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# BEST SF: 1969

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THE BEST SF MAGAZINES IN THE WORLD

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*SF: AUTHORS' CHOICE 2*

(edited by Harry Harrison)

# BEST SF: 1969

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edited by Harry Harrison  
and Brian W. Aldiss

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Originally published by G. P. Putnam's Sons, Inc.

BERKLEY MEDALLION EDITION, APRIL, 1971

SBN 425-01982-9

*BERKLEY MEDALLION BOOKS are published by  
Berkley Publishing Corporation  
200 Madison Avenue  
New York, N. Y. 10016*

BERKLEY MEDALLION BOOKS ® TM 757, 375

PRINTED IN CANADA

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## INTRODUCTION

HARRY HARRISON

1969 was another good year for science fiction, and the readers have profited thereby. A science-fiction novel has at last been made a selection of Book-of-the-Month Club—*The Andromeda Strain*—and been swept into the best-seller list. Another SF novel, *Slaughterhouse-Five*, appeared on these same lists, although the author still insists shrilly that he is not and never has been a science-fiction writer. One wishes that Mr. Vonnegut would look behind and see that none pursueth him. Science fiction is now socially acceptable and appears more and more often in the most unusual and interesting places.

I wish that other writers would follow the example set by Anthony Burgess. Here is an author, one of the finest stylists in the English language, who when he writes science fiction calls it by name. For example his novel *The Wanting Seed*. Or his short story "The Muse," which appears in this anthology. It was first published in *The Hudson Review*, a journal not normally known to indulge in this specialized form of fiction, where it was actually labeled "a sort of SF story." Because of the source we almost missed it. But we have heeded the warning and are now keeping our eyes open for SF in the most unlikely places, such as *Ramparts*—which also contributed a science-fiction story this year. It appears as if the SF story has been involved in a literary diaspora. Although this makes the anthology editor's job more difficult, it



presents rich rewards for the general reader. A special award of merit should also go to *Playboy* at this time. It has always published some SF, but during 1968 it published more excellent SF stories than ever before, the best of which we are happy to reprint here.

The science-fiction magazines of course continue to print the bulk of the science-fiction stories—as well they should. But there has been a certain amount of bubbling and seething among these magazines, new editors and new titles, and the final results of the changes have yet to be seen.

There were no changes at *Analog*, which still forges ahead like a mighty battleship, all guns blazing, with John W. Campbell at the helm and firing button in his accustomed position, thundering out the barrages of his editorials. The *Analog* articles are hard science, the stories something else again. While the magazine's circulation still rises, with monthly sales now past the 100,000 mark. Sail on!

*Fantasy and Science Fiction* editor Edward L. Ferman launched, or rather relaunched, the sister magazine *Venture*, which has not been seen for a good number of years. This magazine features a book-length novel as well as short stories, and though only three issues were published in 1969, you will find one of the stories anthologized here. It is to be hoped that this venture with *Venture* will succeed, as will the new titles to be published by the Galaxy group of magazines.

A number of changes have taken place there. A new editor, Ejler Jakobsson, has come in, along with a new publisher. The transition has been a smooth one, and former editor Frederik Pohl was still there as editor emeritus, along with managing editor Judy-Lynn Benjamin. Mr. Jakobsson is reviving *Worlds of Tomorrow* and *Worlds of Fantasy*.

Some other strange magazines appeared briefly on the newsstands and looking at them, as an act of mercy, it is hoped that they will die quick and painless deaths if they have not done so already. *Spaceway* appeared in a new incarnation, reprinting stories from an earlier existence. These were third rate the first time around and do not bear discussing now. Another strange publication,

titled *Coven 13*, was still stirring with life when last I looked, a magazine of WITCHCRAFT, HORROR and THE SUPERNATURAL as the contents page informs us. It features poems such as "*The Visitor*" ("... stank of quick-lime graves . . . vulpine at nightfall . . .") and stories with titles like "*Of Brides and Brimstone*" and is really of only peripheral interest to the science-fiction reader.

The case of *Amazing* and *Fantastic* is more tragic. After a brief attempt at quality and responsibility under former editor Barry M. Malzberg ("The Castle on the Crag," anthologized here, is from one of the last issues he edited), these magazines have sunk back to their former low-budget ways. Consisting mostly of reprinted stories from the early and bad pulp days of the magazines, interspersed with a meager handful of indifferent new stories, they are not worth serious consideration.

But these publishing crimes are just bad habits left over from the seedy past of magazine science fiction and are of no real importance. The marked improvement in quality in the upper ranges is what we should look at. Science fiction is open-ended and has yet to find its limits or limitations. James Blish, in a note of advice to his fellow science-fiction writers, said, "Language, gentlemen, language is the core of what we do. All else is at best decoration, and much more usually it's bloody fakery." Established writers from outside the field, such as Ken W. Purdy and Anthony Burgess—both in this anthology—show how language can be used within our confines. Newer SF writers, such as Ursula K. Le Guin and James Tiptree, Jr., also represented here, seem to have understood the message. They march to the sound of a different drum: one without the cracked letters PULP painted on the drumhead. We welcome them all and profit by their presence.

This is not to say that the old crimes are not still being committed. We do not have to go to the bottom to find the mangled corpses; examples can be found in the top magazines in the field. For example:

"That," he said to Schwab who sat between Benson and a guard and looked toward the gray-haired man in his late sixties whom Benson indicated standing next



to a door marked Authorized Personnel Only, "is McMaster."

What can a writer possibly be thinking of when he commits a sentence like this one? Perhaps he is not thinking at all. Perhaps the words are fed into the typewriter exactly as they emerge from the subconscious, with no attempt to order or form them, and are never reread once put to paper.

The writer of the preceding three-word sentence that engulfs a monster may at least have the excuse of lack of experience. But what of the following quote from the opening lines of a story by a Hugo-winning author with pretense to quality and fame?

A hard heel could make it ring but so vast was the hall that echoes died on the way to the walls and roof which might have reflected them.

One quick look would have revealed that the correct word here is "sounds." Is it possible that copy was fed straight from the typewriter into an envelope that was sent instantly to the editor, so that remunerative production would not be slowed even by the time needed for a single rereading? Unhappily, it must be so. We deserve better. You, the reader, deserve more.

I recommend to these hurrying writers what I feel to be the seminal book of the year, *Holding Your Eight Hands*, edited by Edward Lucie-Smith (Doubleday). This is subtitled *An Anthology of Science Fiction Verse* and is just that. Though Mr. Lucie-Smith has nodded occasionally—Lovecraft's poetry is on a par with his prose—this is a volume well worth having and should be on every SF writer's desk as an example of how language works. Two of the best poems are anthologized here.

While the cinema has yet to take advantage of all of the possibilities of science fiction, the film festivals have already received the message loud and clear. The Trieste Science Fiction Film Festival is now an annual affair in Italy, and in the Afterword you will find details about the first SF film festival in Rio de Janeiro. At this time,



during the closing days of 1969, it appears that the Japanese will also have an SF film festival at EXPO '70. If they do, I'll be happy to report upon it in next year's anthology. All of this activity not only is exciting, but has its effect upon the writers. It seems to be putting enthusiasm back into science fiction, and there are more books and stories around that are a joy to read.

This year I would like to thank the writers—and readers—who have drawn my attention to stories published in out-of-the-way places. I cannot pretend to read all the thousands of magazines published each month and am grateful for any aid. I am particularly grateful, once again, to Brian W. Aldiss, who has scouted the British publishing scene for material for this anthology as well as writing his Afterword about the year in science fiction. My usual disclaimer still holds: The final selection of material for this volume is mine and mine alone. These are the best stories of the publishing year of 1969. You will see some 1968 copyrights here, and this should not be off-putting. The January—and even the February—issues of most magazines appear in December of the preceding year and are copyrighted in that year. And once again G. P. Putnam's Sons has placed no restrictions whatsoever on the stories I may use. Here is the best science fiction of the year. May you exact the same pleasure from reading it that I have from assembling it.

HARRY HARRISON

## THE MUSE

ANTHONY BURGESS

*It is very easy to say good things about Anthony Burgess. He writes first-class science-fiction novels like The Wanting Seed. He writes quotable prose, for example the observation in Enderby about a pair of good honest British workingmen "... bloodying and bugging their meagre dole of speech." This same Enderby opens with a chapter that is pure science fiction—as well as being a marvelous invention for the introduction of the hero. There is a temptation to overpraise this author which I do not resist, since there is a chilling example right here of just what he can do. Anyone who wishes to write about time travel or alternate worlds in the future had better read this story first.*

"You're quite sure," asked Swenson for the hundredth time, "you want to go through with this?" His hands ranged over the five manuals of the instrument console and, in cross-rhythm, his feet danced on the pedals. He was a very old man, waxed over with the veneer of rejuvenation chemicals. Very wise, with a century of experience behind him, he yet looked much of an age with Paley, the twenty-five-year-old literary historian by



his side. Paley grinned with undiminished patience and said:

"I want to go through with it."

"It won't be quite what you think," said Swenson. (This too he had said many times before.) "It can't be absolutely identical. You may get shocks where you least expect them. I remember taking Wheeler that time, you know. Poor devil, he thought it was going to be the fourteenth century he knew from his books. But it was a very different fourteenth century. Thatched cottages and churches and manors and so on, and lovely cathedrals. But there were polycephalic monsters running the feudal system, with tentacles too. Speaking the most exquisite Norman French, he said."

"How long was he there?"

"He was sending signals through within three days. But he had to wait a year, poor devil, before we could get him out. He was in a dungeon, you know. They got suspicious of his Middle English or something. White-haired and gibbering when we got him aboard. His jailers had been a sort of tripodic ectoplasm."

"That wasn't in System B303, though, was it?"

"Obviously not." The old man came out in Swenson's snappishness. "It was a couple of years ago. A couple of years ago System B303 was enjoying the doubtful benefits of proto-Elizabethan rule. As it still is."

"Sorry. Stupid of me."

"Some of you young men," said Swenson, going over to the bank of monitor screens, "expect too much of Time. You expect historical Time to be as plastic as the other kinds. Because the microchronic and macrochronic flows can be played with, you consider we ought to be able to do the same thing with—"

"Sorry, sorry, *sorry*. I just wasn't thinking." With so much else on his mind, was it surprising that he should be temporarily ungeared to the dull realities of clockwork time, solar time?

"That's the trouble with you young— Ah," said Swenson with satisfaction, "that was a beautiful changeover." With the smoothness of the tongue gliding from one phonemic area to another, the temporal path had become a spatial one. The uncountable megamiles

between Earth and System B303 had been no more to their ship than, say, a two-way transatlantic flipover. And now, in reach of this other Earth—so dizzyingly far away that it was the same as their own, though at an earlier stage of their own Earth's history—the substance vedmum had slid them, as from one dream to another, into a world where solid objects might subsist, so alien as to be familiar, fulfilling the bow-bent laws of the cosmos. Swenson, who had been brought up on the interchangeability of time and space, could yet never cease to marvel at the miracle of the almost yawning casualness with which the *Nacheinander* turned into the *Nebeneinander* (there was no doubt, the old German words caught it best!). So far the monitor screens showed nothing, but tape began to whirl out from the crystalline corignon machine in the dead center of the control turret—cold and accurate information about the solar system they were now entering. Swenson read it off, nodding, a Nordic spruce of a man glimmering with chemical youth. Paley looked at him, leaning against the bulkhead, envying the tallness, the knotty strength. But, he thought, Swenson could never disguise himself as an inhabitant of a less well-nourished era. He, Paley, small and dark as those far-distant Silurians of the dawn of Britain, could creep into the proto-Elizabethan England they would soon be approaching and never be noticed as an alien.

"Amazing how insignificant the variants are," said Swenson. "How finite the cosmos is, how shamefully incapable of formal renewals—"

"Oh, come," smiled Paley.

"When you consider what the old musicians could do with a mere twelve notes—"

"The human mind," said Paley, "can travel in a straight line. The cosmos is curved."

Swenson turned away from the billowing mounds of tape, saw that the five-manual console was flicking lights smoothly and happily, then went over to an instrument panel whose levers called for muscle, for the blacksmith rather than the organist. "Starboard," he said. "Fifteen point eight. Now we play with gravities." He pulled hard. The monitor screens showed band after band of light,



moving steadily upwards. "This, I think, should be—" He twirled a couple of corrective dials on a shoulder-high panel above the levers. "Now," he said. "Free fall."

"So," said Paley, "we're being pulled by—"

"Exactly." And then, "You're quite sure you want to go through with this?"

"You know as well as I do," smiled Paley patiently, "that I *have* to go through with it. For the sake of scholarship. For the sake of my reputation."

"Reputation," snorted Swenson. Then, looking toward the monitors, he said, "Ah. Something coming through."

Mist, swirling cloud, a solid shape peeping intermittently out of vapor porridge. Paley came over to look. "It's the Earth," he said in wonder.

"It's *their* Earth."

"The same as ours. America, Africa—"

"The configuration's slightly different, see, down there at the southern tip of—"

"I can't see any difference."

"Madagascar's a good deal smaller."

"The cloud's come over again." Paley looked and looked. It was unbelievable.

"Think," said Swenson kindly, "how many absolutely incomputable systems there have to be before you can see the pattern of creation starting all over again. This seems wonderful to you because you just can't conceive how many myriads upon myriads of other worlds are *not* like our own."

"And the stars," said Paley, a thought striking him; "I mean, the stars they can actually see from there, from their London, say—are they the same stars as ours?"

Swenson shrugged at that. "Roughly," he said. "There's a rough kinship. But," he explained, "we don't properly know yet. Yours is only the tenth or eleventh trip, remember. What is it, when all's said and done, but the past? Why go to the past when you can go to the future?" His nostrils widened with complacency. "G9," he said. "I've done that trip a few times. It's pleasant to know one can look forward to another twenty years of life. I saw it there, quite clearly, a little plaque in Rostron Place: *To the memory of G. F. Swenson, 1963-2084.*"

"We have to check up on history," said Paley, mumbling

a little. His own quest seemed piddling: all this machinery, all this expertise in the service of a rather mean inquiry. "I have to know whether William Shakespeare really wrote those plays."

Swenson, as Paley expected, snorted. "A nice sort of thing to want to find out," he said. "He was born just five hundred years this year, and you want to prove that there's nothing to celebrate. Not," he added, "that that sort of thing's much in my line. I've never had much time for poetry. Aaaaah." He interposed his own head between Paley's and the screen, peering. The pages of the atlas had been turned; now Europe alone swam toward them. "Now," said Swenson, "I must set the exactest course of all." He worked at dials, frowning but humming happily, then beetled at Paley, saying: "Oughtn't you to be getting ready?"

Paley blushed that, with a huge swathe of the cosmos spent in near-idleness, he should have to rush things as they approached their port. He took off his single boiler suit of a garment and drew from the locker his Elizabethan fancy dress. Shirt, trunks, codpiece, doublet, feathered French hat, slashed shoes—clothes of synthetic cloth that was an exact simulacrum of old-time weaving, the shoes of good leather handmade. And then there was the scrip with its false bottom; hidden therein was a tiny two-way signaler. Not that, if he got into difficulties, it would be of much use: Swenson was (and these were strict orders) to come back for him in a year's time. The signaler was to show where he was and that he was still there, a guest of the past, really a stowaway. Swenson had to move on yet further into space; Professor Shimmins to be picked up in FH78, Dr. Guan Moh Chan in G210, Paley collected on the way back. Paley tested the signaler, then checked the open and honest contents of his scrip: Chief among these was a collection of the works of William Shakespeare—not the early works, though: only six of the works which, in this B303 year of A.D. 1595, had not yet been written. The plays had been copied from a facsimile of the First Folio in fairly accurate Elizabethan script; the paper too was a goodish imitation of the tough coarse stuff that Elizabethan dramatists wrote on. For the rest, Paley had powdered



prophylactics in little bags and, most important of all, gold—angels fire-new, the odd portague, dollars.

"Well," said Swenson, with the faintest twinge of excitement, "England, here we come." Paley looked down on familiar river-shapes—Tees, Humber, Thames. He gulped, running through his drill swiftly. "Countdown starts now," said Swenson. A synthetic voice in the port bulkhead began ticking off cold seconds from 300. "I'd better say good-bye then," gulped Paley, opening the trap in the deck which led to the tiny jet-powered very-much-one-man aircraft. "You should come down in the Thames estuary," said Swenson. "*Au revoir*, not good-bye. I hope you prove whatever it is you want to prove." 200—199—198. Paley went down, settled himself in the seat, checked the simple controls. Waiting took, it seemed, an age. He smiled wryly, seeing himself, an Elizabethan, with his hands on the wheel of a twenty-first-century miniature jet aircraft. 60—59—58. He checked his Elizabethan vowels. He went over his fictitious provenance: a young man from Norwich with stage ambitions ("See, here have I writ a play and a goodly one"). The synthetic voice, booming here in the small cabin, counted to its limit. 4—3—2—1.

Zero. Paley zeroed out of the belly of the mother-ship, suddenly calm, then elated. It was moonlight, the green countryside slept. The river was a glory of silver. His course had been preset by Swenson; the control available to him was limited, but he came down smoothly on the water. What he had to do now was to ease himself to the shore. The little motor purred gently as he steered in moonlight. The river was broad here, so that he seemed to be in a world all water and sky. The shore neared—it was all trees, sedge, thicket; there was no sign of habitation, not even of another craft. What would another craft have thought sighting him? He had no fears about that: with its wings folded, the little air boat looked, from a distance, like some nondescript barge, so well had it been camouflaged. And now, to be safe, he had to hide it, cover it with greenery in the sedge. But, first, before disembarking, he must set the time switch that would, when he was safe ashore, render the metal of the fuselage high-charged, lethally repellent of all would-be board-

ers. It was a pity, but there it was. It would automatically switch off in a year's time, in twelve months to a day. In the meantime, what myths, what madness would the curious examiner, the chance finder generate, tales uncredited by sophisticated London?

And now, London, here he came.

Paley, launched on his night's walk upriver, found the going was easy enough. The moon lighted field paths, stiles. Here and there a small farmhouse slept. Once he thought he heard a distant whistled tune. Once he thought he heard a town clock strike. He had no idea of the month or day or time of night but he guessed that it was late spring and some three hours or so off dawn. The year 1595 was certain, according to Swenson. Time functioned here as on true Earth, and two years before Swenson had taken a man to Muscovy, where they computed according to the Christian system, and the year had been 1593. Paley, walking, found the air gave good rich breathing, but from time to time he was made uneasy by the unfamiliar configurations of the stars. There was Cassiopeia's Chair, Shakespeare's first name's drunken initial, but there were constellations he had not seen before. Could the stars, as the Elizabethans themselves believed, modify history? Could this Elizabethan London, because it looked up at stars unknown on true Earth, be identical with that other one that was only now known from books? Well, he would soon know.

London did not burst upon him, a monster of gray stone. It came upon him gradually and gently, houses set in fields and amid trees, the cool suburbs of the wealthy. And then, like a muffled trumpet under the sinking moon, the Tower. And then came the crammed houses, all sleeping. Paley breathed in the smell of this summer London, and he did not like what he smelled. It was a complex of old rags and fat and dirt, but it was also a smell he knew from the time he had flipped over to Borneo and timidly penetrated the periphery of the jungle: It was, somehow, a jungle smell. And, as if to corroborate this, a howl arose in the distance, but it was a dog's howl. Dogs, man's best friend, here in outer space; dog howling to dog across the inconceivable vastness



of the cosmos. And then came a human voice and the sound of boots on the cobbles. "Four of the clock and a fine morning." He instinctively flattened himself in an alleyway, crucified against the dampish wall. The time for his disclosure was not quite yet. He tasted the vowel sounds of the bellman's call—nearer to American than to present-day British English. "Fowrrr 'vth' cluck." And then, at last knowing the time and automatically feeling for a stopped wristwatch that was not there, he wondered what he should do till day started. Here were no hotels with clerks on all-night duty. He tugged at his dark beard (a three months' growth) and then decided that, as the sooner he started on his scholar's quest the better, he would walk to Shoreditch where the Theatre was. Outside the City's boundaries, where the play-hating City Council could not reach, it was, history said, a new and handsome structure. A scholar's zest, the itch to see, came over him and made him forget the cool morning wind that was rising. His knowledge of the London of his own century gave him little help by way of street orientation. He walked north—the Minories, Houndsditch, Bishopgate—and, as he walked, he retched once or twice involuntarily at the stench from the kennel. There was a bigger, richer, filthier, obscener smell beyond this, and this he thought must come from Fleet Ditch. He dug into his scrip and produced a pinch of powder; this he placed on his tongue to quieten his stomach.

Not a mouse stirring as he walked, and there, under rolling cloud all besilvered, he saw it, he saw it, the Theatre, with something like disappointment. It was mean wood rising above wooden paling, its roof shaggily thatched. Things were always smaller than one expected, always more ordinary. He wondered if it might be possible to go in. There seemed to be no night watchman protecting it. Before approaching the entrance (a door for an outside privy rather than a gate to the temple of the Muses) he took in the whole moonlit scene, the mean houses, the cobbles, the astonishing and unexpected greenery all about. And then he saw his first living animals.

Not a mouse stirring, had he thought? But those creatures with long tails were surely rats, a trio of them

nibbling at some tump of rubbish not far from the way in to the Theatre. He went warily nearer, and the rats at once scampered off, each filament of whisker clear in the light. They were rats as he knew rats—though he had only seen them in the laboratories of his university—with mean bright eyes and thick meaty tails. But then he saw what they had been eating.

Dragged out from the mound of trash was a human forearm. In some ways Paley was not unprepared for this. He had soaked in images of traitor heads stuck on Temple Bar, bodies washed by three tides and left to rot on Thames shore, limbs hacked off at Tyburn (Marble Arch in his day) and carelessly left for the scavengers. (Kites, of course, kites. Now the kites would all be roosting.) Clinically, his stomach calm from the medicine he had taken, he examined the gnawed raw thing. There was not much flesh off it yet: The feast had been interrupted at its beginning. On the wrist, though, was a torn and pulpy patch which made Paley frown—something anatomically familiar but, surely, not referrable to a normal human arm. It occurred to him for just a second that this was rather like an eye socket, the eye wrenched out but the soft bed left, still not completely ravaged. And then he smiled that away, though it was difficult to smile.

He turned his back on the poor human relic and made straight for the entrance door. To his surprise it was not locked. It creaked as he opened it, a sort of voice of welcome to this world of 1595 and its strange familiarity. There it was—tamped earth for the groundlings to tamp down yet further; the side boxes; the jutting apron stage; the study uncurtained; the tarrass; the tower with its flagstaff. He breathed deeply, reverently. This was the Theatre. And then—

“Arrr, caught ye at it!” Paley’s heart seemed about to leap from his mouth like a badly fitting denture. He turned to meet his first Elizabethan. Thank God, he looked normal enough, though filthy. He was in clumsy boots, goose-turd-colored hose, and a rancid jerkin. He tottered a little as though drunk, and, as he came closer to peer into Paley’s face, Paley caught a frightful blast of ale breath. The man’s eyes were glazed and he sniffed



deeply and long at Paley as though trying to place him by scent. Intoxicated, unfocused, thought Paley with contempt, and as for having the nerve to sniff. . . . Paley spoke up, watching his vowels with care:

"I am a gentleman from Norwich, but newly arrived. Stand some way off, fellow. Know you not your betters when you see them?"

"I know not thee, nor why tha should be here at dead of night." But he stood away. Paley glowed with small triumph, the triumph of one who has, say, spoken home-learned Russian for the first time in Moscow and has found himself perfectly understood. He said:

"Thee? *Thee*? I will not be thee-and-thou'd so, fellow. I would speak with Master Burbage."

"Which Master Burbage, the young or the old?"

"Either. I have writ plays and fain would show them."

The watchman, as he must evidently be, sniffed at Paley again. "Gentleman you may be, but you smell not like a Christian. Nor do you keep Christian hours."

"As I say, I am but newly arrived."

"I see not your horse. Nor your traveler's cloak."

"They are—I have left them at mine inn."

The watchman muttered. "And yet you say you are but newly arrived. Go to." Then he chuckled and, at the same time, delicately advanced his right hand toward Paley as though about to bless him. "I know what 'tis," he said, chuckling. "'Tis some naughty meeting, th'hast trysted ringading with some wench, nay, some wife rather, nor has she belled out the morn." Paley could make little of this. "Come," said the man, "chill make for 'ee an th' hast the needful." Paley looked blank. "An tha wants bedding," the man said more loudly. Paley caught that, he caught also the significance of the open palm and wiggling fingers. Gold. He felt in his scrip and produced an angel. The man's jaw dropped as he took it. "Sir," he said, hat-touching.

"Truth to tell," said Paley, "I am shut out of mine inn, late-returning from a visit and not able to make mine host hear with e'en the loudest knocking."

"Arrrrr," and the watchman put his finger by his nose, a homely Earthly gesture, then scratched his cheek with

the angel, finally, before stowing it in a little purse on his girdle, passing it a few times in front of his chest. "With me, sir, come."

He waddled speedily out, Paley following him with fast-beating pulse. "Where go we, then?" he asked. He received no answer. The moon was almost down and there were the first intimations of summer dawn. Paley shivered in the wind; he wished he had brought a cloak with him instead of the mere intention of buying one here. If it was really a bed he was being taken to, he was glad. An hour or so's sleep in the warmth of blankets and never mind whether or not there would be fleas. On the streets nobody was astir, though Paley thought he heard a distant cat's concert—a painful courtship and even more painful copulation to follow, just as on real Earth. Paley followed the watchman down a narrow lane off Bishopsgate, dark and stinking. The effects of the medicine had worn off; he felt his gorge rise as before. But the stink, his nose noticed, was subtly different from before: It was, he thought in a kind of small madness, somehow swirling, redistributing its elements as though capable of autonomous action. He didn't like this one little bit. Looking up at the paling stars he felt sure that they too had done a sly job of refiguration, forming fresh constellations like a sand tray on top of a thumped piano.

"Here 'tis," said the watchman, arriving at a door and knocking without further ado. "Croshabels," he winked. But the eyelid winked on nothing but glazed emptiness. He knocked again, and Paley said:

"'Tis no better. It is late, or early, to drag folk from their beds." A young cock crowed near, brokenly, a prentice cock.

"Neither one nor t'other. 'Tis in the way of a body's trade, aye." Before he could knock again, the door opened. A cross and sleepy-looking woman appeared. She wore a filthy nightgown and, from its bosom, what seemed like an arum lily peered out. She thrust it back in irritably. She was an old Elizabethan woman, about thirty-eight, gray-haired. She cried:

"Ah?"

"One for one. A gentleman, he saith." He took his



angel from his purse and held it up. She raised a candle the better to see. The arum lily peeped out again. All smiles, she curtsied Paley in. Paley said:

"'Tis but a matter of a bed, madam." The other two laughed at that "madam." "A long and wearisome journey from Norwich," he added. She gave a deeper curtsy, more mocking than before, and said, in a sort of croak:

"A bed it shall be and no pallet nor the floor neither. For the gentleman from Norwich where the cows eat porridge." The watchman grinned. He was blind, Paley was sure he was blind; on his right thumb something seemed to wink richly. The door closed on him, and Paley and the madam were together in the rancid hallway.

"Follow follow," she said, and she creaked first up the stairs. The shadows her candle cast were not deep; gray was filling the world from the east. On the wall of the stairwell were framed pictures. One was a crude woodcut showing a martyr hanging from a tree, a fire burning under him. Out of the smiling mouth words ballooned: **AND YETTE I SAYE THAT MOGRADON GIUETH LYFE.** Another picture showed a king with crown, orb, scepter and a third eye set in his forehead. "What king is that?" asked Paley. She turned to look at him in some amazement. "Ye know naught in Norwich," she said, "God rest ye and keep ye all." Paley asked no further questions and kept his wonder to himself at another picture they passed: "**Q. Horatius Flaccus**" it said, but the portrait was of a bearded Arab. Was it not Averroes?

The madam knocked loudly on a door at the top of the stairs. "Bess, Bess," she cried. "Here's gold, lass. A cleanly and a pretty man withal." She turned to smile at Paley. "Anon will she come. She must deck herself like a bride." From the bosom of her nightgown the lily again poked out and Paley thought he saw a blinking eye enfolded in its head. He began to feel the tremors of a very special sort of fear, not a terror of the unknown so much as of the known. He had rendered his flying boat invulnerable; this world could not touch it. Supposing it were possible that this world was in some manner rendered invulnerable by a different process. A voice in his head seemed to say, with great clarity: "Not with impunity may one disturb the—"

And then the door opened and the girl called Bess appeared, smiling professionally. The madam said, smiling also:

"There then, as pretty a mutton slice as was e'er sauced o'er." And she held out her hand for money. Confused, Paley dipped into his scrip and pulled out a clanking dull-gleaming handful. He told one coin into her hand and she still waited. He told another, then another. She seemed satisfied, but Paley seemed to know that it was only a temporary satisfaction. "We have wine," she said. "Shall I—?" Paley thanked her: no wine. The gray hair on her head grew erect. She curtsied off.

Paley followed Bess into the bedchamber, on his guard now. The ceiling beat like a pulse. "Piggesnie," croaked Bess, pulling her single garment down from her bosom. The breasts swung and the nipples ogled him. They were, as he had expected, eyes. He nodded in something like satisfaction. There was, of course, no question of going to bed now. "Honeycake," gurgled Bess, and the breast-eyes rolled, the long lashes swept up and down, up and down coquettishly. Paley clutched his scrip tightly to him. If this distortion—likely, as far as he could judge, to grow progressively worse—if this scrambling of sense data were a regular barrier against intrusion, why was there not more information about it on Earth? Other time travelers had ventured forth and come back unharmed and laden with sensible records. Wait, though: had they? How did one know? There was Swenson's mention of Wheeler, jailed in the Middle Ages by chunks of tripodic ectoplasm. "White-haired and gibbering when we got him aboard." Swenson's own words. How about Swenson's own vision of the future—a plaque showing his own birth and death dates? Perhaps the future did not object to intrusion from the past. But (Paley shook his head as though he were drunk, beating back sense into it) it was not a question of past and future, it was a question of other worlds existing *now*. The now-past was completed, the now-future was completed. Perhaps that plaque in Rostron Place, Brighton, showing Swenson's death some twenty years off, perhaps that was an illusion, a device to engender satisfaction rather than fear but still to discourage interference with the pattern. "My time is short," Paley suddenly said, using



urgent twenty-first-century phonemes, not Elizabethan ones. "I will give you gold if you will take me to the house of Master Shakespeare."

"Maister—?"

"Shairkspeyr."

Bess, her ears growing larger, stared at Paley with a growing montage of film battle-scenes playing away on the wall behind her. "Th'art not that kind. Women tha likes. That see I in thy face."

"This is urgent. This is business. Quick. He lives, I think, in Bishopsgate." He could find out something before the epistemological enemies took over. And then what? Try and live. Keep sane with signals in some quiet spot till a year was past. Signal Swenson, receive Swenson's reassurances in reply; perhaps—who knew?—hear from far time-space that he was to be taken home before the scheduled date, instructions from Earth, arrangements changed. . . .

"Thou knowest," said Paley, "what man I mean. Master Shakespeare the player at the Theatre."

"Aye aye." The voice was thickening fast. Paley said to himself: It is up to me to take in what I wish to take in; this girl has no eyes on her breasts, that mouth forming under her chin is not really there. Thus checked, the hallucinations wobbled and were pushed back temporarily. But their strength was great. Bess pulled on a simple dress over her nakedness, took a worn cloak from the closet. "Gorled maintwise," she said. Paley pushed like mad, the words unscrambled. "Give me money now," she said. He gave her a portague.

They tiptoed downstairs. Paley tried to look steadily at the pictures in the stairwell, but there was no time to make them tell the truth. The stairs caught him off his guard and changed to an escalator of the twenty-first century. He whipped them back to trembling stairhood. Bess, he was sure, would melt into some monster capable of turning his heart to stone if he let her. Quick. He held the point-of-day in the sky by a great effort. There were a few people on the street. He durst not look on them. "It is far?" he asked. Cocks crowed, many and near, mature cocks.

"Not far." But nothing could be far from anything in

this cramped and toppling London. Paley strained to keep his sanity. Sweat dripped from his forehead and a drop caught on the scrip which he hugged to himself like a stomachache. He examined it as he walked, stumbling often on the cobbles. A drop of salty water from his pores. Was it of this alien world or of his own? If he cut off his hair and left it lying, if he dunged in that foul jakes there, from which a three-headed woman now appeared, would this B303 London reject it, as a human body will reject a grafted kidney? Was it perhaps not a matter of natural law but of some God of the system, a God against Whom, the devil on one's side, one could prevail? Was it God's club rules he was pushing against, not some deeper inbuilt necessity? Anyway, he pushed, and Elizabethan London, in its silver dawn, steadied, rocked, steadied, held. But the strain was terrific.

"Here, sir." She had brought him to a mean door which warned Paley that it was going to turn into water and flow down the cobbles did he not hold its form fast. "Money," she said. But Paley had given enough. He scowled and shook his head. She held out a fist which turned into a winking bearded man's face, threatening. He raised his own hand, flat, to slap her. She ran off, whimpering, and he turned the raised hand to a fist that knocked. His knock was slow in being answered. He wondered how much longer he could maintain this desperate holding of the world in position. If he slept, what would happen? Would it all dissolve and leave him howling in cold space when he awoke?

"Aye, what is't, then?" It was a misshapen ugly man with a row of bright blinking eyes across his chest, a chest left bare by his buttonless shirt. It was not, it could not be, William Shakespeare. Paley said, wondering at his own ability to enunciate the sounds with such exact care:

"Oi ud see Maister Shairkespeyr." He was surlily shown in, a shoulder-thrust indicating which door he must knock at. This then, was *it*. Paley's heart martelled desperately against his breastbone. He knocked. The door was firm oak, threatening no liquefaction.

"Aye?" A light voice, a pleasant voice, no early morning crossness in it. Paley gulped and opened the door and went in. Bewildered, he looked about him. A becham-



ber, the clothes on the bed in disorder, a table with papers on it, a chair, morning light framed by the tight-shut window. He went over to the papers; he read the top sheet ("... giue it to him lest he raise all hell again with his fractuousness"), wondering if there was perhaps a room adjoining whence came that voice. Then he heard the voice again, behind him:

"'Tis not seemly to read a gentleman's private papers lacking his permission." Paley spun about to see, dancing in the air, a reproduction of the Droeshout portrait of Shakespeare, square in a frame, the lips moving but the eyes unanimated. He tried to call but could not. The talking woodcut advanced on him—"Rude, mannerless, or art thou some Privy Council spy?"—and then the straight sides of the frame bulged and bulged, the woodcut features dissolved, and a circle of black lines and spaces tried to grow into a solid body. Paley could do nothing; his paralysis would not even permit him to shut his eyes. The solid body became an animal shape, indescribably gross and ugly—some spiked sea urchin, very large, nodding and smiling with horrible intelligence. Paley forced it into becoming a more nearly human shape. His heart sank in depression totally untinged by fear to see standing before him a fictional character called "William Shakespeare," an actor acting the part. Why could he not get in touch with the *Ding an sich*, the Kantian noumenon? But that was the trouble—the thing-in-itself was changed by the observer into whatever phenomenon the categories of time-space-sense imposed. He took courage and said:

"What plays have you writ to date?"

Shakespeare looked surprised. "Who asks this?"

Paley said, "What I say you will hardly believe. I come from another world that knows and reveres the name of Shakespeare. I believe that there was, or is, an actor named William Shakespeare. That Shakespeare wrote the plays that carry his name—this I will not believe."

"So," said Shakespeare, tending to melt into a blob of tallow badly sculpted into the likeness of Shakespeare, "we are both to be unbelievers then. For my part, I will believe anything. You will be a sort of ghost from this

other world you speak of. By rights, you should have dissolved at cock-crow."

"My time may be as short as a ghost's. What plays do you claim to have written up to this moment?" Paley spoke the English of his own day. Though the figure before him shifted and softened, tugging toward other shapes, the eyes changed little, shrewd and intelligent eyes, modern. And now the voice said:

"Claim? *Heliogabalus, A Word to Fright a Whoremaster, The Sad Reign of Harold First and Last, The Devil in Dulwich* . . . Oh, many and many more."

"Please." Paley was distressed. Was this truth or teasing, truth or teasing of this man or of his own mind, a mind desperate to control the *données*, the sense data, make them make sense? On the table there, the mass of papers. "Show me," he said. "Show me somewhat," he pleaded.

"Show me your credentials," said Shakespeare, "if we are to talk of showing. Nay," and he advanced merrily toward Paley, "I will see for myself." The eyes were very bright now and shot with oddly sinister flecks. "A pretty boy," said Shakespeare. "Not so pretty as some, as one, I would say, but apt for a brief tumble of a summer's morning before the day warms."

"Nay," said Paley, "nay," backing and feeling that archaism to be strangely frivolous, "touch me not." The advancing figure became horribly ugly, the neck swelled, eyes glinted on the backs of the approaching hands. The face grew an elephantine proboscis, wreathing, feeling; two or three suckers sprouted from its end and blindly waved toward Paley. Paley dropped his scrip the better to struggle. The words of this monster were thick, they turned into grunts and lallings. Pushed into the corner by the table, Paley saw a sheet of paper much blotted ("Never blotted a line," did they say?):

I haue bin struggling striuing? seeking? how I  
may compair  
This jailhouse prison? where I liue unto the  
earth world  
And that and for because



The scholar was still there, the questing spirit clear while the body fought to keep off those huge hands, each ten-fingered. The scholar cried:

*"Richard II! You are writing Richard II?"*

It seemed to him, literature's Claude Bernard, that he should risk all to get that message through to Swenson, that *Richard II* was, in 1595, being written by Shakespeare. He suddenly dipped to the floor, grabbed his scrip and began to tap through the lining at the key of the transmitter. Shakespeare seemed taken by surprise by this sudden cessation of resistance; he put out forks of hands that grasped nothing. Paley, blind with sweat, panting hard, tapped: "R2 by WS." Then the door opened.

"I did hear noise." It was the misshapen ugly man with eyes across his bare chest, uglier now, his shape changing constantly though abruptly, as though set on by silent and invisible hammers. "He did come to attack tha?"

"Not for money, Tomkin. He hath gold enow of's own. See." The scrip, set down before so hurriedly, had spilt out its gold on the floor. Paley had not noticed; he should have transferred that gold to his—

"Aye, gold." The creature called Tomkin gazed on it greedily. "The others that came so brought not gold."

"Take the gold and him," said Shakespeare carelessly. "Do what thou wilt with both." Tomkin oozed toward Paley. Paley screamed, attacking feebly with the hand that held the scrip. Tomkin's claw snatched it without trouble.

"There's more within," he drooled.

"Did I not say thou wouldst do well in my service?" said Shakespeare.

"And here is papers."

"Ah, papers." And Shakespeare took them. "Carry him to the Queen's Marshal. The stranger within our gates. He talks foolishly, like the Aleman that came before. Wildly, I would say. Of other worlds, like a madman. The Marshal will know what to do."

"But," screamed Paley, grabbed by strong shovels of hands, "I am a gentleman. I am from Norwich. I am a playwright, like yourself. See, you hold what I have written."

"First a ghost, now from Norwich," smiled Shake-

speare, hovering in the air like his portrait again, a portrait, holding papers. "Go to. Are there not other worlds, like unto our own, that sorcery can make men leave to visit this? I have heard such stories before. There was a German—"

"It's true, true, I tell you!" Paley clung to that, clinging also to the chamber door with his nails, the while Tomkin pulled at him. "You are the most intelligent man of these times! You can conceive of it!"

"And of poets yet unborn also? Drythen, or some such name, and Lord Tennis-balls, and a drunken Welshman P. S. Eliot? You will be taken care of, like that other."

"But it's true, true!"

"Come your ways," growled Tomkin. "You are a Bedlam natural." And he dragged Paley out, Paley collapsing, frothing, raving. Paley raved:

"You're not real, any of you! It's you who are the ghosts! *I'm* real, it's all a mistake, let me go, let me explain!"

"'Tis strange he talks," growled Tomkin. And he dragged him out.

"Shut the door," said Shakespeare. Tomkin kicked it shut. The screaming voice went, over thumping feet, down the passageway without. Soon it was quiet enough to sit and read.

These were, thought Shakespeare, good plays. Strange that one of them was about, as far as he could judge, an usurious Jew. This Norwich man had evidently read Marlowe and seen the dramatic possibilities of an evil Lopez-type character. He, Shakespeare, had toyed with the idea of a play like this himself. And here it was, ready done for him. And there were a couple of promising-looking histories here, too. About King Henry IV. And here a comedy called *Much Ado About Nothing*. Gifts, godsend. He smiled. He remembered that Aleman, Doctor Schleyer or some such name, who had come with a story like to this madman (mad? Could madmen do work like this? "The lunatic, the lover, and the poet": a good line in that play about fairies that Schleyer had brought. Poor Schleyer had died of the plague). Those plays Schleyer had brought had been good plays, but not, perhaps, quite so good as these.



Shakespeare furtively (though he was alone) crossed himself. When poets had talked of the Muse, had they perhaps meant visitants like this, now screaming feebly in the street, and the German Schleyer and that one who swore, under torture, that he was from Virginia in America, and that in America they had universities as good as Oxford or Leyden or Wittenberg, nay better? He shrugged, there being more thing in heaven and earth &c. Well, whoever they were, they were heartily welcome so long as they brought plays. That *Richard II* of Schleyer's was, perhaps, in need of the emendations he was now engaged on, but the earlier work from *Henry VI* on, had been popular. He read the top sheet of this new batch, stroking his auburn beard silvered, a fine gray eye reading. He sighed and, before crumpling a sheet of his own work on the table, read it. Not good, it limped, there was too much magic in it. Ingenio the Duke said:

Consider gentlemen as in the sea  
All earthly life finds like and parallel  
So in far distant skies our lives be aped,  
Each hath a twin, each action hath a twin,  
And twins have twins galore and infinite  
And e'en these stars be twinn'd. . . .

Too fantastic, it would not do. He threw it into the rubbish box which Tomkin would later empty. He took a clean sheet and began to copy in a fair hand:

### THE MERCHANT OF VENICE

Then he went on, not blotting a line.

## WORKING IN THE SPACESHIP YARDS

BRIAN W. ALDISS

*In two recent books, Report on Probability A and Barefoot in the Head, Brian Aldiss has been exploring the frontiers of science fiction and of language. This concise, comic, and very excellent short story is another happy product of that exploration.*

My first job of work as a young man was in the spaceship yards, where I felt my talents and expertise could be put to the greatest benefit of society. I worked as a FTL-fitter's mate's assistant. The FTL-fitter's mate was a woman called Nellie. As more and more women came to be employed in the yards, among the men and the androids and the robots, the men became increasingly circumspect in their behavior. Their oaths were more guarded, their gestures less uncouth, and their care for their appearance less negligent. This I found strange, since the women showed clearly that they cared nothing for oaths, gestures, or appearances.

From wastebaskets round the site, I collected many suicide notes. Most of them had never reached their recipients and were mere drafts of suicide notes:

My darling—When you receive this, I shall no longer



be in a position to ever trouble you again.

By the time you receive this letter, I shall never be able.

By the time you receive this, I shall be no more.

My darling—Never again will we be able to break each other's hearts.

You have been more than life to me. My love—I have been so wrong.

It is very good of people to take such care of their compositions even in extremis. Education has had its effect. At my school, we learnt only how to write business letters. With reference to your last shipment of Martian pig iron/iron pigs. Since life is such a tragic business, why are we not educated how to write decent suicide notes?

In this age of progress, where everything is progressive and technological and new, the only bit of our Self we have left to ourselves is our Human Condition—which of course remains miserable, despite three protein-full meals a day. Protein does not help the Dark Night of the Soul. Androids, which look so like us (we have the new Negro androids working in the spaceship yards now) do not have a soul, and many of them are very distressed at lacking the long slow toothache of the Human Condition. Some of them have left their employment, and stand on street corners wearing dark glasses, begging for alms with pathetic messages round their shoulders. Orphan of Technology. Left Factory Too Young. Have Pity on My Poor Metal Frame. And an especially heart-wrenching one I saw in the Queens district. Obsolescence Is the Poor Man's Death. They have their traumas; just to be deprived of the Human Condition must be traumatic.

Most androids hate the android-beggars. They tour the streets after work, beating up any beggars they find, kicking their tin mugs into the gutter. Faceless androids are scaring. They look like men in iron masks. You can never escape role-playing.

We were building Q-line ships when I was in the shipyard. They were the experimental ones. The Q1, the Q2, the Q3 had each been completed, had been towed out into orbit beyond Mars and triggered off toward Alpha Centauri. Nothing was ever heard of them again. Perhaps they are making a tour of the entire universe, and will return to the solar system when the sun is ten kilometers deep in permafrost. Anyhow, I shan't live to see the day.

It was no fun building those ships. They had no luxury, no living quarters, no furnishings, no galleys, no miles and miles of carpeting and all the other paraphernalia of a proper spaceship. There was very little we could take as supplementary income. The computers that crewed them lived very austere lives.

"The sun will be ten kilometers deep in permafrost by the time you get back to the solar system!" I told BALL, the computer on the Q3, as we walked him in. "What will you do then?"

"I shall measure the permafrost."

I've noticed that about the truth. You don't expect it, so it often sounds like a joke. Computers and robots sound funny quite often because they have no roles to play. They just tell the truth. I asked this BALL, "Who will you be measuring this permafrost for?"

"I shall be measuring it for its intrinsic interest."

"Even if there are no human beings around to be interested?"

"You misunderstand the meaning of intrinsic."

Each of these Q ships cost more than the entire annual national income of a state like Great Britain. Zip, out into the universe they went. Never seen again! My handiwork. All those miles of beautiful seamless welding. My life's work.

I say computers tell the truth. It is only the truth as they see it. Things go on that none of us see. Should we include them in our personal truth or not?

My mother was a good old sport. Before I reached the age of ten and was given my extrafamilial posting,



she and I had a lot of fun. Hers was a heart of gold—more, of uranium. She had an old deaf friend called Mrs. Patt who used to come and visit Mother once a week and sit in the big armchair while Mother yelled questions and remarks at her.

I used to hide behind the armchair before Mrs. Patt came in. When she and Mother started shouting, I would rise over the back of the chair so that Mrs. Patt could not see me, sticking my thumbs in my ears and my little fingers up my nostrils so that my nose was wrinkled and distorted, waving my other fingers about while shooting my brows up and down, flobbering my tongue, and blinking my eyes furiously, in order to make Mother laugh. She had to pretend she could not see me. Occasionally, she would have to pretend to blow her nose, in order to enjoy a quick chuckle.

The question I now ask myself, having reached more sober years—Mrs. Patt visited the euthanasia clinic years ago—is whether I should or should not be included among Mrs. Patt's roll call of truths. Since I was not among her observable phenomena, then I couldn't be part of her revealed Truth. For Mrs. Patt, I did not exist in my post-armchair manifestations; therefore my effect upon her Self was totally negligible; therefore I could form no portion of her Truth, as she saw it.

The only effect of my performance on her was that she came to consider my mother as someone usually prone to colds, necessitating frequent nose-blowing.

This suggests that there are two sorts of truth: one's personal truth, and what, for fear of using an even more idiotic term, I will call a Universal Truth. In this last category clearly belong events that go on even if nobody is observing them, like my fingers up my nose, the flights of the Q1, Q2, and Q3, and God.

All this I once tried to explain to my android friend, Jackson. I tried to tell him that he could only perceive Universal Truth, and had no cognizance of Personal Truth.

"Universal Truth is the greater, so I am greater than you, who perceive only Personal Truth," he said.

"Not at all! I obviously perceive all of Personal Truth,

since that's what it means, and also quite a bit of Universal Truth. So I get a much better idea of Total Truth than you."

"Now you are inventing a third sort of truth, in order to win the argument. Just because you have Human Condition, you have to keep proving you are better than me."

I switched him off. I am better than Jackson. I can switch him off.

Next day, going back on shift, I switched him on again.

"There are all sorts of horrible things signaling behind your metaphorical armchair that you aren't aware of," he said immediately.

"At least human beings write suicide notes," I said. It is a minor art that has never received full recognition. A very intimate art. You can't write a suicide note to someone you do not know.

Dear President—My name may not be familiar to you but I voted for you in the last election and, when you receive this, I shall no longer be able to trouble you ever again.

I shall no longer ever be able to vote for you again. Not be able to support you at the next election.

Dear President—This will come as something of a shock, particularly since you don't know me, but.

Dear Sir—You have been more than a president to me.

The women were very emotional. Many of them fell in love with androids. The men were very bitter about this. My first love, Nellie, the FTL-fitter's mate, left me for an android electrician. She said he was more respectful.

In the canteen, we men used to talk about sex and philosophy and who was winning the latest Out-Thinking Contest. The women exchanged recipes. I often feel women do not have quite such a large share of the Human Condition as we do.

When we first went to bed together Nellie said, "You're a bit nervous, aren't you?"

Well, I was, but I said, "No, I'm not nervous, it's just this question of role-playing. I haven't entirely devised one



to cover this particular situation."

"Well, buck up, then, or the whistle will be going. You can be the Great Lover or something, can't you?"

"Do I look like the Great Lover?" I asked in exasperation.

"I've seen smaller," she said, and she smiled. After that, we always got on well together, and then she had to leave me for that android electrician.

For a few days, I was terribly miserable. I thought of writing her a suicide note but I didn't know how to word it.

Dear Nellie—I know you are too hard-hearted to care a hoot about this, but. I know you don't care a hoot but. I know you don't give a hoot. Give a rap. Are indifferent to. Are indifferent to what happens to me, but.

As you lie there in the synthetic arms of your lover, it may interest you to know I am about to.

But I was not really about to, for I struck up a close friendship with Nancy, and she enjoyed my Great Lover role. She was very good with an I-Know-We're-Really-Both-Too-Sensible-For-This role. After a time, I got a transfer so that I could work with her on the starboard condentister. She used to tell me recipes for exotic dishes. Sometimes, it was quite a relief to get back to my mates in the canteen.

At last the great day came when the Q4 was finished. The President came down and addressed us, and inspected the two-mile-high needle of shining steel. He told us it had cost more than all South America was worth, and would open up a New Era in the History of Mankind. Or perhaps he said New Error. Anyhow, the Q4 was going to put us in touch with some other civilization, many light years away. It was imperative for our survival that we get in rapport with them before our enemies did.

"Why don't we just get in rapport with our enemies?" Nancy asked me sourly. She had no sense of occasion.

As we all came away from the ceremony, I had a nasty surprise. I saw Nellie with her arm round that android electrician, and he was limping. An android, limping!

There's role-playing for you. Byronic androids! If we aren't careful, they will be taking over the Human Condition just as they are taking our women. The future is black and the bins of our destiny are filling with suicide notes.

I felt really sick. Nancy stared at me as if she could see someone over my shoulder putting his thumbs in his ears and his little fingers up his nose and all that. Of course, when I looked round, nobody was there.

"Let's go and play Great Lovers while there's still time," I said.



## THE SCHEMATIC MAN

FREDERIK POHL

*What—another computer story? Yes, another. But one unlike those that went before. Fred Pohl not only is one of the modern masters of the SF short story, but is most knowledgeable on matters mathematical, since he makes a hobby of mathematics. As is Bederkind, the protagonist of this story, who suffers a most interesting fate.*

I know I'm not really a funny man, but I don't like other people to know it. I do what other people without much sense of humor do: I tell jokes. If we're sitting next to each other at a faculty senate and I want to introduce myself, I probably say: "Bederkind is my name, and computers are my game."

Nobody laughs much. Like all my jokes, it needs to be explained. The joking part is that it was through game theory that I first became interested in computers and the making of mathematical models. Sometimes when I'm explaining it I say there that the mathematical ones are the only models I've ever had a chance to make. That gets a smile, anyway. I've figured out why: Even if you don't really get much out of the play on words, you can tell it's got something to do with sex, and we all reflexively

smile when anybody says anything sexy.

I ought to tell you what a mathematical model is, right? All right. It's simple. It's a kind of picture of something made out of numbers. You use it because it's easier to make numbers move than to make real things move.

Suppose I want to know what the planet Mars is going to do over the next few years. I take everything I know about Mars, and I turn it into numbers—a number for its speed in orbit, another number for how much it weighs, another number for how many miles it is in diameter, another number to express how strongly the Sun pulls it toward it and all that. Then I tell the computer that's all it needs to know about Mars, and I go on to tell it all the same sorts of numbers about the Earth, about Venus, Jupiter, the Sun itself—about all the other chunks of matter floating around in the neighborhood that I think are likely to make any difference to Mars. I then teach the computer some simple rules about how the set of numbers that represents Jupiter, say, affects the numbers that represent Mars: a few relativistic corrections . . . well, actually, there are a lot of things it needs to know. But not more than I can tell it.

When I have done all this—not exactly in English, but in a kind of a language that it knows how to handle—the computer has a mathematical model of Mars stored inside it. It will then whirl its mathematical Mars through mathematical space for as many orbits as I like. I say to it, "Nineteen ninety-seven June 18 2400 GMT," and it . . . it . . . well, I guess the word for it is, it *imagines* where Mars will be relative to my backyard Questar at midnight Greenwich time on the 18th of June, 1997, and tells me which way to point.

It isn't real Mars that it plays with. It's a mathematical model, you see. But for the purposes of knowing where to point my little telescope it does everything that "real Mars" would do for me, only much faster. I don't have to wait for 1997, I can find out in five minutes.

It isn't only planets that can carry on a mathematical metalife in the memory banks of a computer. Take my friend Schmucl. He has a joke, too, and his joke is that he makes twenty babies a day in his computer. What he means by that is that, after six years of trying, he finally



succeeded in writing down the numbers that describe the development of a human baby in its mother's uterus, all the way from conception to birth. The point of that is that then it was comparatively easy to write down the numbers for a lot of the things that happen to babies before they're born. Momma has high blood pressure. Momma smokes three packs a day. Momma catches scarlet fever or a kick in the belly. Momma keeps making it with Poppa every night until they wheel her into the delivery room. And so on. And the point of *that* is that this way Schmucl can see some of the things that go wrong and make some babies get born retarded, or blind, or with retrolental fibroplasia or an inability to drink cow's milk. It's easier than sacrificing a lot of pregnant women and cutting them open to see.

Okay, you don't want to hear any more about mathematical models, because what kicks are there in mathematical models for you? I'm glad you asked. Consider a for instance. For instance, suppose last night you were watching the Late, Late and you saw Carole Lombard, or maybe Marilyn Monroe with that dinky little skirt blowing up over those pretty thighs. I assume you know that these ladies are dead. I also assume that your glands responded to those cathodetube flickers as though they were alive. And so you do get some kicks from mathematical models, because each of those great girls, in each of their poses and smiles, was nothing but a binary number of some thousands of digits, expressed as a spot of light on a phosphor tube. With some added numbers to express the frequency patterns of their voices. Nothing else.

And the point of *that* (how often I used that phrase!) is that a mathematical model not only represents the real thing, but sometimes it's as good as the real thing. No, honestly. I mean, do you really believe that if it had been Marilyn or Carole in the flesh you were looking at, across a row of footlights, say, that you could have taken away any more of them than you gleaned from the shower of electrons that made the phospors display their pictures?

I did watch Marilyn on the Late, Late one night. And I thought those thoughts; and so I spent the next week preparing an application to a foundation for money, and

when the grant came through I took a sabbatical and began turning myself into a mathematical model. It isn't really that hard. Kookie, yes. But not hard.

I don't want to explain what programs like FORTRAN and SIMSCRIPT and SIR are, so I will only say what we all say: They are languages by which people can communicate with machines. Sort of. I had to learn to speak FORTRAN well enough to tell the machine all about myself. It took five graduate students and ten months to write the program that made that possible, but that's not much. It took more than that to teach a computer to shoot pool. After that it was just a matter of storing myself in the machine.

That's the part that Schmucl told me was kookie. Like everybody with enough seniority in my department, I have a remote-access computer console in my—well, I called it my “playroom.” I did have a party there, once, right after I bought the house, when I still thought I was going to get married. Schmucl caught me one night, walking in the door and down the stairs and finding me methodically typing out my medical history from the ages of four to fourteen. “Jerk,” he said, “what makes you think you deserve to be embalmed in a 7094?”

I said, “Make some coffee and leave me alone till I finish. Listen. Can I use your program on the sequelae of mumps?”

“Paranoid psychosis,” he said. “It comes on about the age of forty-two.” But he coded the console for me and thus gave me access to his programs. I finished and said:

“Thanks for the program, but you make rotten coffee.”

“You make rotten jokes. You really think it's going to be *you* in that program. Admit!”

By then I had most of the basic physiological and environmental stuff on the tapes and I was feeling good. “What's ‘me’?” I asked. “If it talks like me, and thinks like me, and remembers what I remember, and does what I would do—who is it? President Eisenhower?”

“Eisenhower was years ago, jerk,” he said.

“Turing's question, Schmucl,” I said. “If I'm in one room with a teletype. And the computer's in another room with a teletype, programmed to model me. And you're



in a third room, connected to both teletypes, and you have a conversation with both of us, and you can't tell which is me and which is the machine—then how do you describe the difference? *Is there a difference?*”

He said, “The difference, Josiah, is I can touch you. And smell you. If I was crazy enough, I could kiss you. You. Not the model.”

“You could,” I said, “if you were a model too, and were in the machine with me.” And I joked with him (Look! It solves the population problem, put everybody in the machine. And, Suppose I get cancer. Flesh-me dies. Mathematical-model me just rewrites its program), but he was really worried. He really did think I was going crazy, but I perceived that his reasons were not because of the nature of the problem but because of what he fancied was my own attitude toward it, and I made up my mind to be careful of what I said to Schmucl.

So I went on playing Turing's game, trying to make the computer's responses indistinguishable from my own. I instructed it in what a toothache felt like and what I remembered of sex. I taught it memory links between people and phone numbers, and all the state capitals I had won a prize for knowing when I was ten. I trained it to spell “rhythm” wrong, as I had always misspelled it, and to say “place” instead of “put” in conversation, as I have always done because of the slight speech impediment that carried over from my adolescence. I played that game, and by God I won it.

But I don't know for sure what I lost in exchange.

I know I lost something.

I began losing parts of my memory. When my cousin Alvin from Cleveland phoned me on my birthday I couldn't remember who he was for a minute. (The week before I had told the computer all about my summers with Alvin's family, including the afternoon when we both lost our virginity to the same girl, under the bridge by my uncle's farm.) I had to write down Schmucl's phone number, and my secretary's, and carry them around in my pocket.

As the work progressed I lost more. I looked up at the sky one night and saw three bright stars in a line

overhead. It scared me, because I didn't know what they were until I got home and took out my sky charts. Yet Orion was my first and easiest constellation. And when I looked at the telescope I had made I could not remember how I had figured the mirror.

Schmuel kept warning me about overwork. I really was working a lot, fifteen hours a day and more. But it didn't feel like overwork. It felt as though I were losing pieces of myself. I was not merely teaching the computer to be me but putting pieces of me into the computer. I hated that, and it shook me enough to make me take the whole of Christmas week off. I went to Miami.

But when I got back to work I couldn't remember how to touch-type on the console any more and was reduced to pecking out information from the computer a letter at a time. I felt as though I were moving from one place to another in installments, and not enough of me had arrived yet to be a quorum, but what was still waiting to go had important parts missing. And yet I continued to pour myself into the magnetic memory cores: the lie I told my draft board in 1946, the limerick I made up about my first wife after the divorce, what Margaret wrote when she told me she wouldn't marry me.

There was plenty of room in the storage banks for all of it. The computer could hold all my brain had held, especially with the program my five graduate students and I had written. I had been worried about that, at first.

But in the event I did not run out of room. What I ran out of was myself. I remember feeling sort of opaque and stunned and empty; and that is all I remember until now.

Whenever "now" is.

I had another friend once, and he cracked up while working on telemetry studies for one of the Mariner programs. I remember going to see him in the hospital and him telling me, in his slow, unworried, coked-up voice, what they had done for him. Or to him. Electroshock. Hydrotherapy.

What worries me is that that is at least a reasonable working hypothesis to describe what is happening to me now.

I remember, or think I remember, a sharp electric jolt. I feel, or think I feel, a chilling flow around me.



What does it mean? I wish I were sure. I'm willing to concede that it might mean that overwork did me in, and now I too am at Restful Retreat, being studied by the psychiatrists and changed by the nurses' aides. Willing to concede it? Dear God, I *pray* for it. I pray that that electricity was just shock therapy, and not something else. I pray that the flow I feel is water sluicing around my sodden sheets, and not a flux of electrons in transistor modules. I don't fear the thought of being insane; I fear the alternative.

I do not *believe* the alternative. But I fear it all the same. I can't believe that all that's left of me—my id, my ucs, my *me*—is nothing but a mathematical model stored inside the banks of the 7094. But if I am! If I am, dear God, what will happen when—and how can I wait until—somebody turns me on?

THE SNOWS ARE MELTED,  
THE SNOWS ARE GONE

JAMES TIPTREE, JR.

*The author of this story knows a good bit about war, having spent most of World War II in the Pentagon subbasement. This experience inspired him to suggest later, in a speech to a veterans' organization, that since this building was obviously surplus now, it would make a peachy International University. (A suggestion not without merit, perhaps even more so today.) This story is also about the aftermath of a war or a great disaster, and it is also about people. And one of the people is a wolf. In addition, it is that rare kind of story that is a pleasure to read.*

The cold silent land was lightening as the human figure walked up to the ridge. On pale rock the figure was a dark fork, too thin. Serpent-shouldered. It sank into a patch of scrub below the crest, turned a small face up to the sky, crouched again.

A shadow flitted, circling the ridge. A large dog; no, a very large wolf. The animal drifted onto the rocks above the human, froze. The stiff line of its brush showed an old break. The dawn was coming fast now, but to the



west the valley was still dark. Faint howling rose from the valley, ceased.

The dog-wolf faded off the ridge, reappeared by the bushes where the human crouched. The figure bowed its head. Dawn light flickered on wolf canines as he snapped sideways, carrying away a dark cap.

A flood of light spilled out, flew as the human tossed it back. The wolf dropped the cap, sat down and began to worry at something on its chest.

Daylight sprang. In the niche below the rocks the figure was now clearly visible, a young girl in rough jacket and breeches, shaking out her hair. The shoulders of her jacket ended in pads. It had no arms. Nor had she, none at all. A phocomorph. She settled herself beside the wolf, who showed now as bulge-headed with oddly curling fur.

He had drawn out a small object which lay between them on the rock. They were face to face, dawn glinting yellow from his eyes, blue in the girl's. His paw went to the object, clicked.

"Patrol to base," the girl said softly.

Tiny squeak of reply.

"We're at the ridge. The river's about five kilometers west. There's a trail below us, it hasn't been used since the rains. We heard the dogs. We'll wait here till dark, after that we'll be in radio shadow. We'll signal when we're out. Maybe night after next."

Louder squeaking, a woman's voice. Wolf jaws widened, girl's lips grinned.

"We always take care. Patrol out."

The wolf clicked off and then bent and delicately gripped her boot tip in his teeth. The armless girl pulled her foot free, flexed her slim prehensile toes in the cold light. When the other boot came off she used her toes to unhitch the pack harness from his dense fur. He stretched hugely, flung himself down and rolled, revealing a rich cream underbelly.

The girl toed out a food pack and canteen. He got up and carried it to a spring beside the outcrop, pawing it under to fill. They ate and drank, the girl lying on her back and dangling the canteen over her face by its strap. Once she let out a gurgle of laughter. His paw struck her head, pushed her face into her knees. They finished eating,

went to relieve themselves. It was broad daylight now, the sun moving straight up from the eastern hills as if pulled on a wire. A wind rose with it, keening over the rocky rim.

The wolf belly-crawled to the crest, watched awhile, returned to the girl. They pulled brush around themselves, curled together on the laterite shelf.

The sun mounted, struck through the wind's chill. No bird flew, no furred animal appeared. In the brush tangle, silence. Once a mantislike thing rattled near the lair. A yellow eye opened at ground level. The thing whirred away, the eye closed.

During the afternoon the wind carried a thin cawing sound to the outcrop. In the brush yellow eyes were joined by blue. The murmur faded, the eyes disappeared again. Nothing more happened. The equatorial sun dropped straight down the west into the valley, quieting the wind.

As shadow flowed over the outcrop the brush was pulled aside. Girl and wolf came out together to the stream and lapped, she bending like a snake. They ate again, and the girl toed the pack together, fastened it to the wolf's harness. He nosed the transmitter into its pouch in his chest wool and picked up a boot for her to thrust her foot in. When she was shod he hooked a fang into the dark cap. She let her pale hair coil into it and he pulled it over her head, adjusting it carefully away from her eyes. It was dark now, a quarter-moon behind them in the east. She twisted to her feet, a human spring, and they set off down the escarpment into the valley.

Arid scrubland eroded by old floods became forest as they went down. The pair moved watchfully in single file, following a vague trail. When the moon had passed zenith they halted to carry out laborious rearrangements of brush and stones. Then they went on down through the trees, halted again to labor. Trails branched here; when they moved on it was with greater care.

The moon was setting ahead of them when they reached the ruined canyon walls. Beyond the rocks a broad sheet of river muttered in the night. They crossed at a silver riffle, circled quietly on the downstream side. The scent was a stench now—smoke, fish, bodies, excrement, coming from a bend around the canyon crags. A dog



howled, was joined by another, cut off in yelps.

Girl and wolf came out on the crags. Below them were eight ragged thatches huddled in a cove. Smoke rose from a single ash pile. The huts were in shadow. A last moonray silvered a pile of offal by the shore.

The two on the crag watched silently. It was warmer here, but no insect flew. In the huts below a child whimpered, was silenced. Nothing visited the offal pile. The moon set, the river turned dark. A fish splashed.

The wolf rose, drifted away. The girl listened to the river. He returned and she followed him upriver to a cranny in the canyon wall out of sight of the cove. In the river below the water gurgled around a line of crazy stakes. The two ate and drank in silence. When the world lightened they were curled together in sleep.

Sunlight struck their wall, shadows shrank to the east. From the cove came a thin clamor of children's voices, deeper voices. A thud, a cry. In the high cranny, sunlight reflected yellow glints behind dry weeds. The wind was rising, blowing toward the sun across the river. Between the gusts came snarls, chirrupings, undecipherable shouts, the crackle of fire. The eyes waited.

In midmorning two naked women came around the bend below, dragging something along the shore. Seven more straggled after, paused to gesture and jabber. Their skin was angry red, pale at crotch and armpits. White scars stood out, symmetrical chevrons on the bulging bellies. All had thick, conelike nipples; two of them appeared close to term. Their hair was matted, rusty-streaked.

Above on the crags, blue eyes had joined yellow. The women were wading into the river now, their burden revealed as a crude net which they proceeded to string between the stakes. They shrieked at each other, "Gah! Ee, ah!" A small flock of children was drifting around the bend. Several of the larger children carried babies. "Gah! Gah!" they echoed, high-voiced. A stake collapsed, was retrieved with shrieks, would not stand, was abandoned.

Presently larger figures appeared on the shore path. The men. Seven of them, naked and ruddy like the women but much more scarred. None was beyond first youth.

The smallest was dark, all the others had carrotty hair and beards. Behind them trailed three dogs, tail-tucked, ready to flee.

The men shouted imperiously and walked on upriver. The women came out of the water and trotted after them. At the next bend the whole party waded in and commenced to splash and flail, driving the fish down to the nets. A baby screamed. The pair on the rocks watched intent.

One of the men noticed the dogs skulking by the net and hurled a stone. They raced away, turned, crept back. This man was the largest of the group, active and well formed. As the splashing people neared the nets the big man looked ahead, saw the gap in the nets and ran along on the shore to pull it taut. On the cliff above, wolf eyes met human. Wolf teeth made a tiny click.

The fish were foaming in the nets now. The humans closed upon them, hauling at the nets, fish sluicing and leaping through, dogs splashing in to snap. Shouts, screams, floundering bodies. They dragged the squirming mass ashore, dropped it to grab at escaping fish. The young giant stood erect grinning, biting alternately at a fish in each hand. At his feet children scrambled in the threshing nets. He gave a loud wordless shout, threw the fish high.

Finally the women dragged the catch away along the shore path to the huts and the river was empty again. Girl and wolf stretched, lay down unrelaxed. Smoke blew around the bend. It was hot in the rocks now, out of the wind. Below on the sand fish parts glittered, but no flies appeared. From the cove, silence, interrupted briefly by a child's wail. The sun was dropping behind them, shadows spreading toward the river below. The wind followed the sun away.

Presently dusk filled the canyon and the sky turned lilac behind the waxing moon in the east. A column of smoke was rising from the cove. In the stillness voices pealed singly, became a rhythmic chorus underlaid with pounding. This continued for a time, interspersed with shouts, bursts of shrieking. The smoke column wavered, gouted sparks. More shrieks, general shouting. The



uproar died to grumbles, then to silence. The rocks ticked in the night chill.

The wolf left the cranny. The girl sighed, remained. Around the bend a dog began to howl, squealed and was still. The girl toed intricate patterns in a patch of sand. The wolf returned wet-legged, and they ate and drank. While the moon set they slept.

Before dawn they had left that place and circled back across the river to the side on which they had entered the valley. The canyon wall was eroded to a tumble here. The two went slowly several times between shore and rocks as the sky paled. Finally they sat down to wait at the water's edge behind a screen of alders. Across the river were the huts.

When light struck into the canyon the girl rose and faced the wolf. Her jacket wrapped her waist, ended in a wide loop. He caught one tooth in the loop, flicked it free and had the jacket open. Beneath the jacket she was bare. She stood patiently while he nosed the jacket back across her shoulders like a cape. Her shoulders were smooth scarless knobs above her small breasts. The cold air puckered her pink nipples, stirred the little beards of silk in what should have been her armpits.

The wolf was laying the folds of jacket so that they mimicked arms. Satisfied, he jerked his big head and then began to tug at the flexible waistband of her breeches, drawing them down deftly to expose her body and upper thighs. As he worked she began to smile, moved. He growled faintly. The wind blew on her bareness. She leaned against his warm fur. They waited.

Sounds were coming from the thatches across the river. Figures appeared, ambling down to the shore to stand or squat. Girl and wolf watched an alder grove across the river to one side of the huts. Presently the foliage was agitated. A man was coming through. Wolf-head nodded; it was the big one. The man appeared, moving familiarly along a sand spit, and stood to urinate.

Carefully the wolf drew back a low branch. The girl took an awkward pace forward, putting her naked body in full sunlight. The man's head swung, fixed on her. His body tensed. She gave a low call, swaying herself.

Muscles surged in his legs, his feet spurned sand. Instantly the branch thrashed back around her and the wolf was yanking up her breeches, tugging her jacket around. Then they were running, pelting through the alders, racing out of the river bottom on the line toward their trail.

Splashing behind them turned upstream. The wolf had chosen well, there was a deep basin which the man must get around to reach their shore. They bounded up the bluff, the girl agile as a hare. When they were out of the canyon the wolf veered into the trees.

The man came over the bluff to see the girl running alone on the tunnelliike path far ahead. He plunged after her, strong legs eating space. But she was at the electric age for running, child-thin and trained hard. When he slowed after his first burst she was going tirelessly, a peculiar weaving motion of her torso making up the balance for missing arms. As she ran her eyes roamed in search of the splashes they had left upon the trees beside the trail.

Suddenly there were new voices behind her. The dogs had joined the chase. The girl frowned, speeded up. A big gray shadow swerved alongside, stopped with lifted leg beside a tree, then another. The girl smiled, let her pace slow.

Shortly she heard the dogs' voices change when they came to the wolf-sign. Shouts from the man, yelps. No more sound of dogs.

She ran on. It was trot and trot now, uphill, with the sun towering to noon. She was panting hard when she came to the first of the places they had arranged. She leaped aside, glimpsing a gray form among the trees, and jogged on up the rising ground.

Behind her came a sharp yell and then the grunts and flounder of the bogged man. She leaned against a dead termitary. The trees were thinning here, the wind blew through to carry her tiredness away.

The wolf appeared, jerked his head irritably. She turned and trotted on into the wind. Over the treetops she could see the blue line of rimrock far ahead. Trot and trot. The man held her in view now and he was gaining.

Finally she swerved again and heard behind her the



crack of breaking branches and the angry shout. When she paused the wolf was by her. They listened together to the sounds of struggle coming through the fading gusts of wind. Then she resumed of her own accord, knowing now that she could not outrun him. The wolf remained, watchful.

The sun was yellowing into the horizon's dust haze when she topped the final ridge and turned to look. This was the limit of the wild men's trails; would he follow on beyond? She could hear nothing. Then the wolf appeared, motioning her to a sunlit ledge. He butted her into position with his nose and pulled her jacket apart. She sang out a girl's trill, ending in laughter.

As the echo died the wolf pushed her running down the rocks past their old camping place. In a moment he joined her, grinning toothily, and then vanished to one side while she jogged on alone across the unrolling shadows. When she glanced behind a ruddy figure was bobbing down the rocks. No dogs were with him.

Shadows pooled underfoot, became twilight around her as they ran. Twilight turned to moonlight and ink; the wolf ranged ahead of her, his crooked tail held high, and she followed its flag across the plain. This was old goat land, knobbed with clumps of thorn trees whose young were springing up everywhere now that the goats were gone.

Presently the wolf let her slow to walking, pausing now and again to listen for the footfalls behind. No other sound was here.

At last they halted. He drifted back silent as fog, to return briskly and lead her to a thorn clump. Here she freed her feet and drank and ate greedily and drank again while he inspected and licked her feet. But he would not let her unharness him, nor release her hair, and he made her put her boots on before he got out the transmitter.

"We've got one. He's very strong. Is Bonz all right?"

Questions rattled at them. The wolf cut off and pushed the girl's body earthward into the dry thorn chaff. Then he removed himself from her warm odors and leaped up an ant castle to lie facing back the way they had come. His head, sunk onto his crossed paws, showed a fine tremor. One yellow eye was open under the heavy brow.

After a time his withers jerked, were still.

The sounds forced from his throat reached her in the night but her sleep was deep. She found him spasming at the base of the ant castle, the great jaws throwing slaver in the moonlight. She flung herself onto the writhing neck, clamping her thighs along his head, seeking to force her knees between his teeth. He bucked, screamed. The fangs clashed, caught in the ridge of padding fitted inside both her knees. She held his mouth open so as they rolled, a dark stain spreading on her leg. He had already slashed his tongue, she could not see how badly.

When the synchrony passed she released him, crouched murmuring over his head. His tongue ceased bleeding. Slowly his nictitating membranes retracted and the moonlight lit green ghostfire in his open eyes. He lifted his head. She nuzzled him, then pushed. He sighed and put his nose to his chest fur. A vial was harnessed there. He worried out a bolus, gulped. Then he got up, walked stiffly away. There was water nearby. When he returned she was asleep; he left her and leaped heavily up to his post.

Dawn showed them to be on an amba, a high tableland backed by a turreted line of cliffs. These cliffs were their goal, but there was the empty plain to cross. The girl was well out upon it, trotting alone, when the man's figure appeared around an outcrop. He wavered, ready to turn back. But then the sight of his prey gripped him and he was racing hard on her trail.

She speeded up and held the space between them almost constant for a kilometer before he began to gain. She forced her legs. It was wind against wind now across the barren amba. The amba was sliced with deep gullies. As her speed failed she was able to take advantage of the remembered course, doubling to lure him into hidden ravines. At two of the deepest cuts she found the wolf waiting for her and crossed by springing to his back where her pursuer would have to clamber up and down.

But for all she could do the man gained steadily. Between gusts of wind she caught the slap and pound of his hard feet. Her sides were heaving when she reached the tumbled hummocks at the foot of the crags. He was close, closer. She leaped desperately up the rocks,



remembering the stone that had been flung at the dog. How far could that powerful strange limb propel a missile? She did not know, but dodged upward with searing lungs, all her hopes focused on the tunnel.

That was the crucial part. If he should know these cliffs!

But he was coming straight up after her, not stopping to throw, closing fast. Gravel rattled. She could hear his grunts above her own breathing. He was only paces behind now.

Suddenly shadow was over her—the old culvert mouth. Hanging ropes ahead. She flung her weight into them, spun dizzily for an instant. Then everything gave and she struck ground in a rain of dirt. At her heels, the rockslide cascaded into the culvert, walled him out.

She panted for a time in the choking darkness and then started up the culvert's floor. It was steep; she scrabbled, sprawled, pushing herself up on her shoulder pads. This was an old skill; as an infant she had rubbed her shoulders raw. Presently there was gray light above. The wolf's head waited for her at the top.

She emerged onto the old road bed and they went together to look over the brink of the cliff. It was blowing hard here. She leaned against him as they peered down.

Far below, a red figure worked at the rocks before the culvert. The cliff between them hung sheer, he could not get up this way. The girl sighed, grinned, still breathing deeply. She nosed the wolf's back, found the canteen mouth and sucked deep. He whined softly.

Then they went again through the ritual of exposing her body. As he dragged down her breeches she giggled. He growled and nipped at her belly. Then he reared up and pulled off the cap to let the blonde silk blow free.

She advanced to the cliff edge, called into the wind. A red face turned up to her. Its mouth opened. She motioned with her head, stepped to her left. In that direction the roadway had been breached by a rockslide, leaving a moraine he could climb.

He left off staring and mouthing and began to circle toward the rockfall, stopping often to look up. She paced along above him until rocks came between.

Then the wolf dressed her peremptorily and sent her

staggering down the road in the other direction, away from the man. She took up a steady jog, going northwest now with the sun and the wind in her face. Soon the old highway left the cliffs and cut inward between wind-sliced turrets. There were higher crests beyond these to her right, the hills that had once been called Harar. Then she was past the outcrops. The road stretched straight across another mesa top. There were ruins here, adobe shells, ditches, littered yards under occasional huge eucalyptus trees. Metal fragments lay on the roadside. A rusted pump stood like a man as she jogged by. Dust blew. She was beginning to limp.

Now and then the wolf ranged alongside her, then slipped aside to watch her pursuer pass. The man was on the straight behind her now, coming on doggedly, veering from the strange shapes by the road. They had both slowed to walking as the light began to change. The distance between them shrank steadily, faster.

The girl was hobbling when she reached a ravine where the road lay in wreckage. A little time would be gained here, but not much. She was spent. Beyond the wrecked bridge were walls. The road curved around a dead village, ran into an old square. Here the girl turned aside and fell to her knees by the wall. Behind her the man was already leaping through the fallen bridge. It was sunset. The wolf grunted urgently. She shook her head, panted. He snarled and began to yank at her clothing, shouldering her up.

When the man came into the square she was standing alone, her body brilliant in the level light. He stopped, eyes rolling white at the alien walls. Then he took a step toward her and was suddenly in charging onrush. She stood quiet. He leaped, arms grappling her, and she went down under him into the hard dirt.

As they fell together a jet of gas came from between her lips into his face. He convulsed, crushed her. The wolf was on them, dragging the flailing giant off by the arm while the girl coughed and gagged. When the man had flopped to inertness the wolf pounced over her and nosed to raise her head.

Her gagging changed timbre, she wrapped both legs around the wolf and tried to roll him. He roughed her



face with his tongue, planted his paw in her navel and pulled free. When she quieted he was holding the transmitter in front of her face. A snoring noise was coming from the man on the ground.

They looked together at the big body. He was half again the wolf's weight.

"If we tie him to you and drag him he'll get all torn," the girl said. "Do you think you can drive him?"

The wolf laid the transmitter down and grunted noncommittally, frowning at the man.

"We're only at that place west of Goba," the girl told the transmitter. "I'm sorry. He's much stronger than we thought. You—wait!"

The wolf was out on the road, standing tense. She listened too, heard nothing. Then a shiver in the ground, a tiny rumble. The transmitter began to squawk.

"It's all right!" the girl told it. "Bonz is here!"

"What do you mean, Bonz is there?" demanded the distant voice.

"We can hear him coming. He must have got through the break."

"Damned idiots," said the voice. "You're all wasting energy. Base out."

Girl and wolf squatted together in the dusk beside the snoring man. She prodded at him briefly with her booted foot. Her teeth began to chatter.

The throbbing turned into a clashing roar and a fan of light swung around the far end of the square. Behind the light was the dark nub of a small tractor cab. It was towing a flat wagon.

The girl stood up, swung her hair.

"Bonz! Bonz, we've got one!"

The tractor rattled up beside them and a pale head leaned out. The dashlight showed a boy's face, a bony knife-edged version of the girl's.

"Where is he?"

"Here. Look how big he is!"

The tractor's light swung, flooded the supine man.

"You'll have to get him on the wagon," the boy said. His eyes were hollow with fatigue. He made no move to leave the cab.

The wolf was at the side wall of the wagon, pulling

a latch. The wall clanged down to form a ramp to the low cart bed. Girl and wolf began to roll the red body sideways toward the ramp.

"Wait," the boy said suddenly. "Don't hurt him. What have you done to him?"

"He's all right," said the girl. The man's shoulders were lolling against her knees, his upper arm slashed red where the wolf had gripped him.

"Wait, let me look," said the boy. He still did not get out but sat staring, licking his thin lips.

"Our savior," he said. "There's your damned Y chromosome. He's filthy."

He pulled his head back and they tumbled the unconscious man up onto the cart. There were hasps and straps on the floor. The girl's boots were got off and she fastened him down, her bruised toes clumsy. As they got him secure he began to groan. The girl pulled back her lips to reveal the syringe fastened between teeth and cheek and carefully jetted more vapor on his face.

The boy watched them through his rear window, twisted in his seat. He was drinking from a canteen. On the wagon the girl unhitched her companion's harness pack and they ate and drank too. They grinned at the boy. He did not grin back. His eyes were on the great red-gold man.

The girl toed him idly, jostling him.

"Don't do that!" the boy called sharply. The air was cold.

"Do you think he needs a blanket?" asked the girl.

"No! Yes." The boy's voice sounded crumpled.

When the wolf reared up beside the cab door the boy was bent over, hauling blankets from behind his seat. The cab's interior was cluttered with tubing and levers. On the floor, where the boy's feet should have been, was an apparatus from which tubes led upward. When he straightened up it could be seen that he had no legs. His torso was strapped to the seat and ended in a cocoon of canvas into which tubing led. His face was wet-streaked.

"We can all go die, now," he said in a hard voice. He pushed the blankets out the window, ramming with sinewy arms. Wetness ran down his thin jaw, fell on the blanket.



The girl peered around the side, said nothing. The wolf grabbed a double fold of blanket and slung the rest back over his shoulder as he dropped to all fours. The boy hung his arms around the steering wheel and let his head go down.

Girl and wolf covered the man on the cart and fastened up its side. He draped a blanket on her, leaped to the ground. The boy's head came up. He started the tractor and they lurched out onto the road. Above them no bat flew, no night bird hunted, here or anywhere in the empty world. Only the tractor moved across the moonlit plain, a gray beast trotting behind. No insects came to its yellow lights. Before them the road stretched away neutrally to the crests above the Rift, in the land that had been Ethiopia.





## HOSPITAL OF TRANSPLANTED HEARTS

D. M. THOMAS

*D. M. Thomas is a poet, and on the following pages he seems to have invented a new poetical art form. What might well be called a mileage table of the heart. Read across and down just as you would when seeking the mileage to some distant city. But find instead an insight into the human condition. For instance—when the sadist is imbued with the spirit of the Stakhanovite, we find: He emigrated to South Africa.*

## BODY OF:

Priest	Soldier	Whore	Gardener	Sadist	Virgin
Bending sadly over his enemy he gave him his cup of grace.	Absolved by her, he lit a small candle.	He told flowers they would rise again if they were holy.	Religiously he choked evil spirits out of her.	She stopped at the laying on of hands.	
He baptised the little ones with fire.	After the fray she withdrew completely exploding bridges.	Unimaginatively he heard the insecticide's silent rain.	Her nails left stripes on arms, epaulettes on shoulders.	She made them retreat from the capital's gates through snow.	
He loved all men equally.	He did not question their instructions.	Where he planted used condoms, a garden of limbo.	Shagging her, he pulled away from the intimacy of a kiss.	She hung hesitant at the entrance of unlit alleys.	
The butterfly evading his touch he mistook for Jesus.	Where the shell struck, poppies bloomed from the astounded body.	Two roses in the hot-house: one overblown one cankered.	While police raged he cultivated his garden quietly at night.	She regretted pollinization by the wind.	
He pictured a female Messiah's bloodied, heaving breasts.	Afterwards, no one found it was only the moon rising over Finland.	She left their mutilated bodies in backstreet hotels.	The face of the rose purpled, crumpled.	<i>Take me!</i> she said, as the bus left, in church, on the big dipses.	
He swooned at the snakeflesh of the communicant's tongue.	He did not know if he had died in that attack.	Spring congress: nature's pandering shocked him.	She told her daughter 'You are ugly the world must not see you.		

## HEART OF:

Priest      Soldier      Whore      Gardener      Sadist      Virgin



HEART OF:  
Psychologist  
Stakhanovite  
Composer  
Scientist  
Masochist  
Surgeon

He considered Christ's over- compensatory Oedipus complex.	Bayoneted, he watched his killer's face.	She asked them why they did this.	Autumn divorcée: psychosis of Kore lengthened.	He studied the child's face.	Lying on her lonely couch, she made notes on her case.
In his confessional, a camp bed.	He wanted to be the firing squad for the world.	She frigged the hungover gray morning into cupfinal night.	He dreamt himself sole survivor and named Adam.	He emigrated to South Africa.	She took the veil.
So many worlds! So many galaxies! So many saviors!	The silent village forgave him, for not using germ warfare.	As her sighs quickened, she graphed their heartbeats.	Birds hooded, flowers shut; everywhere entropy accepted.	He experimented with the velocity of falling bodies.	She feared the Pill, she feared it.
Through all troubling modulations always the home-key.	He wrote a victory march for the refugees to sing.	Afire with impatience, she felt its percussive rhythm.	Violets' muted trumpets, then spring's full sweet jazz.	He looked at the inert score he had played with too much brio.	Night-music. The wind's singers clicking sadly her bones.
As the rope tightened, he offered to die instead.	He turned the napalm inwards.	She made love for love.	He fecundated the Venus flytrap.	He lashed a masochist who cried with joy.	All night her moist, lustrous eyes begged him not to rape her.
The one he had lost, not the ninety-nine he had saved.	Heart transplant. He sent them to slave factories in the fatherland.	She felt the hump on his back with skilled healing fingers.	Plantation of transplantations. All members of one body.	He said To whip you externally is not enough.	Loving her, he allowed her to tenderly emasculate him.

## BODY OF:

Priest	Psychologist	Stakhanovite	Scientist	Composer	Masochist	Surgeon
	He strove to marry the schizophrenic, whose tongue could not find his name.	From his crane-pulpit he made a new heaven, new earth.	In a smear of communion-wine: DNA of God.	He believed in the triad, three-in-one, one-in-three.	Lunchtime eucharist. Her sad, broiler flesh stigmatised.	In the waiting flesh he made a vertical and transverse cut.
Soldier	Bravely he climbed down into sewers where the Resistance lurked.	Sagging dug fed her tenth son to a patriot's death.	On Mt. Palomar: Such multitudes! And more in reserve.	Choric Ode <i>Warsaw Ghetto</i> for unaccompanied keening of mothers.	She guided the gun barrel between her lips.	The enemy on x-ray. <i>We will attack at first light.</i>
Whore	If he were not paid for his skill their souls would feel enslaved.	He holidayed in a sanitarium. Regained health.	Inadequate theories passed each other on the stairs.	All day at the piano, the spume of notes breaking and idling back.	He dreamt he was a jewess in the Auschwitz brothel.	Cunningly his hands moved as though he were operating.
Gardener	How could he restore the lost paradise beneath Suicide City?	He drilled desert after desert, Planting a future forever receding.	By morning, the culture had flowered unrecognizably.	Instrumentation of a hot summer's day, concerto for busy ephemera.	She cooked and ate the insecticide-ridden plants.	The steering column was grafted into the beautiful girl's breast.
Sadist	He restored naturals to sanity.	His skill faltered by an inch in the third story of the skyscraper.	Test tube in hand, he stood over the city's reservoir.	He ended all movements with imperfect cadences.	She had herself whipped by a reluctant weeping masochist.	Religious he refused to cut away.
Virgin	His fingers holding the pencil trembled. His cheeks blushed.	He shuddered as the road drill clove soft earth.	He shivered at the neutrino cleaving light years of lead.	Convent bells over the fields stirred his heart to new modes.	He kept himself untouched.	Seventy years he fought to save the small tissues.

## HEART OF:



Psychologist

Stakhanovite

Scientist

Composer

Masochist

Surgeon

## HEART OF:

He felt for the  
huge machines'  
pent-up  
sexual energy.

He observed  
the expression  
on the dog's  
transplanted head.

At the first  
performance he  
watched the faces  
of the audience.

On her couch  
of nails,  
she took notes  
on herself.

Skimming the  
memory cells  
his lancet  
found the trauma.

He emigrated to  
the States.

If only nature  
had covered up  
its tracks  
more cunningly.

His 999th Symphony  
was his last.  
Sketches of the  
1000th remain.

He said  
*We must  
take out  
the lot.*

Uncertainty:  
observing quanta  
changed  
by his observing.

Give me  
an ideology  
and I will move  
the whole earth.

Tone-poem  
*Jodrell Bank.*  
The cracklings  
of infinite space.

Singhanded she  
sailed for  
the atom-  
test island.

He toiled to turn  
inert mass  
into energy again.

Slowly he  
collected all the  
strange lost tunes  
of the mad.

He could  
listen to the  
song of a  
tractor forever.

He played moon-  
light sonata  
of the cool  
star's spectrum.

Dies Irae,  
Her favorite  
lovesong.

He gasped at  
the cancer's  
unexpected  
counterpoint.

He drove the  
devils out and  
into his own  
Gaderene mind.

He toiled to  
complete the  
robot which  
would destroy him.

He destroyed his  
magnum opus.  
Only God was  
worthy of it.

He turned  
the scalpel  
inwards.

For freedom  
the patient must  
find her heart  
grasped by hands.

Onto church-  
rubble he  
transplanted the  
factory.

Man came:  
slowly, heart  
grafted into  
the universe.

Thirty years he  
cut, sighed,  
stitched up the  
white silence.

Lovebites  
in his old  
diseased heart.

## ECO-CATASTROPHE!

DR. PAUL EHRLICH

*Dr. Ehrlich is a professor of biology at Stanford University, as well as being an ecologist internationally known for his outspoken views on world environment. He is very much concerned and worried about the future of life on this planet, and he communicates that feeling to his audience. Now he has written what he calls a scenario, a piece of fiction that is really a science-fiction story in the prognosticative vein of Wells or Stapledon. An impressively realistic one that I sincerely hope does not come true. Anyone who does not write to his Congressman encouraging him to back all the current conservation bills after reading this is far more indifferent to the plight of the world than I am.*

### I.

The end of the ocean came late in the summer of 1979, and it came even more rapidly than the biologists had expected. There had been signs for more than a decade, commencing with the discovery in 1968 that DDT slows down photosynthesis in marine plant life. It was announced in a short paper in the technical journal



*Science*, but to ecologists it smacked of doomsday. They knew that all life in the sea depends on photosynthesis, the chemical process by which green plants bind the sun's energy and make it available to living things. And they knew that DDT and similar chlorinated hydrocarbons had polluted the entire surface of the earth, including the sea.

But that was only the first of many signs. There had been the final gasp of the whaling industry in 1973 and the end of the Peruvian anchovy fishery in 1975. Indeed, a score of other fisheries had disappeared quietly from overexploitation and various eco-catastrophes by 1977. The term "eco-catastrophe" was coined by a California ecologist in 1969 to describe the most spectacular of man's attacks on the systems which sustain his life. He drew his inspiration from the Santa Barbara offshore oil disaster of that year and from the news which spread among naturalists that virtually all of the Golden State's seashore bird life was doomed because of chlorinated hydrocarbon interference with its reproduction. Eco-catastrophes in the sea became increasingly common in the early 1970's. Mysterious "blooms" of previously rare microorganisms began to appear in offshore waters. Red tides—killer outbreaks of a minute single-celled plant—returned to the Florida gulf coast and were sometimes accompanied by tides of other exotic hues.

It was clear by 1975 that the entire ecology of the ocean was changing. A few types of phytoplankton were becoming resistant to chlorinated hydrocarbons and were gaining the upper hand. Changes in the phytoplankton community led inevitably to changes in the community of zooplankton, the tiny animals which eat the phytoplankton. These changes were passed on up the chains of life in the ocean to the herring, plaice, cod and tuna. As the diversity of life in the ocean diminished, its stability also decreased.

Other changes had taken place by 1975. Most ocean fishes that returned to fresh water to breed, like the salmon, had become extinct, their breeding streams so dammed up and polluted that their powerful homing instinct only resulted in suicide. Many fishes and shellfishes that bred in restricted areas along the coasts followed them as onshore pollution escalated.

By 1977 the annual yield of fish from the sea was down to 30 million metric tons, less than one-half the per capita catch of a decade earlier. This helped malnutrition to escalate sharply in a world where an estimated 50 million people per year were already dying of starvation. The United Nations attempted to get all chlorinated hydrocarbon insecticides banned on a worldwide basis, but the move was defeated by the United States. This opposition was generated primarily by the American petrochemical industry, operating hand in glove with its subsidiary, the United States Department of Agriculture. Together they persuaded the government to oppose the U.N. move—which was not difficult since most Americans believed that Russia and China were more in need of fish products than was the United States. The United Nations also attempted to get fishing nations to adopt strict and enforced catch limits to preserve dwindling stocks. This move was blocked by Russia, who, with the most modern electronic equipment, was in the best position to glean what was left in the sea. It was, curiously, on the very day in 1977 when the Soviet Union announced its refusal that another ominous article appeared in *Science*. It announced that incident solar radiation had been so reduced by worldwide air pollution that serious effects on the world's vegetation could be expected.

## II.

Apparently it was a combination of ecosystem destabilization, sunlight reduction, and a rapid escalation in chlorinated hydrocarbon pollution from massive Thanodrin applications which triggered the ultimate catastrophe. Seventeen huge Soviet-financed Thanodrin plants were operating in underdeveloped countries by 1978. They had been part of a massive Russian "aid offensive" designed to fill the gap caused by the collapse of America's ballyhooed "Green Revolution."

It became apparent in the early seventies that the "Green Revolution" was more talk than substance. Distribution of high yield "miracle" grain seeds had caused temporary local spurts in agricultural production.



Simultaneously, excellent weather had produced record harvests. The combination permitted bureaucrats, especially in the United States Department of Agriculture and the Agency for International Development (AID), to reverse their previous pessimism and indulge in an outburst of optimistic propaganda about staving off famine. They raved about the approaching transformation of agriculture in the underdeveloped countries (UDC's). The reason for the propaganda reversal was never made clear. Most historians agree that a combination of utter ignorance of ecology, a desire to justify past errors, and pressure from agro-industry (which was eager to sell pesticides, fertilizers, and farm machinery to the UDC's and agencies helping the UDC's) was behind the campaign. Whatever the motivation, the results were clear. Many concerned people, lacking the expertise to see through the Green Revolution drivel, relaxed. The population-food crisis was "solved."

But reality was not long in showing itself. Local famine persisted in northern India even after good weather brought an end to the ghastly Bihar famine of the mid-sixties. East Pakistan was next, followed by a resurgence of general famine in northern India. Other foci of famine rapidly developed in Indonesia, the Philippines, Malawi, the Congo, Egypt, Colombia, Ecuador, Honduras, the Dominican Republic, and Mexico.

Everywhere hard realities destroyed the illusion of the Green Revolution. Yields dropped as the progressive farmers who had first accepted the new seeds found that their higher yields brought lower prices—effective demand (hunger plus cash) was not sufficient in poor countries to keep prices up. Less progressive farmers, observing this, refused to make the extra effort required to cultivate the "miracle" grains. Transport systems proved inadequate to bring the necessary fertilizer to the fields where the new and extremely fertilizer-sensitive grains were being grown. The same systems were also inadequate to move produce to markets. Fertilizer plants were not built fast enough, and most of the underdeveloped countries could not scrape together funds to purchase supplies, even on concessional terms. Finally, the inevitable happened, the pests began to reduce yields in even the most carefully

cultivated fields. Among the first were the famous "miracle rats" which invaded Philippine "miracle rice" fields early in 1969. They were quickly followed by many insects and viruses, thriving on the relatively pest-susceptible new grains, encouraged by the vast and dense plantings, and rapidly acquiring resistance to the chemicals used against them. As chaos spread until even the most obtuse agriculturists and economists realized that the Green Revolution had turned brown, the Russians stepped in.

In retrospect it seems incredible that the Russians, with the American mistakes known to them, could launch an even more incompetent program of aid to the underdeveloped world. Indeed, in the early 1970's there were cynics in the United States who claimed that outdoing the stupidity of American foreign aid would be physically impossible. Those critics were, however, obviously unaware that the Russians had been busily destroying their own environment for many years. The virtual disappearance of sturgeon from Russian rivers caused a great shortage of caviar by 1970. A standard joke among Russian scientists at that time was that they had created an artificial caviar which was indistinguishable from the real thing—except by taste. At any rate the Soviet Union, observing with interest the progressive deterioration of relations between the UDC's and the United States, came up with a solution. It had recently developed what it claimed was the ideal insecticide, a highly lethal chlorinated hydrocarbon complexed with a special agent for penetrating the external skeletal armor of insects. Announcing that the new pesticide, called Thanodrin, would truly produce a Green Revolution, the Soviets entered into negotiations with various UDC's for the construction of massive Thanodrin factories. The USSR would bear all the costs; all it wanted in return were certain trade and military concessions.

It is interesting now, with the perspective of years, to examine in some detail the reasons why the UDC's welcomed the Thanodrin plan with such open arms. Government officials in these countries ignored the protests of their own scientists that Thanodrin would not solve the problems which plagued them. The governments now knew that the basic cause of their problems was



overpopulation and that these problems had been exacerbated by the dullness, daydreaming, and cupidity endemic to all governments. They knew that only population control and limited development aimed primarily at agriculture could have spared them the horrors they now faced. They knew it, but they were not about to admit it. How much easier it was simply to accuse the Americans of failing to give them proper aid; how much simpler to accept the Russian panacea.

And then there was the general worsening of relations between the United States and the UDC's. Many things had contributed to this. The situation in America in the first half of the 1970's deserves our close scrutiny. Being more dependent on imports for raw materials than the Soviet Union, the United States had, in the early 1970's, adopted more and more heavy-handed policies in order to insure continuing supplies. Military adventures in Asia and Latin America had further lessened the international credibility of the United States as a great defender of freedom—an image which had begun to deteriorate rapidly during the pointless and fruitless Vietnam conflict. At home, acceptance of the carefully manufactured image lessened dramatically, as even the more romantic and chauvinistic citizens began to understand the role of the military and the industrial system in what John Kenneth Galbraith had aptly named "The New Industrial State."

At home in the USA the early seventies were traumatic times. Racial violence grew and the habitability of the cities diminished, as nothing substantial was done to ameliorate either racial inequities or urban blight. Welfare rolls grew as automation and general technological progress forced more and more people into the category of "unemployable." Simultaneously a taxpayers' revolt occurred. Although there was not enough money to build the schools, roads, water systems, sewage systems, jails, hospitals, urban transit lines, and all the other amenities needed to support a burgeoning population, Americans refused to tax themselves more heavily. Starting in Youngstown, Ohio, in 1969 and followed closely by Richmond, California, community after community was forced to close its schools or curtail educational operations for lack of funds. Water supplies, already

marginal in quality and quantity in many places by 1970, deteriorated quickly. Water rationing occurred in 1,723 municipalities in the summer of 1974, and hepatitis and epidemic dysentery rates climbed about 500 percent between 1970-1974.

### III.

Air pollution continued to be the most obvious manifestation of environmental deterioration. It was, by 1972, quite literally in the eyes of all Americans. The year 1973 saw not only the New York and Los Angeles smog disasters, but also the publication of the Surgeon General's massive report on air pollution and health. The public had been partially prepared for the worst by the publicity given to the U.N. pollution conference held in 1972. Deaths in the late sixties caused by smog were well known to scientists, but the public had ignored them because they mostly involved the early demise of the old and sick rather than people dropping dead on the freeways. But suddenly our citizens were faced with nearly 200,000 corpses and massive documentation that they could be the next to die from respiratory disease. They were not ready for that scale of disaster. After all, the U.N. conference had not predicted that accumulated air pollution would make the planet uninhabitable until almost 1990. The population was terrorized as TV screens became filled with scenes of horror from the disaster areas. Especially vivid was NBC's coverage of hundreds of unattended people choking out their lives outside of New York's hospitals. Terms like nitrogen oxide, acute bronchitis, and cardiac arrest began to have real meaning for most Americans.

The ultimate horror was the announcement that chlorinated hydrocarbons were now a major constituent of air pollution in all American cities. Autopsies of smog disaster victims revealed an average chlorinated hydrocarbon lead in fatty tissue equivalent to 26 parts per million of DDT. In October, 1973, the Department of Health, Education and Welfare announced studies which showed unequivocally that increasing death rates from hypertension, cirrhosis of the liver, liver cancer,



and a series of other diseases had resulted from the chlorinated hydrocarbon load. They estimated that Americans born since 1946 (when DDT usage began) now had a life expectancy of only 49 years and predicted that if current patterns continued, this expectancy would reach 42 years by 1980, when it might level out. Plunging insurance stocks triggered a stock market panic. The president of Velsicol, Inc., a major pesticide producer, went on television to "publicly eat a teaspoonful of DDT" (it was really powdered milk) and announce that HEW had been infiltrated by Communists. Other giants of the petrochemical industry, attempting to dispute the indisputable evidence, launched a massive pressure campaign on Congress to force HEW to "get out of agriculture's business." They were aided by the agrochemical journals, which had decades of experience in misleading the public about the benefits and dangers of pesticides. But by now the public realized that it had been duped. The Nobel Prize for medicine and physiology was given to doctors J. L. Radomski and W. B. Deichmann, who in the late 1960's had pioneered in the documentation of the long-term lethal effects of chlorinated hydrocarbons. A Presidential Commission with unimpeachable credentials directly accused the agrochemical complex of "condemning many millions of Americans to an early death." The year 1973 was the year in which Americans finally came to understand the direct threat to their existence posed by environmental deterioration.

And 1973 was also the year in which most people finally comprehended the indirect threat. Even the president of Union Oil Company and several other industrialists publicly stated their concern over the reduction of bird populations which had resulted from pollution by DDT and other chlorinated hydrocarbons. Insect populations boomed because they were resistant to most pesticides and had been freed, by the incompetent use of those pesticides, from most of their natural enemies. Rodents swarmed over crops, multiplying rapidly in the absence of predatory birds. The effect of pests on the wheat crop was especially disastrous in the summer of 1973, since that was also the year of the great drought.

Most of us can remember the shock which greeted the announcement by atmospheric physicists that the shift of the jet stream which had caused the drought was probably permanent. It signaled the birth of the Midwestern desert. Man's air-polluting activities had by then caused gross changes in climatic patterns. The news, of course, played hell with commodity and stock markets. Food prices skyrocketed, as savings were poured into hoarded canned goods. Official assurances that food supplies would remain ample fell on deaf ears, and even the government showed signs of nervousness when California migrant field workers went out on strike again in protest against the continued use of pesticides by growers. The strike burgeoned into farm burning and riots. The workers, calling themselves "the Walking Dead," demanded immediate compensation for their shortened lives and crash research programs to attempt to lengthen them.

It was in the same speech in which President Edward Kennedy, after much delay, finally declared a national emergency and called out the National Guard to harvest California's crops that the first mention of population control was made. Kennedy pointed out that the United States would no longer be able to offer any food aid to other nations and was likely to suffer food shortages herself. He suggested that, in view of the manifest failure of the Green Revolution, the only hope of the UDC's lay in population control. His statement, you will recall, created an uproar in the underdeveloped countries. Newspaper editorials accused the United States of wishing to prevent small countries from becoming large nations and thus threatening American hegemony. Politicians asserted that President Kennedy was a "creature of the giant drug combine" that wished to shove its pills down every woman's throat.

Among Americans, religious opposition to population control was very slight. Industry in general also backed the idea. Increasing poverty in the UDC's was both destroying markets and threatening supplies of raw materials. The seriousness of the raw material situation had been brought home during the Congressional Hard Resources hearings in 1971. The exposure of the ignorance of the cornucopian economists had been quite



a spectacle—a spectacle brought into virtually every American's home in living color. Few would forget the distinguished geologist from the University of California who suggested that economists be legally required to learn at least the most elementary facts of geology. Fewer still would forget that an equally distinguished Harvard economist added that they might be required to learn some economics, too. The overall message was clear: America's resource situation was bad and bound to get worse. The hearings had led to a bill requiring the departments of State, Interior, and Commerce to set up a joint resource procurement council with the express purpose of "insuring that proper consideration of American resource needs be an integral part of American foreign policy."

Suddenly the United States discovered that it had a national consensus: Population control was the only possible salvation of the underdeveloped world. But that same consensus led to heated debate. How could the UDC's be persuaded to limit their populations, and should not the United States lead the way by limiting its own? Members of the intellectual community wanted America to set an example. They pointed out that the United States was in the midst of a new baby boom: her birth rate, well over twenty per thousand per year, and her growth rate of over 1 percent per annum were among the very highest of the developed countries. They detailed the deterioration of the American physical and psychic environments, the growing health threats, the impending food shortages, and the insufficiency of funds for desperately needed public works. They contended that the nation was clearly unable or unwilling to properly care for the people it already had. What possible reason could there be, they queried, for adding any more? Besides, who would listen to requests by the United States for population control when that nation did not control her own profligate reproduction?

Those who opposed population controls for the U.S. were equally vociferous. The military-industrial complex, with its all-too-human mixture of ignorance and avarice, still saw strength and prosperity in numbers. Baby-food magnates, already worried by the growing nitrate pollution of their products, saw their market disappearing. Steel

manufacturers saw a decrease in aggregate demand and slippage for that holy of holies, the Gross National Product. And military men saw, in the growing population-food-environment crisis, a serious threat to their carefully nurtured Cold War. In the end, of course, economic arguments held sway, and the "inalienable right of every American couple to determine the size of its family," a freedom invented for the occasion in the early seventies, was not compromised.

The population control bill, which was passed by Congress early in 1974, was quite a document, nevertheless. On the domestic front, it authorized an increase from 100 to 150 million dollars in funds for "family planning" activities. This was made possible by a general feeling in the country that the growing army on welfare needed family planning. But the gist of the bill was a series of measures designed to impress the need for population control on the UDC's. All American aid to countries with overpopulation problems was required by law to consist in part of population control assistance. In order to receive any assistance each nation was required not only to accept the population control aid, but also to match it according to a complex formula. "Overpopulation" itself was defined by a formula based on U.N. statistics, and the UDC's were required not only to accept aid, but also to show progress in reducing birth rates. Every five years the status of the aid program for each nation was to be reevaluated.

The reaction to the announcement of this program dwarfed the response to President Kennedy's speech. A coalition of UDC's attempted to get the U.N. General Assembly to condemn the United States as a "genetic aggressor." Most damaging of all to the American cause was the famous "Twenty-five Indians and a dog" speech by Mr. Shankarnarayan, Indian Ambassador to the U.N. Shankarnarayan pointed out that for several decades the United States, with less than 6 percent of the people of the world, had consumed roughly 50 percent of the raw materials used every year. He described vividly America's contribution to worldwide environmental deterioration, and he scathingly denounced the miserly record of United States foreign aid as "unworthy of a fourth-rate power,



let alone the most powerful nation on earth."

It was the climax of his speech, however, which most historians claim once and for all destroyed the image of the United States. Shankarnarayan informed the assembly that the average American family dog was fed more animal protein per week than the average Indian got in a month. "How do you justify taking fish from protein-starved Peruvians and feeding them to your animals?" he asked. "I contend," he concluded, "that the birth of an American baby is a greater disaster for the world than that of twenty-five Indian babies." When the applause had died away, Mr. Sorensen, the American representative, made a speech which said essentially that "other countries look after their own self-interest, too." When the vote came, the United States was condemned.

#### IV.

This condemnation set the tone of U.S.-UDC relations at the time the Russian Thanodrin proposal was made. The proposal seemed to offer the masses in the UDC's an opportunity to save themselves and humiliate the United States at the same time; and in human affairs, as we all know, biological realities could never interfere with such an opportunity. The scientists were silenced, the politicians said yes, the Thanodrin plants were built, and the results were what any beginning ecology student could have predicted. At first Thanodrin seemed to offer excellent control of many pests. True, there was a rash of human fatalities from improper use of the lethal chemical, but, as Russian technical advisors were prone to note, these were more than compensated for by increased yields. Thanodrin use skyrocketed throughout the underdeveloped world. The Mikoyan design group developed a dependable, cheap agricultural aircraft which the Soviets donated to the effort in large numbers. MIG sprayers became even more common in UDC's than MIG interceptors.

Then the troubles began. Insect strains with cuticles resistant to Thanodrin penetration began to appear. And as streams, rivers, fish culture ponds, and onshore waters became rich in Thanodrin, more fisheries began to

disappear. Bird populations were decimated. The sequence of events was standard for broadcast use of a synthetic pesticide: great success at first, followed by removal of natural enemies and development of resistance by the pest. Populations of crop-eating insects in areas treated with Thanodrin made steady comebacks and soon became more abundant than ever. Yields plunged, while farmers in their desperation increased the Thanodrin dose and shortened the time between treatments. Death from Thanodrin poisoning became common. The first violent incident occurred in the Canete Valley of Peru, where farmers had suffered a similar chlorinated hydrocarbon disaster in the mid-fifties. A Russian advisor serving as an agricultural pilot was assaulted and killed by a mob of enraged farmers in January, 1978. Trouble spread rapidly during 1978, especially after the word got out that two years earlier Russia herself had banned the use of Thanodrin at home because of its serious effects on ecological systems. Suddenly Russia, and not the United States, was the *bête noire* in the UDC's. "Thanodrin parties" became epidemic, with farmers, in their ignorance, dumping carloads of Thanodrin concentrate into the sea. Russian advisers fled, and four of the Thanodrin plants were leveled to the ground. Destruction of the plants in Rio and Calcutta led to hundreds of thousands of gallons of Thanodrin concentrate being dumped directly into the sea.

Mr. Shankarnarayan again rose to address the U.N., but this time it was Mr. Potemkin, representative of the Soviet Union, who was on the hot seat. Mr. Potemkin heard his nation described as the greatest mass killer of all time as Shankarnarayan predicted at least 30 million deaths from crop failures due to overdependence on Thanodrin. Russia was accused of "chemical aggression," and the General Assembly, after a weak reply by Potemkin, passed a vote of censure.

It was in January, 1979, that huge blooms of a previously unknown variety of diatom were reported off the coast of Peru. The blooms were accompanied by a massive die-off of sea life and of the pathetic remainder of the birds which had once feasted on the anchovies of the area. Almost immediately another huge bloom was



reported in the Indian Ocean, centering around the Seychelles, and then a third in the South Atlantic off the African coast. Both of these were accompanied by spectacular die-offs of marine animals. Even more ominous were growing reports of fish and bird kills at oceanic points where there were no spectacular blooms. Biologists were soon able to explain the phenomena: The diatom had evolved an enzyme which broke down Thanodrin; that enzyme also produced a breakdown product which interfered with the transmission of nerve impulses and was therefore lethal to animals. Unfortunately, the biologists could suggest no way of repressing the poisonous diatom bloom in time. By September, 1979, all important animal life in the sea was extinct. Large areas of coastline had to be evacuated, as windrows of dead fish created a monumental stench.

But stench was the least of man's problems. Japan and China were faced with almost instant starvation from a total loss of the seafood on which they were so dependent. Both blamed Russia for their situation and demanded immediate mass shipments of food. Russia had none to send. On October 13, Chinese armies attacked Russia on a broad front. . . .

*I have written a pretty grim scenario, which technically must be considered a work of fiction. However it is firmly based on fact, and in a sense, we're already a long way into this scenario. Everything mentioned as happening before 1970 has actually occurred; much of the rest is based on projections of trends already appearing. Evidence that pesticides have long-term lethal effects on human beings has started to accumulate, and recently Robert Finch, Secretary of the Department of Health, Education and Welfare expressed his extreme apprehension about the pesticide situation. Simultaneously the petrochemical industry continues its unconscionable poison-peddling. For instance, Shell Chemical has been carrying on a high-pressure campaign to sell the insecticide Azodrin to farmers as a killer of cotton pests. They continue their program even though they know that Azodrin not only is ineffective but often increases the*

pest density. They've covered themselves nicely in an advertisement which states, "Even if an overpowering migration [sic] develops, the flexibility of Azodrin lets you regain control fast. Just increase the dosage according to label recommendations." It's a great game—get people to apply the poison and kill the natural enemies of the pests. Then blame the increased pests on "migration" and sell even more pesticide!

Right now fisheries are being wiped out by overexploitation, made easy by modern electronic equipment. The companies producing the equipment know this. They even boast in advertising that only their equipment will keep fishermen in business until the final kill. Profits must obviously be maximized in the short run. Indeed, Western society is in the process of completing the rape and murder of the planet for economic gain. And, sadly, most of the rest of the world is eager for the opportunity to emulate our behavior. But the underdeveloped peoples will be denied that opportunity—the days of plunder are drawing inexorably to a close.

Most of the people who are going to die in the greatest cataclysm in the history of man have already been born. More than three and a half billion people populate our moribund globe, and about half of them are hungry. Some 10 to 20 million will starve to death this year. In spite of this, the population of the earth will increase by 70 million souls in 1969. For mankind has artificially lowered the death rate of the human population, while in general birth rates have remained high. With the input side of the population system in high gear and the output side slowed down, our fragile planet has filled with people at an incredible rate. It took several million years for the population to reach a total of two billion people in 1930, while a second two billion will have been added by 1975! By that time some experts feel that food shortages will have escalated the present level of world hunger and starvation into famines of unbelievable proportions. Other experts, more optimistic, think the ultimate food-population collision will not occur until the decade of the 1980's. Of course more massive famine



*may be avoided if other events cause a prior rise in the human death rate.*

*Both worldwide plague and thermonuclear war are made more probable as population growth continues. These, along with famine, make up the trio of potential "death rate solutions" to the population problem—solutions in which the birth rate-death rate imbalance is redressed by a rise in the death rate rather than by a lowering of the birth rate. Make no mistake about it, the imbalance will be redressed. The shape of the population growth curve is one familiar to the biologist. It is the outbreak part of an outbreak-crash sequence. A population grows rapidly in the presence of abundant resources, finally runs out of food or some other necessity, and crashes to a low level or extinction. Man is not only running out of food, he is also destroying the life support systems of the Spaceship Earth. The situation was recently summarized very succinctly: "It is the top of the ninth inning. Man, always a threat at the plate, has been hitting Nature hard. It is important to remember, however, that NATURE BATS LAST."*

## THE CASTLE ON THE CRAG

PG WYAL

### 1.

*Pg Wyal is a new, and presumably young, writer who writes the new kind of science fiction. His story is concise and to the point, and the point is a philosophical one. If it is a little grim as well, perhaps that is because reality is grim, and reality is faced up to quite definitely here. I hope we will be seeing more of Mr. Wyal's work.*

Once upon a time (or maybe we should say, "Once below a time," for this was very long ago), there was a beautiful princess. Now, the princess had many suitors, but she favored one above all the rest. But alas!—the princess was a White Liberal and valued poverty above all else, and the suitor (who was a handsome prince) was extremely wealthy. Eventually, however, the handsome prince persuaded the lovely princess to sell out, buying great hunks of Blue Chip stock and desiring even greater riches. In fact, the princess became so enamored of wealth that she set the wealthy prince a Task, to prove to her his wealth as a potential husband. "Prince," she said, "see on yonder hill there is a mean cordwainer's shack. Tear down the shack, and build on the promontory a beautiful marble castle. If the castle has enough status,



I will wed you for a husband." The prince was excited by this prospect, and after a suitable cost analysis, he went out on the rocky hill and built a beautiful marble castle. The princess was virtually enchanted by the castle and kept her vow to the prince. They married and lived many years together in the castle.

Now many years passed. The princess, now a queen, grew old and bore many brats. The brats grew up, and the queen at last died, a withered and ugly hag. The prince pined senilely away and died shortly thereafter. Many generations lived and died in the castle, until at last the great edifice squatted deserted on the hill, and bats made their nests among the rafters of once priceless wood. Time passed.

## 2.

One day, centuries after the queen died, a great storm swept the hill where the marble castle stood. The castle was weakened by the rigors of time and shook and shuddered as the gusts pounded its walls. Finally, it could withstand the shocks and strains no longer, and the roof caved in and the walls collapsed. Much of the structure fell into the valley below, and where once stood a monument to a prince's love now lay only rubble and ruin.

And yet, the storm was not over. The gales blew mercilessly, pelting the crumbling lot with the debris of the forest below. A single seed lodged into a crack at the foundation of the broken castle, in the very place where the dead queen lay. The storm passed, but the seed stayed. At length it took root, and tiny leaves grew into twigs and the twigs into branches; the branches thickened into a trunk, and eventually the seed was a great tree. For centuries the tree spread its arms beneath the startled sky, nourished by the dead queen's body, and crumbling stones of the hill, the clean air and the pure water of a cleaner age. The tree slept for eons, neither loving nor hating, fearing nor thinking. It was neither happy nor sad, it was merely a tree.

Then, on a day no different from all the others to the tree, another fierce storm assaulted the hill where the

prince had built a castle for his bride, where the queen had died and her sons been born, where the sons had died and their sons too, where the castle had fallen and the great tree grown. And lightning struck the tree, and the wind split it in two, and it fell down the side of the hill with the queen's bones in its roots, to rest among the weathered blocks of marble that once made a beautiful castle. And time passed.

## 3.

After hundreds of years that saw no change on the now bare hill, strange men came to build a stranger house with a weird purpose. They were somber men and did not speak when speech was unnecessary. Using the blocks of stone from the vanished castle, they built an abbey, and in the abbey they stored books and writings; weird black rites they held for a weird black god who had no pleasures at all but simply sat and brooded over the world wide. And they found the queen's bones in the roots of the fallen tree that once grew in the stones of a smashed castle a prince had built for love, and that now was a home for books and odd worship. And the men in black cowls made chants and songs over the dead queen (who, one may be sure, was not paying the slightest attention to them) and gave her a Christian burial—for the most sacred thing these men knew was Death. They buried her in the windy courtyard with strange relics of giants they found in the earth, and clinging to some of her bones were the rotting splinters of an ancient tree. The men went about their business, praying and meditating, aging and dying, abbot and neophyte, for a thousand years. And more time passed.

## 4.

Beneath the abbey there grew a town, with all the inevitability of moss. And the people in the town went securely about their mundane business, knowing that over their heads was the sentinel of a grieving god. As the years passed the town acquired many citizens, and though armies and plagues might flatten it down, they always



felt safe with the abbey perched on the hill. But then one day the people heard a new rumble, like the groaning of the earth in an earthquake, but sustained, and accompanied by no shaking and lurching of the ground. They looked amazed into the sky and beheld huge machines guided by men, and the machines were flying toward the abbey. And when the flying machines reached the hill, they released huge bombs upon it; but the abbey was of a strong and thick stone and withstood the pommeling without a shudder. The people in the abbey and in the town felt secure, for the war machines flew away, and the explosions stopped. But they were foolish people, for they should have realized that the goals of war are the terrors of life, and when the bombers returned, and returned again, they felt deserted by their distant god.

For days the abbey was racked by fire and concussion, until at last nothing was left but the modality of the Christian philosophy: death. The town was empty, the abbey was powder. Where the prince had built a castle for the woman whom he loved, and the woman had aged and died his wife, where the sons of the wife had grown, conceived sons in turn, died and been followed by death, where the castle of love had been battered by winds and crumbled for nothing into the ground, where a tree had grown from the carcass of the queen and split by lightning had tumbled down, where the blocks of unknown stone had been built into a hollow monastery over a queen still dead, but blessed, where time alone was still alive, the naked flanks of the hill pointed blindly at the stars. And time, time triumphant, passed.

## 5.

A century later, with the hill alone in the rocks and trees and only the shattered flint of history remembered, a city to the north of the hill was scorched into ashes in an instant too fast to feel. Men had discovered a bomb that was so hot, so huge, that whole cities were melted by a single one. The bombs were the manufactures of Hell itself, and Hell's machinists, and rode on the prows of rockets. Not all the rockets achieved their targets, for even the cleverest weapon must be aimed, and even the

cleverest bow properly strung, and even an arrow must be straight or it will not fly true, and it naturally happened that one bomb did not hit a city but landed in the hills to the south. And on the hill where an abbey was blasted, made of stones that lay scattered about, buried amidst them the bones of a queen that had wood clinging to them from a tree struck by lightning, that grew in the ruins of a castle built for love, where ten generations had died and no ghosts now haunted, where a prince had measured and created an architecture for love of the bones that blew dust in a bombed courtyard, with the mammoths, where history paraded and nobody watched, there blossomed the sun as it came to earth. . . . And the hill melted and ran like blood down its own ragged slopes, and where there had been a princess, a castle, a tree, an abbey, no abbey at all to roost on a hill, now there was not even a hill, for the land was fluid, and fluid seeks the sea. And for the hill, no time passed, for there can be no time for no matter.

## 6.

And so you demand a moral; I have told a long story, and all tales must have a reason to be told. So I say: for a thing that has no time, there could never time have been. Show me the hill that this story is about, and I'll show you the truth of lies. What purpose did this history serve? Why, the same purpose served by the princess, her castle, her sons, the tree that sprouted from her corpse, the abbey that grew out of the castle's bones, the god that died with the abbey, and the time that died with the hill. The concept is the crux:

All things will never have been.



## NINE LIVES

URSULA K. LE GUIN

*When The Left Hand of Darkness was published a few years ago, it brought Ursula K. Le Guin instant prominence. It is a book with a solid fabric of reality and an alien—yet human—culture that is spread richly before us. It cannot be chance that the author's father was A. L. Kroeber, late dean of American anthropologists. This same depth of understanding can be seen here in "Nine Lives," a human story played out against the background of one of the most repellent planets ever conceived.*

She was alive inside but dead outside, her face a black and dun net of wrinkles, tumors, cracks. She was bald and blind. The tremors that crossed Libra's face were mere quiverings of corruption: Underneath, in the black corridors, the halls beneath the skin, there were crepitations in darkness, ferments, chemical nightmares that went on for centuries. "Oh the damned flatulent planet," Pugh murmured as the dome shook and a boil burst a kilometer to the southwest, spraying silver pus across the sunset. The sun had been setting for the last two days. "I'll be glad to see a human face."

"Thanks," said Martin.

"Yours is human to be sure," said Pugh, "but I've seen it so long I can't see it."

Radvid signals cluttered the communicator which Martin was operating, faded, returned as face and voice. The face filled the screen, the nose of an Assyrian king, the eyes of a samurai, skin bronze, eyes the color of iron: young, magnificent. "Is that what human beings look like?" said Pugh with awe. "I'd forgotten."

"Shut up, Owen, we're on."

"Libra Exploratory Mission Base, come in please, this is *Passerine* launch."

"Libra here. Beam fixed. Come on down, launch."

"Expulsion in seven E-seconds. Hold on." The screen blanked and sparkled.

"Do they all look like that? Martin, you and I are uglier men than I thought."

"Shut up, Owen. . . ."

For twenty-two minutes Martin followed the landing craft down by signal, and then through the cleared dome they saw it, small star in the blood-colored east, sinking. It came down neat and quiet, Libra's thin atmosphere carrying little sound. Pugh and Martin closed the headpieces of their imsuits, zipped out of the dome airlocks, and ran with soaring strides, Nijinsky and Nureyev, toward the boat. Three equipment modules came floating down at four-minute intervals from each other and hundred-meter intervals east of the boat. "Come on out," Martin said on his suit radio, "we're waiting at the door."

"Come on in, the methane's fine," said Pugh.

The hatch opened. The young man they had seen on the screen came out with one athletic twist and leaped down onto the shaky dust and clinkers of Libra. Martin shook his hand, but Pugh was staring at the hatch, from which another young man emerged with the same neat twist and jump, followed by a young woman who emerged with the same neat twist, ornamented by a wriggle, and the jump. They were all tall, with bronze skin, black hair, high-bridged nose, epicanthic fold, the same face. They all had the same face. The fourth was emerging from the hatch with a neat twist and jump. "Martin bach," said Pugh, "we've got a clone."



"Right," said one of them, "we're a tenclone. John Chow's the name. You're Lieutenant Martin?"

"I'm Owen Pugh."

"Alvaro Guillen Martin," said Martin, formal, bowing slightly. Another girl was out, the same beautiful face; Martin stared at her and his eye rolled like a nervous pony's. Evidently he had never given any thought to cloning and was suffering technological shock. "Steady," Pugh said in the Argentine dialect, "it's only excess twins." He stood close by Martin's elbow. He was glad himself of the contact.

It is hard to meet a stranger. Even the greatest extrovert meeting even the meekest stranger knows a certain dread, though he may not know he knows it. Will he make a fool of me wreck my image of myself invade me destroy me change me? Will he be different from me? Yes, that he will. There's the terrible thing: the strangeness of the stranger.

After two years on a dead planet, and the last half year isolated as a team of two, oneself and one other, after that it's even harder to meet a stranger, however welcome he may be. You're out of the habit of difference, you've lost the touch; and so the fear revives, the primitive anxiety, the old dread.

The clone, five males and five females, had got done in a couple of minutes what a man might have got done in twenty: greeted Pugh and Martin, had a glance at Libra, unloaded the boat, made ready to go. They went, and the dome filled with them, a hive of golden bees. They hummed and buzzed quietly, filled up all silences, all spaces with a honey-brown swarm of human presence. Martin looked bewilderedly at the long-limbed girls, and they smiled at him, three at once. Their smile was gentler than that of the boys, but no less radiantly self-possessed.

"Self-possessed," Owen Pugh murmured to his friend, "that's it. Think of it, to be oneself ten times over. Nine seconds for every motion, nine ayes on every note. It would be glorious!" But Martin was asleep. And the John Chows had all gone to sleep at once. The dome was filled with their quiet breathing. They were young, they didn't snore. Martin sighed and snored, his hershey-bar-colored face relaxed in the dim afterglow of Libra's primary, set

at last. Pugh had cleared the dome and stars looked in, Sol among them, a great company of lights, a clone of splendors. Pugh slept and dreamed of a one-eyed giant who chased him through the shaking halls of hell.

From his sleeping bag Pugh watched the clone's awakening. They all got up within one minute except for one pair, a boy and a girl, who lay snugly tangled and still sleeping in one bag. As Pugh saw this there was a shock like one of Libra's earthquakes inside him, a very deep tremor. He was not aware of this and in fact thought he was pleased at the sight; there was no other such comfort on this dead hollow world, more power to them, who made love. One of the others stepped on the pair. They woke and the girl sat up flushed and sleepy, with bare golden breasts. One of her sisters murmured something to her; she shot a glance at Pugh and disappeared in the sleeping bag, followed by a faint giggle, from another direction a fierce stare, from still another direction a voice: "Christ, we're used to having a room to ourselves. Hope you don't mind, Captain Pugh."

"It's a pleasure," Pugh said half truthfully. He had to stand up then wearing only the shorts he slept in, and he felt like a plucked rooster, all white scrawn and pimples. He had seldom envied Martin's compact brownness so much. The United Kingdom had come through the Great Famines well, losing less than half its population: a record achieved by rigorous food control. Black marketeers and hoarders had been executed. Crumbs had been shared. Where in richer lands most had died and a few had thriven, in Britain fewer died and none throve. They all got lean. Their sons were lean, their grandsons lean, small, brittle-boned, easily infected. When civilization became a matter of standing in lines, the British had kept queue and so had replaced the survival of the fittest with the survival of the fair-minded. Owen Pugh was a scrawny little man. All the same, he was there.

At the moment he wished he wasn't.

At breakfast a John said, "Now if you'll brief us, Captain Pugh—"

"Owen, then."

"Owen, we can work out our schedule. Anything new



on the mine since your last report to your Mission? We saw your reports when *Passerine* was orbiting Planet V, where they are now."

Martin did not answer, though the mine was his discovery and project, and Pugh had to do his best. It was hard to talk to them. The same faces, each with the same expression of intelligent interest, all leaned toward him across the table at almost the same angle. They all nodded together.

Over the Exploitation Corps insigne on their tunics each had a nameband, first name John and last name Chow of course, but the middle names different. The men were Aleph, Kaph, Yod, Gimel, and Samedh; the women Sadhe, Daleth, Zayin, Beth, and Resh. Pugh tried to use the names but gave it up at once; he could not even tell sometimes which one had spoken, for all the voices were alike.

Martin buttered and chewed his toast and finally interrupted: "You're a team. Is that it?"

"Right," said two Johns.

"God, what a team! I hadn't seen the point. How much do you each know what the others are thinking?"

"Not at all, properly speaking," replied one of the girls, Zayin. The others watched her with the proprietary, approving look they had. "No ESP, nothing fancy. But we think alike. We have exactly the same equipment. Given the same stimulus, the same problem, we're likely to be coming up with the same reactions and solutions at the same time. Explanations are easy—don't even have to make them, usually. We seldom misunderstand each other. It does facilitate our working as a team."

"Christ yes," said Martin. "Pugh and I have spent seven hours out of ten for six months misunderstanding each other. Like most people. —What about emergencies, are you as good at meeting the unexpected problem as a nor . . . an unrelated team?"

"Statistics so far indicate that we are," Zayin answered readily. Clones must be trained, Pugh thought, to meet questions, to reassure and reason. All they said had the slightly bland and stilled quality of answers furnished to the Public. "We can't brainstorm as singletons can, we as a team don't profit from the interplay of varied minds;

but we have a compensatory advantage. Clones are drawn from the best human material, individuals of IQ ninety-ninth percentile, Genetic Constitution alpha double A, and so on. We have more to draw on than most individuals do."

"And it's multiplied by a factor of ten. Who is—who was John Chow?"

"A genius surely," Pugh said politely. His interest in cloning was not so new and avid as Martin's.

"Leonardo Complex type," said Yod. "Biomath, also a cellist and an undersea hunter, and interested in structural engineering problems and so on. Died before he'd worked out his major theories."

"Then you each represent a different facet of his mind, his talents?"

"No," said Zayin, shaking her head in time with several others. "We share the basic equipment and tendencies, of course, but we're all engineers in Planetary Exploitation. A later clone can be trained to develop other aspects of the basic equipment. It's all training; the genetic substance is identical. We *are* John Chow. But we were differently trained."

Martin looked shell-shocked. "How old are you?"

"Twenty-three."

"You say he died young— Had they taken germ cells from him beforehand or something?"

Gimel took over: "He died at twenty-four in an air car crash. They couldn't save the brain, so they took some intestinal cells and cultured them for cloning. Reproductive cells aren't used for cloning, since they have only half the chromosomes. Intestinal cells happen to be easy to despecialize and reprogram for total growth."

"All chips off the old block," Martin said valiantly. "But how can . . . some of you be women . . . ?"

Beth took over: "It's easy to program half the clonal mass back to the female. Just delete the male gene from half the cells and they revert to the basic, that is, the female. It's trickier to go the other way, have to hook in artificial Y chromosomes. So they mostly clone from males, since clones function best bisexually."

Gimel again: "They've worked these matters of technique and function out carefully. The taxpayer wants



the best for his money, and of course clones are expensive. With the cell manipulations, and the incubation in Ngama Placantae, and the maintenance and training of the foster-parent groups, we end up costing about three million apiece."

"For your next generation," Martin said, still struggling, "I suppose you . . . you breed?"

"We females are sterile," said Beth with perfect equanimity. "You remember that the Y chromosome was deleted from our original cell. The males can interbreed with approved singletons, if they want to. But to get John Chow again as often as they want, they just reclone a cell from this clone."

Martin gave up the struggle. He nodded and chewed cold toast. "Well," said one of the Johns, and all changed mood, like a flock of starlings that change course in one wingflick, following a leader so fast that no eye can see which leads. They were ready to go. "How about a look at the mine? Then we'll unload the equipment. Some nice new models in the roboats, you'll want to see them. Right?" Had Pugh or Martin not agreed they might have found it hard to say so. The Johns were polite but unanimous; their decisions carried. Pugh, Commander of Libra Base 2, felt a qualm. Could he boss around this superman-woman-entity-of-ten? And a genius at that? He stuck close to Martin as they suited for outside. Neither said anything.

Four apiece in the three large airsleds they slipped off north from the dome, over Libra's dun rugose skin, in starlight.

"Desolate," one said.

It was a boy and girl with Pugh and Martin. Pugh wondered if these were the two that had shared a sleeping bag last night. No doubt they wouldn't mind if he asked them. Sex must be as handy as breathing to them. Did you two breathe last night?

"Yes," he said, "it is desolate."

"This is our first time Off, except training on Luna." The girl's voice was definitely a bit higher and softer.

"How did you take the big hop?"

"They doped us. I wanted to experience it." That was the boy; he sounded wistful. They seemed to have more

personality, only two at a time. Did repetition of the individual negate individuality?

"Don't worry," said Martin, steering the sled, "you can't experience no-time because it isn't there."

"I'd just like to once," one of them said. "So we'd know."

The Mountains of Merioneth showed leprotic in starlight to the east, a plume of freezing gas trailed silvery from a vent hole to the west, and the sled tilted groundward. The twins braced for the stop at one moment, each with a slight protective gesture to the other. Your skin is my skin, Pugh thought, but literally, no metaphor. What would it be like, then, to have someone as close to you as that? Always to be answered when you spoke; never to be in pain alone. Love your neighbor as you love yourself. . . . That hard old problem was solved. The neighbor was the self: the love was perfect.

And here was Hellmouth, the mine.

Pugh was the Exploratory Mission's E.T. geologist, and Martin his technician and cartographer; but when in the course of a local survey Martin had discovered the U-mine, Pugh had given him full credit, as well as the onus of prospecting the lode and planning the Exploitation Team's job. These kids had been sent out from Earth years before Martin's reports got there and had not known what their job would be until they got here. The Exploitation Corps simply sent out teams regularly and blindly as a dandelion sends out its seed, knowing there would be a job for them on Libra or the next planet out or one they hadn't even heard about yet. The government wanted uranium too urgently to wait while reports drifted home across the light-years. The stuff was like gold, old-fashioned but essential, worth mining extraterrestrially and shipping interstellar. Worth its weight in people, Pugh thought sourly, watching the tall young men and women go one by one, glimmering in starlight, into the black hole Martin had named Hellmouth.

As they went in, their homeostatic forehead lamps brightened. Twelve nodding gleams ran along the moist, wrinkled walls. Pugh heard Martin's radiation counter peeping twenty to the dozen up ahead. "Here's the



drop-off," said Martin's voice in the suit intercom, drowning out the peeping and the dead silence that was around them. "We're in a side fissure, this is the main vertical vent in front of us." The black void gaped, its far side not visible in the headlamp beams. "Last vulcanism seems to have been a couple of thousand years ago. Nearest fault is twenty-eight kilos east, in the Trench. This area seems to be as safe seismically as anything in the area. The big basalt flow overhead stabilizes all these substructures, so long as it remains stable itself. Your central lode is thirty-six meters down and runs in a series of five bubble caverns northeast. It is a lode, a pipe of very high-grade ore. You saw the percentage figures, right? Extraction's going to be no problem. All you've got to do is get the bubbles topside."

"Take off the lid and let 'em float up." A chuckle. Voices began to talk, but they were all the same voice and the suit radio gave them no location in space. "Open the thing right up. —Safer that way. —But it's a solid basalt roof, how thick, ten meters here? —Three to twenty, the report said. —Blow good ore all over the lot. —Use this access we're in, straighten it a bit and run slider rails for the robos. —Import burros. —Have we got enough propping material? —What's your estimate of total payload mass, Martin?"

"Say over five million kilos and under eight."

"Transport will be here in ten E-months. —It'll have to go pure. —No, they'll have the mass problem in NAFAL shipping licked by now, remember it's been sixteen years since we left Earth last Tuesday. —Right, they'll send the whole lot back and purify it in Earth orbit. —Shall we go down, Martin?"

"Go on. I've been down."

The first one—Aleph? (Heb, the ox, the leader) —swung onto the ladder and down; the rest followed. Pugh and Martin stood at the chasm's edge. Pugh set his intercom to exchange only with Martin's suit, and noticed Martin doing the same. It was a bit wearing, this listening to one person think aloud in ten voices, or was it one voice speaking the thoughts of ten minds?

"A great gut," Pugh said, looking down into the black

pit, its veined and warted walls catching stray gleams of headlamps far below. "A cow's bowel. A bloody great constipated intestine."

Martin's counter peeped like a lost chicken. They stood inside the dead but epileptic planet, breathing oxygen from tanks, wearing suits impermeable to corrosives and harmful radiations, resistant to a 200-degree range of temperatures, tearproof, and as shock-resistant as possible given the soft vulnerable stuff inside.

"Next hop," Martin said, "I'd like to find a planet that has nothing whatever to exploit."

"You found this."

"Keep me home next time."

Pugh was pleased. He had hoped Martin would want to go on working with him, but neither of them was used to talking much about their feelings, and he had hesitated to ask. "I'll try that," he said.

"I hate this place. I like caves, you know. It's why I came in here. Just spelunking. But this one's a bitch. Mean. You can't ever let down in here. I guess this lot can handle it, though. They know their stuff."

"Wave of the future, whatever," said Pugh.

The wave of the future came swarming up the ladder, swept Martin to the entrance, gabbled at and around him: "Have we got enough material for supports?—If we convert one of the extractor servos to anneal, yes.—Sufficient if we miniblast?—Kaph can calculate stress—" Pugh had switched his intercom back to receive them; he looked at them, so many thoughts jabbering in an eager mind, and at Martin standing silent among them, and at Hellmouth and the wrinkled plain. —"Settled! How does that strike you as a preliminary schedule, Martin?"

"It's your baby," Martin said.

Within five E-days the Johns had all their material and equipment unloaded and operating and were starting to open up the mine. They worked with total efficiency. Pugh was fascinated and frightened by their effectiveness, their confidence, their independence. He was no use to them at all. A clone, he thought, might indeed be the first truly



stable, self-reliant human being. Once adult it would need nobody's help. It would be sufficient to itself physically, sexually, emotionally, intellectually. Whatever he did, any member of it would always receive the support and approval of his peers, his other selves. Nobody else was needed.

Two of the clone stayed in the dome doing calculations and paperwork, with frequent sled trips to the mine for measurements and tests. They were the mathematicians of the clone, Zayin and Kaph. That is, as Zayin explained, all ten had had thorough mathematical training from age three to twenty-one, but from twenty-one to twenty-three she and Kaph had gone on with math while the others intensified other specialities, geology, mining engineering, electronic engineering, equipment robotics, applied atomics, and so on. "Kaph and I feel," she said, "that we're the element of the clone closest to what John Chow was in his singleton lifetime. But of course he was principally in biomath, and they didn't take us far in that."

"They needed us most in this field," Kaph said, with the patriotic priggishness they sometimes evinced.

Pugh and Martin soon could distinguish this pair from the others, Zayin by gestalt, Kaph only by a discolored left fourth fingernail, got from an ill-aimed hammer at the age of six. No doubt there were many such differences, physical and psychological, among them; nature might be identical, nurture could not be. But the differences were hard to find. And part of the difficulty was that they really never talked to Pugh and Martin. They joked with them, were polite, got along fine. They gave nothing. It was nothing one could complain about; they were very pleasant, they had the standardized American friendliness.

"Do you come from Ireland, Owen?"

"Nobody comes from Ireland, Zayin."

"There are lots of Irish-Americans."

"To be sure, but no more Irish. A couple of thousand in all the island, the last I knew. They didn't go in for birth control, you know, so the food ran out. By the Third Famine there were no Irish left at all but the priesthood, and they all celibate, or nearly all."

Zayin and Kaph smiled stiffly. They had no experience

of either bigotry or irony. "What are you then, ethnically?" Kaph asked, and Pugh replied, "A Welshman."

"Is it Welsh that you and Martin speak together?"

None of your business, Pugh thought, but said, "No, it's his dialect not mine: Argentinean. A descendant of Spanish."

"You learned it for private communication?"

"Whom had we here to be private from? It's just that sometimes a man likes to speak his native language."

"Ours is English," Kaph said unsympathetically. Why should they have sympathy? That's one of the things you give because you need it back.

"Is Wells quaint?" asked Zayin.

"Wells? Oh, Wales, it's called. Yes. Wales is quaint." Pugh switched on his rock-cutter, which prevented further conversation by a synapse-destroying whine, and while it whined he turned his back and said a profane word in Welsh.

That night he used the Argentine dialect for private communication. "Do they pair off in the same couples or change every night?"

Martin looked surprised. A prudish expression, unsuited to his features, appeared for a moment. It faded. He too was curious. "I think it's random."

"Don't whisper, man, it sounds dirty. I think they rotate."

"On a schedule?"

"So nobody gets omitted."

Martin gave a vulgar laugh and smothered it. "What about us? Aren't we omitted?"

"That doesn't occur to them."

"What if I proposition one of the girls?"

"She'd tell the others and they'd decide as a group."

"I am not a bull," Martin said, his dark, heavy face heating up. "I will not be judged—"

"Down, down, *machismo*," said Pugh. "Do you mean to proposition one?"

Martin shrugged, sullen. "Let 'em have their incest."

"Incest is it, or masturbation?"

"I don't care, if they'd do it out of earshot!"

The clone's early attempts at modesty had soon worn



off, unmotivated by any deep defensiveness of self or awareness of others. Pugh and Martin were daily deeper swamped under the intimacies of its constant emotional-sexual-mental interchange: swamped yet excluded.

"Two months to go," Martin said one evening.

"To what?" snapped Pugh. He was edgy lately, and Martin's sullenness got on his nerves.

"To relief."

In sixty days the full crew of their Exploratory Mission were due back from their survey of the other planets of the system. Pugh was aware of this.

"Crossing off the days on your calendar?" he jeered.

"Pull yourself together, Owen."

"What do you mean?"

"What I say."

They parted in contempt and resentment.

Pugh came in after a day alone on the Pampas, a vast lava plain the nearest edge of which was two hours south by jet. He was tired but refreshed by solitude. They were not supposed to take long trips alone but lately had often done so. Martin stooped under bright lights, drawing one of his elegant masterly charts: This one was of the whole face of Libra, the cancerous face. The dome was otherwise empty, seeming dim and large as it had before the clone came. "Where's the golden horde?"

Martin grunted ignorance, cross-hatching. He straightened his back to glance round at the sun, which squatted feebly like a great red toad on the eastern plain, and at the clock, which said 18:45. "Some big quakes today," he said, returning to his map. "Feel them down there? Lot of crates were falling around. Take a look at the seismo."

The needle jiggled and wavered on the roll. It never stopped dancing here. The roll had recorded five quakes of major intensity back in midafternoon; twice the needle had hopped off the roll. The attached computer had been activated to emit a slip reading, "Epicenter 61' N by 42' 4" E."

"Not in the Trench this time."

"I thought it felt a bit different from usual. Sharper."

"In Base One I used to lie awake all night feeling the

ground jump. Queer how you get used to things."

"Go spla if you didn't. What's for dinner?"

"I thought you'd have cooked it."

"Waiting for the clone."

Feeling put upon, Pugh got out a dozen dinnerboxes, stuck two in the Instobake, pulled them out. "All right, here's dinner."

"Been thinking," Martin said, coming to table. "What if some clone cloned itself? Illegally. Made a thousand duplicates—ten thousand. Whole army. They could make a tidy power grab, couldn't they?"

"But how many millions did this lot cost to rear? Artificial placentae and all that. It would be hard to keep secret, unless they had a planet to themselves. . . . Away back before the League, when Earth had national governments, they talked about that: Clone your best soldiers, have whole regiments of them. But the food ran out before they could play that game."

They talked amicably, as they used to do.

"Funny," Martin said, chewing. "They left early this morning, didn't they?"

"All but Kaph and Zayin. They thought they'd get the first payload above ground today. What's up?"

"They weren't back for lunch."

"They won't starve, to be sure."

"They left at seven."

"So they did." Then Pugh saw it. The air tanks held eight hours' supply.

"Kaph and Zayin carried out spare cans when they left. Or they've got a heap out there."

"They did, but they brought the whole lot in to recharge." Martin stood up, pointing to one of the stacks of stuff that cut the dome into rooms and alleys.

"There's an alarm signal on every imsuit."

"It's not automatic."

Pugh was tired and still hungry. "Sit down and eat, man. That lot can look after themselves."

Martin sat down but did not eat. "There was a big quake, Owen. The first one. Big enough it scared me."

After a pause Pugh sighed and said, "All right."

Unenthusiastically, they got out the two-man sled that was always left for them and headed it north. The long



sunrise covered everything in poisonous red jello. The horizontal light and shadow made it hard to see, raised walls of fake iron ahead of them which they slid through, turned the convex plain beyond Hellmouth into a great dimple full of bloody water. Around the tunnel entrance a wilderness of machinery stood, cranes and cables and servos and wheels and diggers and robocarts and sliders and control huts, all slanting and bulking incoherently in the red light. Martin jumped from the sled, ran into the mine. He came out again, to Pugh. "Oh God, Owen, it's down," he said. Pugh went in and saw, five meters from the entrance, the shiny, moist, black wall that ended the tunnel. Newly exposed to air, it looked organic, like visceral tissue. The tunnel entrance, enlarged by blasting and double-tracked for robocarts, seemed unchanged until he noticed thousands of tiny spiderweb cracks in the walls. The floor was wet with some sluggish fluid.

"They were inside," Martin said.

"They may be still. They surely had extra air cans—"

"Look, Owen, look at the basalt flow, at the roof, don't you see what the quake did, look at it."

The low hump of land that roofed the caves still had the unreal look of an optical illusion. It had reversed itself, sunk down, leaving a vast dimple or pit. When Pugh walked on it he saw that it too was cracked with many tiny fissures. From some a whitish gas was seeping, so that the sunlight on the surface of the gas pool was shafted as if by the waters of a dim red lake.

"The mine's not on the fault. There's no fault here!"

Pugh came back to him quickly. "No, there's no fault, Martin. —Look, they surely weren't all inside together."

Martin followed him and searched among the wrecked machines dully, then actively. He spotted the airsled. It had come down heading south, and stuck at an angle in a pothole of colloidal dust. It had carried two riders. One was half sunk in the dust, but his suit meters registered normal functioning; the other hung strapped onto the tilted sled. Her imsuit had burst open on the broken legs, and the body was frozen hard as any rock. That was all they found. As both regulation and custom demanded, they cremated the dead at once with the laser guns they carried by regulation and had never used before.

Pugh, knowing he was going to be sick, wrestled the survivor onto the two-man sled and sent Martin off to the dome with him. Then he vomited and flushed the waste out of his suit, and finding one four-man sled undamaged, followed after Martin, shaking as if the cold of Libra had got through to him.

The survivor was Kaph. He was in deep shock. They found a swelling on the occiput that might mean concussion, but no fracture was visible.

Pugh brought two glasses of food concentrate and two chasers of aquavit. "Come on," he said. Martin obeyed, drinking off the tonic. They sat down on crates near the cot and sipped the aquavit.

Kaph lay immobile, face like beeswax, hair bright black to the shoulders, lips stiffly parted for faintly gasping breaths.

"It must have been the first shock, the big one," Martin said. "It must have slid the whole structure sideways. Till it fell in on itself. There must be gas layers in the lateral rocks, like those formations in the Thirty-first Quadrant. But there wasn't any sign—" As he spoke the world slid out from under them. Things leaped and clattered, hopped and jigged, shouted Ha! Ha! Ha! —"It was like this at fourteen hours," said Reason shakily in Martin's voice, amidst the unfastening and ruin of the world. But Unreason sat up, as the tumult lessened and things ceased dancing, and screamed aloud.

Pugh leaped across his spilt aquavit and held Kaph down. The muscular body flailed him off. Martin pinned the shoulders down. Kaph screamed, struggled, choked; his face blackened. "Oxy," Pugh said, and his hand found the right needle in the medical kit as if by homing instinct; while Martin held the mask he struck the needle home to the vagus nerve, restoring Kaph to life.

"Didn't know you knew that stunt," Martin said, breathing hard.

"The Lazarus Jab, my father was a doctor, it doesn't often work," Pugh said. "I want that drink I spilled. Is the quake over? I can't tell."

"Aftershocks. It's not just you shivering."

"Why did he suffocate?"

"I don't know, Owen. Look in the book."



Kaph was breathing normally and his color was restored; only the lips were still darkened. They poured a new shot of courage and sat down by him again with their medical guide. "Nothing about cyanosis or asphyxiation under 'shock' or 'concussion.' He can't have breathed in anything with his suit on. I don't know. We'd get as much good out of *Mother Mog's Home Herbalist*. . . . 'Anal Hemorrhoids,' fy!" Pugh pitched the book to a crate table. It fell short, because either Pugh or the table was still unsteady.

"Why didn't he signal?"

"Sorry?"

"The eight inside the mine never had time. But he and the girl must have been outside. Maybe she was in the entrance and got hit by the first slide. He must have been outside, in the control hut maybe. He ran in, pulled her out, strapped her onto the sled, started for the dome. And all that time never pushed the panic button in his imsuit. Why not?"

"Well, he'd had that whack on his head. I doubt he ever realized the girl was dead. He wasn't in his senses. But if he had been I don't know if he'd have thought to signal us. They looked to one another for help."

Martin's face was like an Indian mask, grooves at the mouth corners, eyes of dull coal. "That's so. What must he have felt, then, when the quake came and he was outside, alone—"

In answer Kaph screamed.

He came up off the cot in the heaving convulsions of one suffocating, knocked Pugh right down with his flailing arm, staggered into a stack of crates and fell to the floor, lips blue, eyes white. Martin dragged him back onto the cot and gave him a whiff of oxygen, then knelt by Pugh who was just sitting up, and wiped at his cut cheekbone. "Owen, are you all right, are you going to be all right, Owen?"

"I think I am," Pugh said. "Why are you rubbing that on my face?"

It was a short length of computer tape, now spotted with Pugh's blood. Martin dropped it. "Thought it was a towel. You clipped your cheek on that box there."

"Is he out of it?"

"Seems to be."

They stared down at Kaph lying stiff, his teeth a white line inside dark parted lips.

"Like epilepsy. Brain damage maybe?"

"What about shooting him full of meprobamate?"

Pugh shook his head. "I don't know what's in that shot I already gave him for shock. Don't want to overdose him."

"Maybe he'll sleep it off now."

"I'd like to myself. Between him and the earthquake I can't seem to keep on my feet."

"You got a nasty crack there. Go on, I'll sit up a while."

Pugh cleaned his cut cheek and pulled off his shirt, then paused.

"Is there anything we ought to have done—have tried to do—"

"They're all dead," Martin said heavily, gently.

Pugh lay down on top of his sleeping bag and one instant later was wakened by a hideous, sucking, struggling noise. He staggered up, found the needle, tried three times to jab it in correctly and failed, began to massage over Kaph's heart. "Mouth-to-mouth," he said, and Martin obeyed. Presently Kaph drew a harsh breath, his heartbeat steadied, his rigid muscles began to relax.

"How long did I sleep?"

"Half an hour."

They stood up sweating. The ground shuddered, the fabric of the dome sagged and swayed. Libra was dancing her awful polka again, her *Totentanz*. The sun, though rising, seemed to have grown larger and redder; gas and dust must have been stirred up in the feeble atmosphere.

"What's wrong with him. Owen?"

"I think he's dying with them."

"Them— But they're dead, I tell you."

"Nine of them. They're all dead, they were crushed or suffocated. They were all him, he is all of them. They died, and now he's dying their deaths one by one."

"Oh, pity of God," said Martin.

The next time was much the same. The fifth time was worse, for Kaph fought and raved, trying to speak but getting no words out, as if his mouth were stopped with



rocks or clay. After that the attacks grew weaker, but so did he. The eighth seizure came at about four thirty; Pugh and Martin worked till five thirty doing all they could to keep life in the body that slid without protest into death. They kept him, but Martin said, "The next will finish him." And it did; but Pugh breathed his own breath into the inert lungs, until he himself passed out.

He woke. The dome was opaqued and no light on. He listened and heard the breathing of two sleeping men. He slept, and nothing woke him till hunger did.

The sun was well up over the dark plains, and the planet had stopped dancing. Kaph lay asleep. Pugh and Martin drank tea and looked at him with proprietary triumph.

When he woke Martin went to him: "How do you feel, old man?" There was no answer. Pugh took Martin's place and looked into the brown, dull eyes that gazed toward but not into his own. Like Martin he quickly turned away. He heated food concentrate and brought it to Kaph. "Come on, drink."

He could see the muscles in Kaph's throat tighten. "Let me die," the young man said.

"You're not dying."

Kaph spoke with clarity and precision: "I am nine-tenths dead. There is not enough of me left alive."

That precision convinced Pugh, and he fought the conviction. "No," he said, peremptory. "They are dead. The others. Your brothers and sisters. You're not them, you're alive. You are John Chow. Your life is in your own hands."

The young man lay still, looking into a darkness that was not there.

Martin and Pugh took turns taking the Exploitation hauler and a spare set of robos over to Hellmouth to salvage equipment and protect it from Libra's sinister atmosphere, for the value of the stuff was, literally, astronomical. It was slow work for one man at a time, but they were unwilling to leave Kaph by himself. The one left in the dome did paperwork, while Kaph sat or lay and stared into his darkness and never spoke. The days went by silent.

The radio spat and spoke: the Mission calling from

ship. "We'll be down on Libra in five weeks, Owen. Thirty-four E-days nine hours I make it as of now. How's tricks in the old dome?"

"Not good, chief. The Exploit team were killed, all but one of them, in the mine. Earthquake. Six days ago."

The radio crackled and sang starsong. Sixteen seconds' lag each way; the ship was out around Planet III now. "Killed, all but one? You and Martin were unhurt?"

"We're all right, chief."

Thirty-two seconds.

"*Passerine* left an Exploit team out here with us. I may put them on the Hellmouth project then, instead of the Quadrant Seven project. We'll settle that when we come down. In any case you and Martin will be relieved at Dome Two. Hold tight. Anything else?"

"Nothing else."

Thirty-two seconds.

"Right then. So long, Owen."

Kaph had heard all this, and later on Pugh said to him, "The chief may ask you to stay here with the other Exploit team. You know the ropes here." Knowing the exigencies of Far Out life, he wanted to warn the young man. Kaph made no answer. Since he had said, "There is not enough of me left alive," he had not spoken a word.

"Owen," Martin said on suit intercom, "he's spla. Insane. Psycho."

"He's doing very well for a man who's died nine times."

"Well? Like a turned-off android is well? The only emotion he has left is hate. Look at his eyes."

"That's not hate, Martin. Listen, it's true that he has, in a sense, been dead. I cannot imagine what he feels. But it's not hatred. He can't even see us. It's too dark."

"Throats have been cut in the dark. He hates us because we're not Aleph and Yod and Zayin."

"Maybe. But I think he's alone. He doesn't see us or hear us, that's the truth. He never had to see anyone else before. He never was alone before. He had himself to see, talk with, live with, nine other selves all his life. He doesn't know how you go it alone. He must learn. Give him time."

Martin shook his heavy head. "Spla," he said. "Just



remember when you're alone with him that he could break your neck one-handed."

"He could do that," said Pugh, a short, soft-voiced man with a scarred cheekbone; he smiled. They were just outside the dome airlock, programming one of the servos to repair a damaged hauler. They could see Kaph sitting inside the great half-egg of the dome like a fly in amber.

"Hand me the insert pack there. What makes you think he'll get any better?"

"He has a strong personality, to be sure."

"Strong? Crippled. Nine-tenths dead, as he put it."

"But he's not dead. He's a live man: John Kaph Chow. He had a jolly queer upbringing, but after all every boy has got to break free of his family. He will do it."

"I can't see it."

"Think a bit, Martin bach. What's this cloning for? To repair the human race. We're in a bad way. Look at me. My IIQ and GC are half this John Chow's. Yet they wanted me so badly for the Far Out Service that when I volunteered they took me and fitted me out with an artificial lung and corrected my myopia. Now if there were enough good sound lads about would they be taking one-lunged short-sighted Welshmen?"

"Didn't know you had an artificial lung."

"I do then. Not tin, you know. Human, grown in a tank from a bit of somebody; cloned, if you like. That's how they make replacement organs, the same general idea as cloning, but bits and pieces instead of whole people. It's my own lung now, whatever. But what I am saying is this, there are too many like me these days and not enough like John Chow. They're trying to raise the level of the human genetic pool, which is a mucky little puddle since the population crash. So then if a man is cloned, he's a strong and clever man. It's only logic, to be sure."

Martin grunted; the servo began to hum.

Kaph had been eating little; he had trouble swallowing his food, choking on it, so that he would give up trying after a few bites. He had lost eight or ten kilos. After three weeks or so, however, his appetite began to pick up, and one day he began to look through the clone's

possessions, the sleeping bags, kits, papers which Pugh had stacked neatly in a far angle of a packing-crate alley. He sorted, destroyed a heap of papers and oddments, made a small packet of what remained, then relapsed into his walking coma.

Two days later he spoke. Pugh was trying to correct a flutter in the tape-player and failing; Martin had the jet out, checking their maps of the Pampas. "Hell and damnation!" Pugh said, and Kaph said in a toneless voice, "Do you want me to do that?"

Pugh jumped, controlled himself, and gave the machine to Kaph. The young man took it apart, put it back together, and left it on the table.

"Put on a tape," Pugh said with careful casualness, busy at another table.

Kaph put on the topmost tape, a chorale. He lay down on his cot. The sound of a hundred human voices singing together filled the dome. He lay still, his face blank.

In the next days he took over several routine jobs, unasked. He undertook nothing that wanted initiative, and if asked to do anything he made no response at all.

"He's doing well," Pugh said in the dialect of Argentina.

"He's not. He's turning himself into a machine. Does what he's programmed to do, no reaction to anything else. He's worse off than when he didn't function at all. He's not human any more."

Pugh sighed. "Well, good night," he said in English. "Good night, Kaph."

"Good night," Martin said; Kaph did not.

Next morning at breakfast Kaph reached across Martin's plate for the toast. "Why don't you ask for it," Martin said with the geniality of repressed exasperation. "I can pass it."

"I can reach it," Kaph said in his flat voice.

"Yes, but look. Asking to pass things, saying good night or hello, they're not important, but all the same when somebody says something a person ought to answer. . . ."

The young man looked indifferently in Martin's direction; his eyes still did not seem to see clear through to the person he looked toward. "Why should I answer?"



"Because somebody has said something to you."

"Why?"

Martin shrugged and laughed. Pugh jumped up and turned on the rock-cutter.

Later on he said, "Lay off that, please, Martin."

"Manners are essential in small isolated crews, some kind of manners, whatever you work out together. He's been taught that, everybody in Far Out knows it. Why does he deliberately flout it?"

"Do you tell yourself good night?"

"So?"

"Don't you see Kaph's never known anyone but himself?"

Martin brooded and then broke out. "Then by God this cloning business is all wrong. It won't do. What are a lot of duplicate geniuses going to do for us when they don't even know we exist?"

Pugh nodded. "It might be wiser to separate the clones and bring them up with others. But they make such a grand team this way."

"Do they? I don't know. If this lot had been ten average inefficient E.T. engineers, would they all have been in the same place at the same time? Would they all have got killed? What if, when the quake came and things started caving in, what if all those kids ran the same way, farther into the mine, maybe, to save the one that was farthest in? Even Kaph was outside and went in. . . . It's hypothetical. But I keep thinking, out of ten ordinary confused guys, more might have got out."

"I don't know. It's true that identical twins tend to die at about the same time, even when they have never seen each other. Identity and death, it is very strange. . . ."

The days went on, the red sun crawled across the dark sky, Kaph did not speak when spoken to, Pugh and Martin snapped at each other more frequently each day. Pugh complained of Martin's snoring. Offended, Martin moved his cot clear across the dome and also ceased speaking to Pugh for some while. Pugh whistled Welsh dirges until Martin complained, and then Pugh stopped speaking for a while.

The day before the Mission ship was due, Martin

announced he was going over to Merioneth.

"I thought at least you'd be giving me a hand with the computer to finish the rock analyses," Pugh said, aggrieved.

"Kaph can do that. I want one more look at the Trench. Have fun," Martin added in dialect, and laughed, and left.

"What is that language?"

"Argentinean. I told you that once, didn't I?"

"I don't know." After a while the young man added, "I have forgotten a lot of things, I think."

"It wasn't important, to be sure," Pugh said gently, realizing all at once how important this conversation was. "Will you give me a hand running the computer, Kaph?"

He nodded.

Pugh had left a lot of loose ends, and the job took them all day. Kaph was a good coworker, quick and systematic, much more so than Pugh himself. His flat voice, now that he was talking again, got on the nerves; but it didn't matter, there was only this one day left to get through and then the ship would come, the old crew, comrades and friends.

During tea break Kaph said, "What will happen if the Explore ship crashes?"

"They'd be killed."

"To you, I mean."

"To us? We'd radio SOS signals and live on half rations till the rescue cruiser from Area Three Base came. Four and a half E-Years away it is. We have life support here for three men for let's see, maybe between four and five years. A bit tight, it would be."

"Would they send a cruiser for three men?"

"They would."

Kaph said no more.

"Enough cheerful speculations," Pugh said cheerfully, rising to get back to work. He slipped sideways and the chair avoided his hand; he did a sort of half-pirouette and fetched up hard against the dome hide. "My goodness," he said, reverting to his native idiom, "what is it?"

"Quake," said Kaph.

The teacups bounced on the table with a plastic cackle,



a litter of papers slid off a box, the skin of the dome swelled and sagged. Underfoot there was a huge noise, half sound half shaking, a subsonic boom.

Kaph sat unmoved. An earthquake does not frighten a man who died in an earthquake.

Pugh, white-faced, wiry black hair sticking out, a frightened man, said, "Martin is in the Trench."

"What trench?"

"The big fault line. The epicenter for the local quakes. Look at the seismograph." Pugh struggled with the stuck door of a still-jittering locker.

"Where are you going?"

"After him."

"Martin took the jet. Sleds aren't safe to use during quakes. They go out of control."

"For God's sake man, shut up."

Kaph stood up, speaking in a flat voice as usual. "It's unnecessary to go out after him now. It's taking an unnecessary risk."

"If his alarm goes off radio me," Pugh said, shut the headpiece of his suit, and ran to the lock. As he went out Libra picked up her ragged skirts and danced belly dance from under his feet clear to the red horizon.

Inside the dome, Kaph saw the sled go up, tremble like a meteor in the dull red daylight, and vanish to the northeast. The hide of the dome quivered, the earth coughed. A vent south of the dome belched up a slow-flowing bile of black gas.

A bell shrilled and a red light flashed on the central control board. The sign under the light read Suit 2, and scribbled under that, A. G. M. Kaph did not turn the signal off. He tried to radio Martin, then Pugh, but got no reply from either.

When the aftershocks decreased he went back to work and finished up Pugh's job. It took him about two hours. Every half hour he tried to contact Suit 1 and got no reply, then Suit 2 and got no reply. The red light had stopped flashing after an hour.

It was dinnertime. Kaph cooked dinner for one and ate it. He lay down on his cot.

The aftershocks had ceased except for faint rolling

tremors at long intervals. The sun hung in the west, oblate, pale red, immense. It did not sink visibly. There was no sound at all.

Kaph got up and began to walk about the messy, half-packed-up, overcrowded, empty dome. The silence continued. He went to the player and put on the first tape that came to hand. It was pure music, electronic, without harmonies, without voices. It ended. The silence continued.

Pugh's uniform tunic, one button missing, hung over a stack of rock samples. Kaph stared at it a while.

The silence continued.

The child's dream: There is no one else alive in the world but me. In all the world.

Low, north of the dome, a meteor lingered.

Kaph's mouth opened as if he were trying to say something, but no sound came. He went hastily to the north wall and peered out into the gelatinous red light.

The little star came in and sank. Two figures blurred the airlock. Kaph stood close beside the lock as they came in. Martin's imsuit was covered with some kind of dust so that he looked raddled and warty like the surface of Libra. Pugh had him by the arm.

"Is he hurt?"

Pugh shucked his suit, helped Martin peel off his. "Shaken up," he said, curt.

"A piece of cliff fell onto the jet," Martin said, sitting down at the table and waving his arms. "Not while I was in it, though. I was parked, see, and poking about that carbon-dust area when I felt things humping. So I went out onto a nice bit of early igneous I'd noticed from above, good footing and out from under the cliffs. Then I saw this bit of the planet fall off onto the flyer, quite a sight it was, and after a while it occurred to me the spare aircans were in the flyer, so I leaned on the panic button. But I didn't get any radio reception, that's always happening here during quakes, so I didn't know if the signal was getting through either. And things went on jumping around and pieces of the cliff coming off. Little rocks flying around, and so dusty you couldn't see a meter ahead. I was really beginning to wonder what I'd do for



breathing in the small hours, you know, when I saw old Owen buzzing up the Trench in all that dust and junk like a big ugly bat—”

“Want to eat?” said Pugh.

“Of course I want to eat. How’d you come through the quake here, Kaph? No damage? It wasn’t a big one actually, was it, what’s the seismo say? My trouble was I was in the middle of it. Old Epicenter Alvaro. Felt like Richter fifteen there—total destruction of planet—”

“Sit down,” Pugh said. “Eat.”

After Martin had eaten a little his spate of talk ran dry. He very soon went off to his cot, still in the remote angle where he had removed it when Pugh complained of his snoring. “Good night, you one-lunged Welshman,” he said across the dome.

“Good night.”

There was no more out of Martin. Pugh opaqued the dome, turned the lamp down to a yellow glow less than a candle’s light, and sat doing nothing, saying nothing, withdrawn.

The silence continued.

“I finished the computations.”

Pugh nodded thanks.

“The signal from Martin came through, but I couldn’t contact you or him.”

Pugh said with effort, “I should not have gone. He had two hours of air left even with only one can. He might have been heading home when I left. This way we were all out of touch with one another. I was scared.”

The silence came back, punctuated now by Martin’s long, soft snores.

“Do you love Martin?”

Pugh looked up with angry eyes: “Martin is my friend. We’ve worked together, he’s a good man.” He stopped. After a while he said, “Yes, I love him. Why did you ask that?”

Kaph said nothing, but he looked at the other man. His face was changed, as if he were glimpsing something he had not seen before; his voice too was changed. “How can you . . . How do you . . .”

But Pugh could not tell him. “I don’t know,” he said,

"it's practice, partly. I don't know. We're each of us alone, to be sure. What can you do but hold your hand out in the dark?"

Kaph's strange gaze dropped, burned out by its own intensity.

"I'm tired," Pugh said. "That was ugly, looking for him in all that black dust and muck, and mouths opening and shutting in the ground. . . . I'm going to bed. This ship will be transmitting to us by six or so." He stood up and stretched.

"It's a clone," Kaph said. "The other Exploit Team they're bringing with them."

"Is it then?"

"A twelveclone. They came out with us on the *Passerine*."

Kaph sat in the small yellow aura of the lamp seeming to look past it at what he feared: the new clone, the multiple self of which he was not part. A lost piece of a broken set, a fragment, inexpert at solitude, not knowing even how you go about giving love to another individual, now he must face the absolute, closed self-sufficiency of the clone of twelve; that was a lot to ask of the poor fellow, to be sure. Pugh put a hand on his shoulder in passing. "The chief won't ask you to stay here with a clone. You can go home. Or since you're Far Out maybe you'll come on farther out with us. We could use you. No hurry deciding. You'll make out all right."

Pugh's quiet voice trailed off. He stood unbuttoning his coat, stooped a little with fatigue. Kaph looked at him and saw the thing he had never seen before: saw him: Owen Pugh, the other, the stranger who held his hand out in the dark.

"Good night," Pugh mumbled, crawling into his sleeping bag and half asleep already, so that he did not hear Kaph reply after a pause, repeating, across darkness, benediction.



## HOLDING YOUR EIGHT HANDS

EDWARD LUCIE-SMITH

*1969 was the year when the stake was finally driven through the heart of traditional science-fiction poetry. There has always been plenty of so-called SF poetry around, printed in smudged fanzines and used to fill the empty space at story's end in the more crumbling magazines, and almost without exception it has all been bad. Harsh criticism indeed, but well deserved. In a hands-across-the-sea conspiracy, a British poet and poetry editor has united with an American publisher to produce Holding Your Eight Hands, an anthology of science-fiction verse. Edward Lucie-Smith is to be congratulated for his noble labors, as well as for including his own verse in this excellent volume. Here are two selections of the best.*

## PROGRESSION OF THE SPECIES

BRIAN W. ALDISS

Long before a woman knows she's pregnant  
And greets the news with fear or smiles

The news has head and heart and heartbeats.  
It's then no bigger than a tadpole.  
The cells are working on that.  
Although I never understood how  
A radio set works, this cellular multiplicity  
Comes within the realm of graspable ideas  
And proves itself pure madness.  
Those cells are programmed with the stuttering messages  
Called life. Our generation's cracked  
The code of life—we know about  
The information in the genes inside the chromosomes.

Soon they'll have it all pegged,  
Know which nucleic acid brings us curly hair  
Which schizophrenic tendencies  
Which gift of gab  
Which stronger eyesight  
Which sweet temper.  
Because people are never content with being  
Clever, they'll have to get cleverer.  
They'll find a way, a century from now,  
To make a synthetic gene, a splendid little thing,  
To insert it—hypodermic gliding through the testicles—  
Into the proto-embryo.

It'll be the end of us and the beginning  
Of perfect people  
Sweet temper artificially disseminated  
A DNA utopia with never an angry word or  
Cruel deed. Let's face it though  
We hate change. The thought of perfection  
Scares us the moment we  
Have head and heart and heartbeats.

You know why. Mischief's our common lot—  
Original sin is not half as original  
As perfection. Those better people  
Would look back on us with a loving sorrow  
As the Neanderthals of the pre-DNA-age.  
In them, the gaudy inferno of the undermind  
Would droop and die and disappear  
Unregretted—as with us, each generation



The Neanderthal dies from us  
Our head and heart and heartbeats.

This is the progression of the species.  
We can manage it for ourselves, thanks,  
From now on.

## REPORT BACK

JOHN COTTON

O dark dark dark. They all go into the dark,  
The vacant interstellar spaces

—T. S. Eliot: *East Coker*

Galactic probe seven thousand and four  
Reports an uneventful journey, free  
From any serious meteoric collisions.  
Geological and radiation  
Surveys are now being prepared, though our first  
Instrumentation suggests little, if  
Any, difficulty in setting up  
The usual research apparatus.

*And looking into the void  
From the far edge of our empire  
We see the next galaxy  
A rapidly receding  
Thumb-smudge of light in a mid-  
Night violet sky pierced by the  
Dead-lights of a handful of planets,  
Red-tinged and steady like the  
Eyes of disappointed lovers,  
And our perspective's gone.*

Gravity repulsion is now reduced  
To a minimum, while preliminary  
Spectroscopic analysis suggests  
Possible vegetation, though we seem,  
At present, on what is clearly a desert.

*Pock-marked with small craters*

*To the edge of a ragged  
 Horizon, and long-shadowed  
 In what passes for a moon  
 On the galactic periphery,  
 Here is an austere beauty,  
 Barren, uncompromising,  
 Like that which must have been  
 Experienced by men  
 On the ice-caps and deserts  
 As they once existed on earth  
 Before their urbanization.  
 Harsh and unambiguous  
 It throws, as it were, a man  
 Into himself. Is this what  
 The early poets wrote about?*

Our first extra-craft exploration has  
 Returned with specimens, one of which may  
 Be a new mineral. We are working  
 On a uranium breakdown now.

We have found, also, what appear to be  
 Pebbles, which suggest the action of seas,  
 Suggesting life, if not now, at some time.  
 With the spectroscopic analysis  
 This could prove most interesting. We will  
 Begin work radio-gravitation  
 Project immediate first light. Meanwhile,  
 We are now occupied with lab work as  
 It is eighty hours until the next "dawn."  
 The darkness, as expected, is intense.

*O the dark, the deep hard dark  
 Of these galactic nights!  
 Even the planets have set  
 Leaving it slab and impenetrable,  
 As dark and directionless  
 As those long nights of the soul  
 The ancient mystics spoke of.  
 Beyond there is nothing,  
 Nothing we have known or experienced.  
 It is such a dark  
 To be lost in which a man  
 Might, perhaps, find himself.*

Excessive hyperwrap has set up



A fault in our auxiliary booster.  
Could you contact the depot-ship, asking  
To send a supply-cruiser with a spare?  
And, while they are at it, some playing-cards  
Or a set of Glaxtopoly with  
A few of the latest girlie magazines.  
Anything to kill the time.

*If a man could stare out  
Such a darkness and endure,  
In such a darkness a man  
Might, perhaps, find himself,  
Scoured to the quick  
In the timeless sands of the void.*

Anything, as I said, to kill the time.

## THE KILLING GROUND

J. G. BALLARD

*At times J. G. Ballard seems to be rushing away from fiction as we normally know it, with stories written in what might be called the William Burroughs mode. Then again he surprises us. He appeared in BEST SF: 1967 with an avant-garde piece of fiction that owed a certain amount of its inspiration to Alfred Jarry. (The derivation proved even more obscure when a slip in type caused this name to appear as Alfred Farry. More than one letter was received seeking information concerning this heretofore unknown author.) Now Mr. Ballard writes a story that is linear and classical, has battles and action, as well as a hero that is only slightly anti. The story also has some pointed things to say about contemporary world affairs.*

As the last smoke from the burning personnel carrier rose through the wet dawn air, Major Pearson could see the silver back of the river three hundred yards from his command post on the hill. Pulverized by the artillery fire, the banks of the channel had collapsed into a network of craters. Water leaked across the meadow, stained by the diesel oil from the fuel tanks of the carrier. Working



the binoculars with his thin hands, Pearson studied the trees along the opposite bank. The river was little wider than a stream, and no more than waist deep, but the fields on both sides were as open as billiard tables. Already the American helicopters had climbed from their bases around the city, clattering in packs over the valley like mindless birds.

An explosion in the driving cabin of the personnel carrier kicked out the doors and windshield. The light flared across the water-soaked meadow, for a moment isolating the faded letters on the memorial stone that formed the rear wall of the command post. Pearson watched the nearest flight of helicopters. They were circling the motor bridge a mile downriver, too far away to notice the wrecked vehicle and its perimeter of corpses. The ambush, though successful, had not been planned. The carrier had blindly driven up the embankment road as Pearson's unit was preparing to cross the river.

With any luck, Pearson hoped, the crossing would now be called off and they would be ordered to withdraw into the hills. He shivered in his ragged uniform. Corporal Benson had pulled the trousers off a dead Marine machine gunner the previous morning, and there had been no time to wash out the blood caked across the thighs and waist.

Behind the memorial was the sandbagged entrance of the storage tunnel. Here Sergeant Tulloch and the seventeen-year-old lieutenant sent up overnight from the youth cadre were working on the field radio, rewiring the headphones and battery. Around the emplacement Pearson's thirty men sat over their weapons, ammunition boxes and telephone wire piled around their feet. Exhausted by the ambush, they would have little energy left for a river crossing.

"Sergeant . . . Sergeant Tulloch!" Pearson called out, deliberately coarsening his overprecise schoolmaster's voice. As he half expected, Tulloch ignored the shout. A pair of copper terminals clamped in his sharp mouth, he went on splicing the frayed wire. Although Pearson was in command of the guerrilla unit, its real initiative came from the Scotsman. A regular in the Gordon Highlanders before the American landings six years earlier,

the sergeant had joined the first rebel bands that formed the nucleus of the National Liberation Army. As Tulloch himself openly boasted, he had been drawn to the insurgent army chiefly by the prospect of killing the English. Pearson often wondered how far the sergeant still identified him with the puppet regime in London propped up by the American occupation forces.

As he climbed out of the slit trench gunfire flickered from the central traverse of the motor bridge. Pearson waited behind the plinth of the memorial. He listened to the roar of heavy howitzers firing from the American enclave five miles to the west. Here nine hundred Marine artillerymen had been holding out for months against two divisions of rebel troops. Supported from the air by helicopter drops, the Americans fought on from their deep bunkers, firing thousands of rounds a day from their seventy guns. The meadows around the enclave formed the landscape of a drowned moon.

The shells whined away through the damp air, the explosions lifting the broken soil. Between the impacts came the rattle of small arms fire as the attack went in across the bridge. Slinging his Sten gun over his narrow shoulders, Pearson ran back to the tunnel.

"What's holding us up, Sergeant? This radio should have been checked at Battalion."

He reached out to the mud-splattered console, but Tulloch pushed his hand away with the spanner. Ignoring the young lieutenant's self-conscious salute, Tulloch snapped: "I'll have it ready in time, Major. Or are you wanting to withdraw now?"

Avoiding the lieutenant's eyes, Pearson said: "We'll follow orders, Sergeant, when and if you repair this set."

"I'll repair it, Major. Don't worry yourself about that."

Pearson unfastened the chin strap of his helmet. During their three months together the sergeant had clearly decided that Pearson had lost heart. Of course Tulloch was right. Pearson looked around the fortified position shielded from the air by the ragged willows, counting the pinched faces of the men huddled beside the field stove. Dressed in ragged uniforms held together with American webbing, living for months in holes in the ground, underfed and underarmed, what kept them going? Not hatred of the



Americans, few of whom, apart from the dead, they had ever seen. Secure within their bases, and protected by an immense technology of warfare, the American expeditionary forces were as remote as some archangelic legion of the day of Armageddon.

If anything, it was fortunate that the Americans were spread so thinly on the ground, or the entire liberation front would long since have been wiped out. Even with 20 million men under arms, the Americans could spare fewer than 200,000 soldiers for the British Isles, a remote backwater in their global war against dozens of national liberation armies. The underground free radio system which Pearson and Tulloch listened to at night as they huddled in their tunnels below the searching helicopters reported continuous fighting from the Pyrenees to the Bavarian Alps, the Caucasus to Karachi. Thirty years after the original conflict in Southeast Asia, the globe was now a huge insurrectionary torch, a world Vietnam.

"Benson!" The corporal limped over, his captured carbine heavy in his thin arms. Pearson waved with a show of temper at the men slumped against the sandbags.

"Corporal, in half an hour we're going into an attack! At least keep them awake!"

With a tired salute, the corporal went off round the emplacement, half-heartedly nudging the men with his boot. Pearson stared through the trees at the river line. To the north, near the ruined castle at Windsor, columns of smoke rose below the helicopters as they plunged and dived, firing their rockets into the ragged forests that had grown among the empty suburban streets. In this immense plain of violence only the meadow below with its leaking river seemed quiet. The water ebbed around the personnel carrier, stirring the legs of the corpses. Without thinking, Pearson started to count his men again. They would have to run across the open ground, ford the river and penetrate the line of trees on the opposite bank. Perhaps the Americans were sitting there with their rapid-fire Gatlings, waiting for them to break cover.

". . . Major Pearson." The lieutenant touched his elbow. "You wanted to see the prisoners."

"Right. We'll have another go at them." Pearson followed the boy around the memorial. The pres-

ence of this young man—barely older than his pupils at the mountain school in the north of Scotland—gave Pearson some kind of encouragement. Already his age had begun to tell doubly against him. Over the years the losses in manpower had been so great, a million soldiers and a further million civilians dead, that older men were put in the more dangerous roles, saving the young for whatever peace would one day come.

The three Americans were behind the memorial, guarded by a soldier with a Bren gun. Lying on his back was a Negro sergeant who had been shot through the chest. His arms and shoulders were caked with blood, and he breathed unevenly through the thick crust on his mouth and chin. Leaning against him was a young private hunched over the knapsack on his knees. His tired student's eyes stared down at his manacled wrists, as if unable to grasp the fact of his own capture.

The third prisoner was a captain, the only officer in the ambushed patrol, a slimly built man with gray crew-cut hair and a soft but intelligent face. In spite of his uniform and webbing he looked less like a combat soldier than a war correspondent or observer. Telephone wire was lashed around his wrists, forcing him to hold his elbows together. Nevertheless he was watching closely the preparations for the coming attack. Pearson could see him counting the men and weapons, the two machine guns and ammunition boxes.

As these sharp blue eyes turned to examine Pearson, running over his decrepit uniform and equipment, Pearson felt a surge of resentment at these intelligent and self-confident men who had occupied the world with their huge expeditionary armies. The American was looking at him with that same surprise Pearson had seen on prisoners' faces before, a genuine amazement that these ragged little men could go on fighting for so long. Even the term the Americans used to describe the rebel soldiers—"Charlie," inherited from the first Vietnam—showed their contempt, whether the soldier fighting against them was a Riff tribesman, Catalan farmer or Japanese industrial worker.

However, as the American knew all too well, if the



order came through to attack the three of them would be shot down where they sat.

Pearson knelt by the Negro sergeant. With the barrel of his Sten gun he nudged the young soldier clutching his knapsack. "Can't you do anything for him? Where's your morphine?"

The soldier looked up at Pearson, and then let his head drop, staring at the fuel oil that formed rainbows on his boots. Pearson raised his hand, about to hit him with the back of his fist. Then the sounds of gunfire on the motor bridge were lost in the overhead whoom of a shell. Coming across the river, the heavy 120 mm. soared over the meadow and plunged into the woods below the hill crest. Pearson crouched behind the memorial, hoping the shell was a stray. Then Sergeant Tulloch signaled that two more had started on their way. The next fell without exploding into the water meadow. The third landed fifty feet below the memorial, spattering its surface with broken earth.

When it was quiet again Pearson waited as Corporal Benson pulled the knapsack away from the young soldier and emptied its contents. He slit the captain's pockets with his bayonet and jerked off his I.D. tag.

There was little to be gained from any formal interrogation. American weapons technology had advanced to the point where it made almost no sense at all to the rebel commanders. Artillery fire, battle dispositions and helicopter raids were now computer-directed, patrols and sorties programmed ahead. The American equipment was so sophisticated that even the wristwatches stripped off dead prisoners were too complicated to read.

Pearson reached down to the clutter of coins and keys beside the private. He opened a leatherbound diary. Inside was a series of illegible entries, and a folded letter from a friend, evidently a draft dodger, about the antiwar movement at home. Pearson tossed them into the pool of water leaking below the plinth of the memorial. He picked up an oil-stained book, one of a paperback educational series, Charles Olsen's *Call Me Ishmael*.

As he held the book in his hands, Pearson glanced back to where Sergeant Tulloch stood over the field radio,

well aware that the sergeant would disapprove of this unfading strand of literacy in his own character. He wiped the oil off the American eagle. What an army, whose privates were no longer encouraged to carry field marshals' batons in their knapsacks but books like this.

To the captain he said: "The U.S. Army must be the most literate since Xenophon's." Pearson slipped the book into his pocket. The captain was looking down over his shoulder at the river. "Do you know where we are?" Pearson asked him.

The captain turned himself round, trying to ease the wounds on his wrists. He looked up at Pearson with his sharp eyes. "I guess so. Runnymede, on the Thames River."

Surprised, Pearson said ungrudgingly: "You're better informed than my own men. I used to live about ten miles from here. Near one of the pacified villages."

"Maybe you'll go back one day."

"I dare say, captain. And maybe we'll sign a new Magna Carta into the bargain. How long have you been out there?"

The captain hesitated, sizing up Pearson's interest. "Just over a month."

"And you're in combat already? I thought you had a three-month acclimatization period. You must be as badly off as we are."

"I'm not a combat soldier, Major. I'm an architect, with U.S. Army Graves Commission. Looking after memorials all over the world."

"That's quite a job. The way things are going, it has almost unlimited prospects."

"I hate to have to agree with you, Major." The American's manner had become noticeably more ingratiating, but Pearson was too preoccupied to care. "Believe me, a lot of us back home feel the war's achieved absolutely nothing."

"Nothing. . . ?" Pearson repeated. "It's achieved everything." An armored helicopter soared across the hillcrest, its heavy fans beating at the foliage over their heads. For one thing, the war had turned the entire population of Europe into an armed peasantry, the first intelligent agrarian community since the eighteenth



century. *That* peasantry had produced the Industrial Revolution. This one, literally burrowing like some advanced species of termite into the subsoil of the twentieth century, might in time produce something greater. Fortunately, the Americans were protected from any hope of success by their own good intentions, their refusal, whatever the cost in their own casualties, to use nuclear weapons.

Two tanks had moved on to the parapet of the bridge, firing their machine guns along the roadway. A scout helicopter shot down into the fields across the river was burning fiercely, the flames twisting the metal blades.

"Major!" Corporal Benson ran to the tunnel mouth. Tulloch was crouched over the radio, headphones on, beckoning towards Pearson. "They're through to Command, sir."

Ten minutes later, when Pearson passed the memorial on his way to the forward post, the American captain had managed to lift himself on to his knees. Wrists clamped together in front of his chest, he looked as if he were praying at some ruined wayside shrine. The wounded Negro had opened his eyes, shallow breaths breaking through the caked blood on his lips. The young private slept against the plinth of the memorial.

The captain pointed with his wired hands at the men strapping up their packs. Pearson ignored him and was about to move on. Then something about the American's posture, and their shared community of fatigue and hopelessness, made him stop.

"We're going forward."

Eyes half closing, the American stared down at his wrists, as if aware of the effort he had wasted in trying to prevent the abrasions from opening. "That's bad luck. Not my day." His face grew stiff and wooden as the blood emptied from his cheeks.

Pearson watched Sergeant Tulloch supervise the stowage of the radio and begin his rounds of the men, waiting with weapons at the ready. "Why did you come up the river?"

The captain tapped the memorial stone with his wrists. "We wanted to see about moving this. The Kennedy Memorial."

"Kennedy. . . ?" Pearson turned and stared down at the broken lettering on the stone. Vaguely he remembered the memorial built by a previous British government at Runnymede to commemorate the assassinated President. In an amiable, if sentimental, gesture an acre of English ground had been given to the American people overlooking Magna Carta island. The President's widow had been present at the unveiling.

The American was feeling the broken lettering. He pulled off his cap and dipped it in the pool of oil-stained water beside the plinth. He began to work away at the memorial, scraping off the mud, as Pearson moved down through the trees to the forward post.

When Pearson returned shortly afterward the American was still working away at the memorial with his wired hands. Below the surface dirt were the residues of earlier defacements, slogans marked in engine grease or cut with bayonets. There was even one, "Stop U.S. Atrocities in Vietnam," almost as old as the monument itself. Pearson remembered that the memorial had been regularly defaced since its unveiling, a favorite target of vandals and agitators.

"Major, we're ready to move off, sir." Tulloch saluted him smartly, for the first time that day. The American was still scraping at the stone and had managed to clean at least half of the front surface.

The lead platoon moved down the slope. As the captain dropped his cap and sat down, Pearson signaled to Sergeant Tulloch.

"O.K., Charlie—off your backside!" Tulloch had drawn his .45 automatic. The rear platoon was filing past, the men's eyes fixed on the gaps in the trees, none of them paying any attention to the prisoners.

The American stood up, his eyes almost closed. He joined the two prisoners lying behind the memorial. As he began to sit down again Tulloch stepped behind him and shot him through the head. The American fell on to the sleeping private. Tulloch straddled his body with one leg. Like a farmer expertly shearing a sheep he shot the other two men, holding them as they struggled. They



lay together at the base of the memorial, their legs streaming with blood.

Above them, the drying stone was turning a pale gray in the weak sunlight.

It was almost white twenty minutes later when they began their advance across the meadow. Fifty yards from the bank a murderous fire had greeted them from the Americans concealed among the trees along the opposite shore. Pearson saw Tulloch shot down into the waterlogged grass. He shouted to Corporal Benson to take cover. As he lay in a shallow crater the white rectangle of the memorial was visible through the trees behind him, clear now as it would not have been that morning. In his last moments he wondered if the cleaning of the memorial had been a signal, which the watching Americans had rightly interpreted, and if the captain had deliberately taken advantage of him.

Mortar shells fell in the damp grass around him. Pearson stood up, beckoning to the young lieutenant to follow him, and ran forward to the wreck of the personnel carrier. Ten steps later he was shot down into the oil-stained water.

## THE DANNOLD CHEQUE

KEN W. PURDY

*Mr. Purdy is an editor of Playboy, a specialist on writing about the automobile, as well as being a much respected short-story writer and novelist. He has a story here that could only be told in the future, and he has accepted the challenge and has written it as a science-fiction story. We can only say thank you and hope that this is only the very first of many more to come.*

The Promenade des Anglais. Late May. Blue sea, sugar-white buildings, still a wash of yellow in the sunlight, ten in the morning. Evian Tassopol behind the shutters, waist-high and waxed, that made the back wall of his show window, in one hand a demitasse cup, stark, bone white, the saucer in the other. Blistering-hot coffee, double espresso of his own roast, grind and brew. A sad, unpretty girl stops to look, lifts her eyes to his, blinks, goes away. A bicycle at the curb, unpainted glistening silver alloy, a monster blond—German? Swede? Russian?—holding it stationary in balance with twitches of the handle bar, twitches of the lumped muscles in his legs, calf muscles like bread loaves.

Faint mosquito hum of electric motors from the



crawling jam of autos on the promenade. Tassopol carrying the cup and saucer to the little room in back. Basta. Business.

At 10:15, as he had said he would, Henry Dannold came in.

"Ah, Monsieur Dannold," Tassopol said. "Good morning!"

"Good morning, Monsieur Tassopol."

"Please sit down, Monsieur Dannold," Tassopol said.

"I shall bring coffee."

Henry Dannold opened the cigarette box. It was gold-framed jade. He pressed the spring and lifted out the false bottom. Tassopol kept the good cigarettes tucked away. They were Merions, handmade, half Macedonian tobacco and half hashish, the only thing fit to smoke, Dannold thought, and sadly beyond his means these days. He lighted one. All cigarettes should be oval, he thought; what a barbarism that they're not! He sensed the first light curling of his nerve ends, fern fronds in sunlight, with the second drag, and he waited in comfort for the coffee. It would have, he knew, a drop of rum in it.

The round table, not 50 centimeters across, stood on a tiny balcony at the back of the shop, two steps up from the floor. The light in the shop was golden now: Tassopol had pressed the OFF show-window button, the Glaverbel glass had turned mirror on the street side, and the word FERME shone jet-black in the door.

"I see," Dannold said, "that you have a new Churchill on the south wall."

"You are observant," Tassopol said. "I bought it yesterday. Let me show you." It was a holograph letter, written at Chartwell on the 22nd of June, 1938, sixteen lines long. There was a reference to a drought that had interfered with the lawns, and a tuft of grass, a dozen blades had been fastened to the letter by a double cut in the paper. A contemporary photograph of Churchill, Churchill as bricklayer, overlapped the letter, corner to corner, and the whole collage was held in a narrow gold frame, restrained and elegant.

"Very nice," Dannold said. "What will it bring?"

Tassopol lifted his shoulders and his head tipped, as if the great mass of black hair overweighed it. He smiled

with golden teeth in his golden face. "A hundred thousand francs," he said. "Not less. Because of the grass, you know."

"Yes. Like that Gerald Mattock you had last winter, that 2026 water-color sketch with the bit of cloth from his shirt."

"Exactly. But this is so much older. Just think: Those leaves of grass were pulled over one hundred fifty years ago, by Winston Churchill's own hand!"

"Yes. Remarkable." Dannold held rich smoke in his lungs and squeezed. How had it been that day in 1938, he wondered, what had the great man's green-grass-stained fingers held for tea, that same day, as a wet English sun lay red on the rolling fields of Kent? Biscuits? Toast? Honey? Whiskey? He was moved. "So many bits of history on these walls," he said. "A remarkable idea you had, this combination of autograph, artifact, photograph. And that you have got so many of them together!"

"So, but it has been twenty years, after all," Tassopol said. "I am known."

"In the matter of your cheque, Monsieur Dannold," Tassopol said, "I have thought of something novel."

"I was sure you would."

"Yes. First, of course, we have the cheque itself, and a handsome thing it is. Coutts' bank was the last bank in the world to use that big, almost square cheque, you know. And, not to overlook, the amount. Two hundred and fifty thousand pounds! Three million francs, even then! And the VOID stamp in violet ink. All most impressive. There can be no problem about a photograph. It must be Jenille's. After all, Jenille won the Lord Thomson of Fleet Prize that year. Here." It had been in his jacket pocket, a six by eight, marvelously composed, as if Jenille had had all day to do it, instead of a half second (it *must* have been chance, Dannold always thought), catching Dannold just as he broke Smith's finger and twisted the gun away, the prime minister staring, bump-eyed, terror just rising in him, his bodyguard, the Welshman, Coffyd, grabbing, huge hook hands shooting his bony wrists out of his sleeves stretching for Smith, and off to one side, a tinkling grace note of comedy, the



P. M.'s daughter smiling at the little boy who'd given her the bouquet. It was, indeed, one hell of a photograph. Dannold remembered seeing it on a billboard in Birmingham and he remembered feeling the rush of blood to his head, and then the pounding in him somewhere, down inside. That was the day, O my friends, that was the day!

"And then," Tassopol was saying, "we must have a text. And here I am going to ask you to indulge me. I would like the text to be—I warn you, this is very presumptuous—a letter to me, describing exactly what happened that day, the 14th of August, 2049. Yes, to me. You *would* be so good? And because it will be longer, must be longer, than one side of any note paper, we will have it typed, the first page on one side only, for the main collage, and the other pages on both sides, and those in double frames, you know the sort of thing, the way stamp collections used to be shown in museums, and everything beautifully hinged together. What do you think of that?"

"Splendid," Dannold said. "And as for its being a letter to you, I don't see why not. The whole thing was your idea, wasn't it?"

"Ah, thank you!" Tassopol said. He poured coffee. "See this," he said. "This is the paper we will use. It was made for me in Paris, hand laid; there are only two men in France who do this work in the old way, one hundred percent linen fibers, just as a thousand years ago. This paper, under glass, sealed in argon, will last absolutely forever! You see, Monsieur Dannold, we will both be immortals, you and I, more or less immortals."

"More or less," Dannold said. "A sobering thought. Not, I think, that I wish to entertain any sobering thoughts, just now."

"At ten thirty, which is to say, five minutes from now," Tassopol said, "my secretary will come in. I suggest you dictate the text straight off to her. I have rented a Nagra XI typescriber. You will sign the finished, perfect copy. My man has already made the main frame and six leaves, probably twice what you'll need. He will be here at two thirty. At three, the Dannold cheque will be finished and upon the wall in the place of honor! The frame, by the way, is of polished chestnut taken from a beam

certified to have come from No. 10 Downing Street when the building was demolished."

"Remarkable," Dannold said. He was ever so slightly high, his persona, or whatever ragged thing was left of it after the nibblings of the years, being gently tugged this way and that, like a lost balloon, up coffee, down rum, sideways-slanting-spiraling hashish and tobacco something else.

Secretary. Punctual. Competent.

"Dear Monsieur Tassopol," Dannold began, "Wednesday, the 14th of August, 2049, I returned to London from a weekend's fishing in New Zealand. As I left the Chelsea Hoverstation, George Marten-Dow's car pulled up to the curb. He had won the general election a few days before and he was off on holiday. The chauffeur aside, there were four in the party: the P. M. himself, his daughter, Elaine, his private secretary, Noel Hoskins, his bodyguard, Will Coffyd. My first thought when I saw him, seeing that our paths would cross, or that at least we would pass on parallel, was to wonder if I should merely nod and give him good morning or stop and congratulate him. We had known each other for some time—politically quite well, socially in a casual way. He was much older than I. He was an eminence among the Whigs, whilst in the Liberal Party I was still known, in a revolting term then current, as a comingman. We were opposed, of course, and one reason I questioned the propriety of stopping to chat with him was a speech I had made in Commons. It had been, I must say, a small masterpiece of invective and abuse. It had put him off seriously: his reply had been lame. Some people said I had been rougher than need be, that I had risked making a real enemy of him. They were thinking of our relative positions. Marten-Dow would clearly be called to the palace sooner or later, whilst my foot was still on the bottom of the escalator. To put it plainly, my friends thought I should have played it safe. But that was not my nature.

"The P. M. and I were 20 feet apart when I decided what I would do: Bow, say 'Good morning,' add 'Well done, sir,' and go on, not having stopped. Two seconds later, everything went up the spout.



"Because the television cameras were running continuously, we were able, later, to determine the exact length of the episode of the attempted assassination of the prime minister: six-point-five seconds. At the time, I'd have thought it was all over in *two* seconds; looking back on it afterward, it seemed *hours*. In moments of tremendous excitement, time is elastic. I think of the episode as a film running in what used to be called stop motion—alternate jerky blurs and knife-sharp stills. That was my first impression: a jerky blur as the man Smith jumped out of the crowd and a sharp still of him ten feet in front of the P. M., the right arm well out, aiming the revolver as carefully as a shooter competing at Bisley.

"One can think most remarkably quickly in such circumstances, and instantly, I thought, he's a bloody amateur, sighting like that, a professional wouldn't aim at all, he'd simply empty the revolver into George's middle. It was that thought, I believe, that set me off. There is a *chance*, I thought, and I went for him. Actually, the television films, which were taken from three angles, showed definitely that I began moving toward Smith *before* he stopped; that is, before he took aim at the P. M.; but I had a contrary impression—obviously my brain was lagging behind my body, or something of that sort. Smith was right-handed, and I was on his left, so it was easy to pick the move; it was one I had done at least 500 times in practice in my UN military service: Grab the barrel with the left hand, the cylinder with the right, get the fat part of your right hand in front of the hammer if it's back, or hold it down if it's not, and twist the barrel hard to the left and back. If the man leaves his first finger inside the trigger guard it will break and if he doesn't you'll spin the gun out of his hand anyway. And that was what happened. In the fat part of seven seconds from the time I had started to move Smith had a broken finger, Coffyd was holding him by the hair of his head and both arms, the P. M. was still staring and Elaine was still smiling, a smile that really did look as if it had been painted on her. That was that. Marten-Dow went off for his holiday in Sicily and I went home.

"The phone was howling as I opened the door. I had expected it would be. Mrs. Dannold was out; it was

cook's day off. I picked it up; 'BBC here,' the man said. They were laying on an hour's program, if you please, on the history of assassination and its effect on humanity down the ages. Obviously, the man said, my presence was imperative. It was for ten o'clock that night. By all means, I told him, you may count on it.

"It was a select company. We had all promised to be on hand at nine, and everyone was, except Peter Merriam; there'd been some trouble on the train from Oxford. John Travis was there, he was leader of the Opposition, and Barrett of the *Times*, Clive MacDonald, Toby Haversford-Moore, Morris Stavinsky—he was really at the top of his fame just then, it wasn't long after he'd shot Jelko—and even Jean Fauriere of *Le Matin* had come over, first time he'd set foot in England in 20 years. They gave us sherry and we laid the program out in a general way, nothing hard and fast about it.

"When we went on the air—live, of course, according to the BBC's unvarying rule—old Merriam gave a five-minute rundown on the history of assassination, absolutely brilliant. Then films were shown, beginning with Sarajevo, 1914, and running up to Jameson in Pittsburgh in 2045. There was a general discussion. Then the best of the stuff the TV people had made that morning went on the screen and I was asked to comment. I explained what I had done, technically, why I had picked the move I used, and so on. The film ran out.

"Someone asked me if I had been frightened and I said yes, badly. Had I thought I might die? Yes, I said, as a matter of fact, I had thought it very likely I would die. Oddly, I didn't think Smith would kill me, because I was convinced he was an amateur and didn't really know anything. I thought the P. M.'s bodyguards would kill me. I expected they would all start shooting at Smith and I would catch it, too.

"Some ass in the studio audience asked me how it felt, being a hero. I said I wasn't a hero, because the heroic act, in my view, implied a choice. I was *there*, on the scene, I knew what to do when I did reach him. I loathe violence, I told them, and the idea of political assassination is sickening, revolting. Further, I said, when you get down to it, George Marten-Dow is His Majesty's



first minister, and even only as such, his life is worth more than mine. I meant all of that quite sincerely. And, indeed, merely saying the words gave me a bit of a glow, lifted me. Emotion took over, I suppose, to the detriment of judgment. I had said I was nothing heroic, but I know now that I wanted to give everyone reason, argument, to prove the contrary. I wanted everyone to know how selfless I had been. Two minutes later, I had destroyed myself.

"Someone in the audience, a foreigner, I thought, from the sound of it, said, 'Since you have told us, in effect, that you would willingly have given your life for the prime minister's, I presume you admire him politically? May I ask, did you vote for Marten-Dow in the general election?'

"'No,' I said, 'I did not vote for Mr. Marten-Dow, although that is certainly none of your business. Nor do I admire him politically. Indeed, rather to the contrary. He is, and all his life has been, a most amoral person. He is vain, cruel, self-centered to the point of obsession. Because it is impossible for him seriously to put forward any project that does not bear on his own welfare, political or fiscal, he has not the vaguest conception of public service. He is, further, a stupid man who will surround himself with stupid men, and so he is terribly dangerous. His election was an unmitigated disaster, the only question being whether short-range or long-range.'

"Tommy Hackett of IVR, in the chair, got his breath before any of the others. 'Whilst some of us, and perhaps, indeed, most of us, would not agree with Mr. Dannold's views,' he said, 'I think we can agree it was most remarkable that, holding those views, he was still willing to put principle above all and throw his life into the balance.'

"Someone said, 'Hear, hear!' and the discussion went on, rather downhill. I said nothing more. I had nothing more to say and I doubted I could get the floor, anyway. Tommy Hackett had gone gun shy and wouldn't look my way.

"When the thing broke up, a BBC page came to me with a letter. 'You were meant to have this before the program, sir,' he said, 'but I couldn't reach you in time.'

"The envelope was of heavy paper and was wax sealed, something I hadn't seen in decades. There was the cheque, £250,000, and a note from Lord Morgan of Fuldale. He was a Whig, of course, but more: He was possibly the most reactionary man in Britain at the time, and he adored Marten-Dow. The cheque was in appreciation of my having preserved Marten-Dow for posterity. In my view, it represented a nearly unimaginable sum of money; to Morgan, it may have meant a month's income.

"I showed it to Helen instantly I got home.

" 'Are you going to save it to torture yourself,' she said, 'or are you going to burn it now and have done?'

" 'I don't think I shall burn it,' I told her.

" 'After what you've said tonight? My dear man, you've burned all your bridges, you may as well burn the cheque!'

"I took it around to Coutts' in the morning. A stop order had come in the minute they opened. They wanted to take it from me, but of course they could not, they had to be satisfied with stamping it VOID.

"I suppose that night at the BBC was the watershed of my life, the high point. I lost my seat in the next election. But long before that happened, the Liberal whip had made it plain to me that my only hope of a career lay in playing the villain, the heavy, as we used to say. That is, to become known as The Denunciator, the tongue of fire, a modern-day Robin Hood seeking out evildoers. Made sense, of course: If I went on as before, a fairly quiet, even mousy sort, no one would ever trust me, not knowing when I might rise and let fly. But if ferocity and castigation were my regular role . . . But I couldn't buy it. Not my thing at all.

"Therefore, when I lost my seat, I retired permanently from politics."

"That should do it, I think," Dannold said.

"I don't know," Tassopol said. "It leaves all of your life since unexplained."

"This was a political episode, Monsieur Tassopol," Dannold said. "It should end coincidentally with the end of my political career."

"It's a point," Tassopol said.



"Yes, and in any case, not much of interest has happened to me since. No point in telling about my fling in the City. Although it could be soon said: 'Broker Goes Broke.' Nor do I want to talk much about why I left England. No, I think it's best as it is."

"I agree," Tassopol said. "And now, what do you say? We will go to Pelly's, sit in the sun, have an aperitif or two, and it will be time for lunch, right?"

"Right," Dannold said.

Dannold got back to the apartment in time for tea. Helen called as the door opened. He went over to the balcony and kissed her. There was room on it for one chair and a cushion for the cat, no more.

Helen Dannold looked at him brightly. "You sold it, didn't you?" she said. She was pink-white and seventy and still pretty.

"How could you tell?"

"Oh, you have a sleek and satisfied look about you."

"Should have. We lunched at The Kelp."

"How much for the cheque, if it's not impertinent of me?" Helen said.

"Fifty thousand francs."

"Ah, well, it's something. To think that old piece of paper finally produced money!" She'd been doing her nails, she rested her hand on the spidery balcony rail. "Were you sorry to see it go, after all these years?"

"In one way, yes," Dannold said slowly. "In a practical way. It was the last, well, *thing* we owned, of any monetary value."

"Yes, I thought of that," Helen said. "Pity, but there you are. Did you snatch some of his Merions?"

## WOMB TO TOMB

JOSEPH WESLEY

*There was once a time when broad-screen science fiction was about the only kind around. This is the type of story where whole planets are destroyed in the wink of an eye, and galactic fleets of mile-long spaceships engage in ether-splitting duels to the death. This era of planet-busting has passed—although the rubble of galactic explosions may still be heard from the reprint racks. Stories tend to narrow their focus and be more personal these days. Where the legendary Kimball Kinnison headed the mightiest fleet ever seen, here we find that Jim Grimes is the pilot of but a single ship in one of those fleets. The endless ranks of rockets are still visible in the background, but the emphasis now is on what has happened to Jim.*

After sounding the emergency chime, my robosec spoke urgently in its clear feminine voice. "Senator Grimes is on his way into your office, sir," said the voder. "I informed him firmly, in accordance with your instructions, that you are not receiving visitors. In spite of this, he has ignored my words and is proceeding into your office. I am unable to stop him—he carries a blue Identcard."



"It's entirely all right," I said, rising to my feet. I had been more than half expecting that the senator would be coming here.

The door to my office was thrown open, and Senator Grimes came in. He was angry and he showed it.

As a senator, he was a deliberate caricature from an archaic antebellum America; a living Claghorn of a legislator. His carefully brushed back white hair was a historical oddity, as was the out-of-date cut of his suit. He was also known to be enormously intelligent, indefatigably electable, and one of the three or four most powerful men in the known Universe.

"What do you mean, barging into my office like this?" I asked him, before he could take charge of the conversation.

"So you are Administrator Burkens," he said, as if I hadn't spoken.

I nodded slowly, once. "I am Admiral Burkens."

"Ah, yes. Admiral Burkens," he corrected himself, "Administrator of the Centauran Military Hospital." He held out his hand. "I've been anxious to meet you, sir."

I ignored his hand and his apparent change of tactics and sat back down behind my desk. "Then why, Senator, do you arrive like this, unannounced? Surely you understand the importance of this Rehabilitation Center, and the fact that we are not any sort of hospital—military or otherwise."

The senator selected the more comfortable of the two easy chairs and eased himself into it.

"I helped set this place up," he said, "even though I don't know as much as I ought to—and am going to—about what it is that you do here. I arranged it so that you can ignore people who try to reach you by forcing them to go through channels, asking for appointments, requesting interviews. Even individual legislators. I know your reputation, Admiral. You are known to take full advantage of every legal opportunity that I gave you, and to pay no attention to such requests. And I don't have time now to arrange a legislative committee of inquiry. So I just bulled through on my Blue Card. No robot can act against a top-level all-area access card, even when programmed by you."

"I have been expecting you," I said. "Ever since your son arrived here for treatment."

The legislator's public mask was erased instantly from his face. He became merely an agonized parent and all the verbal jousting was abandoned, at least for the moment.

"Yes," he said. "My son Jim. Tell me—how is he? Is he all right?"

"He's fine," I said. "He's progressing well. He'll be out of here and ready to go back to the wars inside of three months. He's a fine boy."

"Jim has always been a fine boy," said the senator in a thin voice. "Even in going off to fight in this endless war. And he has always understood its importance, unlike most of his young friends. He has never thought, as so many of them have, that the conquest of our colonies on planets hundreds of light-years from Earth was of little importance to him. And he even agreed with me that we should undertake the recapture of conquered planets. But to volunteer for combat duty against the Kwartah—of course, I couldn't try to stop him."

"Perhaps you're a victim of your own rhetoric?" I asked, figuring that the moment of real contact was over.

I had figured wrong. He looked at me in anguish, his face once again without its mask. "A victim of my own beliefs," he said, "but my own beliefs still."

Heading a Rehab center—restoring youthful human wrecks to fighting condition—is perhaps a needful task, but it is not one that leads to peace of the spirit. I am afraid that my own mask slipped for a moment and I showed some of the compassion I could not help feeling for the old man. "Your boy is getting along well," I said. "He's on the way to complete recovery. Remember that he knew full well what he was volunteering for. He must have known that he would end up here. And right now, if he were capable of decision, he would not have it otherwise."

"May I see him?"

I nodded, rose to my feet, and led the way to a spiral stairway in the far corner of my office, leading down. "Whoever it was who said that war is hell must have been talking about the waste of people. We, here, have been



set up to avoid that waste as much as possible. We have been called a salvage center. Remember, sir, that there are not too many young men on all of the hundreds of Man's planets who are capable of fighting in our front lines. And of these, your son Jim has proved himself to be one of the best."

"Then why will he have to go back and fight again?" The senator sounded like any father.

I stopped and turned to face the old man. "You don't understand, yet," I told him. "Your son, like the others here, has done far more than his share. Nobody will force him to go back. He will want to go back. He will beg to go back as soon as he can remember—long before he is ready." I chose my words carefully. "And I assure you that we won't let him return to combat until we are absolutely sure that he is in proper condition."

Senator Grimes shook his head. "You're right then, I don't understand," he said.

We were now walking along one of the maze of tunnels that lattice the Rehab gardens to provide access to the scores of observation stations. My robosec had flashed the location of the senator's son on my desk screen, and I was taking his father to the observation station that would provide the best look at the boy through its one-way viewing screens.

"Do you know, Senator," I said as we walked along, talking more to fill the uneasy silence than to make conversation, "you must remember as I do to a time when intelligent men seriously put forward the idea that space warfare was an impossibility."

The senator nodded without interest. "I suppose they must have been thinking of warfare out in space, between spaceships. They were right about that at any rate. You can't intercept an out-of-phase ship going faster than light. Or so I've been told."

"Yes, but it's not only that. They also assumed that the population of any well-established planet would easily defeat anyone trying to invade them. After all, the invaders would have to stage their attack at great expense, with no up-to-date reconnaissance or other intelligence before their forces arrived. This would be after flights of up to several months of subjective time, with no chance

of reinforcements if they got into trouble. I suppose that those people just forgot that throughout history it has never been possible to keep a determined invader from effecting a landing—from Caesar to Eisenhower; from Norman conqueror to Spanish conquistador. And once on the ground, readiness and quality of fighting men have usually meant more than numbers of reinforcements.”

“Well, the Kwartah certainly demonstrated that,” said the senator. “They conquered twenty-seven of our planets before we even figured out what was going on.”

I nodded. “And almost two hundred more before we stopped them even once. And as you are well aware, the road back is painful and slow.”

I guided the senator into a side channel and then motioned to a spiral ladder leading up. “Remember, Senator,” I said, “your boy hasn’t been in our hands very long. He’s doing fine, but don’t expect too much.” I kept the lead, winding my way up the spiral stair. “Your son won’t be able to see us or hear us when we are in the observation post. We find that it isn’t good to intrude at all during the early days of Rehab.”

When we stood in front of the large one-way viewscreen, it was as though we gazed out of an immense picture window. The scene was of a rolling green lawn, bordered with trees. Or rather it was of grass growing in a forest glade, because the trees, though not thickly planted, seemed to obstruct all view beyond. There was a brook that looped easily through the glade. No one was in sight.

The senator looked at me, concerned.

“He’s in this closed section, and he’s the only one here,” I said. “We’re just looking in the wrong direction.” I adjusted the controls.

The view rotated until it showed a large-boled tree in the near foreground. Standing beside the tree, with his forehead pressed against it, was a man. Anatomically speaking, at least. If he had stood erect, he would have been well over six feet tall. (Six three and a quarter—I had studied his records and had even checked the measurement.) He was well muscled, with an even sunlamp tan.

This was easy to tell, because he was entirely naked.



The aggressively masculine effect was spoiled, however, because his left thumb was firmly thrust in his mouth. The right hand clutched the left fist, with a forefinger stretched along the nose. And the boy was sobbing as if his heart would break. His nose was as red and running as were his tight-shut eyes.

"You have found him at his worst time," I said quietly. "He can't yet remember his past, yet he has reached the point where he realizes an agonizing sense of loss. His recovery will be very rapid, now."

Senator Grimes was sputtering indignantly. "But this is monstrous. You could at least treat him like a human being instead of an animal. Haven't his services in the past earned him the right to wear clothing? To normal human dignity? And why doesn't he have a nurse? Someone to care for him and to comfort him?"

"There are more than fifty-seven thousand men undergoing rehabilitation in this establishment at this time," I said, my voice uninflected. "Each man when he arrives, virtually without exception, seems essentially mindless and entirely untrained. We don't begin to have enough staff here to change diapers and wipe noses for fifty-seven thousand men and women."

"But surely there are robots," protested the senator. "I know for a fact that Congress has never denied you any of the funds you have asked for."

"Have you any idea of the complexity of a diaper-changing robot? We use machines to wash our patients and to dust powder on them—and they usually manage to apply the powder to the correct end. But we would not attempt to program them to apply clothing—the chances would be too great that they might inflict injury.

"Besides, on further reflection you may agree with me that nakedness in a grown man is at least as dignified as being pinned into a diaper or training pants.

"As for trying to comfort them: Our patients are best left alone at this time. In any event we wouldn't let a nurse near Jim. At least, not a female nurse. Excitement is not beneficial during the early recovery process, and it is astonishing at just how early in the process of getting well that our young male patients are able to remember that they are men. And acting on that memory, or trying

to, can greatly delay ultimate recovery—which is programmed to occur considerably later in the schedule of therapy. As I have said before, your son is actually doing very well.” I took his arm. “Please come back to my office and have a drink, Senator. You need it.”

The senator shook his head slowly like a bewildered lion. “Did you say that you have fifty-seven thousand patients here, all in a mental condition like—like my son, there?”

“Yes, sir. I have fifty-seven thousand patients who came here in mindless condition. Out of a total population of fifty-seven thousand patients. They all arrive here like this.” I was puzzled. He was taking the news too hard.

“Tell me, Senator, is it possible that even in your position of authority you actually don’t know what’s going on here—even though your son volunteered? Don’t you know why these men come here like this? Your son knew what would happen to him—at least as far as this is concerned—and he volunteered anyway.”

The senator seemed suddenly very tired as he followed me back down the corridor toward my office. “Well, you see,” he said, “I’ve been so anxious to support action against the Kwartah—and to support those people who know how to take action against the Kwartah—that I’ve chosen not to spend much time looking at that effort itself. I know that the enemy gained his initial easy victories because he comes from an enormous high-gravity planet and can take very large G forces. More than ten times as much as a human can stand before he blacks out, I believe it is. So at first I gave careful attention to details, and insisted that we build a lot of unmanned vehicles—drone spacecraft—that could support very high accelerations and outmaneuver the Kwartah. But that didn’t seem to work. I was wrong.

“So now I don’t try to tell the experts what to do. And I don’t have the time to try to understand what they are doing. I just help them do it. Even when it involves going back to eating up young men instead of machines—these young men here, for example. Can you blame me for not wanting to know too many of the details?”

He was silent for some time. I pretended not to notice that he was fighting to control his emotions. “I’m sure



that they strap the boys in well, and feed them drugs, and do all they can for them. But it is not surprising to me that we can't protect them as well as we'd like to, so that a lot of the boys who survive end up here at Rehab. But somehow, I figured that the damage would just be to their bodies. I don't understand what this is you say about troubles of the mind."

I escorted the senator back into my office and then turned to face him. "We owe you very much for your unquestioning support while we were learning how to win. But now it is time for you to learn a little about how we do the winning and what the price is. Let me show you a recording. It's a wire that was taken of me, some time ago. It's a training aid that is shown to all recruits before they are finally accepted as volunteers, but only after they have proved their suitability through the extensive physical and mental tests. Your son saw this wire before he signed on."

I touched a switch on my desk, and the lights in the office dimmed as a picture on the wall gradually faded, revealing itself to be a Tri-D tank. I dialed for the proper wire, and after the display of the usual Security Caution and Declaration of Classification the tank dissolved to a depiction of a younger me. I looked younger in the tank—much younger—but the wire was only four years old.

"I was the original guinea pig for this entire idea," I said, narrating the scene myself—I had turned the sound down. At this moment, the tank was showing a couple of doctors running a tube up my nose.

"The whole thing goes back to the twentieth century, when some clever idiot decided that animals ought to be able to breathe under water as well as in air if the pressure was great enough to raise the level of dissolved oxygen to a high enough percentage to support life. It turned out that he was almost right. The subjects died, but not because they couldn't get enough oxygen. It was because they couldn't get rid of enough carbon dioxide. It turns out that water, with the same salt concentration as blood, will dissolve only half as much carbon dioxide as is breathed out. So water breathers poisoned themselves if they kept at it very long.

"But as you say, it turned out that we couldn't design a servomechanism, a servo-autopilot-computer-guidance system that could stand up to the Kwartah, because the Kwartah could outsmart any machine. It also turned out that we couldn't use a man-controlled remote Waldo setup, because the Kwartah could jam the radio link enough to raise the noise level to a point where we had to use filtering to slow down our response times to the point where they could still outmaneuver and beat us.

"So the scientists decided that we just had to use the most compact and elaborate computer ever designed, capable of effective nonlinear programming and of effective operation with inadequate information, and we had to use it without the aid of remote links. We had to put it right in the combat craft. And that computer, of course, is the human brain, which customarily comes prepackaged, attached to some very delicate and fussy and easily damaged ancillary equipment: the human body."

While I had been talking, I had watched the two doctors in the tank complete their task of stuffing the tube up my nose and then connecting a series of tubes to all of the more intimate orifices of my ancillary equipment. The scene had also showed them covering my eyes and ears with a blind-eyed helmet, also the trailing tubes—or rather, trailing cables.

"It was impracticable, thank God, for the experts to disconnect the computer from its ancillary equipment and keep it operating efficiently. So they leave the brain in the body. But as you see," I said, "the job of dressing for a job of piloting these days is more than a minor unpleasantness."

I gestured toward the tank. "And while they were dumping me into the tub of salt water you see there, they were pumping my lungs full of an equally salty liquid—odorless, but of a very low viscosity. At least, all of the authorities claim that it's odorless, but most pilots agree with me that it smells a little like the inside of a used canvas shoe. This liquid, at any rate, solves the problem of carbon dioxide poisoning, since it has more than double the dissolving capacity for the stuff than water. The whole miserable idea goes back to the



Gualtierotti-Spinelli experiments done at the same time as those water-breathing experiments. They put pregnant rats into metal spheres filled with liquid, something like that sphere they're putting me into there in the tank, and they then dropped the sphere from a height that killed the rats instantly. Then they delivered the fetuses by Caesarian section. And they found out that those little rat fetuses survived even ten thousand G's!

"Because the babies were surrounded by amniotic fluid, and their lungs were full of the liquid, too, the shock was transmitted evenly through the liquid and did no damage. And that's why the pilots all go through the miserable and undignified and humiliating experience of being stripped and taped and stuffed in an artificial womb. What you see going on here. Which is also why all of us who are, or have been, pilots called ourselves the R.B.'s. It stands for Rat Bitches. We know just how those original subjects must have felt. And just like those original R.B.'s, we're doing it all for Humanity. It didn't do them much good, either."

"Do you mean that my son went through that?" asked the senator, pointing at my naked image.

"Every time he suited up," I agreed. "He had several hundred hours encased in a wet sphere before his first combat mission to one of our Kwartah-occupied planets. As part of our assault plan to try to take it back from them. And for every one of those hours, he was miserable. I know; I've been there."

"And do you mean to tell me that the pain and misery are enough to crack the minds of all of these young men? I know my son too well for that. He, and those other young men here, would never be broken by the pain and humiliation and discomfort of the kind you have shown me. I just don't believe you."

While he had been speaking, he had kept his eyes on the Tri-D tank in fascination. The liquid-filled metal sphere, with me inside, had had a cap screwed onto the opening they had stuffed me through, and the whole thing had been hoisted a couple of hundred meters above the ground. Then dropped in free fall onto a concrete pavement which it smashed thoroughly.

The cover had been sawed loose, and the senator was

watching me climb out of the metal vagina, trailing a multitude of umbilici, apparently none the worse for my fall.

"You are jumping to conclusions," I said. "Of course the men did not break down in the manner you suggest. These conditions are miserable but not mind-breaking."

"If that's not it, then show me what is."

I stared at Senator Grimes, but he didn't drop his eyes. He had been looking somewhat wilted, but as I watched his static charge seemed to build again until he was his usual crackling self.

"I could show you your son's most recent combat tape," I said at last. "The training film the recruits get before they sign on—after they've seen the one you have just watched—is the combat wire of my first action. But I can show you your son instead if you want me to."

"Does it show the battle that put him here, in this place?" Senator Grimes' eyes still held mine as he asked the question. I slowly nodded.

"Show me the wire," he commanded.

I said nothing but touched a switch, and my image, having tubes laboriously disconnected, faded into swirling blackness. Then I moved another lever, so that the swirling dots coalesced into a close-up of the young man we had recently seen blankly sucking his thumb. Except that in the Tri-D tank the face of Senator Grimes' son, far from being blank and empty, was smiling and vibrantly alive.

A helmet, far neater and smaller than the one I had been pictured modeling, was slid onto his head. The head vanished under the glittering surface of the liquid, and a hatch cover was quickly twirled into place. The camera pulled back to show that the tank containing young Jim Grimes was like the yolk in a heavily armored egg.

The egg was hoisted into the body of a sleek war craft—a craft equally at home in atmosphere or in space. The background of the scene showed an almost endless row of similar eggs being engulfed by similar small craft. The view was of the hangar deck of an enormous spaceship, and the activity indicated that although the ship was still in subspace, it was making its run in to a planet to launch an attack.



The view shifted to that shown by Jim Grimes' sensors—we saw almost as if with his own eyes. We were in the line of warships, and in the foreground we could see a repeat of the mother ship's instruments. These showed that we had already dropped below the speed of light and that our breakout from subspace would be in ten seconds; planetary atmosphere entry would be in fifteen seconds; first ship drop was in eighty-seven seconds; ours would be the twenty-third ship to drop in our line—we would be outside in just over two minutes.

Senator Grimes leaned forward and chewed his lower lip. Time was moving as painfully for him, watching, as it had for his son, experiencing. Breakout occurred on schedule and the faint green background disturbance of subspace disappeared. The shrill sound of atmospheric entry began to build up. Sitting at my desk, I could almost feel the sudden onslaught of G forces from the air drag, just as I had almost felt the null-gravity sensation at the instant of breakout—and all of this in spite of the fact that there was not—and could not be—any reality to that sensation here in the room where we watched a scene in a Tri-D tank.

Then Jim Grimes' little one-man warship began its smooth continuous forward slide toward the port slingshot—one of the pair of catapults that was busy spewing ships into the air.

Suddenly, with an abruptness that brought the senator's hands up reflexively as if to guard his eyes, suddenly we were airborne. I looked around—or rather, young Grimes looked around just as I would have done in his place—to check the position of his ship among its sisters. A quick glance at the radar screen showed a row of targets climbing rapidly up from the ground below. The Kwartah were reacting to attack with awesome rapidity, as usual.

A pulsing alert light, and a glowing ring around one of the blips on the radar, pointed out my target—young Grimes' target—and our ship started a wicked arching turn to pick up the proper lead angle. No action of the pilot was required here; the pilot's task would be one of minor override near the end of the individual action—perhaps holding up fire for a twentieth of a second, or increasing turn rate by a quarter of a G—small

changes in the machine-planned pattern, resulting from training, good judgment, and intuition. The elements computers could not even begin to calculate, but elements which frequently made the difference between victory and defeat in an engagement.

Watching the intercept develop, I found my right forefinger twitching as I tried to make a minor change in course. Simultaneously, the needle that indicated override action crept up off its stop, as young Grimes made the same maneuver that my reflexes had called for.

The pilot left weapon release to the computer, just as I would have done in this engagement, and the maximum-magnification optical screen suddenly blanked momentarily under overload and then cleared to show the expanding fireball that had been a Kwatah combat craft.

The dials indicated that, just as the boy's ship fired, its jets flared as it bounced into a sudden hundred-and-fifty-G evasive maneuver, simultaneously dropping a string of three short-range defensive antimissiles. They must have worked; the craft survived. But already a second target had been ringed, the action light pulsed again, and we were on our way to intercept our second target.

We watched three more intercepts, three more kills, two more narrow escapes from counteraction—and then there was a sudden rumble, a sudden cloud of smoke obscuring the viewscreens just before it went blank—and all dials spun to zero. The small auxiliary screen flickered uncertainly and brightened.

For just a moment I relaxed completely, enfolded in a familiar feeling of comfort and safety, but this was broken almost at once by an intrusive sound from Senator Grimes. A light cough to clear his throat.

I shook off my momentary pang of loss and resumed the burdens of the world. Or at least, the burden of the presence of Senator Grimes.

I looked at him, at his puzzled expression.

"Your son's ship was hit by a missile from the fourth enemy he engaged. Just as his missile destroyed that ship, it destroyed his. At that instant, your son's life-support module—his Egg—was automatically ejected. Look in the tank. You can see by his instruments that he is in free



fall. That soothing humming sound that you hear in the background is just an indication that his emergency homing call-in signal is on the air."

"It wasn't this engagement that put my son here," said the senator. It was not a question, but a simple statement.

"You are right, of course, Senator," I agreed. "A replacement warship, up to this time an unmanned drone, is being called in by your son's Egg. Two of these drone ships are customarily released for every manned battle craft. The armored Egg is much better able to survive than the ship that carried it. And the pilot, floating in amniotic fluid, is protected in complete comfort from almost anything."

"Complete comfort?" asked the senator. "You have just finished telling me about the discomfort and misery you have to go through in those spheres."

"Yes, Senator," I said. "But that's before you have been in battle. Whatever happens, you stay warm and safe inside. For example, in this battle that you're watching now, your son destroyed seventeen of the enemy ships, and in the process lost four of his own, and stayed comfortable and unhurt the entire time. Look there, now. His second warplane will catch him before he even hits the ground."

The small auxiliary radarscope showed a target—blinking the code of a friend—rapidly closing in, and soon the optical display revealed it to be a battle craft apparently identical to the one Jim had been flying. The pilot section was an open nest, gaping to receive its Egg. The craft closed to zero range, there was a blink of the screens, and then they came on bright and clear to show a new target already ringed and the new warship already turning to close in on it.

After the next intercept was successfully completed, I said, "This battle goes on for a little longer than five more days, although the pace soon slows down a good deal. As I said, your son and his Egg came through it all in fine shape. If it's all right with you, I would like to skip ahead to the last engagement and show what happened after that."

The senator nodded, and I made the necessary adjustments to the controls at my desk. The tank clouded

and then quickly cleared to show the same scene as before, except that the dial of the clock-calendar indicated that several days had gone by. The scene in the tank showed a target in the process of being destroyed.

"That was his last kill, and the last kill of this battle," I said. "Now, I'll slip the wire to show things just a couple of hours later."

The instruments now showed that a search pattern was being conducted and that there were no targets on the radar screen. As we watched, a green light beside the action light winked on, and a gentle chime started to sound, not unpleasantly, it seemed, to the senator, who tapped a finger in time to it. The sound jarred unbearably on my ears, and I turned it down to near inaudibility.

"The battle is over. That clanging is the General Recall."

As we watched, the ship started a gentle turn and began to speed up. Grimes' son overrode the automatic homing maneuver and pulled the nose of his craft away from its course toward the interstellar mother ship.

After a few seconds, the note of the chime became louder and more insistent, its tone more of a snarl than a chime. A red light flashed on, and the boy's ship once more started its homing turn.

"As you see, your son doesn't want to go back to the mother ship. The automatic system has now cut out his manual control circuits, and in spite of what he wants is taking him back anyway."

I looked away from the tank. "After our first battle using these machines, just a few years ago, we lost every pilot but one at the end of the battle. Me. I was the only one they got back. And my Egg was down on the ground. After I was ejected from my first ship I had fallen into a narrow canyon. My drone replacement ship couldn't make a pickup. So they got me back, and I told them what was wrong. After I recovered."

"And what was wrong? Is it the same thing that has happened to my son?"

"Yes, sir. During training, as you saw, we all hate our capsules. But after we have been in a few days of battle we like our Eggs very much. They have kept us warm



and comfortable and fed and cared for and protected us. In the middle of a hell of destruction. And so we can't bear the thought of leaving our capsules, ever. We can't bear the thought of being born again."

I cut off the view in the tank. "You don't want to watch the rest of this," I said. "You don't want to watch them haul your son back to the Mother ship and then deliver him forcibly out of the safety of his womb. It's a sort of Caesarean section. And so naturally he goes into shock—it's the birth trauma—and reverts to the mentality and behavior of a newborn infant.

"Recovery, however, is rapid. He'll soon be ready for action again, on some other planet that we take back from the Kwartah."

"You can't mean that you'll force him to go through that experience again?" asked the senator.

"No, sir. We won't. Although we probably would if we had to. If it was needed to help win the war. Well-qualified men are scarce. But we don't have to. All pilots volunteer to return to action. In fact, they beg for it. The desire to return to the womb is almost stronger than the sex drive. After a few times this desire becomes so overwhelming that the pilot never does come out of it. He reverts to the fetal position and just pretends that he has not been forcibly removed from the safety of the womb.

"So we have learned to allow a pilot to take part in a maximum of three battles—three scheduled actions to recover planets that have been lost to us. Then we retire him to one of our own frontier planets, where he is available for action—once only—if the enemy attacks. After that he's pulled back to one of our central planets where the chances of attack are small. He will be put into an Egg again only if the enemy forces his way to one of the planets nearest Earth. And if he is so called, his chances of recovery are nil. In fact, of those who have been sent into action a fourth time to protect a frontier planet, not one in a hundred has ever recovered.

"I am one of the lucky ones. I was on Dubhe IV last year when it was raided—you probably recall that action. And after extensive treatment, I came back. That's why

I run the school here on Alpha Centauri III—and why I'm not allowed into a capsule, even for a demonstration flight.

“So I know that your son will not be forced into action again. He'll beg for the chance. And if he's lucky—it won't be long before we let him climb back into the safety of his Egg—his womb. But I'll never have that chance again, unless—unless . . .

“God! I wish the Kwartah would attack us here!”



## LIKE FATHER

JON HARTRIDGE

*The author of this story is a journalist who resides in the green countryside near Oxford, England. A gentleman of soft-spoken ways, he writes outspoken fiction. His first science-fiction novel, Binary Divine, has recently been published, and this is his first published short story. We can only look forward to a happy future for one who can spin so nastily perfect a yarn.*

Fingest, intent upon rape, hid behind the jereboam tree. He was well concealed. Its lower half was as thick as twenty men.

She passed by here every day at about this time.

Time?

Fingest smiled to himself.

Time was everything.

And the sex-clock was telling him that time was ripe.

At the top of the tree, way above the video camera hovering over him, so high up that the scabrous patterns etched by the huge bark-eating trench beetles could no longer easily be discerned, the great green fronds stirred sluggishly. Then the air was still again, and so were they.

A few yards away a family of catarrhine longtails, in mindless pursuit of an evolutionary dead end, squabbled over the last banana nut on their tree.

Fingest sneered at their gay and angry chatter. He was pleased that Grandpa was not of their kind.

A small reptile climbed importantly on his left boot. He scraped it off with the sole of his right and spent a few moments watching it struggle with the problem of suddenly being in two pieces.

The minutes passed.

Fingest waited composedly.

He thought with pleasure of the tiny wound in her behind. She would have blamed it on a dagger fly. But its cause had been the entry into her flesh of a sub-microminiature thermometer/hormone analyzer.

What a lovely shot! Fingest smacked his lips at the memory of the little missile being guided unerringly into her left buttock from 300 yards.

And that little missile, scarcely visible to the unaided eye, was now reflecting a radio frequency that told him she was in heat.

So it was to be today.

The receiver clipped on to his ear lobe gave a respectful bleep.

It meant that she had left the caves and was probably making her way toward his ambush.

It was unusual for any of her kind to make a habit of walking alone. They moved as a team; so dependent was any one upon the rest that the pack resembled a creature of infinitely adaptable shape more than a community of separate creatures.

She alone seemed capable of detaching herself.

Her fellows, depending upon each other for survival as they did, were slowly establishing a form of communication that was eventually to result in their ascendancy over creation. Already their place in the order of things was assured.

But she had gone one step further than they. Her setting aside of one small part of each day to perform an individual act indicated that she was a cut above the others, perhaps ten thousand years ahead of them.

Or so Fingest thought.



Whatever the evolutionary facts, she was more worthy of his attentions than the others and anyway was the easiest to isolate from the pack.

Fingest peered into his optical electroscope.

Up yonder, through the trees, where the path traversed a clearing of some slight eminence, you could see the creatures as they crossed.

And he was rewarded by the sight of her.

At 300 yards, she looked almost sapiens. There was something about the set of her shoulders which said that the anthropoidal inheritance had already been usurped by a higher promise.

There was, too, an awareness and a curiosity in the carriage of that flat-topped, low-browed head.

Or so Fingest thought. For a crazy instant he considered the distant image to be attractive.

Come, come, he thought. Don't fool yourself, brother.

He forced himself to remember Marcia. Pale, blonde, IQ 155. Then Phyllis, the blue-eyed quadroon who sang to him at night when he paid her, came into his mind.

He thought of his mother.

That helped most of all.

He was able to recall his quarry as she would appear close to.

She would be hairy, rank smelling, leathery skinned, with whites of eyes pink and no bigger than a frightened dog's.

Around her lids and nostrils would be dried mucus, and her wispy beard would carry the remains of several previous meals. Where her hair was thickest, on her head, her sex, her forearms and lower legs, across her shoulders to her armpits and down her back, the skittering of parasites could be discerned by a close observer.

He had noticed that only in the area immediately surrounding her nipples was there any evidence of that supple epidermis enjoyed by advanced members of the species.

Members of the pack knew how to clean themselves in the rivers, but they employed this talent infrequently and were as yet maladroit. The cats whom they slew were cleaner, being able to lick away the dirt as fancy took them.

Fingest trembled. Mind your mind he told himself. You know what you are.

He sighed. Why had humanity not retained an ability to lick itself clean, he wondered plaintively. So nice.

He felt a fastidious tremor run over his spine. It was somehow reassuring.

The bleeps were growing more insistent. Then the sound of her footfalls and her breathing came to him direct above the noise made by the receiver.

He stepped out on to the path and confronted her. The camera swiveled to follow his movements.

The fear in her eyes fought with wonderment.

Fingest aimed the nozzle at her, squeezed the button, and let her fall.

Tucking the anesthetic spray-can into his time-suit satchel, he eased on his surgical mask and walked round to her head. He squatted, hooked his gloved hands under her armpits, and dragged her backward from the track, to a place where they could not be seen—except by the camera.

You never knew. Her pack might be on their way to the watering place, and he couldn't afford to risk letting them disturb him.

He laid her on her back and returned to where they had left the path in order to cover up his tracks.

That done, he made his way, panting a little, back to where he had left her.

The hover camera, its eye oscillating madly in the swiftly varying light and shade of the forest, followed him at a decent distance and kept him in focus all the time.

He knelt down in front of her, pulled her knees up, and parted them.

Fingest cursed as first one, then the other, of her legs obeyed the tensile demands of slumbering muscles and straightened themselves.

Finally he used his body to keep her thighs where he wanted them.

He ordered the camera to pause, and then he took a look.

The sweat trickled over the skin that covered his coccyx. It reminded him of what he had to do.



He ordered the camera to roll again.

Then he did it.

The seed was his.

The syringe was on hire from the Paterplanna AID Corporation.

Fingest, following medical advice, held her in that same position for as long as he could bear it.

The rays of the sun, falling ever nearer to the vertical through the foliage, gave way to cloud and, when the storm had passed, returned to slant from the opposite direction.

His muscles ached. The bugs were getting through his fading repellent. He was drenched. He was starving. He was steaming.

Surely that was enough? Surely by now enough time had elapsed for his sperm to have found the ovum?

Time, after all, was everything.

So Fingest moved.

Groaning as he did so, he forced his stiff leg muscles to take him back to the track. He could see no footprints. Maybe they had been washed away by the rain.

He went down to the river to make sure. No. They weren't there. The coast was clear.

Relieved, he made his way back to where she lay in oblivion, carrying his seed. Again, he hooked his arms under her armpits and dragged her back to the track.

Before spraying her nostrils with the revival compound, Fingest shook his cavewoman by the hand.

And the camera recorded it all.

Back in his chronocar, Fingest took a shower and played back some of the video recording, savoring in anticipation the effect it would have upon the Time Research Authority Committee and the twenty-third century as a whole.

He giggled. Then he held his breath. Then he wiped himself dry.

He sat down in front of his instrument panel and gripped the time lever. The chronocar, in obedience to his manipulations, compressed the next nine months into an apparent fifty seconds. The world outside turned col-

orless as day chased night across the sky five times a second. All the customary sounds of creation were whisked into high frequencies infinitely beyond the capacity of any earth-bred ear, and the only sound to remain was that of the planet groaning as it pursued three-quarters of its annual ellipse.

During those fifty seconds she swelled and burst open, bringing forth a young one, the like of which the pack had never seen.

When the chronocar stopped, the infant was still recovering from the prodding it had received from the females, who could not believe that such a fragile-looking child could be real. (Its mother, being unable to recall the circumstances of its conception, had a few doubts, too.)

But real it was, and it was beginning to thrive upon the supply of milk from those leathery breasts, milk which was a little thin by twenty-third-century standards, but abundant in quantity.

Fingest took the long route round to the clifftop that overhung their caves at the meeting place of forest and savannah.

Once there, he peered through his electroscope and was able quickly to pick out the young one that was his, recognizing it by the fairness and relative delicacy of its skin.

He noticed with satisfaction that it was a male and considered that the size of its cranium in relation to its body was more than gratifying when compared with those of the other young.

A quick look round confirmed that his hover camera was taking it all in.

If the infant survived, it would probably become leader of the pack, simply by virtue of its intelligence. That would be all to the good although fundamentally irrelevant to Fingest's purpose.

When that infant, hundreds of thousands of years ahead of its time, procreated, it would establish a line that would advance the evolutionary progress of the hominid by a gigantic stride.

That was his purpose: to introduce homo sapiens to the world.



It was difficult to see how he could fail. How the names of the great would diminish before his!

Fingest whistled cheerfully in opposition to the raucous birdsong as he made his way back again to the chronocar, concealed in a pleasant clearing on dry and flinty ground.

He sometimes wished it had been nearer the caves, but it was nice to get away, generally speaking.

After clambering into the vehicle Fingest cleaned himself up again, ate heartily, and programmed a two-year/ten-hour compression schedule before settling down to sleep.

The months passed quietly, with only a touch of acidosis to mar their perfection.

Fingest arose refreshed and jovial, enlivened by a sense of destiny. After showering and shaving and putting on some clean kit, he stepped out of the car into 450,000 B.C. again.

His clearing had spread somewhat, the surrounding undergrowth having given way here and there to grass. The shrubs he had chosen to conceal the chronocar were flourishing.

Satisfied, Fingest strode away, with his hover camera in deferential pursuit.

As he walked toward the clifftop he surprised a herd of thigh-high perissodactyla, who galloped away as though by starter's orders. He signaled the camera to follow their progress, which it did, until they disappeared.

When he got to his destination, Fingest cursed himself for hurrying unnecessarily. The mist was too thick to permit a view of the hominid pack below. He sat down to wait.

His daydream after a while became infected with the sense of another presence. He turned round and saw that beneath the faithful lens of the hover camera there was another eye.

Its oblong pupil blandly surveyed the landscape of which Fingest was a part, seeing him and yet not seeing him.

Fingest felt the rage he thought he had left behind well up within him. With trembling fingers he groped in his time-suit satchel for the missile guider. He found it and leveled it at the eye.

His rage gave way to exquisite pleasure as that all-seeing, all-ignoring pupil crumpled and clouded over as the missile penetrated its center.

The paleognathus to which the eye belonged took off from its temporary resting place with a groan and a squawk and a thunderous clap of powerful and inefficient wings.

Unable to see, but incapable of realizing that this disability made purposeful locomotion an impossibility, the great hen made, by chance, for Fingest.

He scrambled out of the way and recovered in time to see the huge semiflightless bird go headlong over the cliff.

The rumblings and clatterings caused by the creature's descent were replaced by a series of bellowings and a thin scream from down below when it fell onto some of the hominids.

Fingest stopped laughing when he realized that he had rolled into the fresh droppings of some large carnivore.

But suddenly, one thought drove out all the others.

That scream—it could have been a young one.

Oh no, he thought, it must not be . . . him.

He scrambled to the cliff edge and peered frantically into the haze.

At first he could see nothing. Then the mist at the back of a prospering sun thinned and cleared, and he could perceive the pack clustering round the dead paleognathus.

He searched among them for some sign, but they were pressed too close.

They broke up. Fingest noticed with despair that one was a female who appeared to be grieving over a small creature in her arms. Others were clustered around her. Some stroked her head; others touched her limbs. When they dispersed, others came up to do the same, preventing Fingest from seeing her or her little one properly.

He felt anger surge up again but controlled it. He would see, in time.

Then his heart gave a leap of pleasure.

Sitting on a rock, a little apart from a group of young ones, sat a still, small, unhappy two-year-old, plainly distinguishable from the others by his paleness, his low



degree of hirsuteness, and the size of his cranium.

Fingest's relief was unbounded.

He hadn't relished the thought of having to sire another. Well . . . not really.

The small ones started to play together in the dust as he watched them. Their game consisted largely of butting each other with their heads and indulging in a form of wrestling.

Occasionally one would break from the group to go to Fingest's offspring and pull him by the head hair or an ear or an arm, in an effort to get him to join in.

But he simply cringed and attempted to detach himself and remained where he was.

Fingest noticed that his chest and face were scarred. He assumed that this was because the infant was falling frequently in his attempts to walk and took it as a good sign, for many larger infants were still making no attempt to rise from all fours.

It seemed to Fingest that the pack was shrinking until he noticed that all the adults were female. This meant that the males were out hunting and the numbers below in fact indicated that the pack was prospering and increasing.

After some time the pack, adults and young, stopped what they were doing and congregated round a large rocky prominence in front of the cliff. One of the older females stepped forward, and pulled aside a boulder, revealing a cave, about three feet high, into which she crawled.

She reappeared after a few moments, rump first, pulling after her a sorry-looking carcass. The females pitched in, pulling off what pieces of meat they could find, handing bits behind them to the young gathered round.

Only Fingest's son remained apart.

Finally the skeleton was picked clean, and several of the adults tossed the bones into the surrounding scrub.

Only then did the female that Fingest had chosen nearly three years before go up to her child. She removed something from her mouth and placed it into his before ambling away.

The child rose and trotted a few steps after her before falling. She looked round as he screamed and then sat down dully to listen to his wailing.

Fingest, feeling pleased despite the smell clinging to his time suit, began to make his way once more back to the chronocar.

He moved cautiously, for he did not want to encounter any returning hunting party who would see him as easy meat, a simple prey for their wooden weapons.

The following morning or, that is to say, a decade later, Fingest awoke to the rainy season. It was not cold, but the world was sodden.

The father of mankind, overanxious to see progress (meaning the onset of his son's puberty) had made a three-month programming error.

The going was difficult. He swore but decided against doing a fresh program just to improve the weather. That would be extravagant.

Fingest set off through the downpour toward his cliff-top vantage point again. He had settled down to a steady pace, though slipping now and then, when suddenly there was a commotion behind him. He threw himself into some thick undergrowth. The hover camera followed him. Frantically he overrode its automatic controls to bring the apparatus down to the ground where it could not be seen.

No sooner had he done so than half a dozen young hominid males came running by uttering hoarse yelps that sounded something like laughter.

One of them tripped and fell over a hidden pothole. The others ran on. The one who had fallen attempted to rise but failed. He sat there moaning and fondling an injured limb. Then he began to make noises of alarm as well as of pain, and he began trying to move, as though away from some threat before him, by pushing at the ground with his arms and his good leg and shuffling backward on his seat.

Following the creature's alarmed gaze, Fingest observed a bright red figure approaching. As it drew near he saw that it was another young hominid. It was moving a bit awkwardly, carrying a broken branch that was too large for it to handle with ease.

The cranium was unusually large, the posture remarkably erect . . . yes, indeed it was his. As it drew



nearer, the closer view revealed that stuck to the scarlet body here and there were the skins of some of the berries which had been used to stain it.

A prehistoric practical joke. Fingest, as the butt of so many of the twenty-third-century variety, was reminded of the futile rage felt by the victims of such tricks.

The scarlet pursuer stopped in his chase of the others and stood over the wounded creature. He bared his teeth once, compressed his lips and growled.

Without changing his expression again he clubbed the other creature so that it keeled over. Fingest called his camera up from the ground and nodded it to the scene.

The injured creature was levered over with the other's club until it was face upward and then screamed as the weapon was brought down hard. It was belabored about the thorax and abdomen until the blood came spurting from its mouth.

Fingest, who had so often done much the same in his imaginings, applauded silently when the performance was over. Then he crept behind his offspring and sent a cloud of anesthetic in his direction.

The hover-camera watched Fingest carry the naked young body to the clearing where the chronocar was parked. There he tied one of its arms to a sapling before reviving it. He had taken the precaution of putting some tranquilizer additive into the revival spray.

But the founder of all mankind was annoyed at the lack of interest shown by his captive upon regaining consciousness; he seemed disappointingly docile, eating all that was offered without reserve, exhibiting no sign of surprise or distress at finding himself tied up, failing totally to react to the other's presence.

Resisting the temptation to let his offspring rot, Fingest dug about in the soil. It did not take him long to find the kind of flint that he sought, and he began chipping at it with another.

He had not intended to interfere—not believing in more personal involvement than was strictly necessary—but if his son were to be the odd one out, the object of persecution, perhaps, in the pack, then he must have a

weapon with which to defend himself. For he had more than himself to defend.

And if he could see how to fashion a flint, then he would also have a skill with which to ingratiate himself to the pack—and earn its protection, to say nothing of its females.

Fingest, making the world's first (or last) stone blade, wondered if the creature that was his offspring had yet . . . he looked at its genitalia and decided that it couldn't have. He sighed.

When the blade was finished, Fingest demonstrated its uses. First—with a missile—he brought down a large lagomorph cropping nearby and brought it back to where his son sat dully waiting.

With three blows of the blade, he separated the lagomorph's head from its body. Fingest discerned a form of comprehension and pleasure express itself upon those sullen features.

Then he skinned the animal with the assistance of the sharp flint and sensed that he was being watched closely, by both camera and captive.

Hoping that the lesson would sink in, he cut the pelt into strips and laid them out side by side. Cutting some tying cord at first into similar lengths, he knotted them together again to last the blade at right angles to a stout stick (would the creature learn the purpose and art of thong-making from that? He should).

With the ax he had thus fashioned, Fingest chopped down a thin, straight sapling. After looking to see if there had been any reaction, he quickly untied the blade from the ax haft and retied it to one end of the sapling to make a spear.

He drove the spear at the lagomorph's dead body, making a great wound. Could the creature, his son, fail to learn from that? Then Fingest hurled the spear from him. It was not a very good throw, and when it landed, the shaft fell off. But at least the blade had stuck into the ground, and his son would have been able to observe the flight and trajectory, and work out the possibilities . . .

He retrieved the sharp-edged stone and took it back to where his son sat tied to the tree. A few seconds'



hacking at the cord released the bonds, and Fingest stood back, smiled, and offered the flint to his mongrel offspring.

After hesitating some seconds the other took it and, as Fingest turned to go, raised it above his head preparatory to smashing it down on to his father's skull.

## THE ELECTRIC ANT

PHILIP K. DICK

*Philip K. Dick creates universes like Chinese puzzle boxes—or one of those wooden Russian dolls which separates to show a smaller doll inside, which separates to show . . . Most settle for the last, smallest, solid wooden doll within. Not so Mr. Dick, who shows that this one comes apart as well in his story of the tragic electric ant.*

At four fifteen in the afternoon, T.S.T., Garson Poole woke up in his hospital bed, knew that he lay in a hospital bed in a three-bed ward, and realized in addition two things: that he no longer had a right hand and that he felt no pain.

They have given me a strong analgesic, he said to himself as he stared at the far wall with its window showing downtown New York. Webs in which vehicles and peds darted and wheeled glimmered in the late afternoon sun, and the brilliance of the aging light pleased him. It's not yet out, he thought. And neither am I.

A fone lay on the table beside his bed; he hesitated, then picked it up and dialed for an outside line. A moment later he was faced by Louis Danceman, in charge of Tri-Plan's activities while he, Garson Poole, was elsewhere.



"Thank god you're alive," Danceman said, seeing him; his big, fleshy face with its moon's surface of pock marks flattened with relief. "I've been calling all—"

"I just don't have a right hand," Poole said.

"But you'll be okay. I mean, they can graft another one on."

"How long have I been here?" Poole said. He wondered where the nurses and doctors had gone to; why weren't they clucking and fussing about him making a call?

"Four days," Danceman said. "Everything here at the plant is going splunkishly. In fact we've splunked orders from three separate police systems, all here on Terra. Two in Ohio, one in Wyoming. Good solid orders, with one-third in advance and the usual three-year-lease-option."

"Come and get me out of here," Poole said.

"I can't get you out until the new hand—"

"I'll have it done later." He wanted desperately to get back to familiar surroundings; memory of the mercantile squib looming grotesquely on the pilot screen careened at the back of his mind; if he shut his eyes he felt himself back in his damaged craft as it plunged from one vehicle to another, piling up enormous damage as it went. The kinetic sensations . . . he winced, recalling them. I guess I'm lucky, he said to himself.

"Is Sarah Benton there with you?" Danceman asked.

"No." Of course; his personal secretary—if only for job considerations—would be hovering close by, mothering him in her jejune, infantile way. All heavy-set women like to mother people, he thought. And they're dangerous; if they fall on you they can kill you. "Maybe that's what happened to me," he said aloud. "Maybe Sarah fell on my squib."

"No, no; a tie rod in the steering fin of your squib split apart during the heavy rush-hour traffic and you—"

"I remember." He turned in his bed as the door of the ward opened; a white-clad doctor and two blue-clad nurses appeared, making their way toward his bed. "I'll talk to you later," Poole said, and hung up the fone. He took a deep, expectant breath.

"You shouldn't be foning quite so soon," the doctor said as he studied the chart. "Mr. Garson Poole, owner

of Tri-Plan Electronics. Makers of random ident darts that track their prey for a circle-radius of a thousand miles, responding to unique enceph wave patterns. You're a successful man, Mr. Poole. But, Mr. Poole, you're not a man. You're an electric ant."

"Christ," Poole said, stunned.

"So we can't really treat you here, now that we've found out. We knew, of course, as soon as we examined your injured right hand; we saw the electronic components and then we made torso X-rays and of course they bore out our hypothesis."

"What," Poole said, "is an 'electric ant'?" But he knew; he could decipher the term.

A nurse said, "An organic robot."

"I see," Poole said. Frigid perspiration rose to the surface of his skin, across all his body.

"You didn't know," the doctor said.

"No." Poole shook his head.

The doctor said, "We get an electric ant every week or so. Either brought in here from a squib accident—like yourself—or one seeking voluntary admission . . . one who, like yourself, has never been told, who has functioned alongside humans, believing himself—*itself*—human. As to your hand—" He paused.

"Forget my hand," Poole said savagely.

"Be calm." The doctor leaned over him, peered acutely down into Poole's face. "We'll have a hospital boat convey you over to a service facility where repairs, or replacement, on your hand can be made at a reasonable expense, either to yourself, if you're self-owned, or to your owners, if such there are. In any case you'll be back at your desk at Tri-Plan, functioning just as before."

"Except," Poole said, "now I know." He wondered if Danceman or Sarah or any of the others at the office knew. Had they—or one of them—purchased him? Designed him? A figurehead, he said to himself; that's all I've been. I must never really have run the company; it was a delusion implanted in me when I was made . . . along with the delusion that I am human and alive.

"Before you leave for the repair facility," the doctor said, "could you kindly settle your bill at the front desk?"



Poole said acidly, "How can there be a bill if you don't treat ants here?"

"For our services," the nurse said. "Up until the point we knew."

"Bill me," Poole said, with furious, impotent anger. "Bill my firm." With massive effort he managed to sit up; his head swimming, he stepped haltingly from the bed and onto the floor. "I'll be glad to leave here," he said as he rose to a standing position. "And thank you for your humane attention."

"Thank you, too, Mr. Poole," the doctor said. "Or rather I should say just Poole."

At the repair facility he had his missing hand replaced.

It proved fascinating, the hand; he examined it for a long time before he let the technicians install it. On the surface it appeared organic—in fact, on the surface, it was. Natural skin covered natural flesh, and true blood filled the veins and capillaries. But, beneath that, wires and circuits, miniaturized components, gleamed . . . looking deep into the wrist he saw surge gates, motors, multistage valves, all very small. Intricate. And—the hand cost forty frogs. A week's salary, insofar as he drew it from the company payroll.

"Is this guaranteed?" he asked the technicians as they fused the "bone" section of the hand to the balance of the body.

"Ninety days, parts and labor," one of the technicians said. "Unless subjected to unusual or intentional abuse."

"That sounds vaguely suggestive," Poole said.

The technician, a man—all of them were men—said, regarding him keenly, "You've been posing?"

"Unintentionally," Poole said.

"And now it's intentional?"

Poole said, "Exactly."

"Do you know why you never guessed? There must have been signs . . . clickings and whirrings from inside you, now and then. You never guessed because you were programmed not to notice. You'll now have the same difficulty finding out why you were built and for whom you've been operating."

"A slave," Poole said. "A mechanical slave."

"You've had fun."

"I've lived a good life," Poole said. "I've worked hard."

He paid the facility its forty frogs, flexed his new fingers, tested them out by picking up various objects, such as coins, then departed. Ten minutes later he was aboard a public carrier, on his way home. It had been quite a day.

At home, in his one-room apartment, he poured himself a shot of Jack Daniel Purple Label—sixty years old—and sat sipping it, meanwhile gazing through his sole window at the building on the opposite side of the street. Shall I go to the office? he asked himself. If so, why? If not, why? Choose one. Christ, he thought, it undermines you, knowing this. I'm a freak, he realized. An inanimate object mimicking an animate one. But—he felt alive. Yet . . . he felt differently, now. About himself. Hence about everyone, especially Danceman and Sarah, everyone at Tri-Plan.

I think I'll kill myself, he said to himself. But I'm probably programmed not to do that; it would be a costly waste which my owner would have to absorb. And he wouldn't want to.

Programmed. In me somewhere, he thought, there is a matrix fitted in place, a grid screen that cuts me off from certain thoughts. Certain actions. And forces me into others. I am not free. I never was, but now I know it; that makes it different.

Turning his window to opaque, he snapped on the overhead light, carefully set about removing his clothing, piece by piece. He had watched carefully as the technicians at the repair facility had attached his new hand: He had a rather clear idea, now, of how his body had been assembled. Two major panels, one in each thigh; the technicians had removed the panels to check the circuit complexes beneath. If I'm programmed, he decided, the matrix probably can be found there.

The maze of circuitry baffled him. I need help, he said to himself. Let's see . . . what's the fone code for the class BBB computer we hire at the office?

He picked up the fone, dialed the computer at its permanent location in Boise, Idaho.



"Use of this computer is prorated at a five frogs per minute basis," a mechanical voice from the fone said. "Please hold your mastercreditchargeplate before the screen."

He did so.

"At the sound of the buzzer you will be connected with the computer," the voice continued. "Please query it as rapidly as possible, taking into account the fact that its answer will be given in terms of a microsecond, while your query will—" He turned the sound down, then. But quickly turned it up as the blank audio input of the computer appeared on the screen. At this moment the computer had become a giant ear, listening to him—as well as fifty thousand other queriers throughout Terra.

"Scan me visually," he instructed the computer. "And tell me where I will find the programming mechanism which controls my thoughts and behavior." He waited. On the fone's screen a great active eye, multilensed, peered at him; he displayed himself for it, there in his one-room apartment.

The computer said, "Remove your chest panel. Apply pressure at your breastbone and then ease outward."

He did so. A section of his chest came off; dizzily, he set it down on the floor.

"I can distinguish control modules," the computer said, "but I can't tell which—" It paused as its eye roved about on the fone screen. "I distinguish a roll of punched tape mounted above your heart mechanism. Do you see it?" Poole craned his neck, peered. He saw it, too. "I will have to sign off," the computer said. "After I have examined the data available to me I will contact you and give you an answer. Good day." The screen died out.

I'll yank the tape out of me, Poole said to himself. Tiny . . . no larger than two spools of thread, with a scanner mounted between the delivery drum and the take-up drum. He could not see any sign of motion; the spools seemed inert. They must cut in as override, he reflected, when specific situations occur. Override to my encephalic processes. And they've been doing it all my life.

He reached down, touched the delivery drum. All I have to do is tear this out, he thought, and—

The fone screen relit. "Mastercreditchargeplate number

3-BNX-882-HQR446-T," the computer's voice came. "This is BBB-307DR recontacting you in response to your query of sixteen seconds' lapse, November 4, 1992. The punched tape roll above your heart mechanism is not a programming turret but is in fact a reality-supply construct. All sense stimuli received by your central neurological system emanate from that unit and tampering with it would be risky if not terminal." It added, "You appear to have no programming circuit. Query answered. Good day." It flicked off.

Poole, standing naked before the fone screen, touched the tape drum once again, with calculated, enormous caution. I see, he thought wildly. Or do I see? This unit—

If I cut the tape, he realized, my world will disappear. Reality will continue for others, but not for me. Because my reality, my universe, is coming to me from this minuscule unit. Fed into the scanner and then into my central nervous system as it snailishly unwinds.

It has been unwinding for years, he decided.

Getting his clothes, he redressed, seated himself in his big armchair—a luxury imported into his apartment from Tri-Plan's main offices—and lit a tobacco cigarette. His hands shook as he laid down his initialed lighter; leaning back, he blew smoke before himself, creating a nimbus of gray.

I have to go slowly, he said to himself. What am I trying to do? Bypass my programming? But the computer found no programming circuit. Do I want to interfere with the reality tape? And if so, *why*?

Because, he thought, if I control that, I control reality. At least so far as I'm concerned. My subjective reality . . . but that's all there is. Objective reality is a synthetic construct, dealing with a hypothetical universalization of a multitude of subjective realities.

My universe is lying within my fingers, he realized. If I can just figure out how the damn thing works. All I set out to do originally was to search for and locate my programming circuit so I could gain true homeostatic functioning: control of myself. But with this—

With this he did not merely gain control of himself; he gained control over everything.



And this sets me apart from every human who ever lived and died, he thought somberly.

Going over to the fone he dialed his office. When he had Danceman on the screen he said briskly, "I want you to send a complete set of microtools and enlarging screen over to my apartment. I have some microcircuitry to work on." Then he broke the connection, not wanting to discuss it.

A half hour later a knock sounded on his door. When he opened up he found himself facing one of the shop foremen, loaded down with microtools of every sort. "You didn't say exactly what you wanted," the foreman said, entering the apartment. "So Mr. Danceman had me bring everything."

"And the enlarging-lens system?"

"In the truck, up on the roof."

Maybe what I want to do, Poole thought, is die. He lit a cigarette, stood smoking and waiting as the shop foreman lugged the heavy enlarging screen, with its power supply and control panel, into the apartment. This is suicide, what I'm doing here. He shuddered.

"Anything wrong, Mr. Poole?" the shop foreman said as he rose to his feet, relieved of the burden of the enlarging-lens system. "You must still be rickety on your pins from your accident."

"Yes," Poole said quietly. He stood tautly waiting until the foreman left.

Under the enlarging-lens system the plastic tape assumed a new shape: a wide track along which hundreds of thousands of punch-holes worked their way. I thought so, Poole thought. Not recorded as charges on a ferrous oxide layer but actually punched-free slots.

Under the lens the strip of tape visibly oozed forward. Very slowly, but it did, at uniform velocity, move in the direction of the scanner.

The way I figure it, he thought, is that the punched holes are *on* gates. It functions like a player piano; solid is no, punch-hole is yes. How can I test this?

Obviously by filling in a number of the holes.

He measured the amount of tape left on the delivery spool, calculated—at great effort—the velocity of the

tape's movement, and then came up with a figure. If he altered the tape visible at the ingoing edge of the scanner, five to seven hours would pass before that particular time period arrived. He would in effect be painting out stimuli due a few hours from now.

With a microbrush he swabbed a large—relatively large—section of tape with opaque varnish . . . obtained from the supply kit accompanying the microtools. I have smeared out stimuli for about half an hour, he pondered. Have covered at least a thousand punches.

It would be interesting to see what change, if any, overcame his environment, six hours from now.

Five and a half hours later he sat at Krackter's, a superb bar in Manhattan, having a drink with Danceman.

"You look bad," Danceman said.

"I am bad," Poole said. He finished his drink, a Scotch sour, and ordered another.

"From the accident?"

"In a sense, yes."

Danceman said, "Is it—something you found out about yourself?"

Raising his head, Poole eyed him in the murky light of the bar. "Then you know."

"I know," Danceman said, "that I should call you 'Poole' instead of 'Mr. Poole.' But I prefer the latter and will continue to do so."

"How long have you known?" Poole said.

"Since you took over the firm. I was told that the actual owners of Tri-Plan, who are located in the Prox System, wanted Tri-Plan run by an electric ant whom they could control. They wanted a brilliant and forceful—"

"The real owners?" This was the first he had heard about that. "We have two thousand stockholders. Scattered everywhere."

"Marvis Bey and her husband Ernan, on Prox 4, control fifty-one percent of the voting stock. This has been true from the start."

"Why didn't I know?"

"I was told not to tell you. You were to think that you yourself made all company policy. With my help. But actually I was feeding you what the Beys fed to me."



"I'm a figurehead," Poole said.

"In a sense, yes." Danceman nodded. "But you'll always be 'Mr. Poole' to me."

A section of the far wall vanished. And with it, several people at tables nearby. And—

Through the big glass side of the bar, the skyline of New York City flickered out of existence.

Seeing his face, Danceman said, "What is it?"

Poole said hoarsely, "Look around. Do you see any changes?"

After looking around the room, Danceman said, "No. What like?"

"You still see the skyline?"

"Sure. Smoggy as it is. The lights wink—"

"Now I know," Poole said. He had been right; every punch-hole covered up meant the disappearance of some object in his reality world. Standing, he said, "I'll see you later, Danceman. I have to get back to my apartment; there's some work I'm doing. Good night." He strode from the bar and out onto the streets, searching for a cab.

No cabs.

Those, too, he thought. I wonder what else I painted over. Prostitutes? Flowers? Prisons?

There, in the bar's parking lot, Danceman's squib. I'll take that, he decided. There are still cabs in Danceman's world; he can get one later. Anyhow it's a company car, and I hold a copy of the key.

Presently he was in the air, turning toward his apartment.

New York City had not returned. To the left and right vehicles and buildings, streets, ped-runners, signs . . . and in the center nothing. How can I fly into that? he asked himself. I'd disappear.

Or would I? He flew toward the nothingness.

Smoking one cigarette after another he flew in a circle for fifteen minutes . . . and then, soundlessly, New York reappeared. He could finish his trip. He stubbed out his cigarette (a waste of something so valuable) and shot off in the direction of his apartment.

If I insert a narrow opaque strip, he pondered as he unlocked his apartment door, I can—

His thoughts ceased. Someone sat in his living room chair, watching a captain kirk on the TV. "Sarah," he said, nettled.

She rose, well-padded but graceful. "You weren't at the hospital, so I came here. I still have that key you gave me back in March after we had that awful argument. Oh . . . you look so depressed." She came up to him, peeped into his face anxiously. "Does your injury hurt that badly?"

"It's not that." He removed his coat, tie, shirt, and then his chest panel; kneeling down he began inserting his hands into the microtool gloves. Pausing, he looked up at her and said, "I found out I'm an electric ant. Which from one standpoint opens up certain possibilities, which I am exploring now." He flexed his fingers and at the far end of the left Waldo a micro screwdriver moved, magnified into visibility by the enlarging lens system. "You can watch," he informed her. "If you so desire."

She had begun to cry.

"What's the matter?" he demanded savagely, without looking up from his work.

"I—it's just so sad. You've been such a good employer to all of us at Tri-Plan. We respect you so. And now it's all changed."

The plastic tape had an unpunched margin at top and bottom; he cut a horizontal strip, very narrow, then, after a moment of great concentration, cut the tape itself four hours away from the scanning head. He then rotated the cut strip into a right-angle piece in relation to the scanner, fused it in place with a micro heat element, then reattached the tape reel to its left and right sides. He had, in effect, inserted a dead twenty minutes into the unfolding flow of his reality. It would take effect—according to his calculations—a few minutes after midnight.

"Are you fixing yourself?" Sarah asked timidly.

Poole said, "I'm freezing myself." Beyond this he had several other alterations in mind. But first he had to test his theory; blank, unpunched tape meant no stimuli, in which case the *lack* of tape . . .

"That look on your face," Sarah said. She began gathering up her purse, coat, rolled-up aud-vid magazine.



"I'll go; I can see how you feel about finding me here."

"Stay," he said. "I'll watch the captain kirk with you." He got into his shirt. "Remember years ago when there were—what was it?—twenty or twenty-two TV channels? Before the government shut down the independents?"

She nodded.

"What would it have looked like," he said, "if this TV set projected all channels onto the cathode ray screen *at the same time*? Could we have distinguished anything in the mixture?"

"I don't think so."

"Maybe we could learn to. Learn to be selective; do our own job of perceiving what we wanted to and what we didn't. Think of the possibilities, if our brain could handle twenty images at once; think of the amount of knowledge which could be stored during a given period. I wonder if the brain, the human brain—" He broke off. "The human brain couldn't do it," he said, presently, reflecting to himself. "But in theory a quasi-organic brain might."

"Is that what you have?" Sarah asked.

"Yes," Poole said.

They watched the captain kirk to its end, and then they went to bed. But Poole sat up against his pillows, smoking and brooding. Beside him, Sarah stirred restlessly, wondering why he did not turn off the light.

Eleven fifty. It would happen anytime, now.

"Sarah," he said, "I want your help. In a very few minutes something strange will happen to me. It won't last long, but I want you to watch me carefully. See if I—" He gestured. "Show any changes. If I seem to go to sleep, or if I talk nonsense, or—" He wanted to say, if I disappear. But he did not. "I won't do you any harm, but I think it might be a good idea if you armed yourself. Do you have your anti-mugging gun with you?"

"In my purse." She had become fully awake now; sitting up in bed, she gazed at him with wild fright, her ample shoulders tanned and freckled in the light of the room.

He got her gun for her.

The room stiffened into paralyzed immobility. Then the colors began to drain away. Objects diminished until, smoke-like, they flitted away into shadows. Darkness filmed everything as the objects in the room became weaker and weaker.

The last stimuli are dying out, Poole realized. He squinted, trying to see. He made out Sarah Benton, sitting in the bed: a two-dimensional figure that doll-like had been propped up, there to fade and dwindle. Random gusts of dematerialized substance eddied about in unstable clouds; the elements collected, fell apart, then collected once again. And then the last heat, energy and light dissipated; the room closed over and fell into itself, as if sealed off from reality. And at that point absolute blackness replaced everything, space without depth, not nocturnal but rather stiff and unyielding. And in addition he heard nothing.

Reaching, he tried to touch something. But he had nothing to reach with. Awareness of his own body had departed along with everything else in the universe. He had no hands, and even if he had, there would be nothing for them to feel.

I am still right about the way the damn tape works, he said to himself, using a nonexistent mouth to communicate an invisible message.

Will this pass in ten minutes? he asked himself. Am I right about that, too? He waited . . . but knew intuitively that his time sense had departed with everything else. I can only wait, he realized. And hope it won't be long.

To pace himself, he thought, I'll make up an encyclopedia; I'll try to list everything that begins with an "a." Let's see. He pondered. Apple, automobile, acksetron, atmosphere, Atlantic, tomato aspic, advertising—he thought on and on, categories slithering through his fright-haunted mind.

All at once light flickered on.

He lay on the couch in the living room, and mild sunlight spilled in through the single window. Two men bent over him, their hands full of tools. Maintenance men, he realized. They've been working on me.

"He's conscious," one of the technicians said. He rose,



stood back; Sarah Benton, dithering with anxiety, replaced him.

"Thank God!" she said, breathing wetly in Poole's ear. "I was so afraid; I called Mr. Danceman finally about—"

"What happened?" Poole broke in harshly. "Start from the beginning and for God's sake speak slowly. So I can assimilate it all."

Sarah composed herself, paused to rub her nose, and then plunged on nervously, "You passed out. You just lay there, as if you were dead. I waited until two thirty and you did nothing. I called Mr. Danceman, waking him up unfortunately, and he called the electric-ant maintenance—I mean, the organic-robby maintenance people, and these two men came about four forty-five, and they've been working on you ever since. It's now six fifteen in the morning. And I'm very cold and I want to go to bed; I can't make it in to the office today; I really can't." She turned away, sniffing. The sound annoyed him.

One of the uniformed maintenance men said, "You've been playing around with your reality tape."

"Yes," Poole said. Why deny it? Obviously they had found the inserted solid strip. "I shouldn't have been out that long," he said. "I inserted a ten-minute strip only."

"It shut off the tape transport," the technician explained. "The tape stopped moving forward; your insertion jammed it, and it automatically shut down to avoid tearing the tape. Why would you want to fiddle around with that? Don't you know what you could do?"

"I'm not sure," Poole said.

"But you have a good idea."

Poole said acridly, "That's why I'm doing it."

"Your bill," the maintenance man said, "is going to be ninety-five frogs. Payable in installments, if you so desire."

"Okay," he said; he sat up groggily, rubbed his eyes and grimaced. His head ached and his stomach felt totally empty.

"Shave the tape next time," the primary technician told him. "That way it won't jam. Didn't it occur to you that it had a safety factor built into it? So it would stop rather than—"

"What happens," Poole interrupted, his voice low and intently careful, "if no tape passes under the scanner? No tape—nothing at all? The photocell shining upward without impedance?"

The technicians glanced at each other. One said, "All the neuro circuits jump their gaps and short out."

"Meaning what?" Poole said.

"Meaning it's the end of the mechanism."

Poole said, "I've examined the circuit. It doesn't carry enough voltage to do that. Metal won't fuse under such slight loads of current, even if the terminals are touching. We're talking about a millionth of a watt along a cesium channel perhaps a sixteenth of an inch in length. Let's assume there are a billion possible combinations at one instant arising from the punch-outs on the tape. The total output isn't cumulative; the amount of current depends on what the battery details for that module, and it's not much. With all gates open and going."

"Would we lie?" one of the technicians asked wearily.

"Why not?" Poole said. "Here I have an opportunity to experience everything. Simultaneously. To know the universe in its entirety, to be momentarily in contact with all reality. Something that no human can do. A symphonic score entering my brain outside of time, all notes, all instruments sounding at once. And all symphonies. Do you see?"

"It'll burn you out," both technicians said, together.

"I don't think so," Poole said.

Sarah said, "Would you like a cup of coffee, Mr. Poole?"

"Yes," he said; he lowered his legs, pressed his cold feet against the floor, shuddered. He then stood up. His body ached. They had me lying all night on the couch, he realized. All things considered, they could have done better than that.

At the kitchen table in the far corner of the room, Garson Poole sat sipping coffee across from Sarah. The technicians had long since gone.

"You're not going to try any more experiments on yourself, are you?" Sarah asked wistfully.



Poole grated, "I would like to control time. To reverse it." I will cut a segment of tape out, he thought, and fuse it in upside down. The casual sequences will then flow the other way. Thereupon I will walk backward down the steps from the roof field, back up to my door, push a locked door open, walk backward to the sink, where I will get out a stack of dirty dishes. I will seat myself at this table before the stack, fill each dish with food produced from my stomach . . . I will then transfer the food to the refrigerator. The next day I will take the food out of the refrigerator, pack it in bags, carry the bags to a supermarket, distribute the food here and there in the store. And at last, at the front counter, they will pay me money for this, from their cash register. The food will be packed with other food in big plastic boxes, shipped out of the city into the hydroponic plants on the Atlantic, there to be joined back to trees and bushes or the bodies of dead animals or pushed deep into the ground. But what would all that prove? A video tape running backward . . . I would know no more than I know now, which is not enough.

What I want, he realized, is ultimate and absolute reality, for one microsecond. After that it doesn't matter, because all will be known; nothing will be left to understand or see.

I might try one other change, he said to himself. Before I try cutting the tape. I will prick new punch-holes in the tape and see what presently emerges. It will be interesting because I will not know what the holes I make mean.

Using the tip of a microtool, he punched several holes, at random, on the tape. As close to the scanner as he could manage . . . he did not want to wait.

"I wonder if you'll see it," he said to Sarah. Apparently not, insofar as he could extrapolate. "Something may show up," he said to her. "I just want to warn you; I don't want you to be afraid."

"Oh dear," Sarah said tinnily.

He examined his wristwatch. One minute passed, then a second, a third. And then—

In the center of the room appeared a flock of green and black ducks. They quacked excitedly, rose from the

floor, fluttered against the ceiling in a dithering mass of feathers and wings and frantic in their vast urge, their instinct, to get away.

"Ducks," Poole said marveling. "I punched a hole for a flight of wild ducks."

Now something else appeared. A park bench with an elderly, tattered man seated on it, reading a torn, bent newspaper. He looked up, dimly made out Poole, smiled briefly at him with badly made dentures, and then returned to his folded-back newspaper. He read on.

"Do you see him?" Poole asked Sarah. "And the ducks?" At that moment the ducks and the park bum disappeared. Nothing remained of them. The interval of their punch-holes had quickly passed.

"They weren't real," Sarah said. "Were they? So how?"

"You're not real," he told Sarah. "You're a stimulus-factor on my reality tape. A punch-hole that can be glazed over. Do you also have an existence in another reality tape or one in an objective reality?" He did not know; he couldn't tell. Perhaps Sarah did not know, either. Perhaps she existed in a thousand reality tapes; perhaps on every reality tape ever manufactured. "If I cut the tape," he said, "you will be everywhere and nowhere. Like everything else in the universe. At least as far as I am aware of it."

Sarah faltered, "I am real."

"I want to know you completely," Poole said. "To do that I must cut the tape. If I don't do it now, I'll do it some other time; it's inevitable that eventually I'll do it." So why wait? he asked himself. And there is always the possibility that Danceman has reported back to my maker, that they will be making moves to head me off. Because, perhaps, I'm endangering their property—myself.

"You make me wish I had gone to the office after all," Sarah said, her mouth turned down with dimpled gloom.

"Go," Poole said.

"I don't want to leave you alone."

"I'll be fine," Poole said.

"No, you're not going to be fine. You're going to unplug yourself or something, kill yourself because you've found out you're just an electric ant and not a human being."



He said, presently, "Maybe so." Maybe it boiled down to that.

"And I can't stop you," she said.

"No," he nodded in agreement.

"But I'm going to stay," Sarah said. "Even if I can't stop you. Because if I do leave and you do kill yourself, I'll always ask myself for the rest of my life what would have happened if I had stayed. You see?"

Again he nodded.

"Go ahead," Sarah said.

He rose to his feet. "It's not pain I'm going to feel," he told her. "Although it may look like that to you. Keep in mind the fact that organic robots have minimal pain circuits in them. I will be experiencing the most intense—"

"Don't tell me any more," she broke in. "Just do it if you're going to, or don't do it if you're not."

Clumsily—because he was frightened—he wriggled his hands into the microglove assembly, reached to pick up a tiny tool: a sharp cutting blade. "I am going to cut a tape mounted inside my chest panel," he said, as he gazed through the enlarging-lens system. "That's all." His hand shook as it lifted the cutting blade. In a second it can be done, he realized. All over. And—I will have time to fuse the cut ends of tape back together, he realized. A half hour at least. If I change my mind.

He cut the tape.

Staring at him, cowering, Sarah whispered, "Nothing happened."

"I have thirty or forty minutes." He reseated himself at the table, having drawn his hands from the gloves. His voice, he noticed, shook; undoubtedly Sarah was aware of it, and he felt anger at himself, knowing that he had alarmed her. "I'm sorry," he said, irrationally; he wanted to apologize to her. "Maybe you ought to leave," he said in panic; again he stood up. So did she, reflexively, as if imitating him; bloated and nervous, she stood there palpitating. "Go away," he said thickly. "Back to the office where you ought to be. Where we both ought to be." I'm going to fuse the tape-ends together, he told himself; the tension is too great for me to stand.

Reaching his hands toward the gloves, he groped to pull them over his straining fingers. Peering into the enlarging screen he saw the beam from the photoelectric gleam upward, pointed directly into the scanner; at the same time he saw the end of the tape disappearing under the scanner . . . he saw this, understood it; I'm too late, he realized. It has passed through. God, he thought, help me. It has begun winding at a rate greater than I calculated. So it's *now* that—

He saw apples and cobblestones and zebras. He felt warmth, the silky texture of cloth; he felt the ocean lapping at him and a great wind, from the north, plucking at him as if to lead him somewhere. Sarah was all around him, so was Danceman, New York glowed in the night, and the squibs about him scuttled and bounced through night skies and daytime and flooding and drought. Butter relaxed into liquid on his tongue, and at the same time hideous odors and tastes assailed him: the bitter presence of poisons and lemons and blades of summer grass. He drowned; he fell; he lay in the arms of a woman in a vast white bed which at the same time dinned shrilly in his ear: the warning noise of a defective elevator in one of the ancient, ruined downtown hotels. I am living, I have lived, I will never live, he said to himself, and with his thoughts came every word, every sound; insects squeaked and raced, and he half sank into a complex body of homeostatic machinery located somewhere in Tri-Plan's labs.

He wanted to say something to Sarah. Opening his mouth he tried to bring forth words—a specific string of them out of the enormous mass of them brilliantly lighting his mind, scorching him with their utter meaning.

His mouth burned. He wondered why.

Frozen against the wall, Sarah Benton opened her eyes and saw the curl of smoke ascending from Poole's half-opened mouth. Then the roby sank down, knelt on elbows and knees, then slowly spread out in a broken, crumpled heap. She knew without examining it that it had "died."

Poole did it to itself, she realized. And it couldn't feel pain; it said so itself. Or at least not very much pain; maybe a little. Anyhow, now it is over.



I had better call Mr. Danceman and tell him what's happened, she decided. Still shaky, she made her way across the room to the fone; picking it up, she dialed from memory.

It thought I was a stimulus-factor on its reality tape, she said to herself. So it thought I would die when it "died." How strange, she thought. Why did it imagine that? It had never been plugged into the real world; it had "lived" in an electronic world of its own. How bizarre.

"Mr. Danceman," she said, when the circuit to his office had been put through. "Poole is gone. It destroyed itself right in front of my eyes. You'd better come over."

"So we're finally free of it."

"Yes, won't it be nice?"

Danceman said, "I'll send a couple of men over from the shop." He saw past her, made out the sight of Poole lying by the kitchen table. "You go home and rest," he instructed Sarah. "You must be worn out by all this."

"Yes," she said. "Thank you, Mr. Danceman." She hung up and stood, aimlessly.

And then she noticed something.

My hands, she thought. She held them up. Why is it I can see through them?

The walls of the room, too, had become ill-defined.

Trembling, she walked back to the inert roby, stood by it, not knowing what to do. Through her legs the carpet showed, and then the carpet became dim, and she saw, through it, further layers of disintegrating matter beyond.

Maybe if I can fuse the tape-ends back together, she thought. But she did not know how. And already Poole had become vague.

The wind of early morning blew about her. She did not feel it; she had begun, now, to cease to feel.

The winds blew on.

## THE MAN INSIDE

BRUCE MC ALLISTER

*The author of this story is a young man of consistent endeavor. As a term project in high school he submitted a series of questions to many science-fiction writers. The results were so interesting he amplified them for a graduate paper in college. Now struggling in university to see if he can destroy the creative-writing program before it destroys him, he has taken off enough time to produce this brief and crystal-sharp study.*

I am ten and a half years old, and I must be important because I'm the only boy they let into this laboratory of the hospital. My father is in the other room of this laboratory. He's what Dr. Plankt calls a "catatonic," because Dad just sits in one position all the time like he can't make up his mind what to do. And that makes Dr. Plankt sad, but today Dr. Plankt is happy because of his new machine and what it will do with Dad.

Dr. Plankt said, "This is the first time a computer will be able to articulate a man's thoughts." That means that when they put the "electrodes" (those are wires) on Dad's head, and the "electrodes" are somehow attached to Dr. Plankt's big machine with the spinning tapes on it, that



machine will tell us what's in Dad's head. Dr. Plankt also said, "Today we dredge the virgin silence of an in-state catatonic for the first time in history." So Dr. Plankt is happy today.

I am too, for Dad, because he will be helped by this "experiment" (everything that's happening today) and for Dr. Plankt, who is good to me. He helps my "ulcer" (a hurting sore inside me) feel better, and he also gives me pills for my "hypertension" (what's wrong with my body). He told me, "Your father has an ulcer like yours, Keith, and hypertension too, so we've got to keep care of you. You're much too young to be carrying an ulcer around in you. Look at your father now. We don't want what happened to your father to happen . . ."

He didn't finish what he was saying, so I didn't understand all of it. Just that I should keep healthy and calm down and not worry. I'm a lot like Dad, I know that much. Even if Dad worried a lot before he became a "catatonic" and I don't worry much because I don't have many things to worry about. "Yet," Dr. Plankt told me.

We're waiting for the big "computer" to tell us what's in Dad's head! A few minutes ago Dr. Plankt said that his machine might help his "theory" (a bunch of thoughts) about "personality symmetry in correlation with schizophrenia." He didn't tell me what he meant by that because he wasn't talking to me when he said it. He was talking to another doctor, and I was just listening. I think what he said has to do with Dad's personality, which Mom says is rotten because he's always so grouchy and nervous and picky. Mom says I shouldn't *ever* be like Dad. She's always telling me that, and she shouts a lot.

Except when she brings people home from her meetings.

I don't think Dr. Plankt likes Mom. Once Dr. Plankt came over to our house, which is on Cypress Street, and Mom was at one of her meetings, and Dr. Plankt and I sat in the living room and talked. I said, "It's funny how both Dad and me have ulcers and hypertension. Like father, like son. Mom says that. It's kind of funny." Dr. Plankt got mad at something then and said to me, "It's not funny Keith! With what she's doing to you both, your *mother*, not your father, is the one who should be in a

mental inst—" He didn't finish his last word, and I don't know what it was and what he was mad about. Maybe he was mad at me.

Many times Dr. Plankt says that he wants to take me away from Cypress Street and put me in a better—

Wait! The computer just typed something! It works just like a typewriter but without anyone's hands on it. The words it is typing are from Dad's head! Dr. Plankt has the piece of paper in his hands now. He's showing it to three doctors. Now he's showing it to Mom. Mom is starting to cry! I've never seen her cry before. I want to see the words from Dad's head!

Another doctor is looking at me, and he has the paper now. I say, "Can I see it! Can I see it?" He looks at me again, and I think he knows who I am because Dr. Plankt talks about me a lot to everyone. I must be important. I don't like the look on this other doctor's face. It's like the look Uncle Josh gets when he's feeling sad about something. This other doctor closes his eyes for a minute and comes over to me with the paper. The paper, the paper! The words from Dad's head. The words are:

OH	OH
MY	MY
WIFE,	SON!
I	I
CERTAINLY	CERTAINLY
DO	DO
NOT	NOT
WANT	WANT
TO	TO
LIVE	DIE!

When I squint my eyes and look at these words from Dad's head, they look like a man in a hat with his arms out, kind of like Dad—except that there's a split down the middle of this man.

It's funny, but I know just how Dad feels.



## NOW HEAR THE WORD OF THE LORD

### ALGIS BUDRYS

*Mr. Budrys does not believe in story blurbing in anthologies. His wishes are respected here.*

The office building had been a hotel, once, and a famous married architect had shot a society physician in the grand foyer at that time. Now there was a horse-wire service doing business as a Bell substation down one of the twisting, door-lined corridors. The men who operated the cage elevators wore yellowed white shirts, no ties, and the pants from pin-striped suits. Everything was either wooden and painted olive green or clad in linoleum and worn down to grit. Lunchtimes, a sallow man sold bready hamburgers cooked in salad oil on an iron sheet in an alcove beside the main entrance. Every five minutes, all day, subway trains ran under the foundations.

Walter Keneally sat in an office with a numbered door and pine shelves on the walls of the one room. There were newspapers, books, magazines and many ledgers on the shelves. He spoke all day to Karachi, Alexandria, Reykjavik, Wellington, Seoul, Lhasa, Colombo, and other cities, through the worn sand-colored telephone in his

golden oak rolltop desk or by other means. Every morning, too, there was a drift of mail on the floor below the slot in the door, and whenever he was not talking or listening to faraway voices, Walter Keneally, who looked like a smooth-skinned bear with a balded white crew cut, would be hunched over an Oliver side-arm typewriter with its black iron frame coated in gummy oil and grime. His short, callused hands, hard as blackjacks, would stab their sausage fingers at the yellowed ivory key-tops, and further information and instructions would flow from him onto dimestore airmail stationery, into envelopes half-covered with stamps, thence into the mailbox on the corner that night, and thus to the four corners of the world.

He was there at eight thirty each morning, and he left at seven each night. Once a week he went out to the post office at noon and bought two hundred dollars in stamps. Once a month he stopped at the Bargain Store for stationery. At night, he went to a room on Twelfth Street, where for thirty dollars a month he had an iron bed, a plywood closet one foot deep with two black hangers hooked over a length of piano wire, and a bureau with the bottom missing from its top drawer. At home and in his office, he would often pause in the middle of communicating and sigh.

He looked up from his typewriter now, at the shut door of his office, and pulled his eyelids until he was pinching the bridge of his nose. He sighed. At the same time, his door opened, a man stepped in carrying a furled umbrella in his left hand, and the man said sharply: "Keneally!"

Keneally had never seen him before, but the sudden voice turned him in his swiveling typist's chair. The stranger arced a long steel skewer like a rapier blade out of the umbrella, came in with quick steps and, with a practiced overhand motion and all his momentum, thrust the skewer through Keneally and anchored him to the golden oak desk.

There was a faint *chuff!* from Keneally. "Got you!" the thin, sharp-faced man said, his eyes glittering and his head cocked intently to one side as he watched Keneally's face.



Keneally looked down. The handle of the skewer was a length of adhesive tape wound around the home-ground steel; the white tape was grimy and frayed at the edges, as if it had been carried from place to place a long time and often toyed with. "Got me," he admitted in his slow, old bear's voice.

"I will not waste time. I will not give you an opportunity to receive any help from your international confederates," the thin man said, pursing his lips. "I am Amos Onsott of the One World Language League. My offices are also on this floor. My organization has hundreds of members throughout the world, and I am here to inform you we are destroying your conspiracy today."

Keneally tested the skewer's ability to keep him sprawled uncomfortably in the chair. There was a faint grating noise from his chest as he moved, and he settled back. "How long have you been on to us?"

"We have done considerable research. Beginning from the time I first noticed your activities and communicated my suspicions to certain League members who corroborated my deductions. Volunteers from our organization have investigated the activities of your underlings in many locations. We have verified that neither you nor your correspondents eat, sleep, or betray any other signs of human behavior."

"There is no time," Keneally said. "We have too much to do. Even at night, when we change shifts and make our reports." He wagged his head, looking from one side of the office to the other. "We do not require rest or pleasure."

Onsott now opened his suit coat and pulled a long, serrated-edge breadknife out of his trousers. "We will not get you all, but we will hand your organization a defeat that will give your survivors long second thoughts about meddling with the human race. We are not prepared to temporize, or compromise, or waste time attempting to convince official authority. Your bloodless parts will be our defense against charges of murder. A fair, untroubled world will be our evidence for your erstwhile plotting!" He came forward, lips pursed, eyes glittering.

"What have we done?" Keneally asked, sighing. "What

about us has aroused your . . . humanity?"

"You are a robot under the control of intelligences in outer space, with whom you communicate telepathically. You confirm our deductions? And you are the chief of an international organization of robots which has been consistently influencing human affairs. Disguised as humans, you have infiltrated every major scientific establishment our members have been able to inspect since my warning. You have influenced legislation and appropriations on a world-wide scale. You are in fact the managers of national policy in every noteworthy nation; *we* do not have your resources, my friend, but we are willing and, for amateurs, quite efficient—as you can see. What have you done?" Onsott was furious. "The world is inexorably approaching the ultimate war! How many years have you shaped our destiny! How many bombs and biological poisons have you brewed up! What have you *done!*"

He jumped to Keneally's side, seized his wrist, and pulled his arm out straight. The chair slewed wildly on its stiff casters and half-broken wheels, and the skewer bent in Keneally's chest but did not pull free. He raised his other arm and tried to reach across to help his imprisoned wrist, but could not make it. The thin, pale, indignant man had the leverage, and now, by trapping the arm against his side with one hand, was able to begin attacking Keneally's shoulder with the knife.

Keneally let his other arm fall and turned his head to watch the white, rumpled broadcloth being sawed into a frayed wound and then the tee shirt's soft cotton trying to snag the knife's teeth. As the knife reached Keneally, it made a sound like something dividing a package of frozen spinach.

"World War III began August 12, 1958, and was over by mid-September," Keneally said. "Every major city and human installation on Earth was destroyed. A few weeks later, the last living thing on this planet succumbed to the incidental radioactivity. We are not controlled from outer space. We do not need to communicate with our makers at all. That's fortunate, because they can only perceive dimly from where they are. We are made by



the future; by the human beings of the future who must somehow restore life to this world, and continuity to this world's history, or die because there is no human race in the future. Do you understand?"

Onsott's eyes stared into Keneally's, but the knife sawed back and forth remorselessly.

"The people of the future can manipulate time," Keneally said. "The transit of time is more difficult to understand than the motorcar or interplanetary space. But if the human race lives long enough, then someday time has to be understood and devices built for acting through it. Not time ships, perhaps, but at least time grapples or time tools. Is that really so difficult to believe?"

Out beyond the grime-grayed window, a pigeon took flight from the spattered windowsill and, bluish-gray, flailed up into the sky of indeterminate color. Onsott's elbow jerked back and forth. His sleeve twitched the skirt of his jacket. His mouth was shut tight. His eyes hardly blinked.

Keneally said: "The humans who made me with their remote devices can't themselves enter their own past. They can't make changes in their own history. If they change the past they change themselves and can't be the people of the future world they believe in. We are not making war. People make war; we are trying to cancel it. It's not easy. The war was a complex event."

"I won't listen," Onsott said, the cords of his wrist white and taut as he bore down on the knife. "Your life isn't even self-consistent."

It was time for another subway train to go by underfoot. Keneally watched Onsott tremble slightly until it was time for the building's sway to have died out.

Keneally said: "They saw the war break out, and they knew what it meant. They are at their machines now, day and night, peering to see if we are carrying out their plans. As long as we can act and they can see us, their time will not wink out; they will have succeeded, and their world will be green and living. But if we should cease working, if even for an instant there were not some one of us working to restore this break in humanity's lifeline, then it would be true forever that Earth died in mid-September of 1958 and the human race died with it. Can

I persuade you to stop? Can I persuade you to get in touch with your organization's members?"

But, at this point, Onsott stepped back and released his hold. Keneally's left arm fell to the floor and shattered, still in its sleeve. Onsott hurled himself around to Keneally's other shoulder. Keneally turned his head.

"Onsott, there is *nothing* alive in this world except a few protein molecules being teased into organization and life in our laboratories; protein molecules that have been created to resist the great miasma of radiation that bathes this planet; bathes me, bathes *you*."

Onsott's forehead was glistening with perspiration. He snatched the knife away from Keneally's shoulder for an instant, bit hard at the knuckles, stared at the red-dimpled whiteness he had inflicted on the flesh he saw there, glared scornfully at Keneally, and resumed his work. "When I have you in a little heap of parts," he snarled, "will you still be talking?"

"Onsott, if there is going to be history, it must be human history. There must be lovers, and new model cars, and airline disasters; new syndicated comic strips, elections, and births of quintuplets. Don't you see that? These things must be part of the unbroken human heritage, even if there were no humans. There must be three billion human histories being played out on this world, and played without a hint of self-consciousness. Even if there are no protoplasmic humans to play them, and will not be until there has been much more success in the laboratories.

"Onsott, you want to live, don't you? You want to go on believing in this world? Feel pain, and joy, and hope for a day when everyone speaks your language? What moves you, Onsott? What do you prize above all other things? Do you want to keep it? Keep the chance of attaining it? You must stop this.

"Onsott, the radiation level will not permit life. The surface of this world is sterile; the deepest canyons and oceans are bare of life and are tumbled with heaps of calcium. There is no grass, there is no cool wind. There is sometimes rain and mud, and there is always death. Do you understand? The living world exists only in the



minds of the subautomatons who now inhabit it for us in the firm conviction that what they see and do has some external reality, that the history they record and make leads naturally from the past and firmly into the future." Keneally looked around the office again. "They keep the dream, God bless them. God bless you. But others don't require pleasure and beauty. Others must be self-aware when the radiation-resistant humans finally emerge from our researches and the reborn human race has been worked into the weave of history again." Keneally said, watching Onsott working pale-mouthed and intent: "We others mustn't dream; we must rebuild the grass and cities good as old again. We can't permit you to stop us." He looked closely at Onsott. "We would like to be considerate. But we can't ally ourselves with death."

Onsott stopped and listened to something, head to one side. A bus perhaps, turning the corner of Broadway on the street below; it was time for one. The familiar sound of shifting gears and laboring acceleration would be quite noticeable, even so far down this hallway. Onsott returned to his work.

Keneally shook his head and sighed. He went on talking, but there was now no particular attempt to make Onsott pay attention. "We have the factories and labs going again. We have the minimal communications. We have some of the key cities restored sufficiently to operate as centers of civilization. But we are far from done. If you leave me alone now, Onsott, you will enjoy the remainder of a long life, and the sense of age, and the answer to the question of what dying is like. Do you want that? Most humanistic individuals do. And I can promise it to you, because we are all still a long, sorry way from the time when the human past is smoothly restored and we wink out like snuffed candles. You understand? The future can wait on this planet now only because this is not its true past. When we have made this a true world again, and saved the future, we must *all* go. We will not die. We will just . . . go. Without ever having had joy or reward. Onsott, I believe I know how a human mind sees the world and itself; please stop what you're doing."

Onsott had been trembling more and more violently.

Now he suddenly stopped hacking at Keneally's shoulder and drove the knife crackling and spurting into Keneally's throat. "*Por la spirito gehomaro!*" he shouted.

Keneally's mouth said hollowly, "Onsott, Amos. Cancel, please. One World Language League. Cancel, please." Onsott became a bag of clothing around a falling pillar of dust and left a great patch of gritty yellow on Keneally. "Keneally, Walter," Keneally's mouth said. "Repair Service."

The sound of typing began again behind the green-painted door with its flaking gilt number. Inside, a man with white hair, dirty trousers, and a shirt with the sleeves raggedly cut off sat hunched over a massive old typewriter. He looked like a bear impersonating a curator of animals. An umbrella stood in the corner.



## *AFTERWORD*

### AN AWFUL LOT OF COPY

*BRIAN W. ALDISS*

Never before have we enjoyed a year so full of science-fictional material. January saw the linking of two Soviet *Soyuz* vehicles in space to provide the first (relatively) commodious spacecraft in orbit, as well as the announcement of the synthesis by two American teams of the first enzyme—ribo-nuclease. In one leap, we were nearer both orbiting space stations and artificial life.

Since then, the pace of progress has been pretty well maintained. Unfortunately, such a pace merely widens the gap between the developed and the underdeveloped countries; but even the latter must this year have taken some comfort from the news of improved grains, ways of making bread from nongrain products, and structural materials that can be made out of tropical products like the fiber of coconuts, as well as the commencement of full commercial operations in India's first nuclear power station.

Of course, the event that most captured people's imaginations was the walk of the first men on the moon, Neil Armstrong and Edwin Aldrin. One-fifth of the world's population watched the event on TV; this was a pretty large percentage, particularly when one considers

that approximately another fifth was Chinese and could not watch!

As yet, we are unused to such mass participation. Several commentators saw in the act a sign that mankind was growing together. But mankind has always had common interests, and the knowledge has never pacified warring tribes. Indeed, a common and rival interest often leads to war.

However, new currents of thought are circulating. Although it is clear that we have no future in space unless we solve our pressing problems on Earth, there can be little doubt that this alien environment presents us with fresh perspectives on those problems. Such perspectives might suggest, for instance, that we deserve no future in space unless we solve our pressing problems on Earth.

It will be up to science-fiction writers, if their voices are to continue to be relevant in the years ahead, to use their unique art as simulation for the future, just as they have—albeit in a somewhat hit-or-miss fashion—prepared the public at large for the moon walk. The present writer feels very strongly that an act of choice is involved here and that those who wish for a human future would be well advised to write for it, leaving those whose desires lie elsewhere to indulge themselves in gadgetry or gadzooks.

Despite the excitements of the real world around us, the SF world's most notable manifestation this year has been a retreat into gadzookery: fantasy in wigs. Never was an underground message more true than the one declaring FRODO LIVES. Not only does he live: HE has brought forth innumerable young.

By the twisted nature of the thing, some of Frodo's progeny are older than he; but the family resemblance is there. A brief excursion into the Forest of Stockbroker's Gothick will make my point clear.

“And the Dunlendings fled and hid themselves, for they were afraid of Elvish folk, though few indeed ever came to their country. But the travelers did not heed them, for they were still a great company and were well provided with all that they needed, and they went on their way at their leisure, setting up their tents when



they would; and as they went the summer wore away."

The *faux naïf* style, the laboring clauses strung together on threads of "and"—this is J. R. R. Tolkien speaking. But the diction is relatively limpid. Among his lesser brethren, "provided with all that they needed" will be rendered as "provided with all needful" or "provided well with all necessary appurtenances to their health and comfort."

Let's dip again.

"Her lovely house had been filled with a swarm of officials, including Acreblade, the private detective. Where was Titus? he had asked. Where was Muzzlehatch? She had shaken her head for hour after hour. Now she sat immobile in her arbor, and her bosom ached."

Leaving aside the problem of whether her bosom had been shaking as much as her head, we see the way Mervyn Peake presents us with another family trait of Frodo's Complaint: the use of cleverly meaningful names. Acreblade. Acre. Blade. Broad Sword. Muzzlehatch. Muzzle. Hatch. Gagged Mouth.

Let's dip again.

"In a short while they had entered the Weeping Waste, for this was the quickest route to the Sighing Desert. Rackhir alone knew this country well, and he guided them. On his back were his bow and quiver of Arrows of Law, given him some years previously by the sorcerer Lamsar at the time of the Siege of Tanelorn."

Michael Moorcock has learnt well. His Stockbroker's Gothickry is tricked out with cute names and technicolor places. Like Tolkien, he has externalized human characteristics into magical phallic objects: swords, rings, Arrows of Law, and even, one supposes, Weeping Wastes.

Magic lies at the heart of all those adventures, magic and the belief in elves, goblins, flying horses, and anything else that comes to hand.

Let's dip again.

"Then about this warden also Guivric walked widdershins, in a complete circle.

"'Issachar is a large-limbed ass,' said Guivric, soberly. 'He has become a servant under taskwork. Yet his is the circumambulation.' Whereafter Guivric still went onward into the next room: and Guivric's feet now glittered each with a pallid halo. . . ."

The bag of tricks whole one findeth in James Branch of the ilk Cabell, including magic and obscure and obsolete learning. What other element must we isolate to define these dragon-haunted wine-dark volumes?

Let's dip again.

"Then he went to the window and looked out, and saw the moon shining bright and white upon the greensward. And lo! the Lady walking with the King's Son, and he clad in thin and wanton rainment, but she in naught else save what God had given her of long, crispy yellow hair. Then was Walter ashamed to look on her, seeing that there was a man with her, and gat him back to bed. . . ."

The erotic, generally avoiding specific sexual encounter, occurs in most of these stories, as it does in this dainty greensward-laden extract from a book by William Morris first published in 1895, the year H. G. Wells' *The Time Machine* appeared. Long crispy yellow hair is almost as common as swordplay.

How is it that such books are still read and enjoyed in the year of the moonwalk? While SF readers continue to yelp about the New Wave and Old Wave, all the while an Ancient Tidal Wave is upon them. Apart from poor old Cabell ("the Tolkien of the Twenties"), the authors I have quoted from are Englishmen, chasing visions of a medieval or premedieval England that never existed. And there are other similar Britons about—David Lindsay, and George MacDonald, and, one may guess, reprints of Andrew Lang and Vernon Lee and William Black and many more yet. Whether any of us will survive



the Ancient Wave remains to be seen; meanwhile, lo, I hie me back from the encompassing greensward to speak awhile of what's been afoot this year in our darkling mundane world.

Back in the present, one sees clearly what causes Frodo's Complaint. The past is safe and under control; the present is already out of hand; the individual is threatened by all the oft-enumerated adjuncts of modern civilization. This is what causes writers to retreat into never-never lands.

The intelligent writer may ask himself, "What is the nicest possible world?" and then set about constructing it on paper. If he chooses a period close to the time when he was born, then who is to blame him? In the year's tastiest and most intricate novel an eminent novelist has done this and tactfully abolished the pain of the past tense and the discomfort of the present.

Vladimir Nabokov's *Ada* embraces a land where it is always bedtime: Estotiland, a Russian-colonized part of North America on the delightful if wordy planet of Demonia (where Terra is just a green theory in space/time).

Occupying most of the bed-space-time are the wellborn Ada herself and her supposed cousin Van. Over the amorous tennis match of their long lives, the score is generally Van In, for there are scores of supporting lovelies on which to practice more than quick quips.

Mr. Nabokov unfolds the nubility of his nobilities with cunning hand, piling up erudition, sneaky puns, and delectable evil in an elaborate game of jackal-and-hyde-and-seek. Incest, blackmail, the suicide of the firebird Lucette—most tormented and tournamented of Nabokovian figures (*tailles*)—tie up with the ribbons of his somewhat mono-onomatopoeia in more than one language. Infectiously, as this critic is not the first to indicate.

Sometimes the wordplay becomes tiring, the ingenuity engineered; by now style is absolute—*Lolita* is reduced to a small town—so that the copulations of the children are as teasingly concealed by subordinate clauses as by

the wistarias and hysterias of Ardis Hall, that Chekhovian country-matters-estate. If the people are all postures and positions, rather than "real," well, reality has been banned in a novel if sometimes novelettish way, just as the telephone has been banned.

Readers and scholars (in Ada's company you must be both) may discover, *au fond*, as much interest in the backgrounds and ample incidentals as in the bare-bummed lovers. Or perhaps it is a case of the triumph of fundamentals over fundamentals, for this is a lovely dreamworld of inconsistencies. Not only are telephones banned and atomic bombs unknown: One can read Proust in the nineteenth century, plainly the proper time for him, and travel in clockwork cars. The Channel Tunnel is amazingly early, the Crimean War pardonably late. Technology is brushed into the wings; with the flight of time similarly doctored, etiquette has become the great healer.

The United Americas stretch from Patagony to somewhere called Gasp (perhaps the famous Last Gasp?); West Africans discovered the Gulf of Mexico and do rather well in the Mississippi region; the golden decadence of what on Terra we rather fishily term *fin de siècle* here extends into the nineteen-sixties, when Van and Ada, lickrish nonagenarians, pore and paw over their memoirs of the long sweet route (liquorice) of life.

This aspect of the book is all very beautiful, not to say slightly irritating: a picture by Watteau, the *eau* perhaps replaced by something stronger. No more monumental a piece of distinguished trifling has ever appeared. Yet how seriously should we take it?

Well, allow Nabokov his pleasure in baffling us. Of its kind (*sui generis*). *Ada* is a masterpiece. Yet for many, its order of corruption and even ordure will cause it to fall between two stools, the readable and the unreadable. Almost like the parson's egg, it has goood in parts.

In comparison with the elegant tailoring of *Ada*, the regulation, ready-to-wear science-fiction field can offer only skimmed goods. Some of these are interesting for the way in which, like *Ada*, they illuminate the cause



of Frodo's Complaint: that present trends are too painful to face.

Two novels published this year have all too contemporary a ring. The future, the present, are frightening; the past beckons with its sense of shelter. Carlyle put it this way: "Why is the past so beautiful? The element of *fear* is withdrawn from it for one thing. That is all safe, while the present and future are all so dangerous."

As the stresses and strains of the population explosion build up, the future becomes uninhabitable to a sensitive imagination.

Whatever its merits as science fiction, Michael Crichton's *The Andromeda Strain* has a painful air of feasibility. It plays on the phobia of contagion from a new and alien disease, an old SF theme handled by many writers (one recalls Charles Eric Maine's *The Darkest of Nights* and Harry Harrison's *Plague From Space*), but Crichton delivers in the documentary style of *Fail-Safe*. The results are painfully plausible.

Even more painful is Alan Seymour's *The Coming Self-Destruction of the United States of America*, which was published simultaneously in Canada and Great Britain. Here again is the documentary style—the book comprises letters, tapes, notes, editorial comment—here again is painful plausibility. Black Power becomes more organized; slowly, slowly and inevitably, the differences between Black and White harden into civil war, and the country is plunged into conflict. A novel one can neither enjoy nor deny.

It is difficult not to look toward the seventies without foreboding. But writers in particular should fight negativity and reflect that current interpretations of the future (with emphases on impersonal hardware rather than human software) may be wrong.

The mass media may perhaps be blamed for presenting the exploration of space as a Challenge and the population explosion as a Threat. In fact, the population explosion is the finest possible challenge to a man's ingenuity, involving more than the mere technological. We are now heir to an immense wealth of knowledge. The problem

is, surely, not so much to acquire more as to employ, or at least disseminate, what we have. True democracy will only come when all knowledge is shared equally.

One of the most interesting volumes of the year was Nigel Calder's *Technopolis: Social Control of the Uses of Science*, in which he foresees a Welfare World and demonstrates the way in which a definite science policy can be inaugurated. When one examines the way in which President Kennedy instigated the Apollo project, the process is seen to be pretty high-handed; in the same way, the Anglo-French supersonic Concorde came into being by methods that tended to bypass the democratic process.

It is this sort of technological innovation which is the Threat. Feasibility and marketability must not become the sole ends of technology and the big business which allies itself with technology.

This may be simply a matter of controls. But if controls mean legislation, legislation cannot come until public opinion backs it. Calder claims such controls are perfectly within our power: "We are not helpless passengers, merely negligent engineers."

At present, controls work only intermittently, partly because power groups will not look ahead beyond their own narrow convenience. Two vivid examples of this blew up during the year, in connection with the increasing pollution of the planet, one in the States, one in the lands of the Rhine, both carrying worldwide implications.

The U.S. Army planned to dump some 27,000 tons of obsolete but still lethal nerve and mustard gasses into the Atlantic. An Army spokesman claimed that pollution of the sea would be "virtually impossible." Fortunately, the Senate headed that off in time.

Almost simultaneously, controls failed in the Rhine. One hundred kilograms of a potent insecticide were dumped in the river, poisoning it for some 250 miles and killing off an estimated 40,000,000 fish. Within a couple of days, the poison passed out into the North Sea.

In one of these cases, existing controls worked just in time; in the other case, they failed. They could be made to work better with better attention paid toward long-term



ends and means. Our ingenuity needs increasingly to be devoted to long-term gains.

Among long-term gains, one must certainly class the closing of the gulf between haves and have-nots.

The long-term has always interested SF readers—and few people else. Politicians are constitutionally unable to think more than five years ahead. (Statesmen were sometimes different, but they may be regarded as an extinct race.) Mankind as a whole has never looked ahead; it used to be an antisurvival trait. Old-fashioned manuals of etiquette, such as the Holy Bible, condemn the habit as strongly as fornication: "Take no thought for the morrow. . . ." "Sufficient unto the day is the evil thereof. . . ." "Which of you by taking thought can add one cubit to his stature?" (St. Matthew in swinging Philistine mood.)

Things have changed since St. Matthew's day. There are more people around. As pressure mounts, so we gradually acquire the habit of looking ahead. Perhaps the insurance companies that sprang up in Victorian times helped to inculcate the habit.

If looking to the long-term is to have any meaning, it requires knowledge of the past. As surely as we are part of a historic process, we must look back as well as forward. We must be aided by analogies and by the knowledge that analogies are no more than that and never exact parallels. Those same Victorians who started the insurance companies had become painfully aware of the problem in their own midst. With the determination characteristic of them, they took measures to ameliorate (and banish where possible) that poverty. It was also characteristic of them (or at least of the mid-Victorians) that they had more faith in private benevolence than government action.

It is characteristic of our generations today that we are painfully conscious of the poor, the destitute, the starving all around the world. With a lack of determination characteristic of us, we aggravate this state of affairs by perpetuating laws and trading agreements that place the Third World at a worse disadvantage. It is also characteristic of us that we place faith in government

benevolence rather than private action. Private action? The arena has grown too big for that!

Feelings of individual helplessness are paradoxically prevalent in the most powerful nations. How can the rich countries best aid the poor? SF readers should find the question at least as interesting as how to travel beyond Mars.

For the reader, the most absorbing sections of John Brunner's novel *Stand on Zanzibar* were those concerned with the fictitious African country of Beninia and the way in which it negotiated for and received aid from a large American company. This constructive approach helps to make the novel one of the most interesting of the year. Lapses into cliché, stereotyped action, and weak writing spoilt much of my enjoyment of *Stand on Zanzibar*; but the high charge of its attempted techniques, as well as its commendable ambition, remain recognizable and set it above most of the fodder of the marketplace.

Writers with social consciences like Brunner and Mack Reynolds may well lead the way in showing how the lot of the poor countries can be improved. The theme is trickier to handle than a star trip: more knowledge has to be gathered to deal with it, characterization is required, utopianism easily spoils conviction.

And, of course, in real life the whole matter is an extremely delicate one. Each country is an individual case.

Take one instance. Herman Kahn and the Hudson Institute worked out a scenario for opening up the resources of South America. What they postulated was a series of Great Lakes to be created in the Amazon basin. This system of waters and dams would bring considerable advantages to the area, notably to Brazil. The system would curb the heavy flooding to which the land near the Amazon and its enormous tributaries is subject; fish in the lakes (and the big river boasts more varieties of fish than the Atlantic) and agriculture around them would provide food aplenty; enough hydroelectric power would be available to serve a wide area; the interior with its inestimable mineral wealth would be opened up; the arid lands of northeast Brazil would gain new strategic importance; and landlocked countries like Bolivia and Paraguay would be given access to the Atlantic.



The Brazilians did not look with favor on this idea, which sounds so promising on paper. Why should they? Brazil, the fifth largest country in the world, has a proper sense of her own resources, awaiting development when she can manage it. She is a various but united country—such a large-scale scheme might well wreck that unity. At present, her resources are concentrated on developing more accessible regions near the big centers. More important, part of Brazil's troubles springs from heavy foreign investment (especially North American), which impedes her independent industrial development.

So, I imagine, a Brazilian might argue. And the force of his arguments would have to be respected.

So what do you do? Perhaps Mack Reynolds and John Brunner can tell us!

Despite its alarmingly soaring population, Brazil is one of the best-favored—and certainly best-humored—of the underdeveloped countries. Also a marvelous country to write about; they've got an awful lot of copy in Brazil.

This year, slightly to change the subject, Brazil rose in all her splendor above the science-fiction horizon. In March she invited thirty-six of the world's leading SF authors, critics, and filmmakers to Rio de Janeiro to the world's first International Science Fiction Symposium.

This Afterword is not the place in which to deliver a report on the symposium. A few general remarks are in order, however. For this event is a symbol of the increasing internationalism and the increasing importance of speculative fiction. No country has recognized this more clearly; as I said in my report, "It seems as if the country of the future had adopted the literature of the future."

The glamorous city of Rio, in its staggering setting, has set a precedent which will probably be followed elsewhere—in Japan, for instance, where science fiction enjoys great popularity. Moreover, the success of the symposium in Rio was such that it is to be repeated this year.

The symposium was not without its comical side. Some of the guests could not take the heat; some of them, out of their native countries for the first time, insisted on cleaning their teeth in mineral water in case they caught

an infection. Nevertheless, communication was established, and authors such as A. E. van Vogt, Robert Heinlein, Harlan Ellison, and Frederik Pohl delivered themselves according to character. Arthur C. Clarke looked in to collect a Black Monolith award for 2001. Some excellent films were shown, among them the Italian film based on Robert Sheckley's story *The Tenth Victim*. And—most important from my own point of view—we had a chance to gain at least a whiff of the highly charged essence of Brazil and to meet Brazilian writers and critics.

My purpose in this Afterword has been to touch on some of the issues that might make good contemporary speculative fiction—the sort of issues over which Michael Moorcock's character Jerry Cornelius lightly scampers. Hard science is no problem; the greatest and most pressing challenges lie in the soft sciences. The human spirit is at present almost irradiated by all possible alternatives; a sense of its past must help it toward greener growth and sounder futures.

Since this was in part the burden of the speech I made at the Rio symposium, that speech now follows as it was delivered. My hope is that it may, *inter alia*, convey something of the atmosphere of that landmark in that exciting city.

I want to take this opportunity of expressing gratitude for the profound, imaginative insight of doctors José Sanz and Fred Madersbacher—an insight worthy of speculative writers—which has drawn such a notable gathering from all parts of the world to assemble in Brazil. It seems to me to be an absolutely superb idea, an influential idea, and I, for one, am moved and delighted to be here.

How to repay even partially this grand gesture? Well, for my part, I will try to show my sweeter side and not be controversial. I will talk about the real world and not about head-leeching fantasies. I will refrain from the hagiographies of yesterday, from lists of old dead crud, and from pious platitude.\* I will speak as if the future lay ahead of us and not behind us in the

\* A cordial reference to some of the earlier speeches.



pages of old *Planet Stories*. I will confine myself to anecdotes suitable to mixed company. In short, I will be all sweetness and light. And I will try to behave as I wish to be regarded, as a writer. Not just an SF writer—a writer in command of his own life. Above all, I will be modest, though a city like Rio demands more than modesty.

My transition to bustling Rio is perhaps as dramatic as anyone's. I have come to this bright and dazzling city from the cool and tender green spring of the Thames Valley.

My hope is that in gratitude for my invitation here, I should present you gentlemen with a little cool and tender green wisdom.

The greatest pleasure to be derived from science fiction comes when it presents us with new perspectives on life—when, in short, it is being philosophical; philosophical values are the ones I try to establish in my own fiction. But science-fiction gatherings are notorious for their lack of philosophy, and the far-sighted sages of the printed page become the vociferous partisans of the rostrum.

I am constitutionally nonpartisan, and so I find myself battling with partisans! But I determined to try and deliver a cool and tender green spring speech to assist the situation.

You may not be surprised to hear that with a little careful thought I soon perceived what was troubling everyone. I realized simultaneously that there is a science-fiction empire and that science fiction itself does not exist.

We'll take the bit about the empire of science fiction first. Empires come and go, people survive. Brazil was once an empire; England was once an empire. Though the grand flags have been hauled down, we still live our private lives.

The science-fiction empire is essentially a commercial one, a loose connection of vested interests formed by people with an interest in maintaining the status quo: writers and critics and historiographers and editors and anthologists—and most of us invited to Rio double in more than one capacity. To make a clean breast of it, I

have myself been writer, editor, anthologist, and critic; and mean to be again; nor do I see the roles as readily separable. All of us are naturally keen to preserve our own little piece of territory against all comers, not realizing that this is an illusory goal. One way we do this is to pretend that science fiction is perfect as we have made it and must not be altered; this keeps out new writers, who naturally have their own ideas about what is what.

But change is the only constant. You can't keep the competition down. Like Lord Byron, you wake up one morning and find yourself famous. You wake up the next morning, and there's a strange new name on all the billboards. The future is raving at the windows of justice. It's useless to bellow about preserving the prose and forms and—ye gods!—even the ideas of the thirties and forties. The seventies are coming up, and you go with them or drown. Look ahead, leave ancestor worship to vain idolaters.

None of us in the science-fiction empire *own* science fiction. Even our own stories are torn from us as we write them down—fathered, yes, but immediately fatherless. They don't become part of some imaginary palace guard—they vanish, or they grow in the minds of others. They change as do the times. We may be creators, but it is the times that are in labor. The great breakers of transience and destruction plunge against our imaginations like the unhurried waves of Copacabana.

Gentlemen, if there's one thing I enjoy, it's a couple of stiff propositions, as the actress said to two bishops. I want to convince you that there is not only a science-fiction empire (of which we guests are all members in one way or another of the ruling caste), but that there is no such thing as science fiction.

Admittedly, there is a sort of imaginary muse, a fickle jade called SF. Yet nobody can define her. Or there are many mutually conflicting definitions, as there are of the Martians. Like the Martians, SF does not exist; she is a product of the imagination!

Gentlemen of the jury, I stand here uttering this heresy among my elders—I don't say betters for fear of flattering you! Some of you have distinct advantage of



not knowing me well and may ask who I am to prove the nonexistence of SF. Well, I have my critical qualifications apart from those I enjoy as a writer. I will name two of them, since I promised you anecdotage.

I believe I can claim to conduct the oldest-established SF-review column in the world which appears in a professional non-science-fictional journal. I have been delivering rough justice approximately once a month ever since 1954—seemingly to nobody's detriment or improvement.

Since that same year, and for the same paper, the *Oxford Mail*, I have also been reviewing SF films. That is even more of the dead-end job than doing the books. Nobody erects statues to critics; but I do feel someone ought to erect at least a small tomb or maybe even a guillotine to anyone who can sit out fifteen years of such tosh as *Barbarella*, *Wasp Woman*, and *Frankenstein's Daughter*—to mention only the distaff side of the art.

Reviewing films and books and writing stories all convince me that SF does not exist. Many of the so-called SF films are merely debauched horror films—nauseating productions like *The Fly* which have no connection with the scientific spirit, the detritus of Western paranoias. On the other hand, the science-fiction film I enjoyed most, which told us in its own mysterious unparaphrasable language something valuable about the human psyche, was not labeled as SF; I refer to the Alain Resnais-Robbe-Grillet film *L'Année Dernière à Marienbad*, where the gilded hotel with its endless corridors—"énormes, somptueux, baroques, lugubres"—stands more vividly as a symbol of isolation from the currents of life than any spaceship: simply by virtue of being more dreadfully accessible to our imaginations.

As for all the fiction that appears as science fiction, the same thing applies. Nevil Shute's *On the Beach* is not labeled as science fiction and manifestly is. My *Report on Probability A* is labeled as science fiction and manifestly isn't. Even the writing that is science fiction and is so labeled often suffers from the label.

And that label is meaningless. To consider the label

"SF," a philosophical approach like Wittgenstein's will help us. "SF" has to be a vague term in order to cover everything; and so it applies to nothing. We have a parallel case with the label "game." What is a game? Games include two small boys chasing each other round a barrel, chess, strip poker, baseball, shuttlecock, coin-spinning, polo, *wei'chin*, and Twenty Questions. By the time you have a definition broad enough to cover all the components, you are left with no viable definition. So it is with SF. It cannot be defined. There is no such thing as science fiction in any viable sense.

Directly we face this fact, life becomes easier and happier. For you cannot make even a paper empire out of something that does not exist. I admit it makes life more difficult for people like Fred Pohl who edit magazines. But for the writers, how much nicer!

Once writers realize that SF does not exist, they can write their own thing, can attempt to satisfy themselves instead of bowing to some vague set of external standards, can be free of all the trappings of the medium that have become so stale—clichés that no longer work, even in the hands of the masters. *Some* of these clichés, like the reporter who turns up at the end of the SF film and says, as he surveys the smoldering carcasses of giant tyrannosaurs, "There are secrets in Nature with which man should not meddle," are things we laugh about. Other clichés, like spaceships that travel faster than light, and robots that can't be distinguished from humans, and telepathy, are still taken seriously. People still write stories about telepathic robots on spaceships which can't be told from humans! But I suggest that all writers write more effectively and more freshly if they write from themselves and coin their own imagery. The corridors of a gigantic hotel may more effectively suggest human isolation than the corridors of a giant spaceship.

I once wrote about a giant spaceship myself, in a novel called *Nonstop* (or *Starship*,) now being filmed.

I used it then as a symbol of technological processes getting out of hand. I would not suggest that any of the old symbols cannot still be used effectively on



occasions; but it is certainly true that a great deal of mileage (or light-yearage) has already been squeezed out of them, and one hampers one's chance of producing anything worth while by using such stale old material without insight. To my mind, the Nebula-winning *Rite of Passage*, set on a giant spaceship, well exemplified the staleness of this particular location. What's wrong with locations like Demansky Island, Amazonia, Vietnam, Berlin, the Negev? Those are the places where next week is already fluttering the cardiac nerve of today.

If writers do their own thing, they are as free as anyone can be. The very idea that there is something called SF is a hindrance, because it stands between a writer and the greater thing which stimulates the production of art: i.e., the current state of the world and the vectors by which the limbic brain carries us over the motorways of tomorrow. Here SF becomes a barrier, baffling the perceptions of a writer and his world.

Few would deny that SF is a fruit of the industrial revolution and the forces that still power that continuing revolution. In this respect, SF can be a useful imaginative tool that helps us probe the profound changes we are all undergoing in our lifetimes. But when SF degenerates into dogma—as any empire tends to—then it merely obscures the wider view inherent in its origins. H. G. Wells possessed that wider vision. We must rediscover it as individuals—and in an idiom suited to our times, not his.

As an Englishman, I am fortunate in having enjoyed a wide range of vicissitudes. When I was a child, Red on the map was a phrase denoting not the Communist Sixth of the world but the British Fifth! I have seen an empire fall, fade like the snows of yesteryear! And the resonant courts of New Delhi close to all but sandaled tread.

“They say the lion and the leopard keep  
The courts where Curzon gloried and drank deep.”

Nothing is permanent. American SF of the pulp variety amuses me—its obsession with beautiful

empresses and colony worlds and Galactic Empires and all the toy romance of conquest inevitably rings a little false to one who was stoned in Bombay the month before India's independence!

All things connect, and the most powerful connections are often the least pretentious. I'll give you an illustration. In 1964, my life seemed to be at a standstill. To escape it, I bought a secondhand Land Rover and drove with the girl who is now my wife to Yugoslavia, where I stayed for six months, just traveling around and enjoying the scenery. Later I wrote a book about it, *Cities and Stones*, illustrated by the photographs that Margaret took on the way.

When we were down in Macedonia, we were strolling through the market of a small town one fine and sizzling day. There were donkeys for sale, and pots and combs and rope and primitive saddles and infibulators and chairs and honey with defunct wasps in it, and tired-looking vegetables and half-dead hens and cheap Greek and East German trinkets—the usual sort of thing. At one stall I came on a pair of shoes made simply of a wooden sole with a strap cut from a car tire. It was exactly like a pair I had bought many years before in Sumatra! There was the very footprint of time! The quarter century between those two pairs of shoes healed invisibly, and I was back on the equator in the turbulent days when another empire was folding up.

I refer to the Dutch overseas empire. I was then a soldier in the Indian Army: one of the polyglot rabble sent to disarm the Japanese Army holding Sumatra and return it to Japan. Our orders were also to reinstate the Dutch. But that was in 1946, and we found the old world had crumbled, giving place to the new. Not perhaps better: not perhaps worse: new! Sukarno's cries of "*Merdekka!*"—indeed, Sukarno's snipers!—were heard. The Indonesians, free of the Japanese, wanted to be free of everyone. And the British, then loosening their clutches on India, were not going to battle for another power's retention of an Eastern empire. So we all got out and left Sukarno to it.

This I remembered in the Macedonian marketplace. Yugoslavia itself is a patchwork of older empires—the



Ottoman Empire in the south, the Habsburgs in the north. Our planet's richer and more complex than any imagined world can be. As for the Macedonians, they still recall the great days of Alexander and dream of one day becoming a separate nation again. Tomorrow's news is built of the ground-down bones of yesterday's empires.

This is not so far from SF as you may suppose. It is certainly not far from the fiction I write. For stresses increase, empires tumble, and memories remain—and all *that* is characteristic of our century, amid the havoc and splendor of which the human experience endures. My personal response to our times is to see in them not only the shadows of the future but the multitudinous twilights of the past. The twentieth century is as yet little more than an annex to the nineteenth—though there are signs that this may change, as dawn comes even to an Arctic waste. The human experience is far more interesting and complex than most SF writers allow—and I hope I can say this with good hope of being understood in Brazil, where the beauties of demographic complexity match the outrageousness of nature.

The people who have talked so much about the role of SF have often stressed the need for an understanding of science before life can begin to make sense. But there is an older claim to be met: the claim that history must be understood before life begins to make sense. I would like to make a similar claim for *art*; but at least it is inarguable that we are a part of the inexorable processes of history and must draw from them before we begin to make sense. By now, the young Sibyl SF has a history of some decades—as Sam Moskowitz certainly reminded us—and it gets in our way of the wider panoramas of history. SF is boring: Only the works of individual writers are interesting. Never look back! Burn down the vegetation, move on! Writers should cultivate the art themselves and practice nonconformity. All true artists are rebels.

Let us tolerate more opinions. Turn neutrality into a crusade. A conifer can grow next to a deciduous tree. Myself, I see no harm in any amount of sex, but I hate

all the empty violence which takes place in the SF magazines. The magazines argue that violence is okay but you mustn't have sex. Yet where does sex begin but in the home? It's something that appeals to all ages, in one form or another. Horror is self-defeating when applied with a trowel; yet in limited amounts it can be fructifying. Myself, I'm for nonviolence. Yet that does not make me want to stop Keith Laumer writing; he is simply addressing himself to a different audience from mine.

What I do find really tedious is a literature without cognizance of corruption. All great literature pays tribute to corruption; all nursery literature—whether Soviet SF or *Analog* SF—seeks to deny it. SF writers like Dick and Disch and Ballard are familiar with corruption and use it without base sensationalism. The riper fruits need compost.

Within the little bedsitteer of SF, many boredoms have their day and fade away, giving place to others. At one time, the Big Bore was "Can SF be Literature?" That question generated a lot of nonsense—again, because people were trying to judge all SF as if it were homogenous, instead of a great divergence of writings by a number of writers whose outlooks are in sharp conflict.

The current Big Bore is "Whether New Wave Is Better Than Old Wave," or vice versa. Anyone who joins in this one is dooming himself to the same misapprehension. Labels are ways in which one writer has to suffer for the sins or virtues of others. Like empires, and even more speedily, individual writers have their day and are gone. Personalities speak louder than print—but only until the arc lights die. It is a sad fact that very few works of SF remain readable after the lapse of a quarter of a century—very few short stories and next to no novels. We have our great old names—Otis Klien, Heinlein, and Harrison—but it must not be enough. The sacred totems resurrected from *Crashing Comet Tales* for our admiration are revealed as grinning corpses. I believe that one reason for this is that too many writers have been blinded by the glamorous myth of the empire of SF and have



bowed to its canons and shibboleths instead of speaking and feeling for themselves. In reality, a writer has nothing to offer but himself. Grope for yesterday rather than next week, and you lose your way forever.

The New Wave controversy is not only a side issue, but wrong, since it simplifies the real situation, which is more complex and interesting than the flaked violence of having only two sides (one of which of course must be the baddies). Much is happening to SF right now, and you'll never comprehend it if you think it's just a matter of Right v. Wrong, or Us v. Them.

Nowadays, very few SF novels please me, I believe because most of them are tacitly addressed to an adolescent audience, and I am no longer adolescent.

I generally enjoy the novels of Philip K. Dick, seeing his shortcomings but admiring his towering artistry. Although he uses many worn old symbols, he uses them so personally and obsessively that he creates something individual. He gives them too that distinction, or *baraka*, the comes from used loved things.

In the last SF review I wrote before leaving Oxford for Rio, I had three pleasant and readable novels to notice—something of a record. The vagaries of English publishing are such that they were James Blish's *Black Easter*, Harry Harrison's *Deathworld 3*, and Robert Sheckley's *Dimension of Miracles*. Here were three accomplished authors doing the things that they individually do well. Yet their novels were wildly unlike. One could not begin to compare them. There they lay, like identical eggs in the basket of my column, and each given its meager ration of two or three paragraphs!—yet what had they in common beyond individual excellence?

Blish's novel is a study of the madness for power; Operation Overkill told in invertedly religious terms—yet told so sparsely that one is prevented from thinking in terms of allegory. Its style is as bare as a winter bough.

Harry tells the sort of exuberant adventurous tale that he does so irresistibly, throwing in vivid pictures of his world—a wild planet where small bodies of men move into action with the dawn.

Bob Sheckley does a sort of "Cantering Candide" round the galaxy, generously inventing, and with a fine stock of blasphemous jokes for good measure.

It was absurd to do what I had to do: throw the three books together and give them that nonlabel, SF. What they were were three novels by Jim, Harry, and Bob, all of which come within the margins of those giant tides raised by the industrial revolution.

A writer is entitled to individual consideration—at least, if he shows himself an individual and not a lackey to editors. One way you can be individual is to find your own audience and your own markets, without relying on ready-made ones. There is no progress in the arts. Every writer worth anything is a new beginning. Old tunes are fine from old singers; there could be something wrong with your ear if you find the new singers merely discordant.

Of course there are divisions between writers, as surely as there are illusions. But the illusion of the empire of science fiction has grown so tatty that I, for one, have begun to write in other modes of fiction, where the petty spirit behind it does not operate. The major division in the ranks of empire, as I see it, is between the Philistines and the artists; or between the creators and the hacks; or perhaps I just mean between those who can and those who can't.

The morning goes on apace. Rio outside sends up its tremendous magic, Harrison waits to address us. The management is trying to persuade me to repeat this speech tomorrow for those who have just arrived. I wrote, it, by the way, sitting beside my wife, while she endured her final contractions before giving birth to a baby girl. When I return home, the baby will have grown, with the first thoughts of another generation aflutter in her head. All life is to be lived and directed towards art and the individuality of art that survives empires.

So my cool and tender green spring advice to science-fiction writers is "Down with empires and up with individuals!" Indeed, that's my advice to the world in general!





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