms that must replace them. Instead, the new heaven and the new earth in their turn must *replace* the old. The lowest level of the labyrinth is the axiom. Start then from the axiomatic level once more.

O threefold logic, in which that classless question is solved. For if, in truth, the values of our logic are thus; true, neither, false; then the values of their negative; not-X; is this column inverted—false, neither, true. And the answer to the question of the dreadful bull-barber of night is—

Neither!

Have *you* stopped beating your wife yet?

Solution due to Jan Lukasiewicz, circa 1920.

The conjunctive mode—X *and* Y—has the following values; if X is true and Y is true the conjunction is also true; whence true neither false when X is true, neither false false when X is neither, and false false false when X is false, the values for Y being true, neither, and false respectively in either case; the lower member of the relation taking dominance over the value of the whole conjunction. The appropriate values for the alternation—X *or* Y—can be found from this and the negation by the use of the well-known De Morgan's rule; which values are left as an exercise to the reader.

So there.

So we have emerged once more from the maze, by a gateway different from that by which we entered, admittedly; but here at last I am alone beneath the dark empty skies on a barren plain where the fluid, shifting shape of the bull-monster no longer follows me with its thunder-cry.

At last the universe is empty; save only for the square, monolithic obelisk that juts from the barren plain, and the dark, empty dome of the sky above it, and a third thing which I do not rightly see, but which I suspect is myself. *This is the final Trinity.*

Thunder, and the light of a thousand suns!

Either, the world exists and I do not, or the world does not exist and I do, or both the world and I exist, or both the world and I do not, or the world does neither and I exist, or the world exists and I do neither, or the world does not exist and I do neither, or I do not exist and the world does neither, or we both do neither, or we both do neither.

Thirty per cent. Not such a *bad* percentage after all.

In this new arithmetic, the song the spiral sings is this:

Two point two owe one, one owe, one one, two one, two two, . . .

Recurring and recurring, world without end. . . .

In the beginning was the end.

Now.

?

The Men Are Coming Back

They say the men are
Coming back. An Elder
Reports her daughter, out
For the morning manna,
As having seen short columns
At the foot of the hills.

There is a loosening of
Muscles and a dampness
In the palm of some hands.
Inexplicably, the children
Begin to shout. Some of the
Elder women bolt the doors.

How did she know? asks
Someone. Know they were
Men? Instinct, says a
Harridan in yellow lace.
Does it matter? There are
Few movements to defence.

Even as they watch the
Elders scent defeat. Some
Of the younger are spitting
Upon the red cloth cover
Of a book, rubbing the
Dye across their untouched lips.

Barry Cole

CAMP CONCENTRATION
PART FOUR-BY THOMAS M.DISCH

1975. Louis Sacchetti, an American academic poet, begins a journal of his prison experiences in the Springfield Federal Penitentiary, where he is serving five years as a conscientious objector. Without explanation, he is taken by armed guards from Springfield to a mysterious subterranean barracks in Colorado. He makes protests to HAAST, the prison director and a retired World War II general, who tries to reassure him by pointing out the advantages of Camp Archimedes—his relative freedom there, a well stocked library, a standard of living well above what Sacchetti is used to even outside prison.

Later he learns from the Camp's WAC psychologist, Dr. AIMEE BUSK, that the prisoners, volunteers from Army hospitals and brigs, have been given an experimental drug, Pallidine, derived from the Spirochaetae pallida, the causative agent of syphilis. The drug produces a twofold effect: it heightens the intellectual powers exponentially and it produces a series of increasingly acute sicknesses, beginning with boils, chancres, dizziness, and nausea, and climaxing inexorably in death within nine months of its injection. There is no cure. Sacchetti has been brought to Camp A to serve as a "liaison" between these genius-prisoners and the staff.

MORDECAI WASHINGTON, a Negro prisoner, becomes Sacchetti's friend and tries to interest him in his own researches in alchemy. With Haast's approval, he has been preparing an *elixir vitae*, with which he hopes to reverse the effects of the Pallidine, though Haast's interest in it is for its rejuvenating properties. The Magnum Opus is conducted on June 21. Mordecai, in the last stages of deterioration caused by the drug, dies of an embolism, and Haast, in a fury of disappointment, abuses his corpse. That night Sacchetti, waking from a dream, realizes what has long been evident to everyone but himself—that he too has been secretly infected with the drug and that he has less than eight months to live.

One by one, in the next few months, the remaining prisoners die—all but Sacchetti, whose journal, under the combined influence of steadily mounting genius and increasingly grave illness, degenerates into a confusing mass of allusions and crypts. Haast threatens to revoke his library privileges, and Sacchetti resumes his journal in more orderly fashion.

We discover that in the interval Camp Archimedes has received a fresh stock of guinea pigs. SKILLIMAN, the director of important U.S. nuclear research projects, has persuaded a number of his young assistants to take Palladine with him in order that they may enjoy those higher flights of genius which had never quite been granted them. Sacchetti becomes friends with one of these assistants, SCHIPANSKY, and tries to persuade him to apply his talents to some finer task than weapons development. Skilliman confronts Sacchetti on this issue, and his nihilistic philosophy seems to carry the day.

Dr. Aimee Busk has mysteriously disappeared from the camp, much to Haast's distress. Putting together a number of strange news stories, Sacchetti comes to the conclusion that Busk, venereally infected by the Palladine, is spreading the contagion of genius throughout the country.

68.

It was some time before Haast could realise that there was more than a personal betrayal involved. Meanwhile Skilliman sulked off, brood under wing, to ponder consequences. I'm convinced that his first and strongest reaction was to feel cheated: he'd wanted so much to put an end to the world *himself*.

69.

Haast required me to spell it out. I gave him my notebooks and my various estimations of the rate of progress of the epidemic.

Assuming that Busk's adventures began immediately after she left the camp (June 22), then the first fruits of her sowing would have begun to appear by mid- or late August. My estimates of the rate of progress are based on the new edition of Kinsey and so it probably errs in the direction of conservatism. The fact that promiscuity (and VD) is more common among homosexuals would likewise tend to accelerate the process, especially in its early stages when rapid dissemination is crucial. The facts in my museum did show a preponderance of "breakthroughs" in just those areas where homosexuality is thickest: the arts, sports, fashion, religion and sex crimes.

Within two more months 30 to 55 per cent of the adult population will be on their way to soaring genius. *Unless* the government immediately reveals all the facts in the case. Less specific warnings against venereal disease will have no more effect on promiscuity than thirty years of Army training films have had. Less, because nowadays we've come to place our faith in penicillin rather than in condoms. Penicillin, sad to tell, has no efficacy against Pallidine.

70.

I *think* that Haast understands all this now. Nothing

but a full revelation of the danger can have any effect. Already, by my graphs, a moiety of professional prostitutes have been infected. The epidemic will move by a geometric progression.

71.

I return to the infirmary at closer intervals. The mind, meanwhile, goes its own way.

"What was I talking about? Oh yes—"

I amuse myself with speculations on who initiated so improbable a romance—and why. Mordecai? And would it have been out of a purely personal spite, a last chance to get his own back at the Great White Bitch of America? Or had he some intuition of how Busk would react, and was his revenge more universal?

And La Busk herself—why would she invite the dirty little spirochaetae in? Had some part of her (her ass, for instance) been waiting around all these years just for the day that some big black buck would break and enter? Or was she more far-seeing? Was Mordecai just the necessary tool, a middleman between the coveted disease and her blood? Surely there was *some* element of the Faustian in her submission. Was it part of her plan even then to escape Camp Archimedes with her Promethean gifts? Did Pandora accept the stranger's box only that she might be able to open it the minute he was gone?

Tune in again next week.

72.

All day yesterday Haast was out of reach. It is morning—he still refuses to talk with me.

There is no indication yet on the television (no stir at the White House, no tremors on Wall Street, no rumours towards the truth) that an announcement is being prepared. Doesn't the government realise that the news *can't* be delayed? With 30 per cent civilian casualties, an industrial society simply cannot *cohere*.

And that is hardly the greatest danger. Consider the sheer disruptive force of so much undirected intelligence suddenly set loose. *Already* the institutions are beginning to show cracks. I doubt, for instance, that our university system will survive. (Or is that wishful thinking?) Religions are already taking off in all directions (e.g., Jacks). Catholicism should be able to maintain at least its clergy in line, thanks to celibacy.

But elsewhere it is exactly the people essential to stability who are likely to become infected: the communications industries, managerial suburbia, law, government, medicine, the educational establishment.

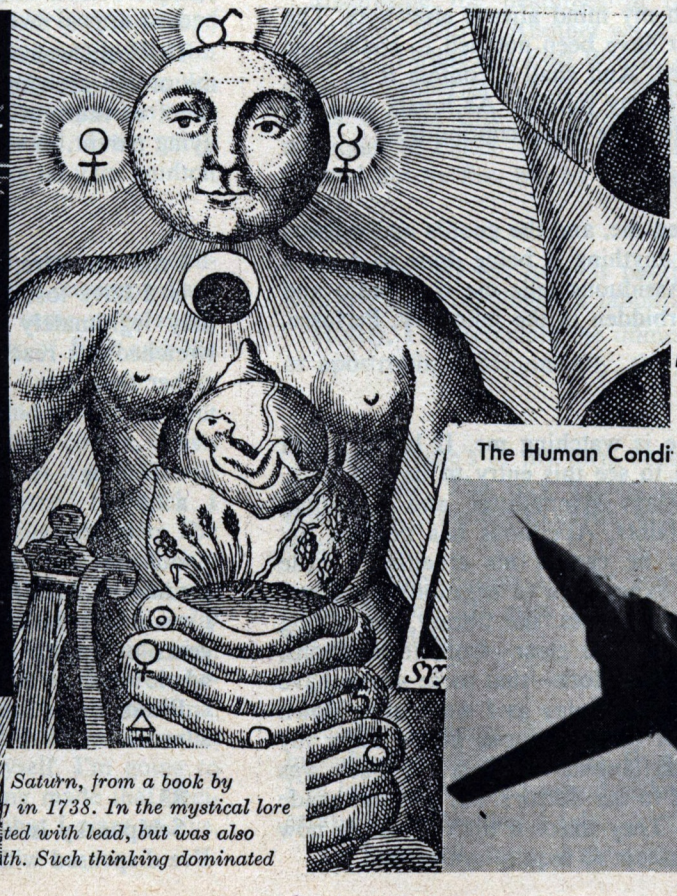
Oh, it will be a spectacular debacle!

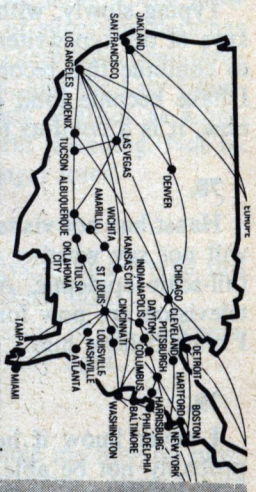
73.

My light is spent; I begin the long waiting.

Assiduous grows surly in his unaccustomed service. I am reluctant to tax his goodwill with new demands.







The Human Condi



4 Allegorical frontispiece depicting Johann Becher, published in Leipzi... of the alchemists Saturn was associa... considered a symbol of life and rebir... Saturn, from a book by ... in 1738. In the mystical lore ...ted with lead, but was also ...th. Such thinking dominated

Braille?

But my hands tremble.

There are still the visions of memory—walks in the Swiss hills (lovelier, really, than the mountains), that day along the shingle hunting shells and agates with Andrea, her smile, the unlikely purple of the veins beneath her eyes, and all the radiant still-lives heaped on the table-tops of the quotidian world.

74.

Laforgue wrote—*Ah, que la vie est quotidienne!*

But that, precisely that, is its beauty.

75.

Memory also has its musics (she should, after all, for she was the mother of the muses), both heard and unheard. Unheard are sweeter. I lie in my dark bed and whisper:

Brightness falls from the air;
Queens have died young and fair;
Dust hath closed Helen's eye.
I am sick, I must die.
Lord have mercy on us!

76.

I have not said it, have I? Not in so many words. Not in a single word: blind.

77.

Typing slowly, with my mind always elsewhere. The keys of my typewriter have been notched to enable me to continue this record. And shall I confess it at last? I have become fond of my journal. As lonely as I am now, it is a comfort to have some continuities.

78.

Haast has not visited me, and the guards and doctors will not say whether anything is being done to avert a full-scale epidemic. Assiduous tells me that radio and television are now forbidden in the infirmary. Perforce, I must believe him.

79.

I never know if he is watching me. If he is, I will probably not be able to see this entry to its end.

From being a distant sympathiser and a willing listener to my complaints, Assiduous has become my tormentor. Each day he carries his cruelties a little further in a spirit of experiment (a titration). At first I tried to frequent public places, the library, the dining hall, etc., but it has become clear—from insinuations, muffled laughter, a missing fork—that these scenes have acted as encouragements. Today as I was sitting down to my morning cup of tea, Assiduous pulled away my chair. There was loud laughter. I think my back was hurt. I've complained to the doctors, but fear has made automatons of them. They make it their principle now never to talk to me, except to inquire symptoms.

When I ask to see Haast, I'm told he is busy. The guards, seeing that I'm no longer relevant to the experiment, take their cue from Skilliman, who taunts me openly with my helplessness, calls me Samson, pulls my hair. Knowing that I've not been able to hold my meals, he asks: "What kind of shit do you think you're eating, Samson? What kind of shit have they put on your plate?"

Assiduous must be out of the room, or not reading what I type. I spent most of the day typing out poems in French to drive him off. I've made these same complaints in other languages, but as there's been no response I must assume that H.H. no longer bothers to have translations made of what I write. Or that he no longer cares what becomes of me.

Strange—that Haast has come to seem almost a friend.

80.

Schipansky visited me today, bringing two other quats—Watson and Quire. Though no word was spoken on the matter, the implication was that my silence has won the debate. (Given enough rope, the devil may always be relied upon to hang himself.)

Yesterday and the day before Schipansky had been told I was too sick to see him. He only got past the guards at last by enlisting Fredgren's help—and by threatening to go on strike. I'd been declared off limits by Skilliman. Fredgren, to get Schipansky into the ward, had to appeal over Skilliman's head to Haast.

The visit, welcome as it was, served chiefly to remind me of my growing alienation. They sat about my bed, silent or murmuring banalities, quite as if I were their dying parent, to whom nothing can be said, from whom nothing may be expected.

81.

I did not dare, while they were here, ask what date it is. I have lost track. I don't know how much time I may legitimately expect. I don't *want* to know. My wretchedness reaches that pitch that I hope it's sooner rather than late.

82.

Feeling
a little
better.

But not much. Schipansky brought Sarch's new recording of Messiaen's *Chronochromie*. Listening to it, I could feel the cogs of my mind slowly engaging in the gears of reality. Schipansky didn't say five words the whole while.

Blind, there are so few cues by which to interpret silences..

83.

Schipansky is not my only visitor. Assiduous, though I've dispensed with his services, often finds occasions to

play his little tricks on me, chiefly at mealtimes. I've learned to recognise his footsteps. Schipansky assures me that Haast has promised to restrain him, but how, after all, is one to be guarded against one's guards?

84.

Often after a painshot there is an epiphanous moment when the mind seems to pierce the veil of Appearance. Later, back in the real world, I look at the nuggets I've brought back from the far reaches and find they are fool's gold. Don't ask whom the joke is on; the joke's on me.

Chagrin—that the mind is, even now, no more than a tub of chemicals, its moment of truth a function of its oxidation rate.

85.

Thomas Nashe still haunts me. I tell his rhymes like rosary beads.

Physic himself must fade;
All things to end are made;
The plague full swift goes by;
I am sick, I must die—
Lord have mercy on us!

86.

Schipansky, Watson, Quire and a new convert Berness spent the day watching over me in rotation. This, in defiance (though they deny it) of Skilliman's explicit orders. Most of the time they pursue their own interests, but sometimes they will read to me, or we talk. Watson asked if, from my new and higher vantage, I would, given the chance anew, still be a conchy. I couldn't decide, and I suppose that means I would. How many things we do only to seem consistent!

87.

Schipansky has at last overcome his terror of confidences. Since the evening that Skilliman interrupted us, Schipansky has been engaged in the same unbalanced dialogue between the eloquent Forces of Evil and the reticent Forces of Good.

"I kept telling myself I had to find a *reason*. But reasons always came in pairs—pro and contra, thesis and antithesis, perfectly matched. At last it was a completely irrational consideration that turned the trick. I was listening to Vickers sing the hunting aria from *Die Frau Ohne Schatten*. Just that. And I thought—if only *I* could sing like that! I suppose it's impossible, of course, considering my age and everything. But I really wanted that, in a way I've never wanted anything else. And that must have been what I'd been waiting for, because afterwards there just didn't seem to be a dilemma.

"If I ever get out of here, and if I don't have to die, that's what I'm going to do with myself. I'm going to study voice. And knowing that, having made that decision, I feel . . . just great. And now that I want to live, the hell of it is I won't."

"What do you intend to do with the time that's left here?" I asked.

"I've started to study medicine, actually. I've already had a fair amount of biology. It isn't hard. So much of what they have to go through in medical school is really beside the point."

"And Watson and Quire and Berness?"

"The project was Watson's originally. He has the ability, which I envy him, to believe that what he's doing at any moment is the only logical and moral thing that can be done. Skilliman couldn't get anywhere talking with him, and his pigheadedness is a help for all of us. Also, now that there are four of us—five if we can count you—it's easier not to be upset by what he says, the threats he makes."

"Do you think there's any chance?"

Minutes of silence. Then: "I'm sorry, Mr. Sacchetti. I forget that you can't see me shake my head. No, not really much of a chance. Finding a cure will always be a matter more or less of trial and error. It takes time, money, equipment. Mostly, it takes time."

88.

H.H. tells me that the officers of his nefarious corporation refuse to admit the existence of the epidemic. Several doctors who have discovered the spirochaetae independently have been paid off or silenced in some less congenial way.

Meanwhile the headlines in the newspapers grow daily more bizarre. Another wave of super-murders has started in Dallas and Fort Worth. There have been *three* museum robberies in a single week, and the City Council of Kansas City has hired Andy Warhol as Commissioner of Parks. Truly, the world is ending. Not by ice and not by fire, but by centrifugal force.

89.

A stroke. My left hand is paralysed, and I type this with my right forefinger, a laboursome task.

Mostly, I contemplate the immensity of my darkness, or apostrophise, Miltonically, the holy light.

90.

Songs, Nashe's or my own, console me now no more than Muzak. The very highest thoughts, pierced with this dread, plummet to earth, snapping the branches of trees.

The hunter comes upon it, not quite, it is not quite dead. A wing lifts, goes limp, and lifts again. Not quite, not quite dead.

91.

Flesh falls apart. The lungs strain, and the stomach manufactures incorrect acids. Every meal nauseates, and I've lost 30 pounds. I would rather not walk. Heartbeat erratic. It hurts when I talk.

Yet I am *still* afraid of the darkness, of that dark box.

92.

If only I *were* a cocoon! If only one might believe the dear old metaphors! If only, in these last days, I might become a little more stupid!

93.

Skilliman has gone off to fetch guards, while Quire seeks Haast. There has been something like a confrontation, which, briefly, to recount:

Schipansky & his 3 friends came to my bedside, bringing 2 more quats. With these on our side, Sk's assts will be split evenly 6 to 6. Conversation revolved, as ever, around the poss. of a cure. Today we must have reached critical mass, for we at last broke out of the usual rut of purely medc. solutions. Among the doz. & more unpracticeable conceits there may be *one* that will turn in the lock! (Tho it was no doubt by such desperate reasoning that M. fastened on his alchemic project.) We talked of: studies in mech. brainwave duplication & storage; Yoga & other methods of susp. animation, such as freeze-drying, until such time as a cure is developed; even, so help me, time travel—&, as an equiv., interstellar voyaging for a sim. purpose, i.e. returning to a world that would be (in an unrelativistic sense) in the future. Sch. even put forward the suggestion that a global effort to wrest some response from God might be made, since we are after all asking for miracles. Bold Berness suggested escape (!!!!) to which I obj. that there is so little opport. for secrecy that our plot would have to be able to work even if the guards knew of it from the start. Time is up. A pity, I did so want to reach 100.

94.

The Lord is my light and my salvation; whom shall I fear? The Lord is the strength of my life; of whom shall I be afraid?

When the wicked, even mine enemies and foes, came upon me to eat up my flesh, they stumbled and fell.

Though an host should encamp against me, my heart shall not fear: though war should rise against me, in this will I be confident.

One thing have I desired of the Lord, that will I seek after; that I may dwell in the house of the Lord all the days of my life, to behold the beauty of the Lord, and to enquire in his temple.

I am so splendidly, so wildly, so simply, so against-all-expectation *happy*! I am overcome by happiness as by some gigantic benevolent steamroller, crushed by Goodness. I can see. My body is whole. My life is given back to me, and the world, the lovely home-again world will not go off to Armageddon without at least a chance to refuse its marching orders.

I am obliged, I fear, to explain. But I only want to sing!

Sequence, Sacchetti, sequence! A beginning, a middle and an end.

Entry 93 above was terminated by the re-arrival in the infirmary of Skilliman with a number of guards, among them Assiduous.

"All right, my little pus-faces, it's time to take yourselves away. Mr. Sacchetti is much too sick to be receiving visitors."

"I'm sorry, Doctor, but we're staying here. We have Mr. Haast's permission to do so, you know." This, quaveringly, from Schipansky.

"You will either, the six of you—where is Quire?—walk out that door by your own power and instantly, or you will, one by one, be carried out. And I have asked the guards to exercise such small brutalities as they find, in conscience, they may. Would someone please remove that disagreeable hand from that noisy typewriter?"

It was, expectably, Assiduous who undertook this task. I tried to turn away from the typewriter with an appearance of calm, but Assiduous must have been quite close by (were the guards by now dispersed throughout the room?), for he was able to catch hold of my right hand and, in pulling me from my chair, to twist it with an exquisite sense of the excruciating. A little gasp of satisfaction broke from his lips. The pain did not quit me for minutes, indeed not till the very end.

"Thank you," Skilliman said. "And now, gentlemen, to demonstrate. . . ."

This ellipsis was occasioned by the arrival of Haast with Quire. H.H. began in a puzzled voice: "I've just been led to understand—"

"Thank heaven you've arrived, General!" Skilliman burst out, improvising coolly. "A very little longer and you might have had a full-scale mutiny on your hands. The first thing you must do—before I can discuss the present danger with you—is to have these young men sent each to his own chamber."

The six quats interrupted with a clamour of protest and explanations, but above these turbulent waters Skilliman's shrill oratory overarched, a distinct hyperbola of steely orange: "General, I *warn* you—if you do not separate these young conspirators, each from each, the security of Camp Archimedes will be gravely jeopardised. As you value your career and good name, sir, take my advice!"

Haast gave only an ambiguous mumble, but must have accompanied it with a sign for the guards to obey Skilliman. The quats were taken, protesting, out of the room.

"I think," Haast began, "that you may be magnifying a mountain into a molehill." He stopped, sensing he'd gone wrong somewhere, puzzling it out.

"May I suggest, General, before we discuss these matters any further, that we leave Sacchetti to the attentions of the medical staff. There are . . . some things . . . I would not want him to hear."

"No! He has some reason for asking that, Haast. Settle my fate now and before me, or it may be a point-

less discussion. I *suspect* him."

"Bother his suspicions! It's *security* that's at issue. Or if you must let the corpse have its way, then let it accompany us above."

"Above, where?" Haast asked.

"*Above*—you've given me your permission to ascend there often enough before this. Why do you baulk now?"

"Baulk? I'm not baulking! I just don't understand."

"I don't want to discuss the matter *here*!"

(Even now I am not sure what Skilliman's intention had been in insisting on this point, which was to prove decisive in so unforeseeable a way. For surely, it *was* unforeseen? Was it simply a conviction that if he could have his way, all arbitrarily, in this, he could have it in any matter?)

"All right," Haast said, his age audible in the (ever more customary) acquiescence of his voice. "Help Sacchetti along, will you?" he asked of the guards. "And find some sort of overcoat for him. Or blankets. It's cold up there."

It was many times over the longest trip I've taken on one of our elevators. The six of us (Assiduous and two other burly guards were required to prevent my escape) made the ascent in a silence perfect but for the popping of my ears.

Without the elevator cage, Haast said, "And now you really must stop this mystery-making and explain what is the matter. What has Louis done that is so dreadful?"

"He has attempted a mutiny, and he has very nearly brought it to success. But it wasn't here I wished to go. It will be safer . . . outside."

The guards led me, a hand in each oxter, across the uncarpeted floor, through one door, through another, and then I felt a breath on my face, like the breath of a beloved whom one has believed dead. I stumbled down three steps. The guards released their grip.

Air!

And beneath my slippered feet not the Euclidean spareness of concrete but the unaccustomed and various-textured earth. I cannot say just what I did, whether I cried aloud, or if tears fell from my blind eyes, or how long I continued with my face pressed against the cold rock. I was beside myself. I felt such a degree of happiness as I had never felt in my life before: because this was the actual air and undoubted rock of the world from which, so many months before, I'd been removed.

They had been talking together perhaps several minutes. I cannot remember now if it was Haast's amazed *What!* that roused me, or the extreme cold, or simply the returning sense of my danger.

"Kill him," Skilliman said levelly. "Now, you *can't* ask me to be clearer than that."

"Kill him?"

"While he's trying to escape. You see, his back is turned on us. He's lost his blankets in his flight. You were obliged to fire. It's a scene absolutely hoary with tradition."

Haast must have indicated some further reluctance, for Skilliman pressed on:

"Kill him. You must. I have shown logically how his continued presence at Camp Archimedes can have but one consequence. His increasing intelligence will soon make it impossible for *any* of us to be quite certain when we're with him just what kind of clever web he's tying round us. I told you what he was talking to them of today—escape! He said it would have to be an escape that could be made despite that we had overheard all their plans! Imagine the *contempt* he must feel for us! The hate!"

I could see, in imagination, Haast's head swaying weakly from side to side. "But . . . I can't . . . I can't. . . ."

"You must! You *must! You must!* If not you yourself, then designate one of the guards. Ask for a volunteer. One of them will be willing to assist you, I'm sure."

Assiduous presented himself at once, with assiduity. "Me, sir?"

"Stand back, you!" Haast said, with no trace of weakness in his voice. Then, in a diminished manner, to Skilliman: "I couldn't allow one of the guards . . . to. . . ."

"Then use your *own* gun, sir. Unless you do it, and at once, you will never be sure that you're not caught, already, in his web. You've created this Frankenstein monster, and you must destroy it."

"I could not, myself. I've known him . . . too often . . . and. . . . But you? Could you? If the gun were in *your* hand?"

"Give it me! I'll answer you direct."

"Guard, give Dr. Skilliman your gun."

In the long silence after this exchange I stood up and turned around, to receive the rawness of the wind in my face.

"Well? Well, Sacchetti? Don't you have something you'd like to say? A couplet to leave as legacy? Another cheek?" There was that in the intensity of his voice that suggested that he was not quite securely mounted in the saddle of his will.

"One thing. To thank you. It's been so beautiful, coming here again. So inexpressibly beautiful. The wind. And . . . can you tell me, please? Is it night . . . or day?"

Silence in reply, then a gunshot. Another. Seven in all. After each my happiness seemed to bound to a new diameter.

Alive! I thought. *I am alive!*

The seventh shot was followed by the longest silence. Then Haast said: "It's night."

"Skilliman. . . ?"

"He fired his bullets at—the stars."

"Literally?"

"Yes. He seemed to be trying especially for Orion's belt."

"I don't understand."

"You weren't, in the showdown, a big enough target, Louis, for the considerable grandeur of his spite."

"And the last bullet? Did he commit. . . ?"

"Perhaps he wanted to, but didn't quite dare. *I* fired the last shot."

"I don't understand yet."

In a baritone thickened by catarrh, Haast hummed the tune of *I'm Building a Stairway to Paradise*.

"Haast," I said. "Are you. . . ?"

"Mordecai Washington," he said. He laid two blankets back on my shoulders. I began to consider.

"We'd really do best now to return downstairs."

95.

Elements of a Denouement.

Haast/Mordecai conducted me to the room just off the old theatre where, when I was building my Museum of Facts, the equipment from his Magnum Opus had been stored. The guards were more preoccupied with Assiduous than with me: Ass. made loud, baulking protests at their rough handling.

The equipment was set up as it had been on the evening of the great fiasco (as I had then judged it). Ass. and myself took the places, respectively, of Haast and Mordecai. With a numbed, grateful suspension of all ratiocination I allowed myself to be strapped and fitted. I must by then have realised, if whisperingly, what was afoot, and I must hold myself to blame for the consequences. I remember going blank when the switch was thrown. Opening my eyes I saw. . . .

And that was half the wonder—*I saw*!

. . . . my own body, a sack of diseases and old flesh, very nearly dead. That body stirred; its eyes opened—to darkness; its hands moved up to its face; its face screamed.

I looked down at my own flesh with an almost swooning admiration. *May* I call it my own? Or does it belong, in large part yet, to Assiduous?

96.

Elements of a Denouement, continued.

Mordecai explained how, in their first months in Camp A., a code had been devised by which the prisoners could communicate secretly without arousing suspicion. All their "alchymical" twaddle had been a crypt, a code of more than Egyptian complexity and complicated by frequent flights of free-form fancy—static, in effect—the better to boggle the N.S.A. computers. Once this language had been established, several researches were undertaken, but the most promising proved one which Schipansky *et al* had touched on peripherally at our recentest brainstorming: mechanical brainwave duplication and storage, following the lines of Frawley's work at Cambridge. The consideration that had stopped *us* had been how to get the brain-thing *out* of storage. The only sensible container for it would be another human body.

Mordecai and his fellows drew this conclusion, and the next—that any device they developed must accomplish recording and playback at one go. *I.e., it would be a mind reciprocator*. That they were able to develop such an instrument with a minimum of actual experiment, maintaining all the while the imposture of the "Magnum Opus", that they could design it in a manner that disguised its intended use from the electronics engineers who had been called in to testify to its innocuity, and that they could bring it to so successful an issue at its first operation—this is the most awesome testimony that I have yet seen to the power of Pallidine.

(One small after-the-fact irony. I had seen the wiring diagram for the main component of the reciprocator hidden in the manner of Poe in the jumble of papers on M.'s desk. It was the drawing I'd found in George Wagner's *Expense Book* of a "king" and the lattice of heads.)

97.

Elements of a Denouement, concluded.

It was a happy accident that Haast's mind, finding itself suddenly in Mordecai's exhausted frame, should panic so hectically as to produce an embolism. Mordecai maintains that it was the thought of being a Negro.

To think of Haast being dead these many months and my visiting with him all the while! Going back over it, I see that many of the changes I'd observed in Haast might have been read as clues, but on the whole it was an immensely well-executed imposture.

But to what purpose, this imposture? Mordecai explained the necessity of a gradual takeover, pointing out that he could only exercise Haast's authority so long as he behaved in a plausibly Haast-like way. A prisoner even after he'd become the warden!

Gradually the other prisoners (The Bishop, Sandemann, etc.) used the mind reciprocators to infiltrate the staff of Camp A., taking sometimes a member of the medical staff and sometimes a guard as their "replacement bodies". One of the strangest consequences of my arrival here was that by the example of my non-violence I persuaded three of the prisoners, Barry Meade among them, to forego "resurrection". Each chose to die his own death rather than to condemn someone else to it.

It was for fear that I would have insisted on a similar self-sacrifice that Mordecai maintained his mystery till the very end, till I had inherited, irreversibly, my victim's flesh. Would I have insisted on martyrdom? I am so in love with that flesh, with life and health, I cannot believe it. I probably would have!

98.

Meanwhile, the future. The search is already well under way for a vaccine. Hope shines bravely from twenty accessible peaks. And if we go down, we'll at least go down fighting.

So, sing heigh-ho!

99.

No, it is not as jolly as all that. There is terror too. Behind the mask of Haast/Mordecai's face lurks the dark knowledge of another, further-off future, of a height beyond the first rosy peaks, of a coldness and strangeness extreme as death. Valéry is right! Finally the mind *is* destitute and bare. Finally it is reduced to the supreme poverty of being a force without an object.

I exist without instincts, almost without images; and I no longer have an aim. I resemble nothing. The poison has had not two effects—genius and death—but one. Call it by which name you will.

100.

A good round number to end on.

It is December 31, another tidiness. Today Mordecai said: "Much that is terrible we do not know. Much that is beautiful we shall still discover. Let's sail till we come to the edge."

THE END

An Age continued from Page 14

liquid was a symbol of the hydrosphere, sacrificial wine to represent the oceans from which life had come, oceans that still regulated and made habitable his external world, oceans that still provided food and climate, oceans that were the blood of the biosphere.

And he himself was a biosphere, containing all the fossil lives and ideas of his ancestors, containing other life forms, containing countless untold possibilities, containing life and death.

He was an analogue of the world; through the CSD, he could translate from one form to the other.

Only in that transitional state, as the drug took effect, could one begin to grasp the nature of the minute energy-duration disturbance that the solar system represented. That system, a bubble within a sea of cosmic forces, was part of a meta-structure that was boundless but not infinite with respect to both time and space. And this banal fact had only become astonishing to man because man had shut himself off from it, had shielded his mind from the immensity of it as the ionosphere round his planet shielded him from harmful radiations, had lost that knowledge, had defended himself from that knowledge with the concept of passing time, that managed to make the universe tolerable by cutting off—but the immense time of it. Immense time had been chopped into tiny wriggling fragments that man could deal with, could trap with sundials, sandglasses, pocketwatches, grandfather clocks, chronometers, which succeeded generation by generation in shaving time down finer and finer, smaller and smaller . . . until the obsessive nature of the whole procedure had been recognised, and Wenlock and his fellow workers blew the gaff on the whole conspiracy.

But the conspiracy had been necessary. Without it, unsheltered from the blind desert of space-time, man would still be with the other animals, wandering in tribes by the rim of the echoing Quaternary seas. Or so the theory went. At least it was clear there had been a conspiracy.

Now the shield was down. The complexities of the cerebrum and cerebellum were naked to the co-continuous universe: and were devouring all they came across.

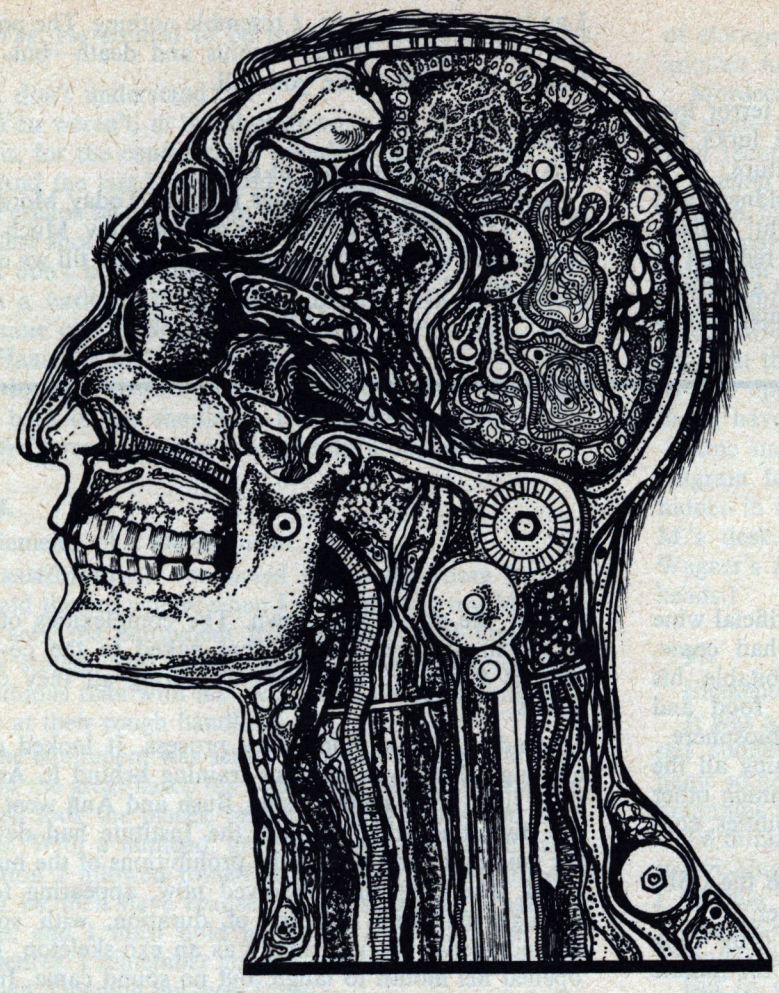
Minding was a momentary process. It looked easy, although there was rigorous training behind it. As the CSD tilted their metabolisms, Bush and Ann went into the discipline—that formula the Institute had devised for guiding them through the prohibitions of the human mind. The Devonian dissolved now, appearing to be a huge marching creature of duration, with spatial characteristics serving simply as an exo-skeleton. Bush opened his mouth to laugh, but no sound came. In the exhilaration of travel, one lost most physical characteristics. Everything seemed to go, except the sense of direction. It was like swimming against a current; the difficult way was towards one's own "present"; to drift into the remote past was relatively easy—and led to eventual death by suffocation, as many had found. If a foetus in the womb were granted the ability to mind-travel, it would be faced with much the same situation: either to battle forward to the climactic moment of birth, or sink easefully back to the final—or was it first?—moment of non-existence.

He was not aware of duration, or the pulse within him that served as his chronometer. In a strange hypnoid state, he felt only a sense of being near to a great body of reality that seemed to bear as much kinship to God as to Earth. And he caught himself trying to laugh again.

Then the laughter died, and he felt he was in flight. Ages rolled below him like night. He was aware of the discomfort of having someone with him—and then he and Ann were surrounded by a dark green world and reality as it was generally experienced was about them again.

Jurassic reality.

(To be continued)



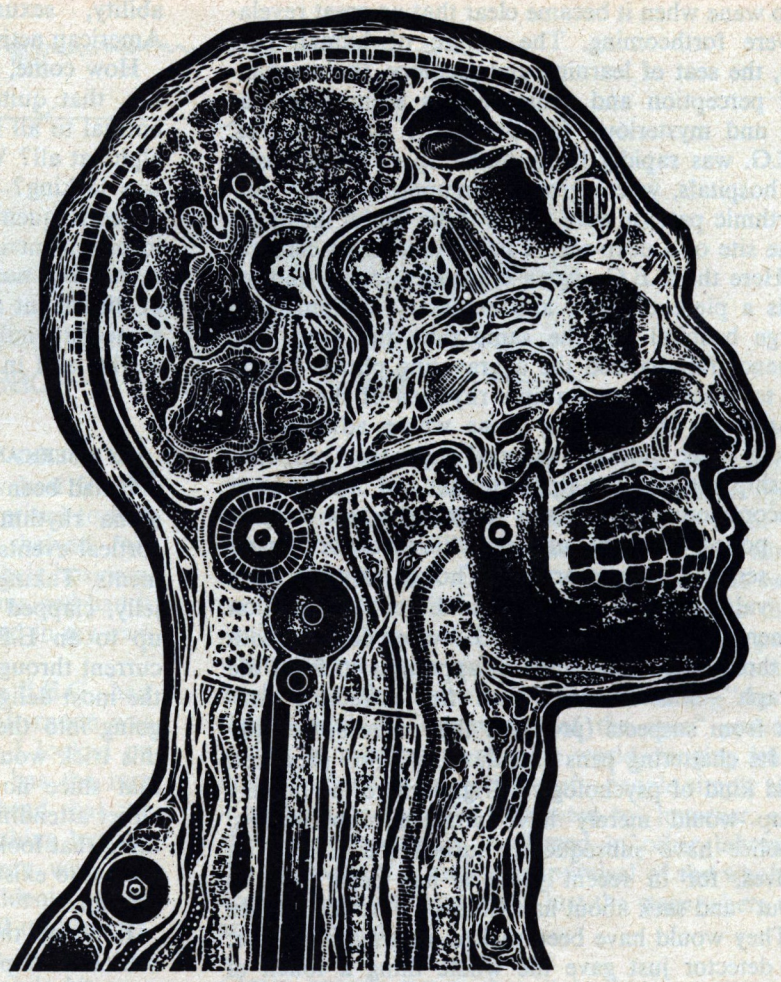
DR CHRISTOPHER EVANS:

EVENTS ARE MOVING fast in the behavioural sciences, and to the psychologist, the physiologist and that new breed of egghead, the cybernetician, has come the feeling that breakthroughs in our understanding of human cerebral processes are imminent, and even under way. It's all been a long time coming, of course, though understandably because of the awesome complexity of the brain and also because of its bloody-minded inaccessibility. As I've tried to point out in two previous articles, however, things really do seem to be on the move. At the same time, one continues to remind oneself that there have been moments of great optimism in the past which turned out ultimately to disappoint the research workers of the time. A particularly good example can be found if we look back to the early 1930s, when a major technological development—the electroencephalograph—led many scientists to the belief that a stupendous tool for the exploration of the living brain had fallen into their hands. Over thirty years of painstaking research, however, brought to many the glum realisation that not much had been achieved, and now, following a curious twist of circumstances and a chance observation of an isolated occurrence, the whole topic has been pitched into the open again. Once more the lesson has been rammed home—when dealing with the brain, things are seldom what they seem.

THE BRAIN IS made up largely of a mass of nervous tissue, cell bodies, connecting fibres and nutrient fluid, and it has been obvious for over a century that all this is concerned with the processes of perception, learning, memory and with the co-ordination of the body's motor activity. The nature of the nervous impulse, as a form of electrical activity, has also been generally well understood; and to most workers dealing with the brain's internal machinations, it was quite obvious that this organ must be the source of a great mass of electrical impulses and signals of one sort or another. The chances of anyone being able to make much sense out of what would seem most likely to be a chaotic explosion of activity were thought to be pretty remote, but it still seemed worthwhile attempting to devise a method of recording it *in case* some pattern was discernible.

The ponderous nature of electrical recording systems in the 1920s precluded widespread research, but in 1930 Hans Berger published his pioneer paper reporting apparently systematic electrical output from human brains. These studies were vigorously taken up by the great English physiologist E. D. Adrian (now Lord

THE INCONSTANT ALPHA



Adrian) and his colleague B. H. C. Matthews, who, working with bird's nest electrical equipment, fastened electrodes to the scalps of their subjects, and by suitably amplifying the tiny signal received were able to sit back and watch the electrical activity of the interior of the brain sputter out from the pen recorders.

Their first results were tremendously encouraging. Far from being a weird tangle of bursts and spikes, or huge random surges of activity or inactivity, strange but consistent rhythmic patterns were clearly emerging on the records. All sorts of rhythms were soon detected, some slow, some fast, some of low and some of high amplitude. The pick of the bunch, however, was one at about ten cycles per second, with nice even humps and a peculiarly positive and enticing look. Suitably enticed, Adrian and Matthews set about trying to find out the necessary conditions for its occurrence, and it soon emerged that the "alpha" rhythm (as it came to be called) occurred mainly when the individual was sitting with eyes closed and mentally "relaxed". Inviting subjects to open their eyes destroyed the alpha rhythm (Fig. 1) as did the imposition of some task such as mental arithmetic. Eyes closed and relaxed again, alpha would slowly begin to reappear and finally would dominate the record.

Speculating cautiously, the early workers considered that the phenomenon appeared to be linked to some such mental state as "attention"—the alpha could be looked upon as a basic "resting" rhythm, indicative perhaps of the summated peaks of thousands upon thousands of nervous impulses firing in harmony. The switching within the brain from this relaxed, non-directional state to one of "attention", "looking" (eyes open) or direct action of some kind would cause a disruption of the neural synchrony, and a consequent flattening of the rhythm. Adrian and Co. then moved on with their exciting new box of tricks to record, identify and measure a whole lot of other cortical rhythms, occurring with different frequencies and under different circumstances, and thus the science of electroencephalography was born.

AS THE YEARS passed, scientists all over the world began to publish accounts of their experiments, giving details of new wave régimes — beta waves, gamma waves, delta waves, etc. — and for a while it looked as though, once the tangle had been sorted out, a vital key to the understanding of the brain would emerge. But after a while initial enthusiasm

began to wane when it became clear that no great revelations were forthcoming. The nature of human personality, the seat of learning and memory, the mechanisms of perception and consciousness seemed just as obscure and mysterious. On the credit side, however, the E.E.G. was rapidly being taken up as a diagnostic tool in hospitals, where gross interruptions of the normal rhythmic pattern were found to be useful in identifying the site of a deep-seated brain tumour or cerebral lesion. Here the E.E.G. was a crashing success, and today it is a piece of basic and necessary equipment in any large hospital. At the same time the press and Pop Science familiarised the aggravating phrase "brain waves" to describe the multiple rhythms of the cortex.

In America, land of big ideas where advances in technology are quickly snapped up, the proposed relationship between the alpha rhythm and conscious or even unconscious mental states suggested a new weapon for the police armoury, and the "lie detector" made its first sensational appearance. Though more or less totally valueless for extracting direct information about mental processes, the E.E.G.—when coupled with two or three other handy bits of apparatus to form the "polygraph"—was a useful tool for extracting confessions from suspects (provided they were sufficiently naïve). Its chattering pens and flashing lights produced a special kind of psychological fright where the homely punch-up would merely have aroused stubbornness. (The police have subsequently turned the E.E.G. on themselves, for in recent years it has been used to "seek out" and sack about half Chicago's crooked police force. They would have been sacked anyway, of course; the lie detector just gave the whole thing a touch of authenticity.)

All this goes to show that the E.E.G. was put to jolly good practical use, and by the mid-1940s (as movie fans will have noted) the E.E.G., suitably tarted up, took its place alongside the bubbling retort as the most vital equipment in the laboratory of mad scientists making wolf-men or pastiche monsters.

MEANWHILE, BACK IN the real-life psychological labs, the E.E.G. was coming to be looked upon as a bit of a floperoo. No one could really put his hand on his heart and say that, after twenty years of technological improvement and the unrolling of thousands of miles of recording tape, the E.E.G. had really coughed up anything new about the way the normal brain worked. But still the experiments churned out, notably on the dramatic and almost omnipresent alpha rhythm, literally thousands of papers being published correlating alpha with breathing, with headaches, with intelligence, with hearing ability, with stupidity, with colour blindness, with acne, with extra-sensory perception, with toothache, with dreams, with eidetic imagery, with schizophrenia both paranoid and depressive, with good and bad intentions, with age and brain size, with alcoholism, with barometric pressure, with literary ability, sexual prowess, vitamin deficiency, un-American activities, with *anything*. Alpha was really *it*!

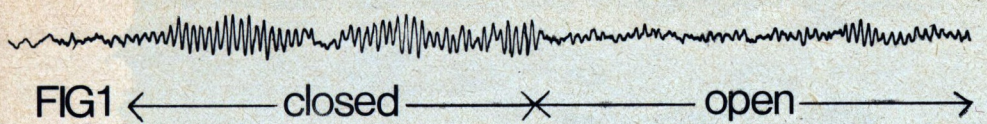
How come, then, a few picayune characters began to ask, that quite a high percentage of human beings—normal to all intents and purposes—simply didn't show alpha at all? What greatly significant part of their brain was lacking? This was the kind of question which is raised frequently in science, and because it's too damned inconvenient is put quietly away on the shelf. And so it was. But not without the sounds of growing murmurs of discontent and suspicion. Sooner or later, it was felt, someone would come along and throw a spanner in the works, and in 1959 someone did.

AN AMERICAN psychologist, one John L. Kennedy, who had been mightily dubious about the significance of alpha rhythm and its relationship to major electrocortical events, did some peculiar but ingenious experiments. Taking a round ceramic bowl, he filled it with jelly, clapped a pair of electrodes on it and geared it up to an E.E.G., then passed a mild steady electric current through the jelly. Out on the E.E.G. trace came the most delightful looking alpha rhythm. Now without going into the details of why Kennedy suspected that this trick would produce "alpha", we can certainly see that since no one could accuse the bowl of jelly of either attending or not attending, the recording of something that looked awfully like alpha from it was a bit of a blow to existing theories of the origin of this particular rhythm.

Kennedy then went on to propose another possible source for alpha—that the brain's jelly (the gooey mixture of neurones and fluid encased in the skull) might be oscillating at its resonant frequency due to the rhythmic activity of the blood pulse. To test this hypothesis he got hold of one patient who had a small hole in his skull due to an old injury, and through which a distinct pulse could be detected. This patient, incidentally, was one of the five per cent of adult human beings who exhibit little or no alpha. Taking a plastic plate, Kennedy then plugged the gap in the man's skull, thus raising the pressure within. For the first time, alpha rhythm appeared on the man's record. Kennedy finished off a short but iconoclastic paper by suggesting that perhaps this explained the rather odd fact that young children never exhibit alpha—until their fontanelle has closed up!

Kennedy's paper was an embarrassment to the whole field of electroencephalography (or to those who believed it). Could it be that the miraculous alpha was not the record of thousands of cortical neurones firing away importantly, but merely a *mechanical* phenomenon related to the blood pulse and to intracranial pressure?

As a student I had come across the Kennedy paper, and being of a naughty and irreverent turn of mind had chuckled at the furore it must be causing—little realising that within a few years I would be involved in it myself. At the time I paid no more attention to it, merely making a mental note to treat electroencephalographers,



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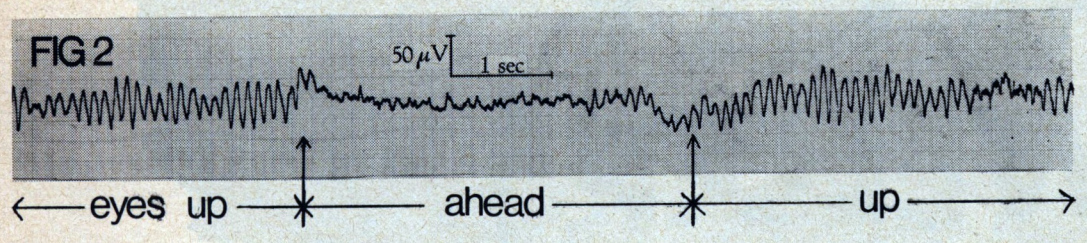


should I ever meet any, with a pinch of salt. In due course I met several (in fact, some of my best friends are electroencephalographers) and was surprised to find that the Kennedy paper had been tacitly shelved, forgotten or politely mislaid. Well, that was their business, and none of mine, and so it would have remained had it not been for an odd experience that occurred in my own laboratory.

An American colleague, an expert on the E.E.G., had set up some portable apparatus and one afternoon was idly recording his own brain waves while I looked on vaguely. Now this particular psychologist has the rare ability to roll his eyes so far up in his head that the pupils vanish and one can barely see anything but the whites of his eyes. He amuses his children with this trick and can be boring at parties. Suddenly, while hooked up to the E.E.G., he decided to roll up his eyes, and to both our amazements we saw quite gigantic and very sustained bursts of alpha occurring *while his eyes were rolled up* (Fig. 2).

Now this is the point to recall that, if anything consistent had been found out about alpha in the past, it was that it is only supposed to be present when you are relaxed, not doing anything, and certainly not attending. And it's supposed to vanish, but *quickly*, whenever you start to "attend" or to put any effort into anything. And yet here was the alpha showing up in giant bursts just at the point when maximum effort was taking place! The effect seemed to be too mad to be true. A technician was pulled in from another lab, zipped up in electrodes, etc. and asked to roll his eyes up as far as he could. To our amazement, and I may say, delight, he showed the effect too, as did a goodly number of other subjects tested. We immediately dubbed the phenomenon "improper alpha", and set out to map it thoroughly.

I'm afraid there isn't the space to go into the details of all the ramifications of the experiments we tried in order to check that we had really come up with something significant. One obvious criticism had to be overcome. You will remember that closing the eyes (letting in less light) causes alpha to appear; clearly, rolling the eyes up might be considered to be cutting down light a good deal, and thus to promoting alpha (forgetting the business about "attention" or "effort"). To counter this criticism we hooked the E.E.G. apparatus up to a motor-car spotlight held a few inches in front of the subject's eyes. The gadget was rigged so that whenever alpha appeared on the record, the spotlight was switched on, thus directing a bright beam of light into the subject's eyes. Despite this, the huge alpha bursts persisted when the eyes were raised. Our paper, "An unexpected artefact in the human E.E.G. concerning the alpha rhythm and the orientation of the eyes" provoked a variety of reactions across the world, ranging from sardonic humour to sharp disbelief—people simply thought it couldn't be true. As time went by, however, and the effect was repeatedly confirmed in other laboratories, the necessity of a radical reappraisal of the whole topic became obvious. And that's just the stage where we are at this moment.

SOME PEOPLE THINK that alpha is now something as simple as the amplified picture of the eyes' natural tremor — a mechanical explanation like Kennedy's. Others think that what we are playing with is something not *really* alpha, but something very, very like it. O.K., but how do you tell which is which? Latest news is that recordings from the E.E.G. of astronaut Frank Borman exhibit some peculiar waveforms. No doubt there's more to come. Personally, I haven't the faintest idea what the "improper alpha" (or "bloody-minded alpha") signifies, but I do know that it makes things pretty awkward for current theoretical structures. Of course one lesson that can be learned from all this is that gigantic, technically brilliant scientific equipment isn't necessarily a short-cut to quick answers. Twenty years ago, I think most people in the business would have thought of the electroencephalograph as being one of the technological marvels most likely to lead to a rapid understanding of the brain's basic processes. Apart from its very real value in diagnosis, however, the truth is that whatever its future, the E.E.G. has been to date a big disappointment. And of all the basic rhythms discovered, the most favoured and promising of the lot—alpha—now looks like being the most suspect. One thing is sure, though: far from being finished, the Great Brain Wave Mystery is just beginning.

THE CITY DWELLERS

BY CHARLES PLATT

YEARS PASSED IN the deserted city, and the broad faces of the tall buildings, once so clean and new, aged and decayed a little more with the passing of each season. Concrete cracked in the winter frost and crumbled in the summer sun; brickwork and masonry split and fell into the streets below. Rain and snow dulled the tinted, plastic panelled façades with streaks of grime and filmed the wide windows with grey dirt. The massive supermarkets, office blocks and apartment buildings settled further on their foundations each year; until the proud buildings were crumbling, subsiding, timeworn and dying.

The streets became clogged with fallen rubble, bricks and broken glass, steel sections and concrete chunks sprouting rusted iron teeth. Rainwater collected in dirty pools where the asphalt of the six-lane boulevards had subsided into hollows.

The city, almost empty of people, was now stark and desolate, and had entered the last stages of its own death.

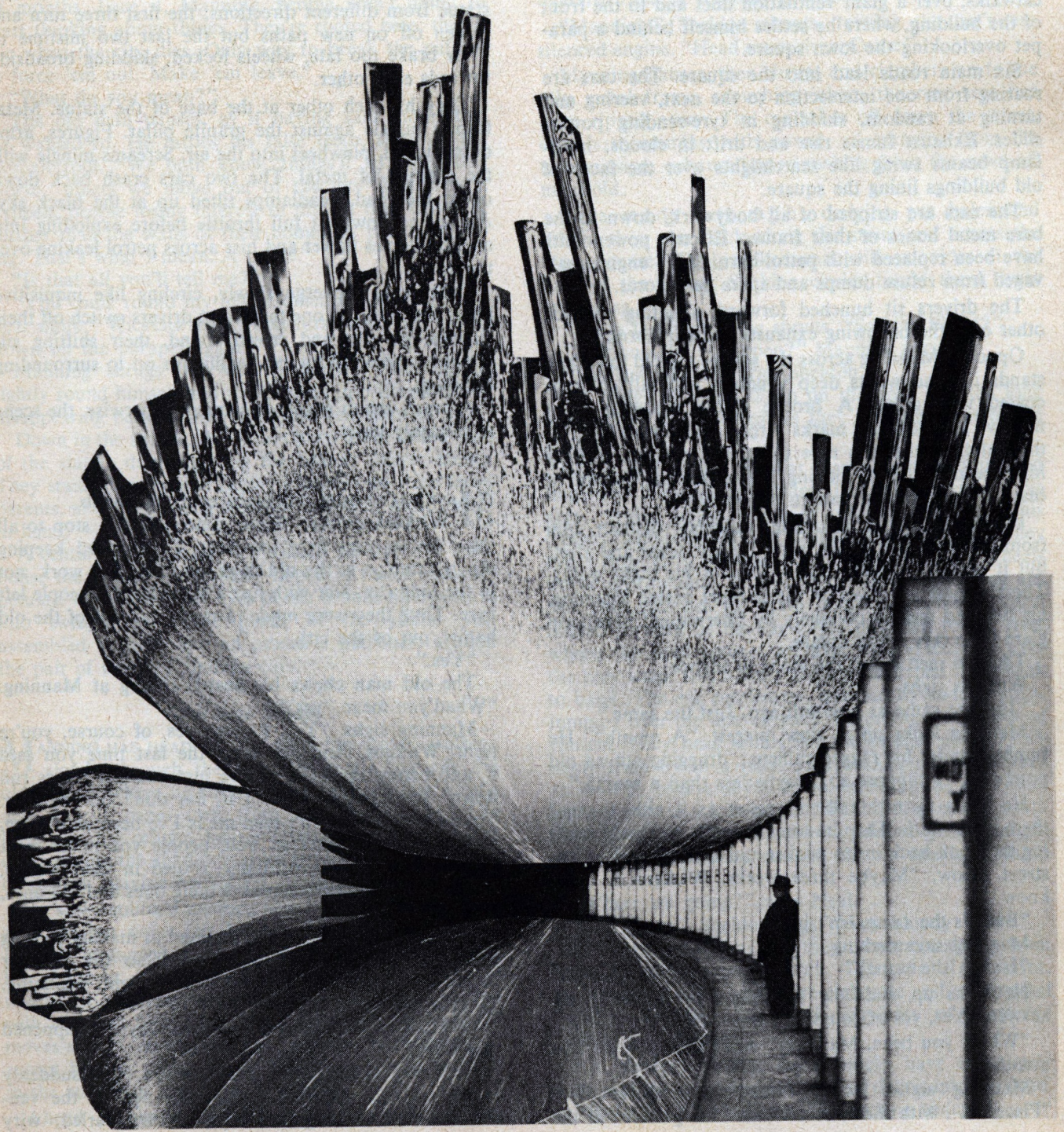
The Bronze Statue

IT HAS BEEN a long, cold night; heavy storm clouds have covered the moon, and great gusts of wind have swept intermittent showers of fine rain through the empty city streets. Now, at the horizon, pale dawn light is just starting to filter through the overcast sky.

Manning walks quietly along the rust-roughened steel monorail line leading through between the tall buildings to what was a civic centre a century ago. He has been up all night wandering through the city, but is still restless and untouched by sleep.

He follows the elevated rail in under the broken roof of the terminus and leaps across to the platform. Skirting piles of rubble, he gropes his way to the broken automatic ticket gate, vaults it and walks down the littered treads of an escalator.

Out in the street he moves softly and warily, often pausing, scanning the patterns of moonlight and shadow. The long streets are deep, dark canyons; the soot-black buildings tower either side.



A few blocks away, the cars have already assembled in the town square. The roar of their engines echoes through the deserted streets, rising and falling on the wind. Manning walks into an alley choked with great mounds of empty cans and food wrappers scavenged from an adjoining supermarket warehouse. He scrambles up the refuse heap, reaches the bottom of a fire escape ladder and pulls himself clear.

Up on the roof, four storeys above, he moves through a jungle of chimney stacks, inspection ladders and rusty catwalks, over a giant ventilation duct and to the front of the building, where he settles himself behind a parapet overlooking the town square.

Six main roads lead into the square. The cars are roaring from one intersection to the next, veering and turning at random, skidding in tyre-rending power-slides. Exhaust fumes rise and drift in clouds; headlamp beams swing like searchlights over the faces of old buildings lining the square.

The cars are stripped of all bodywork, down to the bare metal bones of their frames. Electric power units have been replaced with petrol-burning V8 engines salvaged from refuse dumps and spare part stores.

The drivers sit hunched forward, shouting to each other over the bellowing exhausts and car horns.

Opposite Manning across the square the old town hall stands in shadow, its deep windows and tall columns coated with grime. A bronze statue mounted on a massive granite pillar marks a road junction in front of the building; the cars race round the column, making high-speed U turns, moving like a shifting swarm of black insects without pattern or direction.

Footsteps behind Manning suddenly distract him from the scene below. He turns quickly, tense and alert; but it is only Wickens out on one of his night walks. The old man sits down on the parapet beside Manning, his bearded face lit obliquely by intermittent headlamp glare from cars in the square.

The two men watch the scene in silence.

Wickens sighs.

"Just the same as a month ago. Just the same."

Manning looks up in slow interest. "A month?" He fumbles under his ragged raincoat, dragging out an old notebook. "I suppose so. Maybe less than a month."

He flicks through tattered pages as if able to read them in the dark. Then he loses interest, carelessly stuffing the book back in his pocket and looking back at the street below. "Maybe three weeks, Wickens. I don't know."

"But it's the same, isn't it?"

Manning says nothing.

"Isn't it the same?"

He looks up, suddenly realising Wickens wants an answer. "Yes, yes of course it's the same."

"Where you been, Manning? Ain't seen you for two months."

Manning sighs, feeling forced into conversation. "Places . . . with them, sometimes." He gestures at the people in the cars.

Wickens scowls. "Wasting your time. It'll happen again the same as before and you can't stop it, Manning. Restlessness, sleeplessness, then riot night, next week, maybe even sooner. Same as a month back."

Manning automatically looks back at the scene below, eyes drawn to it. The driving is wilder, now. The cars—black silhouettes against white headlamp glare—weave and flash across road junctions, racing one another, paths crossing. Several head for the bronze statue from different directions; the first three turn and careen off on new paths but the last two mistime it. They brake too late, wheels locked, skidding broadside towards each other.

They hit each other at the base of the statue. Metal frames buckle against the granite pillar. Figures, arms outstretched, pinwheel into the air. Screams mingle with the rending of metal. The two cars crash back down on to the road, headlamps tilted up at the black sky. An engine howls at full throttle before exploding into silence; flames flower and hiss across petrol leaking over the road.

Other cars converge slowly, circling like inquisitive black flies. One by one they stop; drivers switch off their engines, get out and crowd round, their shifting silhouettes projected by car headlamps on to surrounding buildings.

A crash victim is still screaming. Otherwise, the scene is suddenly quiet.

MANNING STANDS UP, limbs cold and numb.

Wickens grunts, "Time someone put a stop to all this. We've been here too long. Civics tried keeping things same as in the old days but that can't work, not in the long run. Not with just a few hundred people left here. Time they were *made* to move out, out of the old habits, out of the city. . . ."

"Yes."

The old man chews his beard, staring at Manning. "Whad'you mean, 'yes'?"

Manning sighs. "Yes, I mean yes, of course, you're right, Wickens. And you were the last time you said it, and before that. But you've just watched things run down. You complain about it, but don't do anything. The reason you haven't seen me is I've been with *them*, with some older ones as well, people you never meet because they're dull, ordinary, rooted in their homes, stagnating like everyone else. Young ones and old ones, all of them stagnating."

Manning looks away, embarrassed at making so long a speech. But Wickens angrily clutches the younger man's arm, turning him round. "All right, Manning. What're *you* doing to sort it out?"

"For a start, trying to understand why it's happened this way."

Wickens cries out in exasperation. He suddenly jumps up and slams Manning back against the ventilation duct, seizing his throat with gnarled, wiry

fingers and shaking him angrily.

"You never damn well listen to me, do you? The times I've said, ain't no *use* trying to understand 'em. You wander around, talking to 'em, thinking about it all. . . . You call that doing something about it?"

Manning is standing limply, silently letting Wickens shake him to and fro, as if an independent witness to his own strangulation.

Wickens finally lets go and turns away, wrinkled hands trembling. "I been busy, just for once, last couple of months. Face it, Manning, people aren't going to start thinking about things. They're rooted here, they'll die when the city dies. Only way to break the pattern is force 'em out. Make 'em leave."

"What do you mean?"

The old man pauses, as if having said more than he wanted to. He rattles his false teeth, spits on the asphalt roof. "We both know, things'll go on getting worse unless we move out of the city. I've seen it happen, people losing interest in life till they can't see further than the walls of their homes. A purge, Manning. That's what I mean. A purge."

"Is that all you'll tell me?"

"You come round my place sometime. Maybe you'll hear more." Wickens scowls and turns his back, sitting down on the parapet again.

Manning shrugs. He wearily gathers his raincoat tightly round himself and walks away into the shadows, disappearing between the pipes and ventilator cowls.

Down in the square, the flames burn lower at the base of the statue, dimly lighting the bronze figures above. They stand in a stylised family group: two stern-faced parents, and their young children, innocent faced, hand in hand.

A century earlier the civics erected the statue to symbolise the formal society they hoped to foster and perpetuate. Now, the blank eyes of the bronze figures stare into twilight, over the heads of the youths still assembled silently, like an attentive audience, around the pair of wrecked, flaming cars.

The Iron Bridge

MANNING HAS HEADED away from the square, walking slowly through the deserted streets towards the old library, where he sleeps in a bed made like a rat's nest out of pages torn from an encylopaedia. The library is his refuge; he sometimes retreats there for days, pacing the shadowy aisles between the tall blocks of shelves, playing booktapes, reading filmstrips.

He seeks solitude instinctively. Born outside this city zone, he has never felt kinship with the people in it. Dressed in ragged trousers and heavy sweaters under his old coat he is as inconspicuously drab as the weathered buildings; his shoulder-length hair is matted with dirt and four days' beard roughens his face. He moves slowly, saying little, and the youths in their cars accept him as grudgingly as the older people huddled in the subsiding apartment buildings.

Ahead of him swift-moving clouds are laced with shifting dawn sunlight. He shivers, hungry, cold, achingly tired, yet knowing he cannot sleep. He is still restless.

Hearing a car engine from behind he stops and turns. The car is approaching along the street, weaving between heaps of rubble. Like the others in the square, its bodywork has been stripped down to the bare chassis. It skids to a halt as the people in it see Manning: he recognises Sheldon, dressed in red, driving, and Neal sitting beside him in mechanic's overalls. Neal is Wickens' grandson.

"Manning," Sheldon shouts, revving the car's unsilenced engine. "Head cross river. Come."

Manning pauses, then shrugs and clambers on to the oily metal frame, crouching where the rear seat has been ripped away. The car takes off down the street, chassis thrumming with power, oil spraying from the transmission, exhaust fumes gushing from the sawn-off manifold.

At a steady sixty m.p.h., dodging pot holes and debris, they roar back along the street and across the town square. The wrecked cars still smoulder at the base of the statue; Sheldon circles round them, tyres screaming.

"Great last night," he shouts. "See the blood?"

"Just how did it happen?" Manning asks.

"Fire and blood!" cries Sheldon.

He bangs his hand down on the horn and the long note echoes behind them as they accelerate out of the square.

Manning clutches the car frame with cold-numbed fingers as it sways under him. The wind bites into his skin, turning hands and face raw red, ripping at his clothes, whipping his hair into his watering eyes. They drive through a sudden rain shower and the wheels throw up fountains of spray into the cold morning air. Manning clenches his teeth and the youths in front crouch forward as the car heads downhill to the river where the road crosses an iron bridge hanging over the grey water like a rusty cobweb stretched from bank to bank. The car accelerates, buffeted by sudden gusts, jumping over the uneven road, fishtailing almost out of control. They head wildly for the bridge; girders suddenly flash by in a roar, then Manning falls forward as Sheldon brakes at full force, throwing the car round a sharp turn in a four-wheel drift, heading up the south riverside road. The rainshower clears; pale sunlight filters down; the road steams; the air smells of damp dust.

"Where we going?" asks Neal.

"Anywhere," Sheldon says. "Any bloody where."

His driving quietens and they turn more slowly from street to street heading south. This side of the river, buildings are older with more elaborate and ornamental façades. Repetitive, unitised simplicity of northside buildings is missing.

But decay is worse. Some blocks have completely collapsed in on themselves, spilling debris into the road.

"Badly built," Neal says. "Not strong enough."

"They were built better than our zone," Manning contradicts him. "But much earlier. Our buildings will be like this soon. Broken down."

"No. No, not like this."

"Yes," Sheldon cuts in, "they fall down, people killed, blood everywhere." He laughs.

Dressed flamboyantly in scarlet cape and trousers, Sheldon lives in a fantasy world colouring his view of reality and people around him. His dreams are as wild as his driving; his fantasies of gang leadership, violence and glamour merge with everyday events until he cannot distinguish between the two.

Neal, intelligent yet introverted and unimaginative, is by his dullness a completely opposite personality, and perfectly matched companion.

"Nothing lasts forever, Neal," Manning persists. "Not even the city."

"It'll last long as I need it."

"It won't, Neal. Northside buildings are already decaying."

He turns angrily in his seat. "I know what I know and all your arguing won't change me, Manning. Nor anyone else. We've all had enough of it."

"All I tell you is facts."

They drive on in silence. Ahead, the buildings end in total collapse; a heap of rubble dotted with vegetation blocks the road completely. The asphalt is split in a mosaic of weed-choked cracks.

"Dead," says Sheldon. He laughs, for no reason. "City's lost its life blood."

He stops the car. Neal fidgets uneasily. "Why don't we go back?" He looks away from the ruins. "Out of limits, here. Turn round, Sheldon."

Sheldon shrugs and U-turns in the road. This area has died. It has lain empty and unlived in for decades.

"It *will* end that way," Manning murmurs, still staring back.

THEY ARE ALMOST at the bridge again when Sheldon brakes violently, jumping out before the car stops, scarlet cape billowing behind him as he runs along the broken pavement.

Neal looks around, confused. Manning points at the bridge. A girl stands in the middle of the span, a hundred yards away, tall, thin and blonde. She turns warily, sees Sheldon, and tenses, ready to run. But the bridge is like a cage. She looks up; its iron girder framework stretches either side and above, marking grey shadow patterns on the road.

Sheldon is coming nearer. She panics unreasoningly and jumps on to the parapet, climbing up from strut to strut, heading blindly for the top.

Sheldon follows her up. Neal and Manning get out of the car and walk closer, watching the two figures silhouetted against the pale sky. Neal says nothing; he seems worried.

The girl has stopped, clinging to a strut high over the road, waiting, frozen. Sheldon advances, taking wild risks, flamboyantly swinging up to her, never looking away from her. She flinches but is too scared to resist as he picks her up, balancing dangerously in the wind, climbing back down carrying her.

He ignores Manning and Neal and runs back to the car with the girl cradled in his arms. He starts the engine and accelerates past them, the girl beside him.

"New blood!" he shouts as he passes, skidding round the corner and across the bridge back to northside.

Long after they have gone, Manning retains an image of the frightened girl, instinctively burying her face in Sheldon's shoulder.

"Another girl," Neal says dully, after a long interval. "I must get back to the workshop. . . ."

"No." Manning catches hold of the youth's arm. His workshop—a converted garage—is his hiding place, where he retreats under any kind of stress, taking refuge in a jungle of cars and machines. "Come with me, Neal. I'm going to see your grandfather. Wickens. He has something to tell me."

"But I got work. . . ." Their eyes meet; he looks away. "Shit, Manning, what do I care. I'll come see the old bastard."

They walk over the bridge, dwarfed by the size of it.

Wickens

WICKENS' HOUSE STANDS on a hillside above rusting, overgrown dockyard cranes and warehouses. The house is on the edge of what was once an exclusive suburb of self-contained houses crowded together, each with its patch of garden. What was a luxury in overpopulated times has become an absurdity; no one lives now in the tiny rooms of the cramped houses, overgrown with weeds. Wickens is there in isolation.

His house stands different from the rest, modified and rebuilt, a confused amalgam of architecture. Sections have been added over the years. Heavy concrete slabs abut tinted plastic, juxtaposed with deep, floating window panels. Turrets and domes sprout from the gabled roof. Stairs curl up one side wall to a rooftop patio.

But the panels are dented, the windows are broken and boarded up, steps have collapsed and masonry is crumbling. The patchwork structure, as confused as Wickens' mind, has aged with him.

Neal and Manning walk in through the open front door, across peeling plastic tiles into the kitchen. The smell is damp and foul; Wickens is bent over a small cooker, surrounded by empty cans and wrappers littering the floor and piled up against the walls. Dim light filters through a high, narrow window.

"So you've come, then." The old man lifts brekpaks clumsily off the cooker and dumps them on a tray encrusted with food remnants. He shuffles past Manning without looking up. "Food there, if you want it."

Manning leaves two paks to heat and follows Neal and Wickens into the front room. Its windows are mostly boarded up, showing cracks of light. The roof has fallen in on one side and debris litters the dampstained floor. Broken furniture lies overturned on the

tattered foam carpeting.

Wickens sits hunched over his food by one of the few unbroken windows. It has started to rain and water droplets snake down the outside of the glass, blurring the view of the river and dockyards at the bottom of the hill.

Wickens eats with nervous, jerky movements, digging his fingers into the brekpaste, snatching mouthfuls from the foil trays. "So why've you come?"

Manning sits down opposite; behind him Neal sits half hidden on the floor by the door. "Our conversation on the roof. . . ." Manning begins.

"Not you, not you. Neal, why're you here? Come out where I can see you, damn it. If you came to visit. . . ."

Resentfully, Neal shifts forward. "Manning brought me."

"Neal can hear what you've got to say," Manning interrupts. "If you've got anything to add to what you said earlier."

"Ain't got nothing to say to you, Manning. Not so long as you think it'll do any good mixing with his kind." He gestures at Neal. "I gave up years ago."

"What do you mean, old man?" Neals says, scowling.

"Keep out of this."

"Out of what?"

Wickens pushes his food aside and half stands up. "Don't know why you came here. You know you aren't welcome. Bad as the rest of 'em, sub-literate, don't know what you're doing, where you're going."

"If you're going to start another lecture. . . ."

"I wouldn't *have* to lecture if you'd listen. Just look around you, see sense. See how it's all dying. No more kids being born because your kind just isn't interested. You don't care, living off the last of the food stocks, drinking water that'll be gone soon. We're dying out and it's your damn fault."

"I listen, Wickens, but I don't hear anything."

"Course you don't. Never will. Tell you, I've given up with your kind, trying to make you see you're stagnating, dying with the city. Ain't nothing 'cept force'll show you. Force you out of your rut. A purge, dammit, that's what. . . ."

Neal stands up, agitated, hands clenched, stepping forward. "I told you," he cuts in, voice tight and shrill. "I told you, old man, don't lecture me! All my life you been telling me I'm no good, not doing what you want, not trying. All my life you been saying things're falling apart. But they've always been this way and they always will. Ain't never going to change, in spite of you. One day you'll push it too hard and someone'll get mad, finish you for good."

"But he's right, Neal," Manning says quietly. "We have to change. The food, the buildings, none of it will hold out much longer."

"Long as we need 'em, they will."

"Five years, Neal, at the most. And look at the people. Old ones staying in their rooms all their lives, never doing anything. Young ones never looking outside of the zone or each other. No curiosity, even. No interest in anything. The city's deteriorating and you've become such a part of it, when *it* dies, *you*. . . ."

"Leave me *be*, damn you, Manning!" Neal is on his feet as if surrounded, eyes wild. "Get out from round me! Leave me be!"

"Don't speak like that," Wickens says, moving forward angrily. "Not in my home. Not to me."

Neal is trembling. "Stupid old man!" he shouts. "Stupid old man, stupid, stupid, stupid, can't see it's all the same, all going to stay the same."

The muscles in Wickens' face are all tensed. He steps forward, bringing up his hands to clutch at Neal's throat. "Child! You don't know. I've already taken steps. Soon your kind are going to have to face the real world. Have to get out of the city. Never listen to reason. So it'll be force. It'll happen, hear me? Ain't nothing you can do to stop it, Neal. It's all set up. . . ."

Neal panics, stepping backward, tripping and falling. Wickens advances on him; he scrambles on to his feet. "Get off me, leave me be!" he shouts, hands moving over the wall behind him, fingers scrabbling as if trying to find something to hold on to.

Then he lunges forward without warning, butting Wickens in the stomach. The old man collapses, groaning, and Neal bolts out of the room, away down the road.

MANNING PAUSES. It is suddenly quiet in the room; all he can hear is Wickens' laboured breathing. He bends over him where he lies, eyes open, face up on the floor.

"Wickens?" He shakes him. "Neal's gone. But I want to know. What have you done to force them out? Is it dangerous? What have you done, the last two months?"

The old man is staring up, but his eyes are focused somewhere behind Manning. He mutters half-syllables, gasps for breath as he pulls himself up, pushing Manning aside and standing unsteadily in the middle of the room.

"You can tell me what you've done, Wickens."

The old man stumbles into the kitchen. Manning's brekpaks are still on the cooker; Wickens hits out at the tinfoil trays and they fall, sizzling, into a heap of empty food wrappers. Then he collapses on the littered floor, eyes falling shut, muscles limp, breathing slowly.

Manning sighs. Wickens is no longer reachable. He may never even remember what he has done.

The Workshop

OUTSIDE, the rain is clearing. Manning walks back down the still-wet road heading for Neal's workshop, reasoning that that is where the youth will have gone. It is mid-morning but the city lies as quiet as ever. Two seagulls wheeling slowly over the grey river are the only sign of life or movement.

Rounding a corner Manning sees something in the road ahead and walks closer, bending down to look at it. It is a dog, lying mangled, dissected almost as

though someone had cut it open looking for something inside it. Now it is dead. Neal's knife lies still plunged in the corpse, where the youth finally killed it in frustration.

Manning frowns and walks past.

The workshop is on the ground floor of a multi-storey garage a little way ahead. Already Neal is busy in it; sounds of power tools alternate with the urgent revving of a car engine. Manning peers between a pair of tall sliding doors. Inside is a litter of equipment and machines; the hundred-foot-square floorspace is cluttered with a miscellany of twentieth-century engineering technology, grey metal gleaming in shadowless light shed by a ceiling of glow panels.

Against the walls are stacks of steel sheets, a hydraulic press, car frames, an excavator shovel, boxes of parts and lengths of heavy chain. Manning sees boxes of cogwheels; heaps of levers, tools and bolts; shelves piled with cables, switches and solid-state control systems. Overhead rails carrying a mobile hoist span the width of the ceiling. A two-man helicopter stands incongruously beside a giant ship's propeller in one corner.

This is Neal's retreat, built from pieces painstakingly gathered from all over the city. Dwarfed by the clutter of metal and plastic stacked up in piles all round him, he works on a car chassis, sliding under it, making adjustments and checking alignments. He slithers out and into the driving seat, not noticing Manning enter the workshop until he appears from behind a stack of motor tyres.

"What do you want?" Neal asks defensively, letting the car engine slow to idling speed.

"To ask you something."

He turns away. "Not interested."

"I just want to know—if Wickens ever told you more about this plan, this idea of forcing people out of the city. Has he done anything? Or is it just an idea he'll never put into practice?"

"What do you care? You'd like to see us all out of the city yourself."

"Yes. But he's an extremist. He always was and now old age has made him see this in pure black and white. He could be dangerous to us all."

Neal sighs. "He's crazy, all right, I know that. He wouldn't tell me anything, Manning. Hates my guts. I don't know what he's done. Now can't you leave me alone?"

Manning turns and walks to the door. "You don't realise how important this could be."

"Not to *us*, Manning," Neal calls after him. "He'll never shift *us*. We're city dwellers. Ain't nothing can change that."

A Man and Woman

LIKE ALL THE REST, the apartment block is slowly falling to pieces. Its heavy, square-patterned façade is dirt-blackened, soot-streaked, windows broken, concrete cracked. The pre-fabricated sections are splitting apart from one another.

One two-room apartment is still lived in. The front room is small, square, low-ceilinged and drab. The walls have yellowed and the pattern of the plastic floor-covering is obliterated with ingrained dirt. Cheap plastic cups and bowls are stacked in a doorless cupboard. A broken clock stands half hidden by ragged curtains drawn across the window. There are two upright moulded plastic chairs either side of a moulded plastic table—no other furniture. A man sits in one of the chairs.

He is in his late forties but his wrinkled, sweat-stained face is timeless. His chair is tilted back on two legs, his arms stretched flat out on the table top, shirt sleeves rolled up exposing black body hairs lying limply over his grey skin.

He breathes slowly, chin on chest, dozing quietly, mind empty. The only sound is the chair creaking in time with each slow exhalation.

Unnoticed, a fly is crawling slowly over the hairs of one of his arms.

Taking small, slow steps a woman enters, carpet slippers scraping over the dirty floor. She pauses, dimly scanning the familiar scene, breathing with difficulty, her sagging stomach painfully rising and falling. She brushes her tangled hair out of her face and continues to the window, stooped forward, mouth slack. She pulls aside the curtain and peers out.

Disturbed by her, the man rouses himself. His eyes open a crack and he swallows slowly. But he makes no movement. The fly still crawls undisturbed over his limp arm.

He licks his cracked lips with a rough grey tongue. "What . . . what is it?"

The woman nods slowly towards something outside. "Coming here," she says.

The man lets his chair fall slowly forward on to its front legs. He leans towards the window, blinking and peering down. Together they watch Manning walking towards the apartment building, until he disappears from view, entering through the main doors out of sight below.

The man frowns, fingering the thick skin of his face. The woman scowls, shaking her head slowly. It is a month since she last went out scavenging for food; she has been indoors ever since. The man cannot remember the last time he left the building. They have few friends, and fewer visitors.

Faintly at first, they hear Manning's footsteps as he climbs the steps in the echoing central stairwell.

At length, they hear him knock on the apartment door.

The woman hesitates, finally turning and shuffling out, through the adjoining kitchen. She opens the door a little and peers out; her eyes meet Manning's.

"Can I come in?"

He pushes the door and she reluctantly backs away, leaving space for him to squeeze past her. He walks through the sordid little kitchen and the man looks

round, blinking in the dim light, as Manning enters the living room.

The woman shuffles up behind and shuts the door.

"I've come about Wickens," Manning says.

The man frowns, leaning slowly forward.

"Eh?"

"About Wickens."

He pauses, scratching stubble on his cheeks. "Wickens? I . . . I'm Wickens."

"Not you, your *father*. Old Man Wickens."

"Old Man Wickens. Ah."

"Have you seen him? Has he mentioned anything about . . . about the city?"

The man and woman exchange a short glance. He coughs roughly and spits on the floor. "Seen him, yes, a month, maybe three months back . . . came here, wanted me to help him, something, don't know. Monorail, eight blocks up from the station. . . ." He trails off, squinting at Manning again. "Who you, what you want, anyhow? What doing coming disturbing here, me. . . ."

"The monorail track—the eastline?"

"*I* know him," the woman says. "Seen him with the kids."

"You mean near the military warehouse? He wanted you to go with him?" Manning persists.

"Kids, don't want none of them. Son of mine, no good bastard, you go round with him, you piss off, better get out, on out, you. . . ."

The man gasps and grunts as he pulls himself up out of his chair; Manning steps back, calm faced. "It must be the military warehouse," he says, glancing at the woman. She peers up at him, mouth twisted oddly, baring her teeth.

They both watch Manning blankly as he walks quickly out of the apartment.

Love

MANNING WALKS ALONG the rusted steel monorail track, wind whipping at his clothes, clouds speeding overhead. The military warehouse is a favourite scavenging ground for the youths; its barbed wire barricades and automatic sentries have long since been dismantled and it lies wide open, stocked with machine parts, heavy vehicles, guns and ammunition. If Wickens had wanted help from his son to plunder the warehouse, his talk of using force could make more sense.

The elevated track curves round past rows of residential balconies and windows and down a steep incline, snaking between office blocks darkening the sky with their heavy, drab façades. The landscape is a pattern of grey oblong shapes merging into tumbled decay.

Manning sees the warehouse in the distance; but in between, on the monorail itself, two figures are walking ahead of him.

He stops and gropes inside his coat for his binoculars. When he focuses on the figures he sees it is Sheldon, in his scarlet cape, and the blonde girl he found on the iron bridge.

Manning watches them stop and climb down an access ladder over the edge of the rail. He lowers his binoculars and thoughtfully walks nearer, finally breaking into a run.

The ladder leads down to an ironwork inspection platform slung under the concrete monorail span. Manning creeps forward and peers over the edge. The iron platform is a secluded haven, walled in by buildings either side and roofed by the track above. Sheldon is huddled there with the girl, undressing her with clumsy, fumbling motions as if numb-fingered. As her shirt falls away from her dirt-smeared skin she presses herself to him, sheltering from the wind; but when he kisses her she responds passively, enduring him with resigned acceptance. Her tangled hair blows in her face; she makes no move to push it aside.

Sheldon caresses her breasts mechanically, unfeelingly, and she slumps back under him, waiting. Their love-making is a soulless ritual lacking meaning or emotion, moved by curiosity rather than desire. Sheldon does what he feels he is supposed to do, and does not understand what he is doing. The procreative instincts have died.

The girl is naked now, lying on her back, making no response as Sheldon touches her, prodding her body as if inspecting it. But then she opens her eyes and sees Manning peering down at her.

She cries out—a flat, unformed sound half lost in the wind—and Sheldon looks up, confused and angry.

Without understanding why, Manning suddenly panics. At once he feels caught out, discovered, trapped. He jumps up, hesitates, then runs clumsily along the monorail, battered shoes half off his feet, coat flapping behind like a great sail in the wind. He glances back and sees them climb on the rail after him. Ahead is a ladder to the ground. He swings down it, rips his coat, slips and tumbles from rung to rung. Sheldon and the girl shout down from above, words lost in the wind. Rain starts blowing in sheets of fine spray; Manning slips and falls in a shower of rust. He lands painfully, jumps up and runs. They follow him down the ladder. The rain comes in heavier droplets, painting pale streaks in the grime on the girl's naked back. Manning runs on blindly ahead, stumbling past debris-littered abandoned cinemas and uncompleted building projects, across overgrown parks littered with bricks and concrete fragments, under peeling façades of rotting advertisement hoardings. Rain pours down in a grey curtain, behind which office blocks rear up, cutting off all escape routes, walling him in. His feet slap down in the rain through puddles and soggy mud. His shoes are gone. His heels and insteps bleed from rusty cans and glass fragments. Breathing is cramped pain. His sight blurs. Fatigue pulls down on his limbs. He is lost in a grey ocean. Soot-blackened concrete and broken windows move before him in regular procession. Long streets stretch to infinity.

When he finds himself outside the library he runs in unthinkingly, near collapse, hands groping at the

bookshelves for support. Water pours down his face and off his clothes. He stumbles through the dim-lit aisles and finds his rough bed, sinking down, straight into sleep.

Carole

WHEN MANNING AWAKES, the girl is there.

He sees her standing in dim evening light filtering through one of the curtained windows. He lies still, watching her, and slowly she walks over to where he is slumped, wet-clothed, feet smeared with blood, on his bed of torn paper.

"My name's Carole. I waited for you to wake up." She pauses. "It's evening. You slept the afternoon."

Manning sits up slowly, nervously, and shivers, clutching his arms round himself. His muscles ache and his skin is icy cold. "You're alone here?"

"I ran from Sheldon."

"Why? Because of . . . of what I saw?"

She shakes her head, faintly amused. "I don't like him. He's all take, no give. I need some help. I'm from another zone, a centre five miles off, it died out. I know no one here." She pauses, looking at him. Her face is pale, like her hair. "I found food." She hands him two irradipaks; he takes them warily, breaking the plastic seals with his teeth, gobbling the contents, keeping his eyes on her.

"Is everyone like Sheldon, Manning? Are you, cold like that?"

"You mean unemotional? I don't know."

"Why did you run?"

He looks away, confused.

"Who are you?" she persists.

"I wasn't born here, didn't know my parents. Man called Wickens found me when I was left near his house. He looked after me and I grew up in the library till six or seven. After that, on my own, always on my own, moving around. I tend to be an outsider. People don't . . . I don't know. I don't think about myself much."

"This is a library?"

"Yes, but no one uses it any more."

"Why should they?"

"It can answer most questions. Don't you have questions?"

"Only where am I, what zone this is, where I can stay, find people."

Manning stands up, walks round her and finds a book. He drops it at her feet, as if not wanting to come into contact with her. She picks it up and opens it.

"These are just pictures of other cities."

"Yes. Places abroad. New York, Tokyo. That book is a history of cities, how they grew in the past. Even if you can't read, the pictures tell the story."

"I can read some words. And numbers. But it stops here. Why does it stop? This is years ago."

Manning grudgingly takes the book from her. "Few books printed after that. I'll read it to you, you'll understand. '. . . Outside of undeveloped countries, crippled by famine, many reasons were behind the birth rate drop. The city's effect on the individual, involving him in a world of mechanical substitutes for real living until he had become absorbed into the lifelessness of his environment was important. . . . Economic and sociological factors, as well as propaganda, state-supported birth control and declining interest in life shown by city dwellers all acted against the rising birth rate, reversing it. . . . Some psychologists referred to "unsexuality" of urbanites. . . . City planners continued to erect unitised building schemes for persons never to be born, until the unforeseen population drop was finally understood and accepted, apparently too late to. . . ."

Manning closes the book. "No more people, no more new buildings."

"Why?"

He sighs, irritated. "Didn't you understand? People are part of the city, now. Part of the city."

"*Which* part of the city?"

"What?"

"I said, which part of the city are we in? It's what I asked before."

Manning sighs again, turning away. "You're same as the rest. You just aren't interested. If you looked for yourself you'd see things can't go on this way much longer. Even the nuclear power stations are finally failing. Water pressure has dropped to almost nothing. Food for five more years, perhaps. And no new generation being born. Because no one's interested."

"All right, so what can *I* do? I just want to live somewhere."

"Move out of the city. Even the buildings won't last long."

"I couldn't do that. How would I eat? Where would I live?"

"Then go back to Sheldon."

She sits silently staring at the floor, biting her lip. "I don't like him. I told you, he's cold; he used me like he uses cars. I'm more than a . . . a thing."

She looks up; their eyes meet. Manning feels on edge, wishes she'd never come, yet cannot fight down feelings of compassion. She is in some ways as unable to fit in with the other city dwellers as he is.

She moves closer to where he sits on the edge of his bed and reaches out, tentatively touching him on the shoulder; he sits as if frozen, refusing to look at her. She comes closer, until her breasts touch and press against him and her breath is on his face. She frowns. "Please let me stay here with you," she says.

Her lips touch his face gently, move over his cheek, find his mouth. For a moment he loses his stiffness and softens to her, responding.

But then he suddenly twists away. Quickly, he stands up, turning his back.

"What's wrong?" she asks quietly.

"Nothing. Nothing." He leans against a block of shelves.

"I thought. . . . You know so much. I thought you'd be nicer to me."

"I'm sorry."

She stands up and walks over to him, studying his face. "You know a lot *about* people, Manning; but when have you ever known someone as a person, face to face? You've always cut yourself off and hidden away here, haven't you? Like you did today after you'd seen us."

He rubs his hands over his face as if trying to wake up. "I suppose. . . ."

"*Can* I stay here?"

He turns and smiles weakly, but his reply is stopped short by sudden noise from outside.

The Cache

SUDDENLY ALERT, MANNING grips her hand and hurries her out of the library, down the steps and behind one of the front pillars.

The noise, at first a distant growl, suddenly becomes an angry, shattering roar as more than thirty cars swarm round the corner in ragged formation and stop outside the library. Manning holds Carole behind the thick pillar, out of the blinding headlamp glare. Youths race from their cars up the front steps. Against the white brilliance Manning sees they carry rifles, grenades, flame throwers and hand weapons. Shouts cut across the rumbling engines as the youths charge into the old building, firing at random.

Others run down the street, shooting and smashing windows, throwing smoke grenades and screaming wildly. Smoke and dust drift in thick clouds.

Youths run back out the library. Sheldon, at the front of them, pauses on the steps. "Not here," he shouts. "But we'll find him. We'll get him, get his blood!" They cheer. "The square!" he shouts. "To the square!"

He jumps in the leading car and takes off down the street, cloak blowing out behind him. The rest of the pack follow; slowly the noise dies away.

MANNING BLINKS, HIS vision a blur of dazzling afterimages. His ears are singing, hands trembling. He staggers down the steps, pulling the girl after him. "Got to get to the town square," he mutters.

"Are . . . are they hunting you because I ran from Sheldon?"

"You could have triggered it. But anything could. It's sooner than I expected. . . ." Ahead they can hear shouts and explosions, car engines roaring, machine guns hammering. Manning, still dazed, stumbles towards the noise, thin-lipped, pale.

"But what's happening?"

"Riot night. Things build up, every month or two, till there's so much aggression a riot's the only outlet. They don't take sides. It's not like that. They fight at random, smash buildings, anything they feel like."

"Why are we going where they're fighting?"

"Wickens. Old man Wickens. He kept talking about using force on people. If he's going to try anything, tonight will be the time. When he sees them riot he . . . it incenses him. He'll drive them out of the city any way he can."

He pushes her ahead of him into the entrance hall of an apartment block. In some previous riot it has been gutted, walls smashed in in places, bannisters lying in a twisted tangle at the bottom of the stairwell. Patches of moonlight fall at random in the darkness.

Up on the fifth floor Manning pauses at the end of a corridor. "There's a chance if Wickens has heard the riot he's come here. He used to use this place."

Motioning her silent he picks up a lump of broken concrete and creeps along the corridor, feeling forward in the darkness, counting the doors. He pauses, then lunges at the seventh door, smashing it open.

But inside, the room is dark and empty. A broken desk and overturned chair lie coated in dust by the window. Papers litter the floor.

Manning sighs, dropping the lump of concrete.

"The papers," Carole says, picking up a few of the sheets. "Won't they mean anything?"

"Not really. Probably date back to when he wrote here, years back." Manning moves to the window. It overlooks the square; bursts of gunfire alternate with flashes of light from car headlamps. It is just enough to read by.

"Page one of a thesis," Manning reads out. "The Rise of the City and the Death of Civilisation." He drops the papers on the floor. "By R. A. Wickens. Written five years ago."

But she is not listening. "Come here," she says urgently, from an adjoining room. "Tell me what all this is."

He follows her and pauses in the doorway. Petrol cans are stacked in the shadows, filling the room from floor to ceiling. In one corner is a small bundle of explosives.

Manning bends down and looks closely at the charge. "Radio controlled," he says slowly, unbelievingly. "Enough to blast a few walls down, light the petrol, spread it, spread the fire. . . ."

"You mean he can blow this all up, from a distance?"

"This and the others he must have planted. The other caches. It's so simple, if you think like Wickens. To get people out, you destroy their homes. Destroy the whole zone. Then they *have* to leave." Manning wipes his hand across his forehead. "Somehow he did it, the last two months. . . ."

He stands still for a moment, tense but unmoving. Then he turns and catches hold of her. "If we can find him we can stop him from setting the whole lot off, destroying the city, killing people. . . ."

She races after him back down the corridor, down the stairs, out into the dark street.

War Machines

ON THE EDGE of town, away from the beginnings of the riot in the square, Wickens' house stands silent, windows dark, empty and deserted. Manning pauses

outside, breathing hard. Carole leans on him, exhausted by the run from the town centre. "Maybe he's in there asleep," she says.

"Too early. He's probably out. But I'll check." Manning walks in the front entrance, followed by the girl. The house is absolutely still, in shadow, faint moonlight filtering through cracks between boards covering the broken windows.

Manning turns, about to speak, but suddenly sees a grey shape leaping at him from the shadows. He twists back but hands close on his throat; he falls on his back, gasping. They struggle on the floor; then they roll into a patch of moonlight and he sees his attacker is not Wickens but Neal, hate-faced, eyes wide.

Slowly the staring eyes focus on Manning; slowly the youth relaxes his grip. Suddenly he pulls away, cursing. "You bastard, Manning. I don't want you. I want the old man."

Manning stands up, trembling. "Wickens? You want to kill him?"

"Time to settle scores, get back at him for all the times he's been at me, saying I'm no good, pushing me the way he wants me to go."

"That's no good reason."

"I don't give a fuck about reason. Riot-night, Manning. Tonight I kill him." Neal turns and walks to the door. "I'm going out to find him." He vanishes out of the house, running past Carole and down the street.

Still shaken, Manning walks to the front door and looks out.

"It all comes out of them," he says half to himself. "Even someone dull and quiet like Neal."

"He's Wickens' grandson?" Carole asks.

"That's right. The old man brought him up, trying to save him from becoming like the rest. Used to cajole him, beat him, lock him up . . . all it ever did was make Neal hate him and hate the idea of learning anything." Manning sighs. "Let's get back to the square. Our last chance is that Wickens will be there."

THE SQUARE IS blazing with light and roaring with sound. Running figures dive for cover under searchlight beams and exploding shells. Machine-gun fire sweeps overhead. The roads and central area of overgrown vegetation are criss-crossed with shifting beams of light.

Crouched in an alley near the town hall, Manning and Carole watch wide-eyed. A cluster of tactical rockets shoots overhead, gushing smoke and illuminating the square with yellow light. But the guidance systems are faulty; the small rockets waver erratically and spin down, impacting at the base of an office building. Fireballs bloom. The ground shudders and shudders again as the building collapses with a roar. Someone near Manning is laughing hysterically.

"It's worse that ever before," he mutters. "They must have found a whole arsenal hidden somewhere. . . ."

Through clouds of dust a makeshift armoured vehicle edges insect-like into the square, guns on continuous automatic, shattering windows and walls. Searchlights converge on it. Bullets slam into its armoured shell, hammering the curved plates off. Suddenly the vehicle erupts in flames, firing distress signals and magnesium flares, lighting the square in a blaze of orange, green and white. Through it all comes screaming.

"Almost out of control," Manning says. "Before, they've always somehow kept it within limits." Behind him, Carole says nothing. She has turned away, covering her ears against the insistent gunfire and explosions. But Manning, like a murder witness, stares compulsively, drawn to the scene.

In the square a tank rumbles forward, crushing overturned vehicles littering the street. Then it hits a mine and the arena blazes yellow. The pounding thump of the explosion booms and re-echoes. The blast overturns the tank, smashes it through a supermarket store front. Walls collapse. Running figures converge on the wreck.

Manning stands up. "Not safe here," he shouts over the noise. "Town hall, follow me." He has lost hope. The deafening noise of the riot pounds from all sides. Rockets and signal flares flash in the sky. Cars roar back and forth.

Manning is almost at the town hall when a new noise comes from behind, overhead. He looks up, sees a helicopter descending, engine at full throttle, rotor blades whirling, shimmering in the beams from searchlights below.

Manning remembers it from Neal's workshop. But he had never dreamed the youth could ever work out how to use it. He grimaces at the irony; Wickens himself probably supplied the mechanical knowledge in the first place.

Now the machine is swooping low, landing lights blazing, firing at random on unprotected youths. Manning glimpses Sheldon piloting it, Neal beside him; it lifts, turns erratically, then side-slips wildly as gunfire hits one of its rotors.

The helicopter falls, lights still shining, smashing on to figures scurrying beneath. Fuel tanks explode and fire boils over the ground. Manning sees Sheldon running, scarlet cape ablaze, screaming through the night, smashing through a store window and falling dying on to a heap of empty food wrappers. Neal is flat on the ground under the broken machine; fire swallows him. All over the square people are converging on the scene. Gunfire ceases. Cars and vehicles are abandoned. Figures gather round. All but the roar of the flames is suddenly silent.

At first, no one sees Wickens step out of the main town hall entrance.

Manning is the first to catch sight of the hunched, thin figure. He runs forward, knocking him off his feet. "The radio transmitter," he cries, "to set the explosives off. Where is it? Give it to me!"

The old man is stunned by his fall. He groans and tries to focus his eyes. Then he sees Manning. He smiles

slowly and painfully. "Nothing . . . nothing you can do," he croaks. "Pre-set. Any time now. It's back at my house. Did you think I'd chance. . . ." His voice trails off. His eyes fall shut.

Manning stands up, turning away. "If we can reach his house. . . ."

His words are cut off as, simultaneously, buildings all over the zone explode and fire sweeps over them. Soon the sky is yellow with flames.

City Death

THE FIRE HAS destroyed the whole zone. Homes have been gutted; men and women who have not ventured out for months have been forced into the streets. Buildings have collapsed. Water and electricity have failed. Food supplies have been incinerated. More than three-quarters of the population have been killed in the riots and the fire—Wickens, Neal and Sheldon among them.

It is dawn; Manning and Carole are alone in the fire-blackened square, having taken final refuge in the fire-proof vaults of the town hall. Most buildings have been razed; the square is bordered now by mounds of tumbled concrete. Smoke still drifts in the wind. Abandoned, gutted vehicles litter the streets.

Manning feels suddenly lost, alone in the city, isolated. Carole is crying, unable to face the desolation. She says nothing as they wander through the empty streets.

Men and women here and there sit blankly in front of the rubble of their homes. They look away uninterested when Manning tries to get them to come with him, out of the city. Two youths, trying to set a car on its wheels, want only to go home. A blind man, trying to get into a store blocked by fallen brickwork, wants help.

Still on their own, Manning and Carole pass the library building. Fireproof, it was one of the few to escape unburnt. Manning pauses, wanting, against his will, to go back into it, be among the books again. Already he is getting accustomed to the destruction and the ruined skyline. The broken buildings still seem solid, reassuring, standing tall all around.

He sighs. "Wickens was wrong. Even total destruction won't make people leave."

"I don't want to leave, either," she says.

But they walk on slowly along the street, heading northwards, towards the city limits and the countryside.





MICHAEL BUTTERWORTH: THE BAKED BEAN FACTORY

OUTSIDE, ON THE sunny side, bomber spheres fly incessantly over the dead landscape of earth. Fused glasses layer the freshly-created deserts—fossilized tree-scapes flower away for ever. The barest jagged ruins of whole cities are lying on the ground, their Darkalene "bubbles" popped and spread awkwardly across them like shinier, shapelier extensions of the deserts.

At this final remote point in time, self-destructive forces in man ring out a final note of decision over choice of life and death, choosing death. As the music fades, the projected tiered images of man release themselves and escape into the inherited deserts of earth, leaving the blank effigies of billions of men and women lying or standing where they were left, like the dolls on Christmas Island, the vegetable halt of mental patients, or the no-longer sexy efficaciousness of pin-up models.

The domes covering the darker side of the planet earth are ultimate industries of its lighter side. They are offering excess of image to a dying population, innovating the nature of their reality, releasing images assuming the identity of weird two-dimensional life-forms the moment they are free, running amuck amidst the rubble of an atomic war.

On a second level, the images from one firm openly attack the images of another, precipitating total, all-out Image Warfare.

Large highways interconnect the domes—at one time main arteries used for the conveyance of goods, now abandoned to the rotting debris and the insects of night. Locklar Ford, the only remaining human Nightwatchman shifts uneasily in his couch in the aurotherm. His factory—Baked Beans (BB)—only hired him as a result of their reluctance to trust and have installed a Charlot & Wakenhurst Brand-Image Detector.

ALL NIGHT NOW the bomber spheres had been swishing silently overhead, from coast to coast, land to land, starting from and going nowhere. Locklar, although he could not possibly be aware of their presence, possessed in his head an ability to detect their image-laden flights, and deep in his subconscious he felt some intruding image had entered the factory.

He slithered out of the area of warmth surrounding the aurotherm like a snake, once coiled, darting out to its full length over the plastic floors. He paused for a second to regain his breath, and then moved powerfully down dimly-lit corridors, across silently-purring machine areas and entered the storage compartment into which, his mind registered, had entered the Enemy.

Large packages, sealed tautly in gleaming Inthracene stacked high around him, formed mazes of minor passageways. His large head, with luminous night eyes, selected the appropriate passageway for his body to move through, and he entered the Central Arena, inside which disposal and packing machines worked away the long night.

A gleam, a slight blur of coloured words flashed for an instant high above in the dry air, hardly distinguishable from the dim red lighting of the compartment.

Locklar pulled himself up first one package, then another, his arms swirling round his shoulders as though he were swimming, until finally he rested on the shiny surface of the topmost package. From up there the faint words, fluttering like dragonflies in the red dark, could not be detected unless, as if looking at a distant star, he averted his eyes slightly from the shimmering filaments of their tracks. When the carnival of colours had reached its peak he released from his eyes the projected image of Baked Beans—the shape of a bean,

with the jointed legs and head of an ant—and a continuous stream of conflicting words and pictures began to tangle with the formations of the Enemy.

A BEAUTIFUL GIRL, her hair long and white as the moonlight, sat all night in the pines that fringed the edges of the darker side of earth. Her mind was beautifully and repeatedly losing itself among the slim shadowy stems of the pine trees. Unless she rose occasionally to transport herself and her veils meandering in to and out of the darkest stems, she would soon lose her Self completely.

Returning from one of these jaunts she seated herself down among the two or three toy relics she had managed to salvage from the sunshine world of far away—a mirror that mirrored the works of Lewis Carroll, a fist-sized clock that told the relative times on three different planets, incorporating in its design the idea of a child's game with time, and a tube of cold green lipstick that illuminated her skin wherever she applied it.

Out under the allnight stars of earth she could hear the swishing of the bombers as they flew by over her head, and she identified herself with an imaginary lover whose fashionable, time-worn face stared down at her from the tail piece of an old-fashioned plane.

Abruptly she rose into the centre of the clearing, attempting to scavenge a last glance at the false plane, and as the stems of the pines began to "click" stealthily, pine by pine, inwards upon her, her mind suddenly filled itself with the smoothness of the lover's face. As the radiation burnt, she began slowly and then more tearfully to uproot the flowing moonlight whiteness of her hair.

LOCKLAR FORD drew into the deep warmth of the aurotherm, into the depth of the alarm couch, wrapped in cold and almost slept. Several times his powerful mind experienced vague undersurface reasonings with Baked Beans, with images that shifted silently from grave black dome to dome, outside on the planet's rotting surface. Finally, as he slept, he crawled in on himself for security.

On shelves and in cases, compartments everywhere, the home images ranked high and silent as the last pieces of his mind. He found himself strangely asleep when he awoke, vapourous and tiny, as if wrapped in canning paper. Shaking off the unwanted image, he took another last look around the premises.

IN A BUNKER, on an island off the coast of Cornwall, a man lay down with his feet stretched out, so that they overhung the end of his bed only by the length of his neck. In his possession was a Charlot & Wakenhurst Brand-Image Detector.

Inside the bunker, its walls alive with a series of glossed girls from the twenty-first century, he used the Detector to measure the level of radiation image of the surrounding country. He rose from his bed to check over the bunker's water supplies, happening as he did so to notice the videoscreen of the Detector broadcasting the outline of a human form. Odd miscellanies of jumbled image had been registering on the screen for weeks, but the human image, which was a jungle of images, had not yet appeared.

The lifelike figure of a woman, her bald head dulled and whitened wandered aimlessly outside the bunker walls, attempting to get in. As usually happened, the man observing the screen became confused over which was image and which was reality, but before the woman had a chance to phase through the walls into the bunker itself, the Detector retaliated, and the screen showed the image dissolving into fragments of the wind—white and green blotches and lines, partly-phased veil disappearing into thin air.

The man left the screen to finish checking over the water supplies and lay down again.

Outside, bombers flew incessantly over the dead landscapes of earth. The man felt attacked by the images of the entire history of earth, and rose and swayed for a moment, clasping a thin hand to his white face, then lurched to the heavy protective doors of the bunker, flung them wide open and was blinded by the sun.

RESOURCING THE ENERGY of the red silence of the air into his own snake-like motions, Locklar Ford slid quietly out from behind the plastic-net backing of a canning machine, and allowed his eyes the freedom of their full image-firing precision into the silent chaos of the Enemy.

The Enemy, sweeping in compass curves, chain-filaments of colour, hyper-alternating currents in the dim-effused lighting of the Canning and Labelling Compartment, beca me more distinct to the human eye, more clearly outlined as its numbers increased, revealing the whereabouts of its true origin, not from one firm but from numerous firms scattered over the earth's darker crust.

Brand-images—the head of a crocodile from a neighbouring firm, the repeater-word "Ilosoara" concertina'd into "Floflar" of McGrinnic's "Darkalene"-producing Industries, and others—wanting for some reason to unanimously attack Baked Beans, were each themselves attacked and devoured in turn, by the swarming ant-life images of the beans Locklar released.

Under the pressure of many long-sequented filaments of words, which combining had entered the dome last of all, fused phosphorescently together in a senseless attempt to end BB for good, Locklar was forced to retreat along the broad connecting corridor of the aurotherm, attracting as he did so a further hoard of uncombined Enemy "visions".

Into the mother-warmth of the aurotherm the man-serpent melted, activating in his mind the built-in "suck-back" ability of most Charlot & Wakenhurst Brand-Image Detectors, which, in case of emergency, collapse the absoluteness of their firm's image into the brain of the Detector, or, as in this case, the *skull* of the victim, effectively preventing further damage to the firm's image.

A REVERIE OF BONE

LANGDON JONES

TO DISCUSS THE work of Mervyn Peake presents a special difficulty; the reviewer is faced by the incredible diversity of his wide-ranging talents. His creative life has been short, but he has provided an abundance of work enough for several men. Illustrator, painter, poet, novelist and playwright, he represents a creative phenomenon, a man with an intense and individual inner vision that could find expression in a variety of ways.

Peake was born in China in 1911, and came to England as a young boy when his family returned home. While still young he attained a solid reputation as a painter and illustrator. The war came, and Peake was drafted into the Engineers. This must, at the time, have seemed a disaster as far as his creative work was concerned, but in fact what he witnessed during those years provided a great creative spur.

It was in the army that he began work on *Titus Groan,* the first book of the monumental "Titus" trilogy. These books have been described as "Gothic" fantasies, but this does not do them justice. It is true that the first two, *Titus Groan* and *Gormenghast,* are set in an enormous crumbling castle, in which meaningless rituals are compulsively carried out by grotesque characters. But their vision is much too adult and meaningful for them to be classified in this way; and the characters are grotesque in the way that Dickens' characters are grotesque, not for the sake of chintzy Walt Disney cuteness, for there is not a trace of that, but in a way that has meaning and purpose. In the trilogy there are dozens of major characters, each one finely drawn, all with the solidity of real people.

These books are not infantile fantasies (as are some of the novels with which they have been unfortunately compared). In them will be found real things: human frailty, death and sexual love, as realistically drawn as in the most pertinent of modern novels. Neither are they heavy Germanic romances, for Peake writes with a genuine wit and a clear transparency of touch. One can only compare them with Dickens, for Peake writes like a Dickens intoxicated by words, a Dickens drunk with his own imaginings. The style is an unusual one, but is superbly evocative; in his descriptions of Gormenghast castle, he brings to bear the eye and imagination of the artist:

> He had seen a tower with a stone hollow in its summit. This shallow basin sloped down from the copestones that surrounded the tower and was half filled with rainwater. In this circle of water whose glittering had caught his eye, for to him it appeared about the size of a coin, he could see that something white was swimming. As far as he could guess it was a horse. As he watched he noticed that there was something swimming by its side, something smaller, which must have been the foal, white like its parent. Around the rim of the tower stood swarms of crows, which he had identified only when one of them, having flapped away from the rest, grew from the size of a gnat to that of a black





moth as it circled and approached him before turning in its flight and gliding without the least tremor of its outspread wings back to the stone basin, where it landed with a flutter among its kind.

ALTHOUGH GORMENGHAST, with its decaying towers, its parapets, its flints, is far removed from the realities of the war during which it was created, it is clear that much of Peake's phenomenal creative energy that began at this time was a direct result of what he had experienced. Towards the end of the war, the army belatedly realised that it had made a mistake, and commissioned Peake as a war artist. It was in this capacity that he was one of the first Britons to witness the horrors of Belsen, a nightmare that stayed with him, and that later was to influence a great deal of the final book of the trilogy, *Titus Alone*.

The war stripped the veneer from those elemental forces that Peake had always sensed so strongly, and now they became supreme. The blitz on London, for example, with its surrealistic images of warfare, the incongruous dead, the buildings lifting themselves from the ground, retaining their shape for a timeless moment, the immediacy of fear and pain, all this forms the background to *The Rhyme of the Flying Bomb*, which tells in a hundred and twenty-five stanzas of the compassionate meeting of a sailor and a new-born baby, who talk of death, together in a ruined church, a flying bomb approaching.

These tortured images of war, particularly that of crumbled, dead masonry, find expression mainly in Peake's poetry, as in "London, 1941", from the collection *Shapes and Sounds*:

Half masonry, half pain; her head
From which the plaster breaks away
Like flesh from the rough bone, is turned
Upon a neck of stones; her eyes
Are lid-less windows of smashed glass,
Each star-shaped pupil
Giving upon a vault so vast
How can the head contain it?

This is what seemed most expressive to Peake; the wrecked masonry of London, after the destruction had ceased, the remains of houses from which all life had passed:

What are these shapes that stare where once strong houses
Rose with their sounding halls and rooms of breath?
No, not their skeletons for those have fallen
Dragging to earth
The coloured muscles from a thousand walls,
And all the slow
Articulate organs that are now
The rubble that a cold well of the night
Erects its height
Of re-assembled emptiness upon.

Here are the landscapes of Gormenghast, but a dead Gormenghast, a stage from which all the characters have

fled in terror. The meaningless decay left behind after the triumph of those evil forces which are never far away.

What of this skin that once enclosed all this?
Oh it will fall to darkness, to cold darkness
For it is ichabod and Life had fallen
Down into darkness through its quickened crate,
And it will fall to darkness, to cold darkness
Where nothing stirs among the dynasties.
The rubble that is rotting in the rain
Exhales the death of Warsaw and Pompeii,
Guernica, Troy and Coventry—all cities,
And every breathing building that died burning.

The shapes departing and the brick returning.

AND YET, DESPITE this, the work of Peake is not pessimistic. Although a great deal of his work is based upon the images of death—skeletons lying pallid in the night—crows perching in a blear landscape—rats lying stiff and dead in cold morning light—there is a strength and vitality going through everything he creates; although Peake feels the pulse of tragedy, he can observe without being dragged into a morass of confusion—his own personal vitality resists the impulse to surrender to pain. And Peake's vision becomes, as a result, vast in scope. In his drawings he can report, with objectivity, the look of interested concentration in the eyes of a young boy; he can show the grotesqueness of the crying face of a baby, expressing nothing but the desire to suck; he can, like George Grosz, highlight the distortions of corruption in the faces about him; he can create his own visions of the grotesque, with only elements of the human. And he can write a book like the superbly comical *Mr. Pye,* a novel which begins innocuously enough, with the visit of an apparently ordinary man to the island of Sark, but which goes along to break all the rules, and finishes, if unconventionally, in a brilliantly funny way. This vision has enabled him to design the stage sets for Capek's *The Insect Play.*

His kind of vision made Peake an ideal book illustrator, and he was commissioned to illustrate a new edition of the Alice books, and also Carroll's *The Hunting of the Snark.* These were particularly successful, for Peake, like Tenniel, captured entirely the atmosphere of the books (which wasn't surprising) but gave the characters a wry comicality, a lightness that Tenniel never quite achieved.

PEAKE ENJOYED A great flourish of popularity during the forties and early fifties, but since then his public has not been wide. The tides of fashion have ebbed, and the paintings now are sought after by isolated connoisseurs, but not known to the public at large. One can understand this neglect of the paintings, for Peake had his own path to follow, and he followed it tenaciously and characteristically, ignoring contemporary trends entirely. Even so, it is very frustrating, for, when one has seen the work and appreciated its value, one can understand equally that the future will indeed prize the works of Peake, and that he will regain a popularity that will then be lasting. However, as far as the literature is concerned, this oblivion (which, with the planned publication of hard cover and paperback versions in England, and a paperback version in America of the "Titus" trilogy, is showing signs of abating) is completely incomprehensible. Here are some of the richest, most controlled novels of the language, a treasure-house of experience; they should be in every library, required reading in secondary schools, familiar to everybody. It is true that not everyone is fond of fantasy, but everyone with some feeling for language, some imagination, should be drawn irresistibly into their pages, and should remember the books for the rest of their lives.

Peake is not a dessicated cynic. He is wild, romantic, bursting with a profusion of ideas:

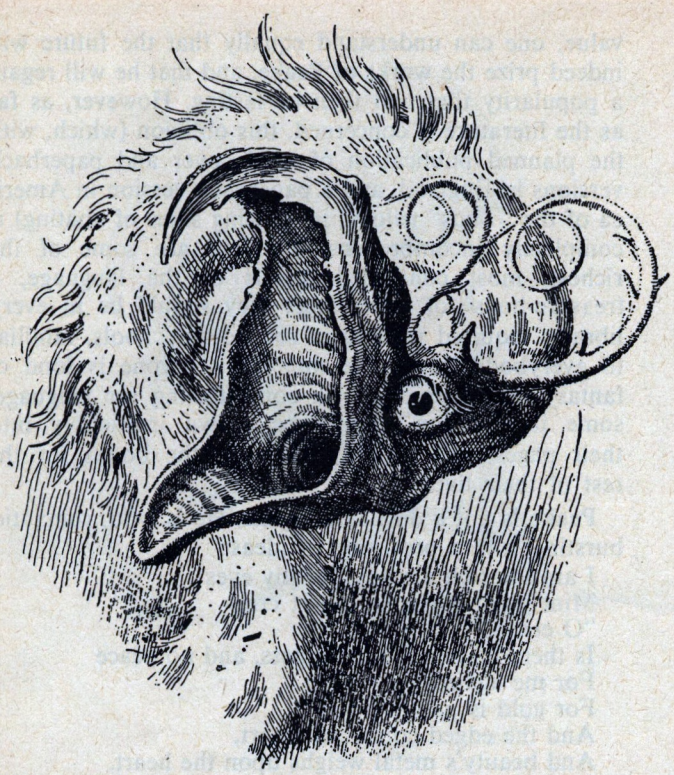
I am too rich already, for my eyes
Mint gold, while my heart cries
"O cease!
Is there no rest from richness, and no peace
For me again?"
For gold is pain,
And the edged coins can smart,
And beauty's metal weighs upon the heart.

Now these riches are no more. The spring has dried up, and Peake's creative life is over. In 1958 he contracted encephalitis, a virus infection of the brain. He was at the time working on the last book of the "Titus" trilogy, and was barely able to complete it. He was forced to stop work and go into hospital, where he has remained ever since. The dark forces, those destructive powers that had been such a preoccupation of Peake's, have finally overtaken him. During the final part of *Titus Alone,* after a great struggle, these forces in their ultimate form were defeated. It is tragically ironic that while this was being written the struggle was taking place in reality, and that in reality they finally triumphed.

Titus Alone was published after extensive editorial revision by the publishers. It is clear that Peake's illness had some effect on the final shape of the book, but, having seen the original manuscript, I feel that there is, unpublished, much of value (a complete character has been deleted, and the close of the book has been greatly reduced in scale), and once the chaotic manuscript has been fully pieced together it will be fascinating to see what emerges.

ALTHOUGH PEAKE NO longer works, he has left a vast quantity of material; there are, alone, about a hundred poems still unpublished.

Out of this store-house of material have been chosen —by George Lawson and Peake's wife Maeve—a selection of poems and drawings, which are being published by Bertram Rota as *A Reverie of Bone,* in a special edition of three hundred numbered copies, priced at 3 gns. Although the poems have not been revised, some



of them represent the best of Peake. This selection has a particular interest, in that the poems were written between 1940 and 1959, covering a large proportion of Peake's working life. Although the poems are not virtuoso displays, in them one can clearly see Peake's particular strengths. In "May, 1940", for example, the poem unfolds at its own tempo and finishes with a strong last line that resonates after the poem is over. Even in this mood, in which the insanity and repeated horrors of war give to life a feeling of worthlessness, the countryside is described with love, not with the dim eyes of the defeated:

Be proud, slow trees. Be glad you stones and birds,
And you brown Arun river and all things
That grow in silence through the hours of maytime—
Be glad you are not fashioned in God's image.

Peake observes horror, and records it relentlessly. Is there a more graphic picture of dehumanised war-death than the following lines from "Victims"?

Where was the lavender
Or gentle light? Where were the coverlets
Of quiet? Or white hands to hold their bleeding
Claws that grabbed horribly for child or lover?

In the war poems there is a tiredness of spirit, an utter weariness of repeated sufferings. The seduction of a quick and peaceful death is felt, but rejected:

"Old, cold Lady"
I said to her,
"I know of bosoms
Softer far
To sleep upon"

The old, cold Lady
Turned away,
"I had forgotten"
I heard her say
"How old I am . . . how old I am. . . ."

The title poem is beautifully sustained, a meditation of thirty-eight verses on that detritus of flesh and brick so fascinating to Peake:

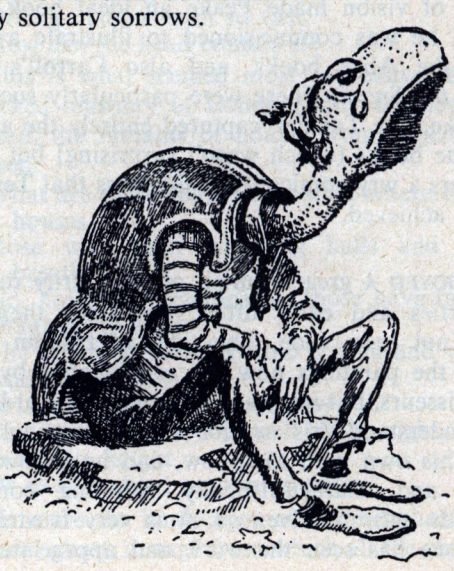
What is more exquisite than to be free
Of all that presses on the crying core
Of the long bones, that now so nakedly
Can hear the desert winds along the scree,
How loud they are that were so drugged before,
By the dumb bullion of the shrouding clay.

Queens in their tombs are mouthed by the furred lips
Of humid plants, or, stretched upon stone shelves
Of granite, where the sandy sunlight fingers,
How ruminatively with hazy fingertips
High tiers of skeletons and skulls revolve
Among the motes where the dank lizard lingers.

Some of the poems are less successful. "Dead Rat", for example, is too naïve, and at times descends into sentimentality: ". . . your little fore-paws so beseeching,/Crossed on your breast, and pink like human fingers . . ."; but most of them have great strength, particularly those about painters, "El Greco" and "Rembrandt", "Until death laid him in a pauper's grave,/Gulfed in those shadows that his pictures have".

The final poem is one of the last things that Peake ever wrote. There is no more struggling, no more resistance; the battle was over, and Peake could only succumb to those forces that he knew would destroy him:

Heads float about me; come and go, absorb me;
Terrify me that they deny the nightmare
That they should be, defy me;
And all the secrecy; the horror
Of truth, of this intrinsic truth
Drifting, ah God, along the corridors
Of the world; hearing the metal
Clang; and the rolling wheels.
Heads float about me haunted
By solitary sorrows.





THE LAST INN ON THE ROAD

ROGER ZELAZNY
& DANNY PLACHTA

FATHER BOB FLICKED a quick Sign of the Cross with the point of his switchblade and dropped into a crouch. He stared up the alleyway, his leather jacket tight across his shoulders. There was a faint flash of metal not more than six feet away.

"Who is it?" he demanded.

A fleet of motor-cycles crackled down the adjacent street. He waited for their lights to outline his adversary.

But the bikes belonged to the Red Holy Rollers from Saint Bob's, and they always rode blacked-out.

"Who is it?" he asked again, after the silence had returned.

"Sister Cameo. That *is* you, Father?"

"Blessed be the Holy Name of Jesus," he intoned, snapping his blade closed.

"Blessed be the Holy Name," she agreed, and another blade snicked shut within the darkness.

"Praise be that I got here when I did, Sister. That sounded like the Rollers going by."

"I'd say so, Father. Full strength."

She touched the priest's arm.

"But come. It isn't far."

"Just to be on the safe side, Sister, we'd better spread some broken glass. You get the far end of the alley and I'll get this one."

He moved toward the nearer street.

"It's in the centre of the block," she whispered, before they parted.

Father Bob spent five minutes smashing empty beer bottles on the rough pavement. All the street lights had been shot out. In fact, Father Bob had never seen a lighted one. Nevertheless, there was a certain amount of light tumbling from a large neon sign: BUY OUR JUNK, it urged. Below it, smaller letters spelled out the familiar slogan: ACID, HORSE, SEEDS AND LI. TAKE TEA AND SEE.

He was about to return to the safety of the alley and its darkness when he noticed the dog. Its long dark tail rippled in the wind as it trotted toward him. Small, yet for some strange reason unafraid, it came up to him. Its tongue hung out over its side teeth as though it were laughing, and its ears were long and ragged. He patted its head and was vaguely pleased when it followed him back up the alley.

"This is it, Father," whispered the nun when they met again. "We're home."

Rusted hinges grated, and Father Bob felt her hand on his arm.

"Don't fall over anything, Bob. It's a mess in here."

He heard the dog patter in after them. The ancient door creaked again and clicked at their backs.

"It's an old garage," she told him. "The house in front is completely wrecked. I covered our only window with tar paper."

Then she rummaged for a dark moment and a match scratched, flashing yellow pain into his eyes. "Make yourself at home."

It was, he observed after a moment, a compact indoor junkyard, an attic and cellar that had somehow gotten together for money, not love.

"A wreck room," he muttered, and the girl giggled.

She lit a votive candle and the room was drenched in the bloodlight of its glass container. Twisted shadows from a hundred shipwrecked homes filled the walls, the floor, the ceiling.

"I think we'd best put it out as soon as we're settled," she suggested. Her black leather jacket and stretch pants became a reddish bronze in the candlelight, and he glanced furtively at his own clothing. The dog nipped at Sister Cameo's boots. "Here," she said, lifting it in her arms, "I think I can fix you up for the night." She found an empty beer case, removed the partitions and placed the dog gently within it. ". . . But I won't have you sleeping on any of these dirty old rags!"

There was a slight movement in the corner of the garage, and two cats glided forth to peer in at the dog. They leaned and watched without moving. "One happy family," smiled the priest, and the man and the woman knelt on the cold concrete, joining together in prayer.

Sister Cameo extinguished the candle, and they went to bed, the dog making faint noises, half-snore, half-growl, behind them.

They looked like stars and they were among the stars. They moved with seeming slowness, yet somehow they passed quickly.

"We are near," said Amar.

"The star guides us well," replied Borin.

"Still, we shan't arrive in time," said Calat.

The three points of light arced across another hundred parsecs.

"Perhaps. Perhaps not. But it's our only chance to see," said Amar.

"Their star nears the apex," observed Borin.

"We cannot stay long," Calat noted.

The three points crossed another dark gap.

RIGHT THERE ON Saint Bob's parking lot, in the middle, the Red Holy Rollers parked their bikes. They parked them and they slept there, resting their heads upon the polished chrome of the handlebars. None of them were really tired, having slept most of the day. But they were a legend around town. They slept on their bikes, it was told. So don't kill a good thing. They stayed in the lot until eleven o'clock, passed another ten minutes debating where to go. Finally, they roared off to the Junk Yard, three blocks away. There . . . .

The place was spinning when they hit it. They knew it would be, and it revved up when they moved into action. The in-drink that night was Old Krupnik on the rocks, for God's sake, and they uncorked it, learned to live with it.

Some old broad in a topless ski suit swivelled it over and asked would anyone care to move around the floor, so Tiny Tim the Big Man called her hand, took it, yanked her into service. They swung to the strings twisted and the skins thumping; the Molesters' "Old Rugged Cross Writhe" it was, and everybody did, making with the outstretched arms bit. But Tiny Tim, he got a thumb in the right eye and that was it for indoor exercise.

After the debacle that ensued, they were all of them about seven handlebars to the wind when it fell upon them like damn let's go Of-the-Cloth hunting. Real big this went, up and over like a pregnant pole-vaulter, and. . . .

They cut at 11:47. One more round of Old Krup-damnitnik. . . .

Crawling in deep shadows, darkness all about them, yet able to see, the three moved down the alien roadway.

"A strange world. . . ." said Amar.

"Like no other," Borin agreed.

"Perhaps it will be for the best"—Calat.

They skittered and churned, boffed and scaffonted, then paused.

"I am weary of my burden"—Amar.

"There is so little time. . . ."—Borin.

"The stars! I fear we must miss our chance to see!"—Calat.

"Yes! We must leave our prizes! Make haste!"—Borin.

They moved on, up, out, their tears falling upon the stones.

FATHER BOB was awakened by a creaking noise. He listened, tense, motionless, to the sound of the dog's breathing. Could someone have entered the garage without awakening the animal? Regretting the sound, he snapped open his switchblade.

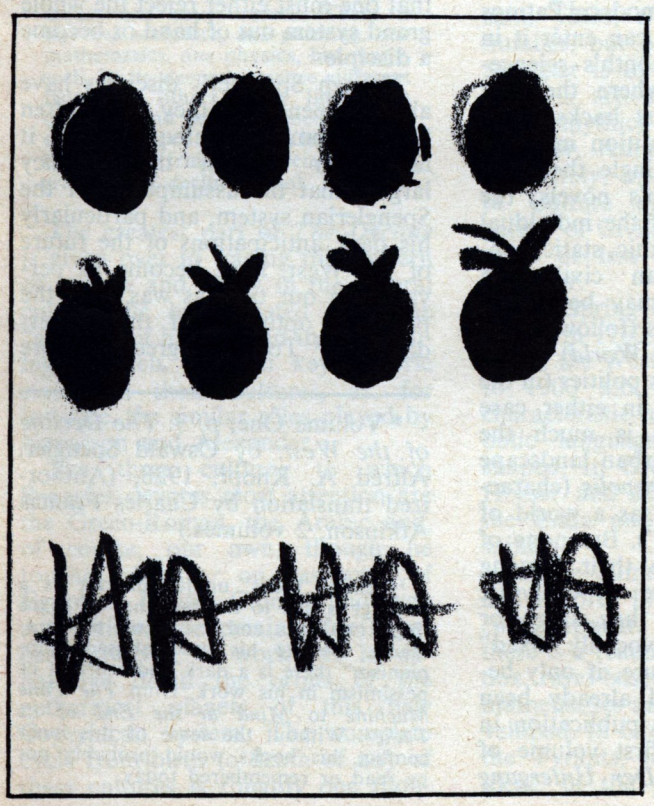
"Father. It's me."

"What're you doing, Sister?"

"I heard a noise outside. I waited awhile before checking."

"Someone prowling?"

"I don't really know, but when I went out I stumbled over. . . these." She lit a match, spreading the flame to the candle.



He inspected the three items in the ruddy light.

"Very strange," he admitted. "Perhaps we overlooked them when we entered."

"Perhaps," she said.

The priest held one of the objects near the candle.

"It's a concave disc, with little projections all over. . . . Beautiful!" he decided, "whatever it is."

"Here's a metal box, covered with some kind of spongy stuff," said the man.

The last item was a wire band with an attached oval of what seemed a shiny plastic substance. Impulsively, she took the band and gently forced it over the head of the awakened puppy, who had been sniffing at it.

"Pretty doggie. . . ." she said, fondling its ears.

"Let the little fellow sleep on the spongy thing," said the priest, and the girl lifted the dog as Father Bob placed the makeshift cushion in the beer case.

"I took a bottle of milk tonight, God forgive me," said the nun, her blush invisible in the red light. "We can put some in this odd dish for the dog and the cats and drink the rest ourselves. I was saving it for breakfast. What is that smell?"

The dog came out of the beer case again, to splash with his pink tongue at the milk as she poured it. The cats only sat and watched. Their tongues smoothed their whiskers, but they did not draw near.

As Sister Cameo was about to place the dog back in the box, both garage doors banged open. She reached for her switchblade and cried out.

Father Bob froze, his right hand at his belt, as an empty beer bottle struck against his forehead. He swayed for a moment, then fell back against an old washing machine. Slashing furiously, the nun went down with a length of chain around her thighs.

"I'm cut!" roared Tiny Tim. "Thirty-eight years a Roller and never a scratch! Now I get it from a broad!" His sobs were inaudible above the screams when they nailed the nun and the priest to the garage doors. "It was the glass at the end of the alley tipped us off!" he taunted them, feeling the better for it.

The old men stayed to hear the screaming and whimpering for the minute or two that it lasted. Then they stamped out and returned to their bikes, parked up the block.

The dog looked at the unconscious figures on the doors. He licked his paws in the bloody candlelight. He sniffed at the overturned dish. The plastic and metal jangled together below his neck, and he paused to glance back into the mangled beer case. There was a strange smell about the place. . . .

A vague curtain of coloured light forming in the midnight sky shifted, was gone, before the dog entered the shadows of the alley. Briefly then, he paused, but only to aim a single, short howl at the moon before it vanished behind a cloud; and then he passed the darting neon, going up the street, off the street, by the street and into the night beyond, his gift a choking collar around his puppy throat.

the Rise of the decline

Thomas M. Disch

EVERY NEW YORKER, and most barbarians, believe that New York is portent of mankind's universal fate more reliable even than the Fatima revelations. Its glass walls are a mirror in which we believe we can see, still as a mammoth frozen in a glacier, the image of what all our cities must become, a universal Hilton, a fluorescent formicary of endless tunnels and low-ceilinged cells in which anomic hordes listlessly serve machines of godlike omniscience and power to the somnolent strains of Muzak. If few would proclaim this prophecy (no one, it is said, really *wants* it to happen), fewer still would deny it. Like the stereotyped foreboding of the Old Testament ("Look out, Jerusalem!") it has become one of our traditions, a secular Apocalypse. The Beast may have an odd or an even number of horns, the Whore may be more or less well dressed, according as the various copyists of the original revelation may devise, but in all essentials the vision of this impending Megalopolis is scrupulously adhered to.

The road to this modern Patmos is well marked. One can enter it in the pages of this month's science-fiction magazines, where the best writers and the worst hacks make obeisance to the tradition in equal measure. It is the single theme of Pohl and Kornbluth's novels, the fantasied rebellion of the individual (us) against a monolithic, static, conformist, authoritarian civilization (it). The emphasis may be placed on bread-and-circuses (following the lines of *Brave New World*) or on the technique of mass politics (in the wake of *1984*), but in either case the physical setting is much the same, the petrified urban landscape of Fritz Lang's *Metropolis* (characterized by one critic as a world of "ornamental despair"). But none of these works, despite their varying merits, possess true Apocalyptic authority, nor could they, singly or together, have so irrevocably "fixed" the shape of the future, if only because that task had already been accomplished by the publication in July, 1918, of the first volume of Oswald Spengler's *Der Untergang des Abendlandes*.

In making claims for this book one can do no better than to quote its author, whose praise of his own accomplishment no later admirer has ever exceeded. The first words of *The Decline of the West** strike the author's characteristic note:

> "In this book is attempted for the first time the venture of predetermining history, of following the still untravelled stages of a Culture, and specifically of the only Culture of our time and on our planet which is actually in the phase of fulfilment —the West-European-American.
>
> "Hitherto the possibility of solving a problem so far-reaching has evidently never been envisaged, and even if it had been so, the means of dealing with it were either altogether unsuspected or, at best, inadequately understood."

That Spengler achieved some measure of success in this vast and dubious enterprise has been attested by some of his most acute critics. Lewis Mumford, whose chief work, *The City in History*, is an invigorating hybrid of Spengler and Freud, was one of his first admirers, and Toynbee claims that his first reading of *The Decline* drove him to despair — not by its message but from a sense that now there was nothing left for *him* to do. However, Spengler won few impartial supporters. So unified is his conception that one must either reject the whole grand system out of hand or become a disciple.

Though Spengler's disciples have always been few, they have often been uncommonly eloquent, and it has been through their agency largely that the assumptions of the Spenglerian system, and particularly his dark anticipations of the future of the West, have become as pervasive in our time as was once the positivist optimism of the Edwardian age.[1] To the degree therefore

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* Volume One, p. 3. *The Decline of the West*, by Oswald Spengler. Alfred A. Knopf, 1928. (Authorized translation by Charles Francis Atkinson, 2 volumes.)

[1] Perhaps Wells' unique interest as a prophet is due to the fact that he spans these two eras and these two temperaments. Despite his much-abused "utopianism" there is a dark undercurrent of pessimism in his work, from *The Time Machine* to *Mind at the End of its Tether*. Without the sense of this inner conflict, his books would probably not be read or remembered today.

that we are all Spenglerians unaware, it is to our advantage to examine this "venture of predetermining history" and to judge the soundness of these laws that govern our presumably inexorable decline.

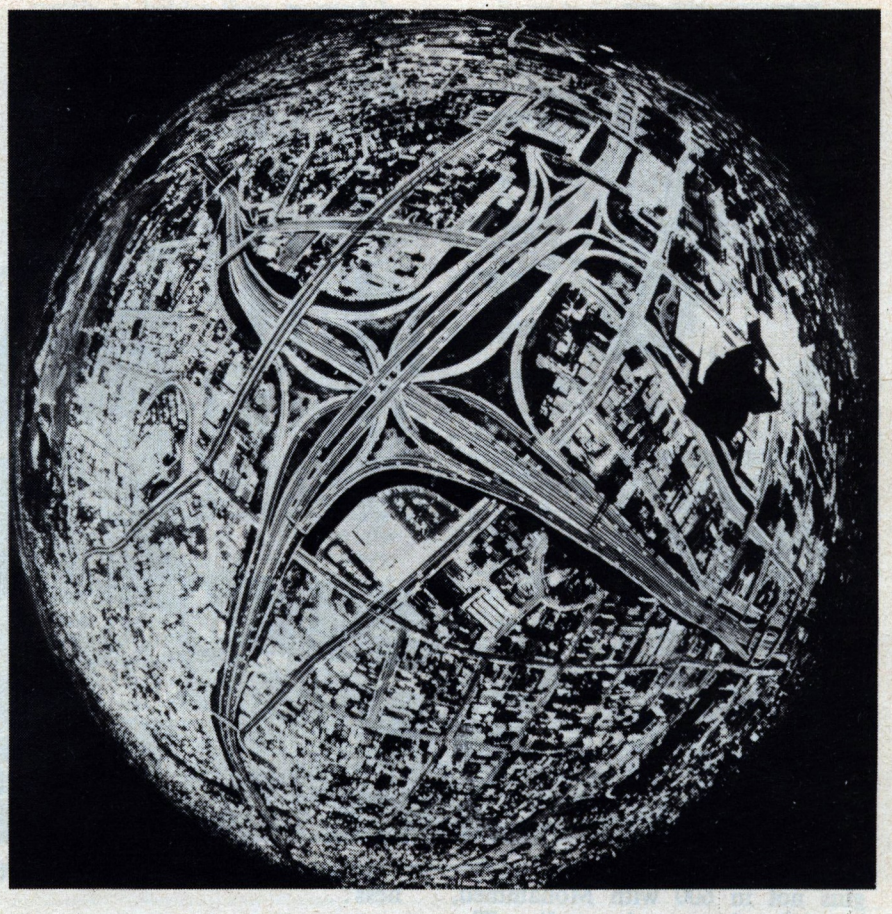
The Morphology of Culture

SPENGLER BEGINS BY laying waste the conventional (and wholly arbitrary) partition of history into three "ages" — Ancient, Mediaeval and Modern—a schemata which, he points out, is covertly self-congratulatory. Against this "Ptolemaic" system of world history he opposes his own "Copernican" system in which our Western Culture is but the most recent of many, all of them governed by the same biologic laws of growth, decline and death:

> "I see, in place of that empty figment of *one* linear history which can only be kept up by shutting one's eyes to the overwhelming multitude of the facts, the drama of *a number* of mighty Cultures, each springing with primitive force from the soil of a mother-region to which it remains firmly bound throughout its whole life-cycle; each stamping its material, its mankind in *its own* image; each having *its own* idea, *its own* passions, *its own* life, will, and feeling, *its own* death. . . . Each Culture has its own possibilities of self-expression, which arise, ripen, decay, and never return. There is not *one* sculpture, *one* painting, *one* mathematics, *one* physics, but many, each in its deepest essence different from the others, each limited in duration and self-contained, just as each species of plant has its peculiar blossom or fruit, its special type of growth and decline." (vol. I, p. 21.)

The greatest part of *The Decline* is given over to tracing this pattern of growth and decay in the several cultures he has isolated from the "stream" of history and in establishing parallels between key historic events in these cultures, as, for instance, the similar rôles played by Napoleon and Alexander.

The three cultures to which Spengler devotes most attention are the Greco-Roman, the Arabic and, of course, our own, though he touches briefly on aspects of Egyptian, Indian, Chinese and even Aztec history. It remained for Toynbee, however, to work out in exhaustive detail the orbits of the nethermost planets of this new Copernican system. The complete cycle from birth to death of any of these cultures is roughly one thousand years, a suspiciously mythic number, but perhaps Fate and not Spengler is to blame for that. This cycle is articulated into a (suspiciously mythic) calendar of Spring, Summer, Autumn and Winter—or, alternately, into a polar opposition of Culture and Civilization, the period of Civilization corresponding more or less to "Winter" on the calendar.



The Spring of the Classic World begins in 1100 B.C. and lasts for 400 years; the West's Spring is from 900 to 1300 A.D. In this period the characteristic myths and the symbolic language of the culture is shaped. In Greece it is the age of Homer and Hesiod, in Europe of the Edda and the legends of the saints.

In the Summer (700 to 400 B.C. and 1300 to 1700 A.D.) the first true cities appear, and simultaneously there is a reaction against the orthodox, rural-based Culture. Systems of mathematics and philosophy are developed. In Greece this is the age of the Tyrants, of the Orphic movement, of the pre-Socratics and of Pythagoras. In the West it is the age of dynastic monarchy, of the Reformation, of Galileo, Bacon and Descartes. (At this point a strict chronological parallelism breaks down, for the West's Summer extends a good century beyond the Summer of Greece and by the end of "Autumn" the gap has widened by 150 years.)

The Greek Autumn is the age of Pericles and Aristotle; in the West it is the period from Bach to Beethoven, from Voltaire to Hegel. Now the forms innate in the springtime reach their final "fruition".

The Winter is timeless. In the Classic World it begins with the advent of Hellenism and endures till the dissolution of the Roman Empire. For ourselves, of course, it has only just begun.

In establishing this "morphological" parallelism, Spengler is sometimes extremely persuasive and always ingenious. One of his most ingenious (and controversial) achievements was in aligning the time-scheme of Arabic civilization to correspond with the Greco-Roman and Western millenia. To do this he



posits a "Magian" culture that begins not in 600 with Mohammed, but fully six centuries earlier. The Christian gospels, the legends of Mithras and Gnostic cosmogonies are thus equated with Homer and the Eddas. Mohammed himself is "morphologically" a contemporary of Pythagoras and Oliver Cromwell, and Spengler's long chapter on these three figures is, if not wholly convincing, a magnificent tour de force. Sadly, this chapter cannot be read out of context, for Spengler has by this point established a private vocabulary of a turgidity that any German metaphysician might envy.

The Winter Landscape

BY THE WINTERTIME of Civilization the creative possibilities of a culture are played out. Only *extensive* possibilities remain: engineering, imperial adventures, the management of vast cities and vast sums of money. It is an age of scepticism and irreligion, of pedantry and eclecticism in the arts and philosophy, of despotic demagogues, of degenerate excitement and anomic torpor. Spengler's most vivid passages depict this final historical condition, and occasionally with an uncharacteristic succinctness:

> "Now the old mature cities with their Gothic nucleus of cathedrals, town-halls, and high-gabled streets, with their old walls, towers and gates, ringed about by the Baroque growth of brighter and more elegant patricians' houses, palaces and hall-churches, begin to overflow in all directions in formless tenements and utility buildings, and to destroy the noble aspect of the old time by clearances and rebuildings. Looking down from one of the old towers upon the sea of houses, we perceive in his petrification of a historic being the exact epoch that marks the end of organic growth and the beginning of an inorganic and therefore unrestrained process of massing without limit. And now, too, appears that artificial, mathematical, utterly land-alien product of a pure intellectual satisfaction in the appropriate, the city of the city architect. In all Civilizations alike, these cities aim at the chessboard form, which is the symbol of soullessness. Regular rectangle-blocks astounded Herodotus in Babylon and Cortez in Tenochtitlan. . . . In the West-European and American world the lay-out of Washington in 1791 is the first big example. . . . Even now the world-cities of the Western Civilization are far from having reached the peak of their development. I see, long before A.D. 2000, cities laid out for ten to twenty million inhabitants, spread over enormous areas of countryside, with buildings that will dwarf the biggest of today's and notions of traffic communication that we should regard as fantastic to the point of madness." (vol. II, p. 100-101.)
>
> "But no wretchedness, no compulsion, not even the clear vision of the madness of the development, avails to neutralize the attractive force of these daemonic creations. The wheel of Destiny rolls on to its end; the birth of the City entails its death . . . Now the giant city sucks the country dry, insatiably and incessantly demanding and devouring fresh streams of men, till it wearies and dies in the midst of an almost uninhabited waste of country. Once the full sinful beauty [A lapse from relativism? T.D.] of this last marvel of all history has captured a victim, it never lets him go. Primitive folk can loose themselves from the soil and wander, but the intellectual nomad never. Homesickness for the great city is keener than any other nostalgia. . . ." (vol. II, p. 102.)
>
> "Tension, when it has become intellectual, knows no form of recreation but that which is specific to the world-city—namely *détente*, relaxation, distraction. . . . The relief of hard, intensive brain-work by its opposite — conscious and practised fooling—of intellectual tension by the bodily tension of sport, of bodily

tension by the sensual straining after 'pleasure' and the spiritual straining after the 'excitement' of betting and competitions, of the pure logic of the day's work by a consciously enjoyed mysticism—all this is common to the world-cities of all the Civilizations. . . ." (vol. II, p. 103.)

"And then, when Being is sufficiently uprooted and Waking-Being sufficiently strained, there suddenly emerges into the bright light of history a phenomenon that has long been preparing itself underground and now steps forward to make an end of the drama—*the sterility of civilized man.* . . . The last man of the world-city no longer *wants* to live—he may cling to life as an individual, but as a type, as an aggregate, no, for it is a characteristic of this collective existence that it eliminates the terror of death. . . . Children do not happen because intelligence at the peak of intensity can no longer find any reason for their existence. . . ." (vol. II, p. 103-104.)

"At this level all Civilizations enter upon a stage, which lasts for centuries, of appalling depopulation. The whole pyramid of cultural man vanishes. It crumbles from the summit, first the world-cities, then the provincial forms and finally the land itself, whose best blood has incontinently poured into the towns, merely to bolster them up a while. At the last, only the primitive blood remains, alive, but robbed of its strongest and most promising elements. The residue is the *Fellah type.*

"If anything has demonstrated the fact that Causality has nothing to do with history, it is the familiar 'decline' of the Classical, which accomplished itself long before the irruption of Germanic migrants. The Imperium enjoyed the completest peace; it was rich and highly developed; it was well organized; and it possessed in its emperors from Nerva to Marcus Aurelius a series of rulers such as the Caesarism of no other Civilization can show. And yet the population dwindled, quickly and wholesale. . . ." (vol. II, p. 105.)

"Consequently, we find everywhere in these Civilizations that the provincial cities at an early stage, and the giant cities in turn at the end of the evolution, stand empty, harboring in their stone masses a small population of fellaheen, who shelter in them as the men of the Stone Age sheltered in caves and pile-dwellings. . . . In a long series of Classical writers from Polybius onward, we read of old, renowned cities in which the streets have become lines of empty, crumbling shells, where the cattle browse in forum and gymnasium, and the amphitheatre is a sown field, dotted with emergent statues and herms. Rome had in the fifth century of our era the population of a village, but its Imperial palaces were still habitable.

"This, then, is the conclusion of the city's history, growing from primitive barter-center to Culture-city, and at last to world-city, it sacrifices first the blood and soul of its creators to the needs of its majestic evolution, and then the last flower of that growth to the spirit of Civilization—and so, doomed, moves on to final self-destruction." (vol. II, p. 107.)

Che sera, sera?

IT IS PROBABLE that Spengler, like Rembrandt, is admired by most of us chiefly for the sake of the magnificent gloom of passages like those above. Then, too, there's a great deal of intellectual *fun* to be had jumping about so freely from mountain top to mountain top. But how is one to *assess* a book whose scope is so extensive that even many professional historians feel they must reserve judgement?

The entire burden of his argument rests on a supposed parallelism in the development of all Cultures. In judging these parallels, the most thorough knowledge of Western history (including the history of its

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AN AGE
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arts, its philosophy, its economic and religious institutions) is useless without a comparable background in the histories of Greece, Egypt, India, China *et al.* Splengler's average reader will possess, at best, a familiarity with Classic and Western history. Concerning the events of Middle and Far Eastern Cultures he will be obliged to accept Spengler's words on such questions as, for instance, the likeness of the Chan-Kwo period to the French Revolution. Who, besides Spengler, knows? It seems indicative, however, that a majority of historians with specialist knowledge in these areas insist that Spengler has made grave misrepresentations of whole epochs. On the other hand, Toynbee has subsequently, with an even vaster erudition, ironed out many of the apparent discrepancies in the Spenglerian scheme, playing Kepler to his Copernicus. The criticisms levelled against Toynbee have been numerous but not so overwhelming. The theory possesses, in a descriptive sense at least, intellectual respectability.

Whether it can be used reliably as a basis for prophecy is another question. Early in the book (in the chapter "Physiognomic and Systematic") Spengler goes to great lengths to denounce the principle of *causality* in the study of history. Surely, when one's argument relies exclusively upon metaphors, this must be a sensitive point. Writing of Goethe, he observes: "Sympathy, observation, comparison, immediate and inward certainty, intellectual *flair*—these were the means whereby he was enabled to approach the secrets of the phenomenal world in motion. *Now these are the means of historical research* — precisely these and no others." (vol. I, p. 25.) Alas, though these may very well enable us to approach the secrets, they are not enough to allow us to *prove a case*. Arguments from analogy are always a poor second-best, and the broader the analogy, the shakier the argument. Spengler's analogies are of the very broadest. (Indeed, this is their special merit!)

The fact, if it is a fact, that some two dozen cultures have had a lifetime of roughly one thousand years does not mean necessarily that the two-dozenth-and-first will expire at the same age, *unless* it can be shown that there is a necessary and inevitable relationship between one generation and the next such that after a period of about thirty generations the expressive possibilities of *any* culture must have exhausted themselves.

There is ample reason to believe that Spengler was premature, by at least fifty years, in predicting the end of significant new developments in the arts and sciences. Impressionism was scarcely the last gasp of Western painting. Had Spengler been more sensitive to the art of his own time, he would have seen in Cubism the fulfilment of all that the art of painting had been trying to achieve (by Spengler's own definition of its tendencies) since the time of van Eyck. Similarly, he maintains that our mathematics reached its final, Autumnal form in the work of Gauss and Riemann. How much more satisfying, aesthetically, to have been able to round things off with Russel and Wittgenstein, Gödel, and Einstein. Then, indeed, the doors seemed closed. Of Freud, too, there is no mention in *The Decline of the West*, though the second volume appeared in 1922.

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Spengler can hardly be blamed for these oversights. It is a fact that unforeseen possibilities cannot be foreseen (a fact that is the ruination of all systems of prophecy). And, after all, these are trifling errors, the result of Spengler's overweening appetite for the Winter's bleakest days. Like a child eagerly counting the days till Christmas, he has given November a scant two weeks.

The Redemption of Faust

EVEN WITHIN SPENGLER'S system there is hope for Western (or, as he styles it, *Faustian*) Civilization, for it is essential to his conception that each Culture/Civilization expresses a unique world-view. If our outlook is unique, why not, as well, our destiny?

The prime symbol of the Faustian world-view is endless space (first expressed tangibly by the builders of the Gothic cathedrals) and, complementarily, a deep reverence for, and understanding of, historical phenomena (the Renaissance cult of the Antique). Its physics are dynamic, as opposed to the Classic ages' static physics; its purely *relational* mathematics advances from the dematerialized geometries of Des Cartes to the abstract, paradoxical "spaces" of Riemann, while at its height Classic mathematics adhered to the sensuous, self-evident geometry of Euclid. Like his Goethean prototype, Faustian man cannot countenance the notion of *limit*, either in time or in space.

It becomes a question, then, whether there *are* limits—in art, in science, in political and economic development, in the life-style of great cities, and—especially—in individual consciousness. In at least two spheres one can say with confidence (and without reliance upon mere "intuition") that there are not —in science and in technology/economics. The scientific method of the West has a singular, almost autonomous capacity for self-regeneration. Just as the fifty years since Spengler have witnessed immense advances of the most fundamental order in all branches of science, so we may expect the next fifty, the next hundred-and-fifty years, to produce advances as immense and as fundamental. They are already visible on the horizon, and the most dire pronouncements will not prevent their fulfilment. The development of science is pyramidal, but, *pace* Spengler, the pyramid is inverted.

These advances in science will be attended by corresponding advances in technology, and these in turn influence every sphere of life, the economic especially. Therefore, so long as Western science maintains its impetus we can be certain that processes of historical change will not come to a stop. (A prediction, it should be noted, based on the principle of Causality, which Spengler so earnestly condemns.) The frozen wastelands of the absolute winter seem still to be a long way off.

How, then, are we to account for Spengler's real successes as a prophet? His picture of the Megalopolitan landscape was so accurate that novelists need no longer resort to science fiction to portray it in all its gruesome horror, as witness such a Spenglerian work as Hugh Selby's *Last Exit to Brooklyn*. His analogy between Imperial Rome and America becomes more uncomfortably accurate every day, and his forebodings of a new age of Caesars is echoed by most prophets of a liberal stamp and actualized by politicians of every stamp.

Perhaps in these respects Spengler will be proven right, though it will have been a triumph of his intuition rather than of his methods. But even should this happen, one is obliged to point out (with Spengler) that this is not necessarily a cause for pessimism. The Roman age had its decided grandeur, as well as a fair amount of good poetry, and there is something vaguely reassuring (if only for an American) in the notion of a Pax Americana, which might, on a truly world-wide scale, forever eliminate the threat of the barbarian.

As for Megalopolis, well, for its inhabitants it doesn't seem as bad as all that. There are, after all, splendid circuses. Or, as we used to say — New York is a Summer Festival.

AFTER LABOUR — WHAT?

TOO MANY WELFARE-happy Britons, encouraged to reproduce until their subsidized progeny are crawling out of the woodwork, the mere idea of *under*population may seem a fantasy in itself. It is a fantasy that becomes increasingly attractive as the century swells to a close. Yet the uncomfortable truth is that Britain and other crowded areas of the globe are irreversibly geared to mass employment, mass transport, mass catering and entertainment—machines that cannot afford to slow down. What might happen if the brakes were ruthlessly applied to these complex mechanisms is shown, in part, in *Implosion* (Rupert Hart-Davis, 25s), a second novel by D. F. Jones.

This is not a world-picture of catastrophe, but (as the book's fictitious Prime Minister, George Farmer, would put it) "a parochial view". It centres upon John Bart, an eminent young surgeon who decides to stand for Parliament and is swept abruptly into political power by the mass dismissal of the Government of 1972. Strange rumours of a steeply declining birthrate have created unease which is increased by clumsy Ministerial denials. A new Government, installed in record time, faces the task of re-organizing a country destined to lose nine-tenths of its population within fifty years. The cause of the disaster is found to be a drug, put into the public water supplies, which renders women sterile. This episode and the cloak-and-daggering which follows has all the conviction of comic-opera; fortunately, it forms only a small part of the story. From this point onwards, the situation is developed with few concessions to melodrama as the comparative handful of still-fertile women, among them Bart's wife, are segregated in guarded camps as a form of human livestock, while around them towns and villages slowly decay. *Implosion* may not be the greatest novel written around the theme of civilization's decline, but it is an excellent example of the power of a strong basic idea uncluttered by gimmicks.

The Devil His Due (Ed. Douglas Hill, Rupert Hart-Davis, 25s) deals with less tangible horrors. Hell and the agents thereof are the common subject of eight stories which vary considerably in mood and approach. The writing is never less than workmanlike, but rarely inspired. Keith Roberts, a British writer of increasing reputation, most accurately conveys the disquieting *wrongness* of

the supernatural in the contemporary world in "The Eastern Windows"; closest to this in atmosphere is Hilary Bailey's "Devil of a Drummer", which begins promisingly with a demoniac musician in London's Portobello Road, but ends rather conventionally. "A Long Spoon", "Anthropologic Demonography", "Return Visit" and "The Atheist's Bargain", by John Wyndham, Ramsay Wood, E. C. Tubb and Tom Disch/John Sladek respectively, take a more flippant view of the rational twentieth-century man confronted by Hellish temptation. Judith Merril skilfully walks the borderline between fantasy and science with "The Shrine of Temptation", and Michael Moorcock chronicles a bizarre adventure of Elric the Sorcerer-King, "The Singing Citadel". In total, moderately entertaining, but don't look for any hidden gems.

VERY NEARLY ANYTHING can be looked for, and found, in *The Ganymede Takeover* (Ace Books, 50c) by Phillip K. Dick and Ray Nelson, beginning with the notion of Tennessee as the last bastion of human freedom in the war against the wormlike conquerors from Ganymede. Add to this one Percy X, Negro telepath and leader of a band of coloured rebels who are the hard core of the resistance forces, and whose skin is a coveted prize among the Ganymedians; an illusion projector capable of "materialising" hordes of vampires, elephants, aardvaarks and other fancies; action running from stark brutality to outright farce and several sharp prods in all directions at race prejudice. The end result is like James Thurber's well-known hat; indescribable. Judge it for yourself.

Two long-established exponents of high adventure, Edmond Hamilton and Poul Anderson, are represented by *Starwolf* (Ace Books, 50c) and *The Trouble Twisters* (Gollancz SF, 21s). In the first, which is billed as the beginning of a series, Hamilton tells a colourful tale of Galactic piracy, exotic planets and alien science with the deftness of an old hand; the somewhat more recent Poul Anderson offers a smooth blend of science and action that few other authors can achieve with such consistency. Three stories of David Falkayn, member of the Polisotechnic League and trader to the stars, make up *The Trouble Twisters*: "The Three-Cornered Wheel" places apprentice Falkayn and the crew of a trader spaceship upon a world where native food and drink will poison an Earthman; to lift off again, they must move a hefty piece of equipment over appalling roads by muscle-power alone. The snag being that the circle is a sacred object and wheels, therefore, are *verboten*. Lighter in mood, "A Sun Invisible" revolves around the problem of locating an enemy who conceals himself behind your preconception of a situation. The third and longest story, "The Trouble Twisters", mixes sword-and-cloak warfare, alien politics, Terran-descended mercenaries and four highly individualistic traders in a roaring free-for-all that has just about everything to recommend it. Of course, the motivation behind the undermining of extraterrestrial cultures and religions is pure old-fashioned greed, but why quibble over details? Read on.

J. Cawthorn.

The Authors

DR. DAVID HARVEY lectures in Economic Geography at the University of Bristol, has lived and worked in various parts of the world, including Sweden and the U.S.A. Previous publication in NEW WORLDS was the story *Jake in the Forest* in 155.

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CHARLES PLATT'S first novel, *The Garbage World* (serialised in NW 167-8), is soon to be published in the U.S. by Berkley. Charles Platt is 22 and Design Editor of NEW WORLDS.

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