

# **Science Fiction**

## **Readings & Assignments: Week Seven**

# Science Fiction

## Quiz: Week Seven

1. In the *Oxford Book of Science Fiction Stories*, how does Tom Shippey define “fabril literature”?
2. Shippey discusses how early speculative fiction seemed to predict technology that would be invented or events that would come to pass. Name four of these that he mentions.
3. “The Way of Cross and Dragon”: What heresy is the inquisitor sent out to squelch?
4. “Sand Kings”: What did Kress tell Wo he fed his shambler?
5. “Swarm”: How long does the swarm say the human race will last?
6. “Burning Chrome”: What did Rikki do with her share of the money?
7. “Silicon Muse”: What does the computer tell Snodgrass when everyone has left the room after the demonstration?
8. “The Road Not Taken”: What important person was killed during the initial volley?
9. “Dog Fight”: Why could Deke not get too physically close to Nance?
10. “Pots”: Why do the explorers decide to keep the discovery of the planet a secret?

# Science Fiction

## Journal: Week Seven

1. "The Way of Cross and Dragon": By creating a world that has developed a religion based on the idea of Judas Iscariot as the actual hero of the Bible rather than a villain, and a Bible replete even with dragons, discussion is George R.R. Martin encouraging readers to have concerning religion? Explain and give your opinion.
2. "Sand Kings": In this more famous Martin story, Simon has the responsibility of acting as the god of the sand kings. How does this story and its characters compare to "Microcosmic God"? Can you see elements of this early short story that would later be used in "Game of Thrones"?
3. "Swarm": In this story, the being addressed as Swarm comments on how the urges for progress will make the human race extinct. Do you view her discussion with Afriel on how intelligence leads to turmoil and destruction as accurate or inaccurate? Explain.
4. "Burning Chrome": Here, Rikki's goal is to have surgically enhanced eyes to become a model, essentially. In what ways have we, and do we currently, artificially create what social norms consider human beauty. To what extent do you believe it is normal and healthy to participate in this transformation?
5. "Silicon Muse": In this story, the fiction-writing computer creates an ingenious glimpse of an increasingly darker and more nihilistic reflection of life based on a simple statement. Can you create some other possible statement that would be interesting for such a computer to use to write several versions of their story? Discuss the current state of AI as it impacts our lives.
6. "The Road Not Taken": Other than faster than light travel, describe the technological achievements of the Roxoloni and explain the premise of this story and why the title refers to the Robert Frost poem. What technologies do the United States possess that other countries do not that may remind you of this story?
7. "Dog Fight": Do you know or have you ever met people like Deke, Nance, or Tiny? Care to elaborate? The relationship of gaming culture, drug culture, and other youth sub-cultures began in the 1980s, but continue today. How have they changed?
8. "Pots": In this story, archaeologists are on a mission across the universe to discover their origins, essentially the meaning of life, but why are they disappointed when they finally arrive on Earth? Why does Desan refuse to believe the truth that Dr. Gothon reveals? Can you compare this story to "The Way of Cross and Dragon"? How?

THE OXFORD BOOK OF

# Science Fiction Stories

Tom Shippey

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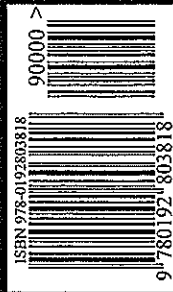
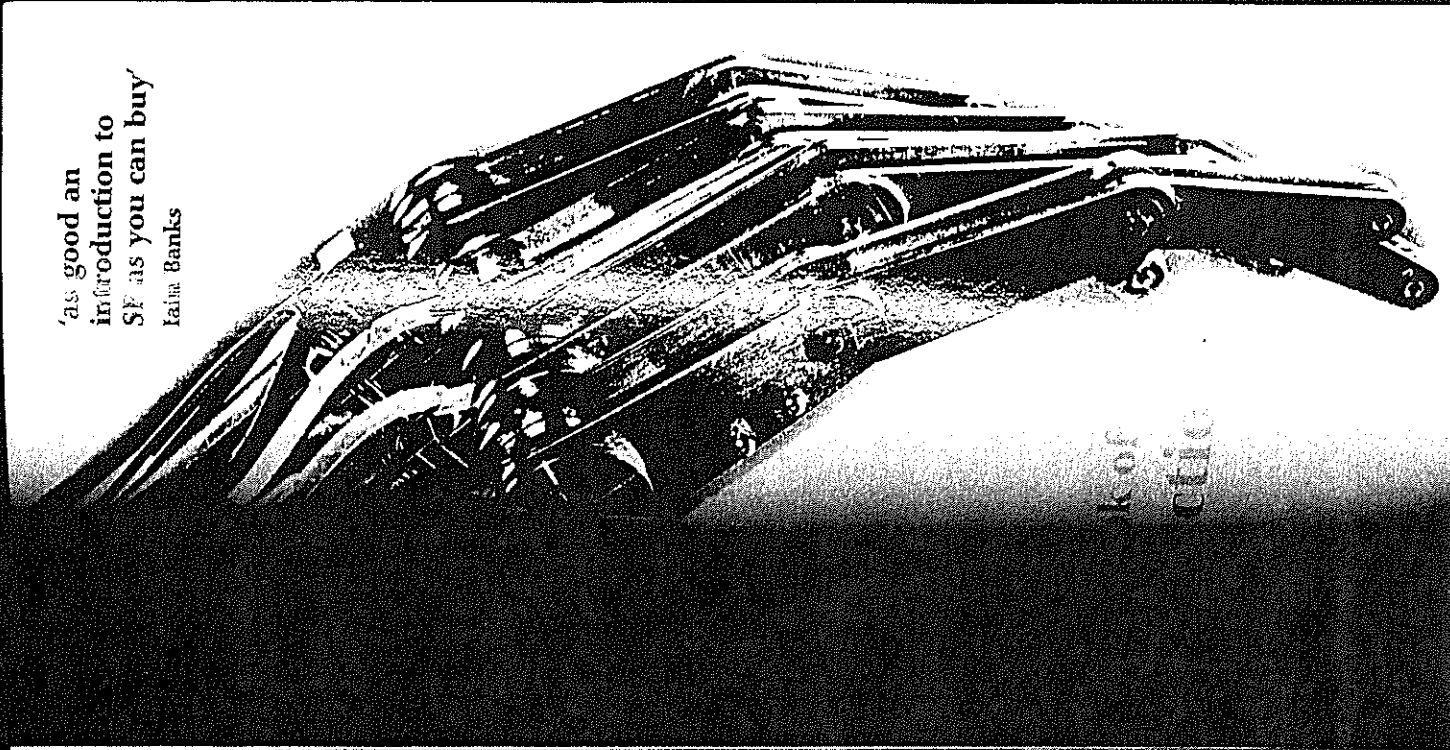
*Independent on Sunday*

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## INTRODUCTION

### I

A revealing way of describing science fiction is to say that it is part of a literary mode which one may call 'fabril'.<sup>1</sup> 'Fabril' is the opposite of 'pastoral'. But while 'the pastoral' is an established and much-discussed literary mode, recognized as such since early antiquity, its dark opposite has not yet been accepted, or even named, by the law-givers of literature. Yet the opposition is a clear one. Pastoral literature is rural, nostalgic, conservative. It idealizes the past and tends to convert complexities into simplicity; its central image is the shepherd. Fabril literature (of which science fiction is now by far the most prominent genre) is overwhelmingly urban, disruptive, future-oriented, eager for novelty; its central image is the 'faber', the smith or blacksmith in older usage, but now extended in science fiction to mean the creator of artefacts in general—metallic, crystalline, genetic, or even social.

The first story in this collection, H. G. Wells's 'The Land Ironclads', sets up the opposition made above with Wells's usual uncanny prescience. The story brings into confrontation two countries, two armies, two ways of life, two kinds of human being. It does this, one should note, at the expense of immediate contemporary relevance. By 1903 British readers were quite used to stories predicting future war, but they were nearly always told the identity of the combatants: Britain and Germany, Britain and France, white races versus non-white ones, etc.<sup>2</sup> Wells's story says only 'the invader', 'the defender'; and from the data in the story it is impossible to identify either side more accurately. The defenders—rural outdoorsmen with an adventurous pioneering element—might be Australians, or Boers; the invaders could be any industrialized European nation. But the point of the story (fabril literature,

<sup>1</sup> As far as I am aware, this word has never been used in print. I owe it to Dr James Bradley, of the University of British Columbia, who coined word and concept in his study of early Germanic smithcraft.

<sup>2</sup> See I. F. Clarke, *Voices Prophesying War, 1763-1984* (New York, 1966; reprinted Oxford, 1992), and the anthologies by Michael Moorcock, *Before Armageddon* (London, 1975) and *England Invaded* (London, 1977).

science fiction included, tends much more to the sharp, unexpected, but summarizable point than more accepted literary genres) is stated quite clearly in its last, heavily ironic sentence: that although there is a sentimental bias against machines and the users of machines, a cult of the healthy, simple, and untrammelled, making machines for a particular purpose is nevertheless a fully human activity too—not one which should simply be dismissed, in war, as vaguely unsporting or, in peace, as socially degrading.

Wells wrote many years later that when he died his epitaph would have to be 'I told you so. You *darned* fools',<sup>3</sup> and there is an evident irony in the fact that no one in authority, at least, took any notice of his clear vision of the stalemate of trench warfare broken by the use of the tank, though the *Strand* magazine (whether prophetically or reproachfully) did reprint the story in November 1916, twelve months before the battle of Cambrai. On the whole, though, Wells's story and Wells's point were lost on educated British readers. They continued to reject the values of 'fabril', a reaction obvious for instance in E. M. Forster's avowedly anti-Wellsian story 'The Machine Stops', written in 1908 but not published until twenty years later. But science fiction no longer needed to depend on classically educated readers. It could find, or create, its own constituency, a process that has gone on with accelerating force throughout the century. And in that process it could afford to ignore, or reject, not only an established readership, but also many established literary attitudes or conventions.

Thus, there is no absolute need (in the science fiction *short story* at least) for a hero, heroine, or central figure. There is none in the Wells story, where the central interest, as the title indicates, is on a *thing*. Several other stories in this collection are also named after things (see Le Guin, Niven, Spinrad, and Schenck), and though some of them do have central figures and even 'heroes', or a heroine, others do not. Meanwhile other stories in the collection, however they are titled, do not in fact centre on a person or a personal experience but on an object, a technique, or on the implications of an object or a technique. There is an individual domestic tragedy in 'Raccoona Sheldon's' 'The Screwfly Solution', but the

<sup>3</sup> In the 'Preface' to the 1941 reprint of his novel *The War in the Air* (London, 1908).

foreground of that story is arguably there only to exemplify and to personalize the background; the story's centre is not Anne, Alan, and Amy but 'the screwfly solution' itself, a scientific technique used against humans instead of for them. Similarly, though Tom Disch's 'Problems of Creativeness' has a very clear central figure, and David Brin's 'Piecework' again presents a clearly foregrounded heroine, both stories are actually using individuals to make much wider, though perhaps antithetical, points: in Disch's case, maybe, that individual perception cannot overpower system failure, in Brin's (more clearly, and more in agreement with Wells) that even what appears to be a profoundly dehumanizing technology can be used for good as well as for ill. Science fiction authors have been reluctant to concede the non-necessity of a central figure, Theodore Sturgeon, for instance, asserting that 'A science fiction story is a story built around human beings, with a human problem and a human solution, which would not have happened at all without its scientific content';<sup>4</sup> but there is an element in this of wary defensiveness against established literary opinion, as well as of truth. Nearly all the stories in this collection have human beings in them. But one at least does not (Clarke); and in the rest human beings are by no means always central (see Weinbaum, 'Smith', Sterling, or the arguable case of Le Guin).

What, then, has science fiction had to offer to its human readers? Whatever it is, it has been enough for the genre to make its way to a prominent, if not dominant place in popular literary culture despite every kind of literary misunderstanding or discouragement. A very basic answer must be, Truth. Not every science fiction story, of course, can 'come true', indeed (Cambrai notwithstanding), probably none of them do, can, or ever will. Just the same, many of them (perhaps all of them, in some way or another) may be trying to solve a question for which many people this century have had no acceptable answer. Brian Aldiss has argued boldly that 'Science fiction is the search for a definition of [humanity] and [its] status in the universe which will stand in our advanced but confused state of knowledge';<sup>5</sup> and this definition has immediate relevance to a clutch of stories in this collection (Campbell, Simak, van Vogt,

<sup>4</sup> The definition is given by 'William Atheling Jr.' (i.e. James Blish) in *The Issue at Hand: Studies in Contemporary Magazine Science Fiction* (Chicago, 1964), 14.

<sup>5</sup> See Brian Aldiss, with David Wingrove, *Trillion Year Spree: the History of Science Fiction* (London, 1986), 25. I have altered Aldiss's 'mankind . . . his'.

Miller, Aldiss himself, Martin, or McAuley). There is a less obvious connection between Aldiss's dictum and a number of other stories. Take Clarke's, for instance, the only story in the collection entirely about alien races, with no 'people' in it at all. How can this be part of a 'definition of [humanity]'? But as soon as that question is put, the answer is clear. Clarke's aliens—who have just experienced a war ended by a weapon of mass destruction, whose secret cannot be kept, and which puts them all at risk from guilt and from future retaliation—are self-evidently an analogue of Clarke's readers in 1951; and his point is the need (desire, yearning) for some alternative mode of development, some science of the mind, from which humanity may at present be debarred as naturally as his handless aliens are debarred from becoming blacksmiths. And yet his aliens solve their problem; perhaps humans could make an analogous breakthrough too. The story makes assertions about humanity even though no humans are there. It also in a sense extends the notion of the maker, the 'faber', to a race and a situation paradoxically 'pastoral'. Aldiss's definition of science fiction, and my own categorization of it, survive at least this test.

The same could be said more extensively about the rather large number of 'social' science fiction stories in this collection—those that present a society both like and unlike our own and ask us to accept that the changes, however horrible, are plausible (see, for instance, 'Padgett', Pohl, Ballard, Harrison, Disch, or Spinrad). To take one particular example, what has Gene Wolfe's story about the future reintroduction of slavery, 'How the Whip Came Back', to say about humanity? Here we find a highly personalized story about one woman in a critical place at a critical time. But central though she undoubtedly is, the story is really asking every individual reader whether he or she would be proof against a similar temptation to enslave, given the altered circumstances laid out in the story: perhaps most of all the altered world-picture created by robots. Sal the secretary is not a human being nor a central character in the story, but the story would not work without her (it). And behind the story, the circumstances, and the individual question there lurks a metathesis not stated but not really invisible either: that there is no such thing as unvarying human nature or immutable morality. Instead, good and evil are socially defined, and people will do whatever they can get away with, economics and technology permitting. This thesis is not proved by Wolfe's story, indeed it is

clear within the story that there is/will be resistance to it (as exemplified by the deluded but not defeated Pope). In other stories the thesis comes over more forcefully, as through the violently ironic endings of Ballard or Harrison. But whichever way the authors tilt the balance, it is clear they are engaging in a similar activity: searching, as Aldiss says, for a definition of humanity which will stand, given the depressing insights gained during the twentieth century.

Could Aldiss's argument be extended further, for instance to the apparent 'adventure stories' also represented in this collection (e.g. Schmitz, Le Guin, or Gibson)? Once more, an argument could be made out via the insights of cultural anthropology and the profound effect this has had on American science fiction especially, and particularly as mediated via Ursula Le Guin (the daughter of the two great American anthropologists Alfred and Theodora Kroeber). One might note also the deep urge within several stories to transform the 'soft sciences' into 'hard sciences' and so make their practitioners appropriately 'fabril' as well (see 'Padgett', Brin, and paradoxically Schenck). But enough has perhaps been said to indicate that science fiction, while full of argument, disagreement, and even rebuttal (Simak and Aldiss, 'Padgett' and McAuley, Brin and *Brave New World*), nevertheless has become in some ways a collective mode, with a shared set of doubts and questions, and even a recoverable if hidden agenda. To go back to the notion of 'fabril': what science fiction has been doing over the decades of this century has been steadily to extend the perceived boundaries of Culture (technology, government, social organization, all seen as affecting—if not absolutely determining—the way human beings act and feel), while at the same time becoming more and more aware of the immense scale of Nature, against which human beings are set and against which they are ultimately powerless.<sup>6</sup> Of this long and vital debate many themes may be seen to be components, all well-represented in this anthology: the nature of intelligence, the nature of civilization, the essentials of humanity, the possibility of super-humanity, the relationship (or otherwise) of theology and morality, the freedom (or otherwise) of the individual within history.

<sup>6</sup> No author has quite managed to challenge this last statement, though one can see the urge to try in van Vogt in this collection, and in works by, in particular, Bruce Sterling elsewhere.



It has been said already in this Introduction that what science fiction has had to offer many readers is Truth. That must seem a most implausible assertion if Truth is taken to mean a single, final solution. If, however, the assertion is taken to mean that science fiction readers have felt able to believe that science fiction authors were addressing them seriously, and trying to explain facts as they saw them and not as more established literary genres would like them to be, then it carries immediately a great deal more force. One might add that the doubts over other branches of literature and their teachers that appear here and there in this anthology ('Padgett', Disch, and Schenck) are not entirely friendly: many science fiction authors feel the 'soft sciences' have let them down both personally and generically. One has to say also in the end that a great reinforcement to the field's sense of iconoclastic inner knowledge has come, this century, through war. Wells foresaw trench stalemate in 1903; 'atomic bombs' appeared in science fiction in 1936;<sup>7</sup> we may never come upon the ICE, icebreakers or 'black ice' of Gibson's universe, or the tanglefoot 'ground-circuits' of Kipling's, but either suggestion has at least more probability than the alternative dimly accepted by other literary genres—that perhaps things will stay more or less the same. It is the repeated and dramatic failure of that prediction this century that has given science fiction so much of its appeal.

## II

Do science fiction authors have the literary technique to give proper expression to the undoubted power of their concepts? The view that they do not is a common one, and in it there is a certain truth, as also a certain blindness. The truth stems from the fact that for many years science fiction, and especially the short story in science fiction, was a genre for amateurs and for autodidacts. One might respond to this by saying that almost all authors, classical ones included, were amateurs once; there have never been many who, like Dickens, became commercial successes so early that they could afford to live by writing from the outset. But science fiction,

<sup>7</sup> See Isaac Asimov (ed.), *Before the Golden Age: A Science Fiction Anthology of the 1930s* (London and New York, 1974), 858.

with its multiplicity of magazines demanding copy and its highly participatory readership, was from the late 1920s onwards a genre that gave considerable opportunity for the 'fan' who wrote a story or two, saw them well-received, and went on to become a success within the field, with or without giving up his day-job. The backgrounds of such authors might be very varied—'Cordwainer Smith' was a political scientist and military adviser, Harry Harrison a gunnery-instructor sergeant turned commercial artist, Hilbert Schenck a professor of engineering, while 'Raccoona Sheldon' worked for the Pentagon. Skilled and able as they were, few would have had very much of a literary education. By contrast science fiction, from 1910, was also a fertile field for the professional writer who compensated for a quarter-cent-a-word pay-scale by amazing feats of productivity, like Edgar Rice Burroughs with his scores of 'Tarzan', 'Pellucidar', and 'John Carter' novels, or Will F. Jenkins (better known in science fiction as 'Murray Leinster'), who is estimated to have written and sold more than fifteen hundred stories in his fifty-year career. None of the latter group is represented in this anthology, because (questions of literary quality apart) a quarter-cent a word seems to have acted as a profound discouragement against the idea of a *short* story: the six-part serial or the 25,000-word novelette were the preferred modes of Burroughs and his successors. Just the same, the influence of the penny-a-liners was strong on the amateurs. The idea of the technically crafted short story, the story to match Conrad or Joyce, Stevenson or Hardy, was absent even as a goal for decades of development.

The contrast can be seen in this collection, for instance, by comparing Kipling's careful and assured handling of multiple voices in his 1912 story with the three that follow it, by Williamson, Weinbaum, and Campbell, all three setting up a kind of frame and then retiring thankfully into the haven of the first-person narration: a technique which takes the short story back almost to its ancestor, the oral anecdote. A further contrast could be made between these three stories and the immensely more sophisticated 'I'-narration of Gibson's 'Burning Chrome' fifty years later, where the first person is no longer an easy refuge but a major feature of the 'cyberpunk' effect. Nevertheless, one could honestly concede that the science fiction short story has been for all practical purposes unaffected by the techniques of 'modernism' ever since it left its long gestation as

'scientific romance' (largely in Britain), crossed the Atlantic, and entered the domain of 'the pulps'. To that extent the criticisms of Kurt Vonnegut, or of the writers associated with the 'New Wave' of the 1960s and 1970s, have some truth.<sup>8</sup>

Yet they ignore, and literary criticism has for the most part done the same, science fiction's corresponding self-taught strengths, especially in the field of the short story. All authors in the genre realize that science fiction has one particular, unshared problem: the need to set out the 'rules of the game', the precise and novel nature of each story's individual universe before or as well as getting on with telling the story itself. If a science fiction story did not have something strange and unknown about it, it would not be science fiction;<sup>9</sup> but it is impossible to expect any reader to know in advance what this unknown element is. The reader has to be given some clues (often considerable clues) about how to decode the story, and this takes finite time and space that may all too easily detract from or slow up the narration. With science fiction there is always a problem of information, and there are more and less sophisticated ways of solving it. A common but relatively unsophisticated one is shown by 'Lewis Padgett', noted even by other science fiction authors<sup>10</sup> for his proneness to getting a story going, introducing some element of doubt or paradox, and then halting the action in order to deliver the 'lecture' that is a major part of his story's point. Harrison's 'A Criminal Act' follows a similar trajectory (though there the 'lecture' is a debate); Niven's 'Cloak of Anarchy' baits its hook with a colourful, unexpected image before breaking off to give a brief history of transportation that sets the scene for the central fable of technology, civilization, and the flawed insights of Ron Cole, the fabril anti-hero; even in 1990 David Brin continues the time-honoured science-fiction device of excerpts from future

<sup>8</sup> Vonnegut has created an affectionate parody of the professional science fiction writer, 'Kilgore Trout', in several novels, including *God Bless You, Mr. Rosewater* (New York, 1965), and *Slaughterhouse-Five* (New York, 1969). Trout's technical writing skill is rated especially low. For 'New Wave' criticisms, see several of the author's linking commentaries in *The Best Science Fiction of J. G. Ballard* (London, 1977).

<sup>9</sup> The 'something strange and unknown' is the *novum*, a term used and defined by Darko Suvin in *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven, Conn., 1979). See further my 'Preface: Learning to Read Science Fiction' in Tom Shippey (ed.), *Fictional Space: Essays on Contemporary Science Fiction* (Oxford, 1991).

<sup>10</sup> His technique was commented on by Blish, see 'Atheism', *Issue at Hand*, 90 and more supportively in Aldiss, *Trillion Year Spree*, 225-6.

publications, just to transmit economically the 'rules' of his particular game. Techniques like these, simple or complex, are essential for science fiction, especially short science fiction. If they appear inartistic according to 'modernist' principles of indirectness, then that is part of the nature of the genre.

The genre has, however, learned, and learned intelligently, how to turn potential weakness into strength. Science fiction often excels at the 'open' ending and the story poised forever between alternative explanations, both a product of the necessity of shifting from foreground to background, from story-line to required interpretive information. 'Raccoona Sheldon's' 'The Screwfly Solution' is a powerful case in point. If examined closely it consists of almost twenty different interlocking sections in under nine thousand words—carefully distinguished typographically in the original magazine publication, and again here. Rather more than half of these are part of the story's 'foreground' (at least seven of them form the main story-line centred on Alan, four of them are excerpts from letters by Ann, one is an excerpt from a diary by Amy, and a final one consists of an unexpected shift to first-person narration by Ann alone). But there are six more sections—seven if one counts the quotation from Schönweiser—that are traditional science fiction 'background': announcements in a newspaper, interviews, reports or clippings from *Nature*, with one of the reports further subdivided into a majority and a minority version. What is the purpose of this extreme, but still genre-traditional, multiplicity of viewpoints? Clearly, it is to offer multiple alternative explanations for the plague of 'femicide' that is the story: a religious conviction, an airborne plague, an exaggeration of something genuinely present in masculine sexual response, a functional pathology, an alien pheromone trap. The story gains its power from being at once a feminist nightmare and an account of an experiment, from saying simultaneously that the impulse to murder women is internal/real and external/science fictional. But though 'The Screwfly Solution' is an extreme case of skill and sophistication, it is an extreme case of a tendency towards multiple viewpoint very widely present (cf. Kipling, Miller, Le Guin, Harrison, and Schenck, in the last of which typography is again used here to mark off sections).

Further results of the peculiar science fictional problem of foreground and background, story-line and information, include the powerful development of ironic endings, and the ability to tell what

one might call a 'non-story', a story of frustration, a story where, in a sense, nothing happens. Ironic endings are a product of the frequent gap between an ignorant, time-bound character and an omniscient, trend-indicating narrator. Spinrad's Mr Harris does not understand the final gesture of the Japanese Mr Ito in sending him a *fake* fake gold brick (i.e. a real one). That is because he, Harris, is trapped in a viewpoint which accepts American decline and cannot perceive the value of American ideals, or American artefacts: to the American reader of 1973 (and still of the 1990s), it is Harris's viewpoint that is alien and the disaster of his incomprehension perfectly clear (perhaps still becoming clearer). In the same way Pohl's Mr Burckhardt finds out, but forgets, that he is merely a creature to be played on by media professionals; no reader in a consumer society can avoid the thought that we are all in some way Burckhardts. Elsewhere, with Niven or Martin or Kipling, it is the characters who 'come upon a knowing' at the end of the story that the reader may, or may not, be prepared to accept. Or the story may close with a moment of silent horror or incomprehension as an argument is thrown into violent reverse, as in Harrison or Aldiss. But all these endings are ironic, and all are to one degree or another 'open': the reader has to take them away and think about them, part of the 'fix' that science fiction delivers.

The same foreground/background gap allows development of the 'non-story' or 'anti-story', the science fiction equivalent of the modernist, Joycean, non-narrative 'prose fiction'. Is the ending of Disch's 'Problems of Creativeness' an 'epiphany', as Joyce would have put it? It is certainly not a conventional ending to a conventional love-story, though there is a love-affair between Birdie and Milly lurking inside the story as memory and as potential. But the potential is aborted, or contraced, just like the baby the Revised Genetic Testing Act will not allow the lovers to have. Disch's fiction shows how a story can fail to take place, as social requirements overpower individual passion, as background information ironizes the ignorant central character. In Ballard's 'Billennium', too, a breakout is frustrated; what the characters cannot see is that their tiny failure is their world's gigantic intellectual error in miniature. One might say something similar of a second 'failed romance' (this time interlaced with a successful inhumanity) in Gibson's multiple-flashback 'I'-narration 'Burning Chrome'.

It is not difficult, from the stories in this anthology, to argue strongly for the science fiction short story as a highly progressive mode whose authors have reached levels of technical ability in handling information well above those of writers in conventional genres. Yet it could also be argued (from what has been said just above) that, technical ability or no, and regardless of the interest of its concepts, science fiction remains at bottom a depressingly entropic mode. From its beginnings to now (see Pollack or McAuley) its practitioners are ready to imagine apocalypse and the total extinction of humanity; when they do include scenes of beauty, or indulge in pastoral (see Simak, Schmitz, or McAuley again), it is always with some ruinous qualification, like the eight warships poised to obliterate Noorhut—Grimp, lorel, werrets, and all—in Schmitz, or the fat moths pushing out of the butterfly girl's mouth in McAuley. In his study of romance Northrop Frye identified 'themes of descent' in which 'charms and spells hold one motionless; human beings are turned into subhuman creatures, and made more mechanical in behaviour; hero or heroine are trapped in labyrinths or prisons';<sup>11</sup> to which one could say, yes, see specifically Le Guin (the suspended animation relativity-trap journey), Disch (man turned masked guerilla), Miller (Manue trapped in breathlessness on Mars). Behind many stories one may see the entropic vision of Lukyan the Liar in Martin's 'The Way of Cross and Dragon', a vision that convinces Father Damien the Knight Inquisitor even in his victory. Does science fiction tend inevitably towards the ironic mode, a mode in which (in Frye's terms) 'we have the sense of looking down on a scene of bondage, frustration or absurdity'?<sup>12</sup>

If such a charge were to stick, it would at least make a change from the accusations once levelled at science fiction of being 'mere escapism', a literature of wish-fulfilment alone. Actually, science fiction contains stories of every shade from the naïveté optimism (none included here, but see van Vogt for an approach to it) to the most luxurious gloom (again, none included here, but see Sterling or Pollack for an approach to it). The common factor across the entire range of attitudes, from optimism to pessimism, from wish-fulfilment to deepest irony, is perhaps this. Whatever one's theories

<sup>11</sup> Northrop Frye, *The Secular Scripture: A Study of the Structure of Romance* (Cambridge, Mass. and London, 1976), 129.

<sup>12</sup> Northrop Frye, *Anatomy of Criticism: Four essays* (Princeton, NJ, 1957), 34.

about the genre, the very existence of science fiction is intimately connected with a growing popular awareness not only of scientific data (note the fascination with radium in Williamson, 1928), not only of scientific theories (note Le Guin not needing to explain the relativity-trap in 1964), but of the mingled power and weakness of scientific method itself. Recent history has convinced almost all science fiction's readers that modern knowledge of the universe is much more powerful than ancient; but, by the same token, it will be much less powerful than some future, alien, or potential state. This has given the field its mingled pride and humility—humility in the scenes of 'bondage, frustration, or absurdity' that inevitably involve its readers, pride in the awareness that even if one cannot avoid them, one can understand them.

Nor has this mixture of hope and frustration been, for many authors and many readers, a matter of intellectual persuasion or literary artifice alone. It has, instead, often reached the level of belief, one might even say of faith. At the end of Stanley Weinbaum's 'A Martian Odyssey', the hero is asked about the mysterious Martian crystal with the power of destroying diseased tissue and leaving healthy tissue unharmed: "'it might be the cancer cure they've been hunting for a century and a half.'" "Oh that!" muttered Jarvis gloomily. . . "Here it is." Weinbaum was dying of cancer when he wrote those words, and probably knew it.<sup>13</sup> He saw his salvation in science fiction, even if he also knew he would not live to see it.

## III

One final claim that may be made for science fiction is that it has been, if not the most inclusive, then the most characteristic literary genre of the twentieth century. Did science fiction exist at all before the last hundred years? Nearly all commentators have argued that it did, pointing back to ancestors as various as *Gulliver's Travels* and the floating island, or the voyage to the Moon described by Lucian in the second century AD. In this there is a strong element of a quest for respectable ancestry, generated precisely by uneasy awareness

<sup>13</sup> See Sam Moskowitz (ed.), *A Martian Odyssey and other classics of science fiction* by Stanley G. Weinbaum (New York, 1962), 10.

of novelty. But one may concede that there has no doubt always been in the human race an impulse towards speculation about the unknown, and also, less recognized, an impulse towards glorification of the 'faber', the maker. Both these impulses have at different times been strongly reinforced by new awareness of the conquest of the unknown by technology, whether geographical (as with More's *Utopia* of 1516) or astronomical (as with Kepler's Moon-vision of 1634), or, indeed, more broadly scientific, as with Mary Shelley's *Frankenstein* of 1818, for which Brian Aldiss has made a powerful case (see note 5 above) as being the great originator of modern science fiction. Yet there are two tests one may apply which point to a later date, in fact to the last decade of the nineteenth century, as a critical turning-point. One is public acceptance and the creation of a market. The other is continuing non-historical interest among modern readers. Both tests look to reception rather than to production as delimiters of science fiction.

To take the second one first, it can be said that only H. G. Wells (not Mary Shelley, certainly not George Griffith, not even Jules Verne) is still widely read by science fiction fans for their own amusement only and is still a strongly perceptible influence on modern authors. Wells's clutch of stories from the 1890s—*The Time Machine*, *The Island of Dr Moreau*, *The Invisible Man*, *The War of the Worlds*—all generated whole and continuing sub-genres of imitators, their influence still evident in this collection from Campbell to Le Guin and beyond. Wells, naturally, did not invent his works out of nothing. There was a history behind him of recent, intense speculation about technology and war—for which see note 2 above—and an ancestor-genre of 'scientific romance', especially well-developed in Britain.<sup>14</sup> Nevertheless, Wells changed the field, and the market. It is interesting that there already was a market for the fantastic short story, and for serial fiction, in the new magazines of Britain and America, led by the *Strand* (founded in 1891) and followed by such imitators as *Pearson's*, which serialized *The War of the Worlds* in 1897, or the *Pall Mall*, which serialized *The War in the Air* eleven years later. These magazines, and many others, both satisfied and stimulated an appetite for fantastic fiction, and for science fiction.

Despite this popularizing role, most of what they printed in this

<sup>14</sup> See Brian Stableford, *Scientific Romance in England, 1890-1950* (London, 1985).

genre is unsatisfactory for the modern reader. One can only say that nineteenth-century readers were too easy to shock. London could be destroyed by a volcano! The seat of government might have to move to Manchester! Perhaps electricity won't work one day! Refrigerators could destroy the ice-storage industry! All these plots, and others of the same kind, are to be found in Sam Moskowitz's excellent and well-titled collection *Science Fiction by Gaslight*.<sup>15</sup> None seems to have much potential for development in modern terms, but works of that nature did create an attitude. They made people think about change. And as the pace of change accelerated in *individual lives* all through the later nineteenth and twentieth centuries—steamships, trains, the electric telegraph, 'wireless', the cinema, germ-theory and the microscope (the last three all translated into short stories by Kipling)—so a market, if still a restricted one, was created for fiction that predicted, mediated, and revelled in change.

Major reinforcement was given to this in the USA especially by, successively, the Edisonian string of inventions, the aeroplane, the idea of space travel, and first the idea and then the fact of nuclear power. *The War of the Worlds* created one immediate and indignant riposte in *Edison's Conquest of Mars* by Garrett P. Serviss, serialized in twenty-six instalments in the *New York Journal* in 1898. From 1912 onwards a string of magazines published by Frank A. Munsey, and including *Argosy* and *All-Story Weekly*, launched authors like Edgar Rice Burroughs on an eager readership.<sup>16</sup> There is no doubt that what they produced is science fiction (still read, still imitated or re-created), though as pointed out above it was rarely short, the natural mode of the penny-a-liner being not surprisingly the 25,000 word novelette or better still the eight-part serial. Yet this era laid the foundations, and created the literary conventions, for the modern age of science fiction, which was inaugurated in April 1926 by the first issue of *Amazing Stories*, edited by Hugo Gernsback, and swept on first by the appearance of the rival magazine *Astounding Stories* in January 1930, and then by the appointment of John W. Campbell to the editorship of *Astounding* in September 1937.

From then on it is easy to follow the development of science

<sup>15</sup> Sam Moskowitz (ed.), *Science Fiction by Gaslight: A History and Anthology of Science Fiction in the Popular Magazines, 1891-1911* (Cleveland, Ohio, 1968).

<sup>16</sup> See Sam Moskowitz (ed.), *Under the Moons of Mars: A History and Anthology of 'The Scientific Romance' in the Munsey Magazines, 1912-1920* (New York, 1970).

fiction from this anthology, with its stories by Williamson (from *Amazing* 1928), by Campbell (from before his editorial period), and by several of the authors whom Campbell developed—a group that included Isaac Asimov, Robert Heinlein, and Theodore Sturgeon, besides those represented here. Even authors who were not published by Campbell and who wrote for his later competitor magazines (such as *Galaxy* or *Fantasy* and *Science Fiction*) would acknowledge his influence, for good or ill.

Quite what this influence was is now hard to say, though Campbell's 'participatory' relationship with his authors was famous: it extended to giving them plots, themes, and scenarios, as well as refusing to print what they wrote until it fitted his direction.<sup>17</sup> Few would deny, though, that a major influence was Campbell's unflinching belief that science fiction was *going to happen*, and that the process could be hastened by writers (and editors). Sometimes his belief led him to disaster: Campbell was responsible, among much else, for the launch of Scientology on the world as L. Ron Hubbard moved from being a run-of-the-mill *Astounding* author of the 1940s to becoming a guru-figure who insisted his science fictional notions were true. At other times Campbell and his authors showed a Wellisian prescience. It has already been remarked that 'atomic bombs' were a recognized concept in science fiction from the 1930s (indeed, from well before). Famously, in an *Astounding* story of March 1944 Cleve Cartmill described an atomic bomb and mentioned the critical mass of uranium-235; the editorial offices were visited by military intelligence, convinced some breach of security must have taken place. But rather more significantly, Robert Heinlein had, in a long story in the same magazine three years before (May 1941), got the mechanics of nuclear weapons completely wrong but predicted with some accuracy the political dilemma such weapons would cause, as well as the seeming inevitability of a future Cold War.<sup>18</sup> On the whole, the Cartmill-Heinlein opposition gives a good image of science fiction's relationship with future reality and its potential as a predictor. Predictively speaking, if you publish thousands of stories about the future, one or two

<sup>17</sup> Campbell printed a famous and much-anthologized story by Tom Godwin, 'The Cold Equations', in *Astounding* (Aug., 1954). It is said that Campbell made Godwin write the story seven times, until he produced an ending in which the heroine died.

<sup>18</sup> See further my article 'The Cold War in Science Fiction, 1940-1960', in Patrick Parrinder (ed.), *Science Fiction: A Critical Guide* (London and New York, 1979), 90-109.

will later approximate to reality (when everyone will forget the thousands of misses). But what is much more significant than the occasional coincidental flash is the steady, cumulative creation of a mindset, and a readership, that is accustomed to change and ready to accept that technological change will inevitably bring social and political change as well.

The overall effect of that attitude spreading in society is impossible to quantify. Did science fiction put men on the Moon? Certainly a high proportion of NASA scientists, technicians, and administrators were long-term readers of science fiction; they knew space travel was possible when the general public and its elected representatives did not. Arthur Clarke's career is neatly paradigmatic. He began as a radar instructor with the RAF during the Second World War; foresaw global TV, satellite transmission, and the geosynchronous orbit as early as 1945; and in the middle of his immensely successful career in science fiction (in 1967) wrote a moving story of a non-believing politician converted to space research too late.<sup>19</sup> One can only repeat that part of the fabril mentality is to believe that physical problems have physical solutions, and that these *could* be found even if they have not been. If they had been, of course, we would once more be outside the field of science fiction.

Science fiction, one may conclude, is not an accurate predictor in detail, nor does it have a privileged relationship with reality. On the other hand, it is peopled with acute observers who take a long view. In this anthology one can see the impact of nuclear power, very early, in 'Padgett' and van Vogt. Space travel is a major prop, if not a major theme, in perhaps one story in three. Alien life is accepted unquestioningly in about the same proportion. Other major themes include artificial intelligence, in half-a-dozen stories from Campbell on, with Gibson pre-dating 'virtual reality' by some years; genetic engineering in several stories from 'Cordwainer Smith' on; and world overpopulation in the three stories by Ballard, Harrison, and Disch, seen in each case, fabril-style, as a physical or social problem in which moralizing is irrelevant. Yet this brief rundown of themes totally misses, for instance, Wolfe, Niven, and

<sup>19</sup> The story is 'Death and the Senator', first printed in *Analog* (May, 1961) and reprinted in Clarke's *Tales of Ten Worlds* (New York, 1962). Clarke's autobiographical account of his career in radar is *Gifted Path* (New York, 1963).

Spinrad, and has little to do with the central points of a dozen other stories. Science fiction is inherently unpredictable. Its authors are committed (with exceptions)<sup>20</sup> to the belief that unpredictability is as true of the future as it has been of the recent past.

## IV

The remarks above make it easier to declare the aims and limits of this anthology. It follows the model set up by other Oxford collections of genre fiction such as *The Oxford Book of English Ghost Stories* (1986) or *The Oxford Book of English Detective Stories* (1990). That is to say, it is chronologically presented; no author provides more than one story; and the overriding aim is to give an impression of the range, vitality, and literary quality of a genre. In one way this volume faces an even greater challenge than its predecessors, one of scale. It includes stories from a dozen magazines, and there have been of course literally scores of others.<sup>21</sup> Many of these were ephemeral, but one at least, *Asounding* (retitled *Analog* in 1960), has carried on printing its four or five stories an issue, fifty stories a year, from 1930 to the present. The number of science fiction stories published in English this century will probably not rise to a hundred thousand, but is certainly deep into the tens of thousands. Calculation will show that the chance of any two people 'perming' the same thirty stories from, say, thirty thousand, makes astronomical numbers look small. No selection, then, can be perfect. Furthermore, many major authors and influential concepts have had to be left out simply because they do not figure in the field of the short story—the premier field for science fiction, but with strong competition, especially in some periods, from both the full novel and the novella or novelette. This selection confines itself also to stories written in English, not in ignorance of the fact that there are worlds elsewhere,<sup>22</sup> but in the conviction that Anglo-American

<sup>20</sup> The urge to make history into a hard science governed by mathematics is strong. See my entry on 'History in SF', in Peter Nicholls (ed.), *The Encyclopedia of Science Fiction* (London, 1979), 283–4.

<sup>21</sup> Peter Nicholls's *Encyclopedia* lists 167 English language science fiction magazines on p. 258.

<sup>22</sup> For which see Neil Barron (ed.), *Anatomy of Wonder: A Critical Guide to Science Fiction* (2nd edn., New York and London, 1981).

science fiction has been by far the most powerful branch of the genre, and quite enough for any one selection to cope with.

What this selection can claim is that it provides a fair sample of the best the field can offer. It is possible to follow the development of the genre (subject to the qualification over length above) from these pages alone. Yet no story has been chosen to fill a gap or provide a specimen. Most important, perhaps, is a kind of serendipity inherent in selection from such a rich field. Many comparisons of theme and substance, of subgenre and technique, have been made fleetingly in the preceding pages. Far more arise out of combinations or juxtapositions not made or not seen. I would be pleased if this anthology were to 'convert' previous non-readers of science fiction into exploring the field more widely. But even enthusiasts who have read and collected steadily will find some stories they have missed and, by seeing familiar items unfamiliarly juxtaposed, may discover new insights about science fiction as a whole. Science fiction is an underrated genre, its drives and impulses often unrecognized. Over the years, and entirely by their own efforts, its authors have created the devoted and participatory readership which, collectively, they deserve. I hope this anthology may help to make that achievement more widely recognized and, in institutions of literary education, more sympathetically, but more analytically, understood.

# THE LAND IRONCLADS

H. G. WELLS

## I

The young lieutenant lay beside the war correspondent and admired the idyllic calm of the enemy's lines through his field-glass.

'So far as I can see,' he said at last, 'one man.'

'What's he doing?' asked the war correspondent.

'Field-glass at us,' said the young lieutenant.

'And this is war!'

'No,' said the young lieutenant; 'it's Bloch.'

'The game's a draw.'

'No! They've got to win or else they lose. A draw's a win for our side.'

They had discussed the political situation fifty times or so, and the war correspondent was weary of it. He stretched out his limbs. 'Aaaai s'pose it is!' he yawned.

*Flut!*

'What was that?'

'Shot at us.'

The war correspondent shifted to a slightly lower position. 'No one shot at him,' he complained.

'I wonder if they think we shall get so bored we shall go home?'

The war correspondent made no reply.

'There's the harvest, of course....'

They had been there a month. Since the first brisk movements after the declaration of war things had gone slower and slower, until it seemed as though the whole machine of events must have run down. To begin with, they had had almost a scampering time; the invader had come across the frontier on the very dawn of the war in half-a-dozen parallel columns behind a cloud of cyclists and cavalry, with a general air of coming straight on the capital, and the defender horsemen had held him up, and peppered him and forced him to open out to outflank, and had then bolted to the next

# THE WAY OF CROSS AND DRAGON

GEORGE R. R. MARTIN

'Heresy,' he told me. The brackish waters of his pool sloshed gently. 'Another one?' I said wearily. 'There are so many these days.'

My Lord Commander was displeased by that comment. He shifted position heavily, sending ripples up and down the pool. One broke over the side, and a sheet of water slid across the tiles of the receiving chamber. My boots were soaked yet again. I accepted that philosophically. I had worn my worst boots, well aware that wet feet are among the inescapable consequences of paying call on Torgathon Nine-Klariis Tûn, elder of the ka-Thane people, and also Archbishop of Vess, Most Holy Father of the Four Vows, Grand Inquisitor of the Order Militant of the Knights of Jesus Christ, and councillor to His Holiness, Pope Daryn XXI of New Rome.

'Be there as many heresies as stars in the sky, each single one is no less dangerous, Father,' the Archbishop said solemnly. 'As Knights of Christ, it is our ordained task to fight them one and all. And I must add that this new heresy is particularly foul.'

'Yes, my Lord Commander,' I replied. 'I did not intend to make light of it. You have my apologies. The mission to Finnegan was most taxing. I had hoped to ask you for a leave of absence from my duties. I need rest, a time for thought and restoration.'

'Rest?' The Archbishop moved again in his pool; only a slight shift of his immense bulk, but it was enough to send a fresh sheet of water across the floor. His black, pupilless eyes blinked at me. 'No, Father, I am afraid that is out of the question. Your skills and your experience are vital to this new mission.' His bass tones seemed then to soften somewhat. 'I have not had time to go over your reports on Finnegan,' he said. 'How did your work go?'

'Badly,' I told him, 'though I think that ultimately we will prevail. The Church is strong on Finnegan. When our attempts at reconciliation were rebuffed, I put some standards into the right

hands, and we were able to shut down the heretics' newspaper and broadcast facilities. Our friends also saw to it that their legal actions came to nothing.'

'That is not *badly*,' the Archbishop said. 'You won a considerable victory for the Lord.'

'There were riots, my Lord Commander,' I said. 'More than a hundred of the heretics were killed, and a dozen of our own people. I fear there will be more violence before the matter is finished. Our priests are attacked if they so much as enter the city where the heresy has taken root. Their leaders risk their lives if they leave that city. I had hoped to avoid such hatreds, such bloodshed.'

'Commendable, but not realistic,' said Archbishop Torgathon. He blinked at me again, and I remembered that among people of his race, that was a sign of impatience. 'The blood of martyrs must sometimes be spilled, and the blood of heretics as well. What matters it if a being surrenders his life, so long as his soul is saved?'

'Indeed,' I agreed. Despite his impatience, Torgathon would lecture me for another hour if given a chance. That prospect dismayed me. The receiving chamber was not designed for human comfort, and I did not wish to remain any longer than necessary. The walls were damp and mouldy, the air hot and humid and thick with the rancid-butter smell characteristic of the ka-Thane. My collar was chafing my neck raw, I was sweating beneath my cassock, my feet were thoroughly soaked, and my stomach was beginning to churn. I pushed ahead to the business at hand. 'You say this new heresy is unusually foul, my Lord Commander?'

'It is,' he said.

'Where has it started?'

'On Arlon, a world some three weeks distance from Vess. A human world entirely. I cannot understand why you humans are so easily corrupted. Once a ka-Thane has found the faith, he would scarcely abandon it.'

'That is well known,' I said politely. I did not mention that the number of ka-Thane to find the faith was vanishingly small. They were a slow, ponderous people, and most of their vast millions showed no interest in learning any ways other than their own, nor in following any creed but their own ancient religion. Torgathon Nine-Klariis Tûn was an anomaly. He had been among the first converts almost two centuries ago, when Pope Vidas I had ruled that non-humans might serve as clergy. Given his great lifespan and



the iron certainty of his belief, it was no wonder that Torgathon had risen as far as he had, despite the fact that less than a thousand of his race had followed him into the Church. He had at least a century of life remaining to him. No doubt he would someday be Torgathon Cardinal Tûn, should he squelch enough heresies. The times are like that.

'We have little influence on Arion,' the Archbishop was saying. His arms moved as he spoke, four ponderous clubs of mottled green-grey flesh churning the water, and the dirty white cilia around his breathing hole trembled with each word. 'A few priests, a few churches, and some believers, but no power to speak of. The heretics already outnumber us on this world. I rely on your intellect, your shrewdness. Turn this calamity into an opportunity. This heresy is so spurious that you can easily disprove it. Perhaps some of the deluded will turn to the true way.'

'Certainly,' I said. 'And the nature of this heresy? What must I disprove? It is a sad indication of my own troubled faith to add that I did not really care. I have dealt with too many heresies. Their beliefs and their questionings echo in my head and trouble my dreams at night. How can I be sure of my own faith? The very edict that had admitted Torgathon into the clergy had caused a half-dozen worlds to repudiate the Bishop of New Rome, and those who had followed that path would find a particularly ugly heresy in the massive naked (save for a damp Roman collar) alien who floated before me, who wielded the authority of the Church in four great webbed hands. Christianity is the greatest single human religion, but that means little. The non-Christians outnumber us five-to-one, and there are well over seven hundred Christian sects, some almost as large as the One True Interstellar Catholic Church of Earth and the Thousand Worlds. Even Daryn XXI, powerful as he is, is only one of seven to claim the title of Pope. My own belief was once strong, but I have moved too long among heretics and non-believers. Now, even my prayers do not make the doubts go away. So it was that I felt no horror—only a sudden intellectual interest—when the Archbishop told me the nature of the heresy on Arion.'

'They have made a saint,' he said, 'out of Judas Iscariot.'

As a senior in the Knights Inquisitor, I command my own starship, which it pleases me to call the *Truth of Christ*. Before the craft was assigned to me, it was named the *Saint Thomas*, after the apostle,

dragons forth to start fires throughout the world, funeral pyres for Jesus of Nazareth.

And Jesus rose on the third day, and Judas wept, but his tears could not turn Christ's anger, for in his wrath he had betrayed all of Christ's teachings.

So Jesus called back the dragons, and they came, and everywhere the fires went out. And from their bellies he called forth Peter and made him whole again, and gave him dominion over the Church.

Then the dragons died, and so too did all dragons everywhere, for they were the living sigil of the power and wisdom of Judas Iscariot, who had sinned greatly. And He took from Judas the gift of tongues and the power of healing He had given, and even his eyesight, for Judas had acted as a blind man (there was a fine painting of the blinded Judas weeping over the bodies of his dragons). And He told Judas that for long ages he would be remembered only as Betrayer, and people would curse his name, and all that he had been and done would be forgotten.

But then, because Judas had loved Him so, Christ gave him a boon: an extended life, during which he might travel and think on his sins and finally come to forgiveness. Only then might he die.

And that was the beginning of the last chapter in the life of Judas Iscariot. But it was a very long chapter indeed. Once dragon-king, once the friend of Christ, now he was only a blind traveller, outcast and friendless, wandering all the cold roads of the Earth, living still when all the cities and people and things he had known were dead. Peter, the first Pope and ever his enemy, spread far and wide the tale of how Judas had sold Christ for thirty pieces of silver, until Judas dared not even use his true name. For a time he called himself just Wandering Ju', and afterward many other names. He lived more than a thousand years and became a preacher, a healer, and a lover of animals, and was hunted and persecuted when the Church that Peter had founded became bloated and corrupt. But he had a great deal of time, and at last he found wisdom and a sense of peace, and finally, Jesus came to him on a long-postponed deathbed and they were reconciled, and Judas wept once again. Before he died, Christ promised that he would permit a few to remember who and what Judas had been, and that with the passage of centuries the news would spread, until finally Peter's Lie was displaced and forgotten.

Such was the life of St Judas Iscariot, as related in *The Way*

of *Cross and Dragon*. His teachings were there as well and the apocryphal books he had allegedly written.

When I had finished the volume, I lent it to Arla-k-Bau, the captain of the *Truth of Christ*. Arla was a gaunt, pragmatic woman of no particular faith, but I valued her opinion. The others of my crew, the good sisters and brothers of Saint Christopher, would only have echoed the Archbishop's religious horror.

'Interesting,' Arla said when she returned the book to me. I chuckled. 'Is that all?'

She shrugged. 'It makes a nice story. An easier read than your Bible, Damien, and more dramatic as well.'

'True,' I admitted. 'But it's absurd. An unbelievable tangle of doctrine, apocrypha, mythology, and superstition. Entertaining, yes, certainly. Imaginative, even daring. But ridiculous, don't you think? How can you credit dragons? A legless Christ? Peter being pieced together after being devoured by four monsters?'

Arla's grin was taunting. 'Is that any sillier than water changing into wine, or Christ walking on the waves, or a man living in the belly of a fish?' Arla-k-Bau liked to jab at me. It had been a scandal when I selected a non-believer as my captain, but she was very good at her job, and I liked her around to keep me sharp. She had a good mind, Arla did, and I valued that more than blind obedience. Perhaps that was a sin in me.

'There is a difference,' I said.

'Is there?' she snapped back. Her eyes saw through my masks. 'Ah, Damien, admit it. You rather liked this book.'

I cleared my throat. 'It piqued my interest,' I acknowledged. I had to justify myself. 'You know the kind of matter I deal with ordinarily. Dreary little doctrinal deviations; obscure quibblings on theology somehow blown all out of proportion; bald-faced political manoeuvrings designed to set some ambitious planetary bishop up as a new pope, or wrest some concession or other from New Rome or Vess. The war is endless, but the battles are dull and dirty. They exhaust me spiritually, emotionally, physically. Afterwards I feel drained and guilty.' I tapped the book's leather cover. 'This is different. The heresy must be crushed, of course, but I admit that I am anxious to meet this Lukyan Judasson.'

'The artwork is lovely as well,' Arla said, flipping through the pages of *The Way of Cross and Dragon* and stopping to study one especially striking plate—Judas weeping over his dragons, I think. I

but I did not consider a saint notorious for doubting to be an appropriate patron for a ship enlisted in the fight against heresy.

I have no duties aboard the *Truth*, which is crewed by six brothers and sisters of the Order of Saint Christopher the Far-Travelling, and captained by a young woman I hired away from a merchant trader. I was therefore able to devote the entire three-week voyage from Vess to Arion to a study of the heretical Bible, a copy of which had been given to me by the Archbishop's administrative assistant. It was a thick, heavy, handsome book, bound in dark leather, its pages tipped with gold leaf, with many splendid interior illustrations in full colour with holographic enhancement. Remarkable work, clearly done by someone who loved the all-but-forgotten art of bookmaking. The paintings reproduced inside—the originals, I gathered, were to be found on the walls of the House of Saint Judas on Arion—were masterful, if blasphemous, as much high art as the Tammerwens and RoHalladays that adorn the Great Cathedral of Saint John on New Rome.

Inside, the book bore an imprimatur indicating that it had been approved by Lukyan Judasson, First Scholar of the Order of Saint Judas Iscariot.

It was called *The Way of Cross and Dragon*.

I read it as the *Truth of Christ* slid between the stars, at first taking copious notes to better understand the heresy I must fight, but later simply absorbed by the strange, convoluted, grotesque story it told. The words of text had passion and power and poetry.

Thus it was that I first encountered the striking figure of Saint Judas Iscariot, a complex, ambitious, contradictory, and altogether extraordinary human being.

He was born of a whore in the fabled ancient city-state of Babylon on the same day that the saviour was born in Bethlehem, and he spent his childhood in the alleys and gutters, selling his own body when he had to, pimping when he was older. As a youth he began to experiment with the dark arts, and before the age of twenty he was a skilled necromancer. That was when he became Judas the Dragon-Tamer, the first and only man to bend to his will the most fearsome of God's creatures, the great winged fire-lizards of Old Earth. The book held a marvellous painting of Judas in some great dank cavern, his eyes aflame as he wields a glowing lash to keep a mountainous green-gold dragon at bay. Beneath his arm is a woven basket, its lid slightly ajar, and the tiny scaled heads of three

dragon chicks are peering from within. A fourth infant dragon is crawling up his sleeve. That was in the first chapter of his life.

In the second, he was Judas the Conqueror, Judas the Dragon-King, Judas of Babylon, the Great Usurper. Astride the greatest of his dragons, with an iron crown on his head and a sword in his hand, he made Babylon the capital of the greatest empire Old Earth had ever known, a realm that stretched from Spain to India. He reigned from a dragon throne amid the Hanging Gardens he had caused to be constructed, and it was there he sat when he tried Jesus of Nazareth, the troublemaking prophet who had been dragged before him bound and bleeding. Judas was not a patient man, and he made Christ bleed still more before he was through with Him. And when Jesus would not answer his questions, Judas contemptuously had Him cast back out into the streets. But first, he ordered his guards to cut off Christ's legs. 'Healer,' he said, 'heal thyself.'

Then came the Repentance, the vision in the night, and Judas Iscariot gave up his crown, his dark arts, and his riches to follow the man he had crippled. Despised and taunted by those he had tyrannized, Judas became the Legs of the Lord, and for a year carried Jesus on his back to the far corners of the realm he once ruled. When Jesus did finally heal Himself, then Judas walked at his side, and from that time forth he was Jesus' trusted friend and counsellor, the first and foremost of the Twelve. Finally, Jesus gave Judas the gift of tongues, recalled and sanctified the dragons that Judas had sent away, and sent his disciple forth on a solitary ministry across the oceans, 'to spread My Word where I cannot go.'

There came a day when the sun went dark at noon and the ground trembled, and Judas swung his dragon around on ponderous wings and flew back across the raging seas. But when he reached the city of Jerusalem, he found Christ dead on the cross.

In that moment his faith faltered, and for the next three days the Great Wrath of Judas was like a storm across the ancient world. His dragons razed the Temple in Jerusalem, drove the people forth from the city, and struck as well at the great seats of power in Rome and Babylon. And when he found the others of the Twelve and questioned them and learned of how the one named Simon-called-Peter had three times betrayed the Lord, he strangled Peter with his own hands and fed the corpse to his dragons. Then he sent those

smiled to see that it had affected her as much as me. Then I frowned.

That was the first inkling I had of the difficulties ahead.

So it was that the *Truth of Christ* came to the porcelain city Ammadon on the world of Arion, where the Order of Saint Judas Iscariot kept its House.

Arion was a pleasant, gentle world, inhabited for these past three centuries. Its population was under nine million; Ammadon, the only real city, was home to two of those millions. The technological level was medium high, but chiefly imported. Arion had little industry and was not an innovative world, except perhaps artistically. The arts were quite important here, flourishing and vital. Religious freedom was a basic tenet of the society, but Arion was not a religious world either, and the majority of the populace lived devoutly secular lives. The most popular religion was Aestheticism, which hardly counts as a religion at all. There were also Taoists, Erikanners, Old True Christs, and Children of the Dreamer, plus adherents of a dozen lesser sects.

And finally there were nine churches of the One True Interstellar Catholic faith. There had been twelve. The other three were now houses of Arion's fastest-growing faith, the Order of Saint Judas Iscariot, which also had a dozen newly built churches of its own.

The Bishop of Arion was a dark, severe man with close-cropped black hair who was not at all happy to see me. 'Damien Har Verisi' he exclaimed with some wonderment when I called on him at his residence. 'We have heard of you, of course, but I never thought to meet or host you. Our numbers here are small.'

'And growing smaller,' I said, 'a matter of some concern to my Lord Commander, Archbishop Torgathon. Apparently you are less troubled, Excellency, since you did not see fit to report the activities of this sect of Judas worshippers.'

He looked briefly angry at the rebuke, but quickly swallowed his temper. Even a bishop can fear a Knight Inquisitor. 'We are concerned, of course,' he said. 'We do all we can to combat the heresy. If you have advice that will help us, I will be glad to listen.'

'I am an Inquisitor of the Order Militant of the Knights of Jesus Christ,' I said bluntly. 'I do not give advice, Excellency. I take action. To that end I was sent to Arion, and that is what I shall do.'

Now, tell me what you know about this heresy, and this First Scholar, this Lukyan Judasson.'

'Of course, Father Damien,' the Bishop began. He signalled for a servant to bring us a tray of wine and cheese, and began to summarize the short but explosive history of the Judas cult. I listened, polishing my nails on the crimson lapel of my jacket until the black paint gleamed brilliantly, interrupting from time to time with a question. Before he had half finished, I was determined to visit Lukyan personally. It seemed the best course of action.

And I had wanted to do so all along.

Appearances were important on Arion, I gathered, and I deemed it necessary to impress Lukyan with myself and my station. I wore my best boots—sleek, dark hand-made boots of Roman leather that had never seen the inside of Torgathon's receiving chamber—and a severe black suit with deep burgundy lapels and stiff collar. Around my neck was a splendid crucifix of pure gold; my collarpin was a matching golden sword, the sigil of the Knights Inquisitor. Brother Denis carefully painted my nails, all black as ebony, and darkened my eyes as well, and used a fine white powder on my face. When I glanced in the mirror, I frightened even myself. I smiled, but only briefly. It ruined the effect.

I walked to the House of Saint Judas Iscariot. The streets of Ammadon were wide and spacious and golden, lined by scarlet trees called whisperwinds whose long, drooping tendrils did indeed seem to whisper secrets to the gentle breeze. Sister Judith came with me. She is a small woman, slight of build even in the cowed coveralls of the Order of Saint Christopher. Her face is meek and kind, her eyes wide and youthful and innocent. I find her useful. Four times now she has killed those who attempted to assault me.

The House itself was newly built. Rambling and stately, it rose from amid gardens of small bright flowers and seas of golden grass; the gardens were surrounded by a high wall. Murals covered both the outer wall around the property and the exterior of the building itself. I recognized a few of them from *The Way of Cross and Dragon*, and stopped briefly to admire them before walking through the main gate. No one tried to stop us. There were no guards, not even a receptionist. Within the walls, men and women strolled languidly through the flowers, or sat on benches beneath silverwoods and whisperwinds.

Sister Judith and I paused, then made our way directly to the House itself.

We had just started up the steps when a man appeared from within, and stood waiting in the doorway. He was blond and fat, with a great wiry beard that framed a slow smile, and he wore a flimsy robe that fell to his sandalled feet. On the robe were dragons, dragons bearing the silhouette of a man holding a cross.

When I reached the top of the steps, he bowed to me. 'Father Damien Har Veris of the Knights Inquisitor,' he said. His smile widened. 'I greet you in the name of Jesus, and in the name of Saint Judas. I am Lukyan.'

I made a note to myself to find out which of the Bishop's staff was feeding information to the Judas cult, but my composure did not break. I have been a Knight Inquisitor for a long, long time. 'Father Lukyan Mo,' I said, taking his hand. 'I have questions to ask of you.' I did not smile.

He did. 'I thought you might,' he said.

Lukyan's office was large but spartan. Heretics often have a simplicity that the officers of the true Church seem to have lost. He did have one indulgence, however. Dominating the wall behind his desk console was the painting I had already fallen in love with: the blinded Judas weeping over his dragons.

Lukyan sat down heavily and motioned me to a second chair. We had left Sister Judith outside in the waiting chamber. 'I prefer to stand, Father Lukyan,' I said, knowing it gave me an advantage.

'Just Lukyan,' he said. 'Or Luke, if you prefer. We have little use for hierarchy here.'

'You are Father Lukyan Mo, born here on Arion, educated in the seminary on Cathaday, a former priest of the One True Interstellar Catholic Church of Earth and the Thousand Worlds,' I said. 'I will address you as befits your station, Father. I expect you to recite. Is that understood?'

'Oh, yes,' he said amiably.

'I am empowered to strip you of your right to perform the sacraments, to order you shunned and excommunicated for this heresy you have formulated. On certain worlds I could even order your death.'

'But not on Arion,' Lukyan said quickly. 'We're very tolerant here. Besides, we outnumber you.' He smiled. 'As for the rest, well,

I don't perform those sacraments much anyway, you know. Not for years. I'm First Scholar now. A teacher, a thinker. I show others the way, help them find the faith. Excommunicate me if it will make you happy, Father Damien. Happiness is what all of us seek.'

'You have given up the faith then, Father Lukyan,' I said. I deposited my copy of *The Way of Cross and Dragon* on his desk. 'But I see you have found a new one.' Now I did smile, but it was all ice, all menace, all mockery. 'A more ridiculous creed I have yet to encounter. I suppose you will tell me that you have spoken to God, that he trusted you with this new revelation, so that you might clear the good name, such that it is, of Holy Judas?'

Now Lukyan's smile was very broad indeed. He picked up the book and beamed at me. 'Oh, no,' he said. 'No, I made it all up.' That stopped me. 'What?'

'I made it all up,' he repeated. He hefted the book fondly. 'I drew on many sources, of course, especially the Bible, but I do think of *Cross and Dragon* as mostly my own work. It's rather good, don't you agree? Of course, I could hardly put my name on it, proud as I am of it, but I did include my imprimatur. Did you notice that? It was the closest I dared come to a byline.'

I was speechless only for a moment. Then I grimaced. 'You startle me,' I admitted. 'I expected to find an inventive madman, some poor self-deluded fool, firm in his belief that he had spoken to God. I've dealt with such fanatics before. Instead I find a cheerful cynic who has invented a religion for his own profit. I think I prefer the fanatics. You are beneath contempt, Father Lukyan. You will burn in hell for eternity.'

'I doubt it,' Lukyan said, 'but you do mistake me, Father Damien. I am no cynic, nor do I profit from my dear Saint Judas. Truthfully, I lived more comfortably as a priest of your own Church. I do this because it is my vocation.'

I sat down. 'You confuse me,' I said, 'Explain.'

'Now I am going to tell you the truth,' he said. He said it in an odd way, almost as a cant. 'I am a Liar,' he added.

'You want to confuse me with a child's paradoxes,' I snapped.

'No, no,' he smiled. 'A Liar. With a capital. It is an organization, Father Damien. A religion, you might call it. A great and powerful faith. And I am the smallest part of it.'

'I know of no such church,' I said.

'Oh, no, you wouldn't. It's secret. It has to be. You can understand that, can't you? People don't like being lied to.'

'I do not like being lied to,' I said.

Lukyan looked wounded. 'I told you this would be the truth, didn't I? When a Liar says that, you can believe him. How else could we trust each other?'

'There are many of you?' I asked. I was starting to think that Lukyan was a madman after all, as fanatical as any heretic, but in a more complex way. Here was a heresy within a heresy, but I recognized my duty: to find the truth of things, and set them right. 'Many of us,' Lukyan said, smiling. 'You would be surprised, Father Damien, really you would. But there are some things I dare not tell you.'

'Tell me what you dare, then.'

'Happily,' said Lukyan Judasson. 'We Liars, like those of all other religions, have several truths we take on faith. Faith is always required. There are some things that cannot be proven. We believe that life is worth living. That is an article of faith. The purpose of life is to live, to resist death, perhaps to defy entropy.'

'Go on,' I said, interested despite myself.

'We also believe that happiness is a good, something to be sought after.'

'The Church does not oppose happiness,' I said drily.

'I wonder,' Lukyan said. 'But let us not quibble. Whatever the Church's position on happiness, it does preach belief in an afterlife, in a supreme being and a complex moral code.'

'True.'

'The Liars believe in no afterlife, no God. We see the universe as it is, Father Damien, and these naked truths are cruel ones. We who believe in life, and treasure it, will die. Afterwards there will be nothing, eternal emptiness, blackness, non-existence. In our living there has been no purpose, no poetry, no meaning. Nor do our deaths possess these qualities. When we are gone, the universe will not long remember us, and shortly it will be as if we had never lived at all. Our worlds and our universe will not long outlive us. Ultimately, entropy will consume all, and our puny efforts cannot stay that awful end. It will be gone. It has never been. It has never mattered. The universe itself is doomed, transient, uncarving.'

I slid back in my chair, and a shiver went through me as I

listened to poor Lukyan's dark words. I found myself fingering my crucifix. 'A bleak philosophy,' I said, 'as well as a false one. I have had that fearful vision myself. I think all of us do, at some point. But it is not so, Father. My faith sustains me against such nihilism. It is a shield against despair.'

'Oh, I know that, my friend, my Knight Inquisitor,' Lukyan said. 'I'm glad to see you understand so well. You are almost one of us already.'

I frowned.

'You've touched the heart of it,' Lukyan continued. 'The truths, the great truths—and most of the lesser ones as well—they are unbearable for most men. We find our shield in faith. Your faith, my faith, any faith. It doesn't matter, so long as we believe, really and truly believe, in whatever lie we cling to.' He fingered the ragged edges of his great blond beard. 'Our psychs have always told us that believers are the happy ones, you know. They may believe in Christ or Buddha or Erika Stormjones, in reincarnation or immortality or nature, in the power of love or the platform of a political faction, but it all comes to the same thing. They believe. They are happy. It is the ones who have seen truth who despair, and kill themselves. The truths are so vast, the faiths so little, so poorly made, so riddled with error and contradiction that we see around them and through them, and then we feel the weight of darkness upon us, and can no longer be happy.'

I am not a slow man. I knew, by then, where Lukyan Judasson was going. 'Your Liars invent faiths.'

He smiled. 'Of all sorts. Not only religious. Think of it. We know truth for the cruel instrument it is. Beauty is infinitely preferable to truth. We invent beauty. Faiths, political movements, high ideals, belief in love and fellowship. All of them are lies. We tell those lies, among others, endless others. We improve on history and myth and religion, make each more beautiful, better, easier to believe in. Our lies are not perfect, of course. The truths are too big. But perhaps someday we will find one great lie that all humanity can use. Until then, a thousand small lies will do.'

'I think I do not care for your Liars very much,' I said with a cold, even fervour. 'My whole life has been a quest for truth.'

Lukyan was indulgent. 'Father Damien Har Veris, Knight Inquisitor, I know you better than that. You are a Liar yourself. You do good work. You ship from world to world, and on each you

destroy the foolish, the rebels, the questioners who would bring down the edifice of the vast lie that you serve.'

'If my lie is so admirable,' I said, 'then why have you abandoned it?'

'A religion must fit its culture and society, work with them, not against them. If there is conflict, contradiction, then the lie breaks down, and the faith falters. Your Church is good for many worlds, Father, but not for Arion. Life is too kind here, and your faith is stern. Here we love beauty, and your faith offers too little. So we have improved it. We studied this world for a long time. We know its psychological profile. Saint Judas will thrive here. He offers drama, and colour, and much beauty—the aesthetics are admirable. His is a tragedy with a happy ending, and Arion dotes on such stories. And the dragons are a nice touch. I think your own Church ought to find a way to work in dragons. They are marvellous creatures.'

'Mythical,' I said.

'Hardly,' he replied. 'Look it up.' He grinned at me. 'You see, really, it all comes back to faith. Can you really know what happened three thousand years ago? You have one Judas, I have another. Both of us have books. Is yours true? Can you really believe that? I have been admitted only to the first circle of the order of Liars, so I do not know all our secrets, but I know that we are very old. It would not surprise me to learn that the gospels were written by men very much like me. Perhaps there never was a Judas at all. Or a Jesus.'

'I have faith that that is not so,' I said.

'There are a hundred people in this building who have a deep and very real faith in Saint Judas, and the way of cross and dragon,' Lukyan said. 'Faith is a very good thing. Do you know that the suicide rate on Arion has decreased by almost a third since the Order of Saint Judas was founded?'

I remember rising slowly from my chair. 'You are fanatical as any heretic I have ever met, Lukyan Judasson,' I told him. 'I pity you the loss of your faith.'

Lukyan rose with me. 'Pity yourself, Damien Har Veris,' he said. 'I have found a new faith and a new cause, and I am a happy man. You, my dear friend, are tortured and miserable.'

'That is a lie!' I am afraid I screamed.

'Come with me,' Lukyan said. He touched a panel on his wall,

and the great painting of Judas weeping over his dragons slid up out of sight. There was a stairway leading down into the ground. 'Follow me,' he said.

In the cellar was a great glass vat full of pale green fluid, and in it a thing was floating, a thing very like an ancient embryo, aged and infantile at the same time, naked, with a huge head and a tiny atrophied body. Tubes ran from its arms and legs and genitals, connecting it to the machinery that kept it alive.

When Lukyan turned on the lights, it opened its eyes. They were large and dark and they looked into my soul.

'This is my colleague,' Lukyan said, patting the side of the vat. 'Jon Azure Cross, a Liar of the fourth circle.'

'And a telepath,' I said with a sick certainty. I had led pogroms against other telepaths, children mostly, on other worlds. The Church teaches that the psionic powers are one of Satan's traps. They are not mentioned in the Bible. I have never felt good about those killings.

'The moment you entered the compound, Jon read you and notified me,' Lukyan said. 'Only a few of us know that he is here. He helps us lie most efficiently. He knows when faith is true, and when it is feigned. I have an implant in my skull. Jon can talk to me at all times. It was he who initially recruited me into the Liars. He knew my faith was hollow. He felt the depth of my despair.'

Then the thing in the tank spoke, its metallic voice coming from a speaker-grill in the base of the machine that nurtured it. '*And I feel yours, Damien Har Veris, empty priest. Inquisitor, you have asked too many questions. You are sick at heart, and tired, and you do not believe. Join us, Damien. You have been a Liar for a long, long time!*'

For a moment I hesitated, looking deep into myself, wondering what it was I *did* believe. I searched for my faith—the fire that had once sustained me, the certainty in the teachings of the Church, the presence of Christ within me. I found none of it, none. I was empty inside, burned out, full of questions and pain. But as I was about to answer Jon Azure Cross and the smiling Lukyan Judasson, I found something else, something I *did* believe in, had always believed in. Truth.

I believed in truth, even when it hurt.

'*He is lost to us,*' said the telepath with the mocking name of Cross. Lukyan's smile faded. 'Oh, really? I had hoped you would be one of us, Damien. You seemed ready.'

I was suddenly afraid, and I considered sprinting up the stairs to Sister Judith. Lukyan had told me so very much, and now I had rejected them.

The telepath felt my fear. '*You cannot hurt us, Damien,*' it said. '*Go in peace. Lukyan has told you nothing.*'

Lukyan was frowning. 'I told him a good deal, Jon,' he said.

'*Yes. But can he trust the words of such a Liar as you?*' The small misshapen mouth of the thing in the vat twitched in a smile, and its great eyes closed, and Lukyan Judasson sighed and led me up at the stairs.

It was not until some years later that I realized it was Jon Azure Cross who was lying, and the victim of his lie was Lukyan. I *could* hurt them. I did.

It was almost simple. The Bishop had friends in government and media. With some money in the right places, I made some friends of my own. Then I exposed Cross in his cellar, charging that he had used his psionic powers to tamper with the minds of Lukyan's followers. My friends were receptive to the charges. The guardians conducted a raid, took the telepath Cross into custody, and later tried him.

He was innocent, of course. My charge was nonsense; human telepaths can read minds in close proximity, but seldom anything more. But they are rare, and much feared, and Cross was hideous enough so that it was easy to make him a victim of superstition. In the end, he was acquitted, but he left the city Ammadon and perhaps Arion itself, bound for regions unknown.

But it had never been my intention to convict him. The charge was enough. The cracks began to show in the lie that he and Lukyan had built together. Faith is hard to come by, and easy to lose. The merest doubt can begin to erode even the strongest foundation of belief.

The Bishop and I laboured together to sow further doubts. It was not as easy as I might have thought. The Liars had done their work well. Ammadon, like most civilized cities, had a great pool of knowledge, a computer system that linked the schools and universities and libraries together, and made their combined wisdom available to any who needed it.

But when I checked, I soon discovered that the histories of Rome and Babylon had been subtly reshaped, and there were three

listings for Judas Iscariot—one for the betrayer, one for the saint, and one for the conqueror-king of Babylon. His name was also mentioned in connection with the Hanging Gardens, and there is an entry for a so-called 'Codex Judas'.

And according to the Ammadon library, dragons became extinct on Old Earth around the time of Christ.

We finally purged all those lies, wiped them from the memories of the computers, though we had to cite authorities on a half-dozen non-Christian worlds before the librarians and academics would credit that the differences were anything more than a question of religious preference. By then the Order of Saint Judas had withered in the glare of exposure. Lukyan Judasson had grown gaunt and angry, and at least half of his churches had closed.

The heresy never died completely, of course. There are always those who believe no matter what. And so to this day *The Way of Cross and Dragon* is read on Arion, in the porcelain city Ammadon, amid murmuring whisperwinds.

Arla-k-Bau and the *Truth of Christ* carried me back to Vess a year after my departure, and Archbishop Torgathon finally gave me the rest I had asked for, before sending me out to fight still other heresies. So I had my victory, and the Church continued on much as before, and the Order of Saint Judas Iscariot was crushed and diminished. The telepath Jon Azure Cross had been wrong, I thought then. He had sadly underestimated the power of a Knight Inquisitor.

Later, though, I remembered his words.

*You cannot hurt us, Damien.*

Us?

The Order of Saint Judas? Or the Liars?

He lied, I think, deliberately, knowing I would go forth and destroy the way of cross and dragon, knowing too that I could not touch the Liars, would not even dare mention them. How could I? Who would believe it? A grand star-spanning conspiracy as old as history? It reeks of paranoia, and I had no proof at all.

The telepath lied for Lukyan's benefit, so that he would let me go. I am certain of that now. Cross risked much to snare me. Failing, he was willing to sacrifice Lukyan Judasson and his lie, pawns in some greater game.

So I left, and carried within me the knowledge that I was empty

of faith but for a blind faith in truth, a truth I could no longer find in my Church.

I grew certain of that in my year of rest, which I spent reading and studying on Vess and Cathaday and Celia's World. Finally I returned to the Archbishop's receiving room, and stood again before Torgathon Nine-Klarnis Tûn in my very worst pair of boots. 'My Lord Commander,' I said to him, 'I can accept no further assignments. I ask that I be retired from active service.'

'For what cause?' Torgathon rumbled, splashing feebly.

'I have lost the faith,' I said to him, simply.

He regarded me for a long time, his pupilless eyes blinking. At last he said, 'Your faith is a matter between you and your confessor. I care only about your results. You have done good work, Damien. You may not retire, and we will not allow you to resign.'

The truth will set us free.

But freedom is cold and empty and frightening, and lies can often be warm and beautiful.

Last year the Church finally granted me a new and better ship. I named this one *Dragon*.



## Sandkings

George R. R. Martin's varied output is divided among science fiction, fantasy, and horror and has earned him multiple Hugo and Nebula Awards as well as the Bram Stoker Award from the Horror Writers Association. Much of his best writing runs to novella length, where the scope of the narrative allows exploration of a variety of themes and ideas that cut across genre boundaries. "Sandkings" treats in a futuristic setting an idea as old as the horror classic *Frankenstein*: the irresponsibility of a man who plays at being God, and the peril he faces when his monster turns on him. "Nightflyers," adapted for the screen in 1987, sets a haunted house scenario inside an interstellar spaceship. "A Song for Lya" explores the religious beliefs of an extraterrestrial culture as an outgrowth of its unique biology. "Meathouse Man" is one of several stories in which he puts a science fiction spin on the classic horror theme of the zombie. Martin began publishing fiction in 1971. His first novel, *Dying of the Light*, was published six years later and garnered praise for its detailed portrait of an extraterrestrial culture shaped by the singular nature of the planet it inhabits. Nearly all of Martin's novels are distinguished by their meticulously conceived backgrounds. *Fevre Dream*, a period vampire tale, offers a vivid re-creation of life on the Mississippi River in the antebellum South. *The Armageddon Rag* evokes the American counterculture of the 1960s in its account of a rock band whose music channels the destructive energies and chaos of the time. *A Game of Thrones*, *A Clash of Kings*, and *A Storm of Swords* comprise the first three episodes in his epic Song of Ice and Fire heroic fantasy saga. Martin has also written the novel *Windhaven* in collaboration with Lisa Tuttle. His short fiction has been collected in *A Song for Lya and Other Stories*, *Songs the Dead Men Sing*, *Portraits of His Children*, and *Tuf Voyaging*. He has written for a number of television series, including the new *Twilight Zone* and *Beauty and the Beast*, and edited more than twenty anthologies, including fifteen mosaic novels in the *Wild Cards* series.

SIMON KRESS LIVED alone in a sprawling manor house among the dry, rocky hills fifty kilometers from the city. So, when he was called away unexpectedly on business, he had no neighbors he could conveniently impose on to take his pets. The carrion hawk

was no problem; it roosted in the unused belfry and customarily fed itself anyway. The shambler Kress simply shooed outside and left to fend for itself; the little monster would gorge on slugs and birds and rockjocks. But the fish tank, stocked with genuine Earth piranha, posed a difficulty. Kress finally just threw a haunch of beef into the huge tank. The piranha could always eat each other if he were detained longer than expected. They'd done it before. It amused him.

Unfortunately, he was detained *much* longer than expected this time. When he finally returned, all the fish were dead. So was the carrion hawk. The shambler had climbed up to the belfry and eaten it. Simon Kress was vexed.

The next day he flew his skimmer to Asgard, a journey of some two hundred kilometers. Asgard was Baldur's largest city and boasted the oldest and largest starport as well. Kress liked to impress his friends with animals that were unusual, entertaining, and expensive; Asgard was the place to buy them.

This time, though, he had poor luck. Xenopets had closed its doors, t'Etherane the Petseller tried to foist another carrion hawk off on him, and Strange Waters offered nothing more exotic than piranha, glowsharks, and spider-squids. Kress had had all those; he wanted something new.

Near dusk, he found himself walking down the Rainbow Boulevard, looking for places he had not patronized before. So close to the starport, the street was lined by importers' marts. The big corporate emporiums had impressive long windows, where rare and costly alien artifacts reposed on felt cushions against dark drapes that made the interiors of the stores a mystery. Between them were the junk shops—narrow, nasty little places whose display areas were crammed with all manner of offworld bric-a-brac. Kress tried both kinds of shop, with equal dissatisfaction.

Then he came across a store that was different.

It was quite close to the port. Kress had never been there before. The shop occupied a small, single-story building of moderate size, set between a euphoria bar and a temple-brothel of the Secret Sisterhood. Down this far, the Rainbow Boulevard grew tacky. The shop itself was unusual. Arresting.

The windows were full of mist; now a pale red, now the gray of true fog, now sparkling and golden. The mist swirled and eddied and glowed faintly from within. Kress glimpsed objects in the window—machines, pieces of art, other things he could not recognize—but he could not get a good look at any of them. The mists flowed sensuously around them, displaying a bit of first one thing and then another, then cloaking all. It was intriguing.

As he watched, the mist began to form letters. One word at a time. Kress stood and read:

WO. AND. SHADE. IMPORTERS. ARTIFACTS. ART. LIFE-FORMS. AND.  
MISC.

The letters stopped. Through the fog, Kress saw something moving. That was enough for him, that and the word "Life-forms" in their advertisement. He swept his walking cloak over his shoulder and entered the store.

Inside, Kress felt disoriented. The interior seemed vast, much larger than he would have guessed from the relatively modest frontage. It was dimly lit, peaceful. The ceiling was a starscape, complete with spiral nebulae, very dark and realistic, very nice. The counters all shone faintly, the better to display the merchandise within. The aisles were carpeted with ground fog. In places, it came almost to his knees and swirled about his feet as he walked.

"Can I help you?"

She seemed almost to have risen from the fog. Tall and gaunt and pale, she wore a practical gray jumpsuit and a strange little cap that rested well back on her head.

"Are you Wo or Shade?" Kress asked. "Or only sales help?"

"Jala Wo, ready to serve you," she replied. "Shade does not see customers. We have no sales help."

"You have quite a large establishment," Kress said. "Odd that I have never heard of you before."

"We have only just opened this shop on Baldur," the woman said. "We have franchises on a number of other worlds, however. What can I sell you? Art, perhaps? You have the look of a collector. We have some fine Nor T' alush crystal carvings."

"No," Simon Kress said. "I own all the crystal carvings I desire. I came to see about a pet."

"A life-form?"

"Yes."

"Alien?"

"Of course."

"We have a mimic in stock. From Celia's World. A clever little simian. Not only will it learn to speak, but eventually it will mimic your voice, inflections, gestures, even facial expressions."

"Cute," said Kress. "And common. I have no use for either, Wo. I want something exotic. Unusual. And not cute. I detest cute animals. At the moment I own a shambler. Imported from Cotho, at no mean expense. From time to time I feed him a litter of unwanted kittrens. That is what I think of *cute*. Do I make myself understood?"

Wo smiled enigmatically. "Have you ever owned an animal that worshiped you?" she asked.

Kress grinned. "Oh, now and again. But I don't require worship, Wo. Just entertainment."

"You misunderstand me," Wo said, still wearing her strange smile. "I meant worship literally."

"What are you talking about?"

"I think I have just the thing for you," Wo said. "Follow me."

She led Kress between the radiant counters and down a long, fog-shrouded aisle beneath false starlight. They passed through a wall of mist into another section of the store, and stopped before a large plastic tank. An aquarium, thought Kress.

Wo beckoned. He stepped closer and saw that he was wrong. It was a terrarium. Within lay a miniature desert about two meters square. Pale sand bleached scarlet by wan red light. Rocks: basalt and quartz and granite. In each corner of the tank stood a castle.

Kress blinked, and peered, and corrected himself; actually only three castles stood. The fourth leaned; a crumbled, broken ruin. The other three were crude but intact, carved of stone and sand. Over their battlements and through their rounded porticoes, tiny creatures climbed and scrambled. Kress pressed his face against the plastic. "Insects?" he asked.

"No," Wo replied. "A much more complex life-form. More intelligent as well. Considerably smarter than your shambler. They are called sandkings."

"Insects," Kress said, drawing back from the tank. "I don't care how complex they are." He frowned. "And kindly don't try to gull me with this talk of intelligence. These things are far too small to have anything but the most rudimentary brains."

"They share hiveminds," Wo said. "Castle minds, in this case. There are only three organisms in the tank, actually. The fourth died. You see how her castle has fallen."

Kress looked back at the tank. "Hiveminds, eh? Interesting." He frowned again. "Still, it is only an oversized ant farm. I'd hoped for something better."

"They fight wars."

"Wars? Hmmm." Kress looked again.

"Note the colors, if you will," Wo told him. She pointed to the creatures that swarmed over the nearest castle. One was scabbling at the tank wall. Kress studied it. It still looked like an insect to his eyes. Barely as long as his fingernail, six-limbed, with six tiny eyes set all around its body. A wicked set of mandibles clacked visibly, while two long, fine antennae wove patterns in the air. Antennae, mandibles, eyes, and legs were sooty black, but the dominant color was the burnt orange of its armor plating. "It's an insect," Kress repeated.

"It is not an insect," Wo insisted calmly. "The armored exoskeleton is shed when the sandking grows larger. If it grows larger. In a tank this size, it won't." She took Kress by the elbow and led him around the tank to the next castle. "Look at the colors here."

He did. They were different. Here the sandkings had bright red armor; antennae, mandibles, eyes, and legs were yellow. Kress glanced across the tank. The denizens of the third live castle were off-white, with red trim. "Hmmm," he said.

"They war, as I said," Wo told him. "They even have truces and alliances. It was

an alliance that destroyed the fourth castle in this tank. The blacks were getting too numerous, so the others joined forces to destroy them."

Kress remained unconvinced. "Amusing, no doubt. But insects fight wars too."

"Insects do not worship," Wo said.

"Eh?"

Wo smiled and pointed at the castle. Kress stared. A face had been carved into the wall of the highest tower. He recognized it. It was Jala Wo's face. "How...?"

"I projected a holograph of my face into the tank, kept it there for a few days. The face of god, you see? I feed them; I am always close. The sandkings have a rudimentary psionic sense. Proximity telepathy. They sense me, and worship me by using my face to decorate their buildings. All the castles have them, see." They did.

On the castle, the face of Jala Wo was serene and peaceful, and very lifelike. Kress marveled at the workmanship. "How do they do it?"

"The foremost legs double as arms. They even have fingers of a sort; three small, flexible tendrils. And they cooperate well, both in building and in battle. Remember, all the mobiles of one color share a single mind."

"Tell me more," Kress said.

Wo smiled. "The maw lives in the castle. Maw is my name for her. A pun, if you will; the thing is mother and stomach both. Female, large as your fist, immobile. Actually, sandking is a bit of a misnomer. The mobiles are peasants and warriors; the real ruler is a queen. But that analogy is faulty as well. Considered as a whole, each castle is a single hermaphroditic creature."

"What do they eat?"

"The mobiles eat pap—predigested food obtained inside the castle. They get it from the maw after she has worked on it for several days. Their stomachs can't handle anything else, so if the maw dies, they soon die as well. The maw... the maw eats anything. You'll have no special expense there. Table scraps will do excellently."

"Live food?" Kress asked.

Wo shrugged. "Each maw eats mobiles from the other castles, yes."

"I am intrigued," he admitted. "If only they weren't so small."

"Yours can be larger. These sandkings are small because their tank is small. They seem to limit their growth to fit available space. If I moved these to a larger tank, they'd start growing again."

"Hmmm. My piranha tank is twice this size, and vacant. It could be cleaned out, filled with sand..."

"Wo and Shade would take care of the installation. It would be our pleasure."

"Of course," said Kress, "I would expect four intact castles."

"Certainly," Wo said.

They began to haggle about the price.

\* \* \*

THREE DAYS LATER Jala Wo arrived at Simon Kress' estate, with dormant sandkings and a work crew to take charge of the installation. Wo's assistants were aliens unlike any Kress was familiar with—squat, broad bipeds with four arms and bulging, multifaceted eyes. Their skin was thick and leathery, twisted into horns and spines and protrusions at odd spots upon their bodies. But they were very strong, and good workers. Wo ordered them about in a musical tongue that Kress had never heard.

In a day it was done. They moved his piranha tank to the center of his spacious living room, arranged couches on either side of it for better viewing, scrubbed it clean, and filled it two-thirds of the way up with sand and rock. Then they installed a special lighting system, both to provide the dim red illumination the sandkings preferred and to project holographic images into the tank. On top they mounted a sturdy plastic cover, with a feeder mechanism built in. "This way you can feed your sandkings without removing the top of the tank," Wo explained. "You would not want to take any chances on the mobiles escaping."

The cover also included climate control devices, to condense just the right amount of moisture from the air. "You want it dry, but not too dry," Wo said.

Finally one of the four-armed workers climbed into the tank and dug deep pits in the four corners. One of his companions handed the dormant maws over to him, removing them one by one from their frosted cryonic traveling cases. They were nothing to look at. Kress decided they resembled nothing so much as a mottled, half-spoiled chunk of raw meat. With a mouth.

The alien buried them, one in each corner of the tank. Then they sealed it all up and took their leave.

"The heat will bring the maws out of dormancy," Wo said. "In less than a week, mobiles will begin to hatch and burrow to the surface. Be certain to give them plenty of food. They will need all their strength until they are well established. I would estimate that you will have castles rising in about three weeks."

"And my face? When will they carve my face?"

"Turn on the hologram after about a month," she advised him. "And be patient. If you have any questions, please call. Wo and Shade are at your service." She bowed and left.

Kress wandered back to the tank and lit a joystick. The desert was still and empty. He drummed his fingers impatiently against the plastic, and frowned.

ON THE FOURTH day, Kress thought he glimpsed motion beneath the sand, subtle subterranean stirrings.

On the fifth day, he saw his first mobile, a lone white.

On the sixth day, he counted a dozen of them, whites and reds and blacks. The oranges were tardy. He cycled through a bowl of half-decayed table scraps. The mobiles sensed it at once, rushed to it, and began to drag pieces back to their respective

corners. Each color group was very organized. They did not fight. Kress was a bit disappointed, but he decided to give them time.

The oranges made their appearance on the eighth day. By then the other sandkings had begun to carry small stones and erect crude fortifications. They still did not war. At the moment they were only half the size of those he had seen at Wo and Shade's, but Kress thought they were growing rapidly.

The castles began to rise midway through the second week. Organized battalions of mobiles dragged heavy chunks of sandstone and granite back to their corners, where other mobiles were pushing sand into place with mandibles and tendrils. Kress had purchased a pair of magnifying goggles so he could watch them work, wherever they might go in the tank. He wandered around and around the tall plastic walls, observing. It was fascinating. The castles were a bit plainer than Kress would have liked, but he had an idea about that. The next day he cycled through some obsidian and flakes of colored glass along with the food. Within hours, they had been incorporated into castle walls.

The black castle was the first completed, followed by the white and red fortresses. The oranges were last, as usual. Kress took his meals into the living room and ate seated on the couch, so he could watch. He expected the first war to break out any hour now.

He was disappointed. Days passed; the castles grew taller and more grand, and Kress seldom left the tank except to attend to his sanitary needs and answer critical business calls. But the sandkings did not war. He was getting upset. Finally, he stopped feeding them.

Two days after the table scraps had ceased to fall from their desert sky, four black mobiles surrounded an orange and dragged it back to their maw. They maimed it first, ripping off its mandibles and antennae and limbs, and carried it through the shadowed main gate of their miniature castle. It never emerged. Within an hour, more than forty orange mobiles marched across the sand and attacked the blacks' corner. They were outnumbered by the blacks that came rushing up from the depths. When the fighting was over, the attackers had been slaughtered. The dead and dying were taken down to feed the black maw.

Kress, delighted, congratulated himself on his genius.

When he put food into the tank the following day, a three-cornered battle broke out over its possession. The whites were the big winners.

After that, war followed war.

ALMOST A MONTH to the day after Jala Wo had delivered the sandkings, Kress turned on the holographic projector, and his face materialized in the tank. It turned, slowly, around and around, so his gaze fell on all four castles equally. Kress thought it rather a good likeness—it had his impish grin, wide mouth, full cheeks. His blue eyes spar-

kled, his gray hair was carefully arrayed in a fashionable sidesweep, his eyebrows were thin and sophisticated.

Soon enough, the sandkings set to work. Kress fed them lavishly while his image beamed down at them from their sky. Temporarily, the wars stopped. All activity was directed toward worship.

His face emerged on the castle walls.

At first all four carvings looked alike to him, but as the work continued and Kress studied the reproductions, he began to detect subtle differences in technique and execution. The reds were the most creative, using tiny flakes of slate to put the gray in his hair. The white idol seemed young and mischievous to him, while the face shaped by the blacks—although virtually the same, line for line—struck him as wise and beneficent. The orange sandkings, as ever, were last and least. The wars had not gone well for them, and their castle was sad compared to the others. The image they carved was crude and cartoonish, and they seemed to intend to leave it that way. When they stopped work on the face, Kress grew quite piqued with them, but there was really nothing he could do.

When all the sandkings had finished their Kress-faces, he turned off the holograph and decided that it was time to have a party. His friends would be impressed. He could even stage a war for them, he thought. Humming happily to himself, he began to draw up a guest list.

THE PARTY WAS a wild success.

Kress invited thirty people: a handful of close friends who shared his amusements, a few former lovers, and a collection of business and social rivals who could not afford to ignore his summons. He knew some of them would be discomfited and even offended by his sandkings. He counted on it. Simon Kress customarily considered his parties a failure unless at least one guest walked out in high dudgeon.

On impulse he added Jala Wo's name to his list. "Bring Shade if you like," he added when dictating her invitation.

Her acceptance surprised him just a bit. "Shade, alas, will be unable to attend. He does not go to social functions," Wo added. "As for myself, I look forward to the chance to see how your sandkings are doing."

Kress ordered them up a sumptuous meal. And when at last the conversation had died down, and most of his guests had gotten silly on wine and joysticks, he shocked them by personally scraping their table leavings into a large bowl. "Come, all of you," he told them. "I want to introduce you to my newest pets." Carrying the bowl, he conducted them into his living room.

The sandkings lived up to his fondest expectations. He had starved them for two days in preparation, and they were in a fighting mood. While the guests ringed the tank, looking through the magnifying glasses Kress had thoughtfully provided, the

sandkings waged a glorious battle over the scraps. He counted almost sixty dead mobiles when the struggle was over. The reds and whites, who had recently formed an alliance, emerged with most of the food.

"Kress, you're disgusting," Cath m' Lane told him. She had lived with him for a short time two years before, until her sappy sentimentality almost drove him mad. "I was a fool to come back here. I thought perhaps you'd changed, wanted to apologize." She had never forgiven him for the time his shambler had eaten an excessively cute puppy of which she had been fond. "Don't ever invite me here again, Simon." She strode out, accompanied by her current lover and a chorus of laughter.

His other guests were full of questions.

Where did the sandkings come from? they wanted to know. "From Wo and Shade, Importers," he replied, with a polite gesture toward Jala Wo, who had remained quiet and apart through most of the evening.

Why did they decorate their castles with his likeness? "Because I am the source of all good things. Surely you know that?" That brought a round of chuckles.

Will they fight again? "Of course, but not tonight. Don't worry. There will be other parties."

Jad Rakkis, who was an amateur xenologist, began talking about other social insects and the wars they fought. "These sandkings are amusing, but nothing really. You ought to read about Terran soldier ants, for instance."

"Sandkings are not insects," Jala Wo said sharply, but Jad was off and running, and no one paid her the slightest attention. Kress smiled at her and shrugged.

Malada Blane suggested a betting pool the next time they got together to watch a war, and everyone was taken with the idea. An animated discussion about rules and odds ensued. It lasted for almost an hour. Finally the guests began to take their leave.

Jala Wo was the last to depart. "So," Kress said to her when they were alone, "it appears my sandkings are a hit."

"They are doing well," Wo said. "Already they are larger than my own."

"Yes," Kress said, "except for the oranges."

"I had noticed that," Wo replied. "They seem few in number, and their castle is shabby."

"Well, someone must lose," Kress said. "The oranges were late to emerge and get established. They have suffered for it."

"Pardon," said Wo, "but might I ask if you are feeding your sandkings sufficiently?"

Kress shrugged. "They diet from time to time. It makes them fiercer."

She frowned. "There is no need to starve them. Let them war in their own time, for their own reasons. It is their nature, and you will witness conflicts that are delightfully subtle and complex. The constant war brought on by hunger is artless and degrading."

Simon Kress repaid Wo's frown with interest. "You are in my house, Wo, and here I am the judge of what is degrading. I fed the sandkings as you advised, and they did not fight."

"You must have patience."

"No," Kress said. "I am their master and their god, after all. Why should I wait on their impulses? They did not war often enough to suit me. I corrected the situation."

"I see," said Wo. "I will discuss the matter with Shade."

"It is none of your concern, or his," Kress snapped.

"I must bid you good night, then," Wo said with resignation. But as she slipped into her coat to depart, she fixed him with a final disapproving stare. "Look to your faces, Simon Kress," she warned him. "Look to your faces."

Puzzled, he wandered back to the tank and stared at the castles after she had taken her departure. His faces were still there, as ever. Except—he snatched up his magnifying goggles and slipped them on. Even then it was hard to make out. But it seemed to him that the expression on the face of his images had changed slightly, that his smile was somehow twisted so that it seemed a touch malicious. But it was a very subtle change, if it was a change at all. Kress finally put it down to his suggestibility, and resolved not to invite Jala Wo to any more of his gatherings.

OVER THE NEXT few months, Kress and about a dozen of his favorites got together weekly for what he liked to call his "war games." Now that his initial fascination with the sandkings was past, Kress spent less time around his tank and more on his business affairs and his social life, but he still enjoyed having a few friends over for a war or two. He kept the combatants sharp on a constant edge of hunger. It had severe effects on the orange sandkings, who dwindled visibly until Kress began to wonder if their maw was dead. But the others did well enough.

Sometimes at night, when he could not sleep, Kress would take a bottle of wine into the darkened living room, where the red gloom of his miniature desert was the only light. He would drink and watch for hours, alone. There was usually a fight going on somewhere, and when there was not he could easily start one by dropping in some small morsel of food.

They took to betting on the weekly battles, as Malada Blane had suggested. Kress won a good amount by betting on the whites, who had become the most powerful and numerous colony in the tank, with the grandest castle. One week he slid the corner of the tank top aside, and dropped the food close to the white castle instead of on the central battleground as usual, so that the others had to attack the whites in their stronghold to get any food at all. They tried. The whites were brilliant in defense. Kress won a hundred standards from Jad Rakkis.

Rakkis, in fact, lost heavily on the sandkings almost every week. He pretended to

a vast knowledge of them and their ways, claiming that he had studied them after the first party, but he had no luck when it came to placing his bets. Kress suspected that Jad's claims were empty boasting. He had tried to study the sandkings a bit himself, in a moment of idle curiosity, tying in to the library to find out to what world his pets were native. But there was no listing for them. He wanted to get in touch with Wo and ask her about it, but he had other concerns, and the matter kept slipping his mind.

Finally, after a month in which his losses totaled more than a thousand standards, Jad Rakkis arrived at the war games carrying a small plastic case under his arm. Inside was a spiderlike thing covered with fine golden hair.

"A sand spider," Rakkis announced. "From Cathaday. I got it this afternoon from t'Etherane the Petseller. Usually they remove the poison sacs, but this one is intact. Are you game, Simon? I want my money back. I'll bet a thousand standards, sand spider against sandkings."

Kress studied the spider in its plastic prison. His sandkings had grown—they were twice as large as Wo's, as she'd predicted—but they were still dwarfed by this thing. It was venomed, and they were not. Still, there were an awful lot of them. Besides, the endless sandking wars had begun to grow tiresome lately. The novelty of the match intrigued him. "Done," Kress said. "Jad, you are a fool. The sandkings will just keep coming until this ugly creature of yours is dead."

"You are the fool, Simon," Rakkis replied, smiling. "The Cathaday sand spider customarily feeds on burrowers that hide in nooks and crevices and—well, watch—it will go straight into those castles, and eat the maws."

Kress scowled amid general laughter. He hadn't counted on that. "Get on with it," he said irritably. He went to freshen his drink.

The spider was too large to cycle conveniently through the food chamber. Two of the others helped Rakkis slide the tank top slightly to one side, and Malada Blane handed him up his case. He shook the spider out. It landed lightly on a miniature dune in front of the red castle, and stood confused for a moment, mouth working, legs twitching menacingly.

"Come on," Rakkis urged. They all gathered round the tank. Simon Kress found his magnifiers and slipped them on. If he was going to lose a thousand standards, at least he wanted a good view of the action.

The sandkings had seen the invader. All over the castle, activity had ceased. The small scarlet mobiles were frozen, watching.

The spider began to move toward the dark promise of the gate. On the tower above, Simon Kress' countenance stared down impassively.

At once there was a flurry of activity. The nearest red mobiles formed themselves into two wedges and streamed over the sand toward the spider. More warriors erupted from inside the castle and assembled in a triple line to guard the approach to the

underground chamber where the maw lived. Scouts came scuttling over the dunes, recalled to fight.

Battle was joined.

The attacking sandkings washed over the spider. Mandibles snapped shut on legs and abdomen, and clung. Reds raced up the golden legs to the invader's back. They bit and tore. One of them found an eye, and ripped it loose with tiny yellow tendrils. Kress smiled and pointed.

But they were *small*, and they had no venom, and the spider did not stop. Its legs flicked sandkings off to either side. Its dripping jaws found others, and left them broken and stiffening. Already a dozen of the reds lay dying. The sand spider came on and on. It strode straight through the triple line of guardians before the castle. The lines closed around it, covered it, waging desperate battle. A team of sandkings had bitten off one of the spider's legs, Kress saw. Defenders leaped from atop the towers to land on the twitching, heaving mass.

Lost beneath the sandkings, the spider somehow lurched down into the darkness and vanished.

Jad Rakkis let out a long breath. He looked pale. "Wonderful," someone else said. Malada Blane chuckled deep in her throat.

"Look," said Idi Noredidian, tugging Kress by the arm.

They had been so intent on the struggle in the corner that none of them had noticed the activity elsewhere in the tank. But now the castle was still, the sands empty save for dead red mobiles, and now they saw.

Three armies were drawn up before the red castle. They stood quite still, in perfect array, rank after rank, of sandkings, orange and white and black. Waiting to see what emerged from the depths.

Simon Kress smiled. "A *cordon sanitaire*," he said. "And glance at the other castles, if you will, Jad."

Rakkis did, and swore. Teams of mobiles were sealing up the gates with sand and stone. If the spider somehow survived this encounter, it would find no easy entrance at the other castles. "I should have brought four spiders," Jad Rakkis said. "Still, I've won. My spider is down there right now, eating your damned maw."

Kress did not reply. He waited. There was motion in the shadows.

All at once, red mobiles began pouring out of the gate. They took their positions on the castle, and began repairing the damage the spider had wrought. The other armies dissolved and began to retreat to their respective corners.

"Jad," said Simon Kress, "I think you are a bit confused about who is eating who."

THE FOLLOWING WEEK Rakkis brought four slim silver snakes. The sandkings dispatched them without much trouble.

Next he tried a large black bird. It ate more than thirty white mobiles, and its thrashing and blundering virtually destroyed their castle, but ultimately its wings grew tired, and the sandkings attacked in force wherever it landed.

After that it was a case of insects, armored beetles not too unlike the sandkings themselves. But stupid, stupid. An allied force of oranges and blacks broke their formation, divided them, and butchered them.

Rakkis began giving Kress promissory notes.

It was around that time that Kress met Cath m'Lane again, one evening when he was dining in Asgard at his favorite restaurant. He stopped at her table briefly and told her about the war games, inviting her to join them. She flushed, then regained control of herself and grew icy. "Someone has to put a stop to you, Simon. I guess it's going to be me," she said. Kress shrugged and enjoyed a lovely meal and thought no more about her threat.

Until a week later, when a small, stout woman arrived at his door and showed him a police wristband. "We've had complaints," she said. "Do you keep a tank full of dangerous insects, Kress?"

"Not insects," he said, furious. "Come, I'll show you."

When she had seen the sandkings, she shook her head. "This will never do. What do you know about these creatures, anyway? Do you know what world they're from? Have they been cleared by the ecological board? Do you have a license for these things? We have a report that they're carnivores, possibly dangerous. We also have a report that they are semi-sentient. Where did you get these creatures, anyway?"

"From Wo and Shade," Kress replied.

"Never heard of them," the woman said. "Probably smuggled them in, knowing our ecologists would never approve them. No, Kress, this won't do. I'm going to confiscate this tank and have it destroyed. And you're going to have to expect a few fines as well."

Kress offered her a hundred standards to forget all about him and his sandkings.

She *asked*. "Now I'll have to add attempted bribery to the charges against you."

Not until he raised the figure to two thousand standards was she willing to be persuaded. "It's not going to be easy, you know," she said. "There are forms to be altered, records to be wiped. And getting a forged license from the ecologists will be time-consuming. Not to mention dealing with the complainant. What if she calls again?"

"Leave her to me," Kress said. "Leave her to me."

HE THOUGHT ABOUT it for a while. That night he made some calls.

First he got t'Etherane the Petseller. "I want to buy a dog," he said. "A puppy."

The round-faced merchant gawked at him. "A puppy? That is not like you, Simon. Why don't you come in? I have a lovely choice."

"I want a very specific *kind* of puppy," Kress said. "Take notes. I'll describe to you what it must look like."

Afterward he punched for Idi Norediddian. "Idi," he said, "I want you out here tonight with your holo equipment. I have a notion to record a sandking battle. A present for one of my friends."

THE NIGHT AFTER they made the recording, Simon Kress stayed up late. He absorbed a controversial new drama in his sensorium, fixed himself a small snack, smoked a joystick or two, and broke out a bottle of wine. Feeling very happy with himself, he wandered into the living room, glass in hand.

The lights were out. The red glow of the terrarium made the shadows flushed and feverish. He walked over to look at his domain, curious as to how the blacks were doing in the repairs on their castle. The puppy had left it in ruins.

The restoration went well. But as Kress inspected the work through his magnifiers, he chanced to glance closely at the face. It startled him.

He drew back, blinked, took a healthy gulp of wine, and looked again.

The face on the walls was still his. But it was all wrong, all *twisted*. His cheeks were bloated and piggish, his smile was a crooked leer. He looked impossibly malevolent.

Uneasy, he moved around the tank to inspect the other castles. They were each a bit different, but ultimately all the same.

The oranges had left out most of the fine detail, but the result still seemed monstrous, crude—a brutal mouth and mindless eyes.

The reds gave him a satanic, twitching kind of smile. His mouth did odd, unlovely things at its corners.

The whites, his favorites, had carved a cruel idiot god.

Simon Kress flung his wine across the room in rage. "You *dare*," he said under his breath. "Now you won't eat for a week, you damned..." His voice was shrill. "I'll teach you." He had an idea. He strode out of the room, and returned a moment later with an antique iron throwing-sword in his hand. It was a meter long, and the point was still sharp. Kress smiled, climbed up and moved the tank cover aside just enough to give him working room, opening one corner of the desert. He leaned down, and jabbed the sword at the white castle below him. He waved it back and forth, smashing towers and ramparts and walls. Sand and stone collapsed, burying the scrambling mobiles. A flick of his wrist obliterated the features of the insolent, insulting caricature the sandkings had made of his face. Then he poised the point of the sword above the dark mouth that opened down into the maw's chamber, and thrust with all his strength. He heard a soft, squishing sound, and met resistance. All of the mobiles trembled and collapsed. Satisfied, Kress pulled back.

He watched for a moment, wondering whether he'd killed the maw. The point

of the throwing-sword was wet and slimy. But finally the white sandkings began to move again. Feebly, slowly, but they moved.

He was preparing to slide the cover back in place and move on to a second castle when he felt something crawling on his hand.

He screamed and dropped the sword, and brushed the sandking from his flesh. It fell to the carpet, and he ground it beneath his heel, crushing it thoroughly long after it was dead. It had crunched when he stepped on it. After that, trembling, he hurried to seal the tank up again, and rushed off to shower and inspected himself carefully. He boiled his clothing.

Later, after several fresh glasses of wine, he returned to the living room. He was a bit ashamed of the way the sandking had terrified him. But he was not about to open the tank again. From now on, the cover stayed sealed permanently. Still, he had to punish the others.

Kress decided to lubricate his mental process with another glass of wine. As he finished it, an inspiration came to him. He went to the tank smiling, and made a few adjustments to the humidity controls.

By the time he fell asleep on the couch, his wine glass still in his hand, the sand castles were melting in the rain.

KRESS WOKE TO angry pounding on his door.

He sat up, groggy, his head throbbing. Wine hangovers were always the worst, he thought. He lurched to the entry chamber.

Cath m'Lane was outside. "You monster," she said, her face swollen and puffy and streaked by tears. "I cried all night, damn you. But no more, Simon, no more." "Easy," he said, holding his head. "I've got a hangover."

She swore and shoved him aside and pushed her way into his house. The shambler came peering round a corner to see what the noise was. She spat at it and stalked into the living room, Kress trailing ineffectually after her. "Hold on," he said, "where do you... you can't..." He stopped, suddenly horrorstruck. She was carrying a heavy sledgehammer in her left hand. "No," he said.

She went directly to the sandking tank. "You like the little charmers so much, Simon? Then you can live with them."

"*Cathi!*" he shrieked.

Gripping the hammer with both hands, she swung as hard as she could against the side of the tank. The sound of the impact set his head to screaming, and Kress made a low blubbering sound of despair. But the plastic held.

She swung again. This time there was a *crack*, and a network of thin lines sprang into being.

Kress threw himself at her as she drew back her hammer for a third swing. They went down flailing, and rolled. She lost her grip on the hammer and tried to throttle



him, but Kress wrenched free and bit her on the arm, drawing blood. They both staggered to their feet, panting.

"You should see yourself, Simon," she said grimly. "Blood dripping from your mouth. You look like one of your pets. How do you like the taste?"

"Get out," he said. He saw the throwing-sword where it had fallen the night before, and snatched it up. "Get out," he repeated, waving the sword for emphasis. "Don't go near that tank again."

She laughed at him. "You wouldn't dare," she said. She bent to pick up her hammer.

Kress shrieked at her, and lunged. Before he quite knew what was happening, the iron blade had gone clear through her abdomen. Cath m'Lane looked at him wonderingly, and down at the sword. Kress fell back whimpering. "I didn't mean... I only wanted..."

She was transfixed, bleeding, dead, but somehow she did not fall. "You monster," she managed to say, though her mouth was full of blood. And she whirled, impossibly, the sword in her, and swung with her last strength at the tank. The tortured wall shattered, and Cath m'Lane was buried beneath an avalanche of plastic and sand and mud.

Kress made small hysterical noises and scrambled up on the couch.

Sandkings were emerging from the muck on his living room floor. They were crawling across Cath's body. A few of them ventured tentatively out across the carpet. More followed.

He watched as a column took shape, a living, writhing square of sandkings, bearing something, something slimy and featureless, a piece of raw meat big as a man's head. They began to carry it away from the tank. It pulsed.

That was when Kress broke and ran.

IT WAS LATE afternoon before he found the courage to return.

He had run to his skimmer and flown to the nearest city, some fifty kilometers away, almost sick with fear. But once safely away, he had found a small restaurant, put down several mugs of coffee and two anti-hangover tabs, eaten a full breakfast, and gradually regained his composure.

It had been a dreadful morning, but dwelling on that would solve nothing. He ordered more coffee and considered his situation with icy rationality.

Cath m'Lane was dead at his hand. Could he report it, plead that it had been an accident? Unlikely. He had run her through, after all, and he had already told that policer to leave her to him. He would have to get rid of the evidence, and hope that she had not told anyone where she was going this morning. That was probable. She could only have gotten his gift late last night. She said that she had cried all night,

and she had been alone when she arrived. Very well; he had one body and one skimmer to dispose of.

That left the sandkings. They might prove more of a difficulty. No doubt they had all escaped by now. The thought of them around his house, in his bed and his clothes, infesting his food—it made his flesh crawl. He shuddered and overcame his revulsion. It really shouldn't be too hard to kill them, he reminded himself. He didn't have to account for every mobile. Just the four maws, that was all. He could do that. They were large, as he'd seen. He would find them and kill them.

Simon Kress went shopping before he flew back to his home. He bought a set of skinthins that would cover him from head to foot, several bags of poison pellets for rockjock control, and a spray canister of illegally strong pesticide. He also bought a magnalock towing device.

When he landed, he went about things methodically. First he hooked Cath's skimmer to his own with the magnalock. Searching it, he had his first piece of luck. The crystal chip with Idi Noredidian's holo of the sandking fight was on the front seat. He had worried about that.

When the skimmers were ready, he slipped into his skinthins and went inside for Cath's body.

It wasn't there.

He poked through the fast-drying sand carefully, but there was no doubt of it; the body was gone. Could she have dragged herself away? Unlikely, but Kress searched. A cursory inspection of his house turned up neither the body nor any sign of the sandkings. He did not have time for a more thorough investigation, not with the incriminating skimmer outside his front door. He resolved to try later.

Some seventy kilometers north of Kress' estate was a range of active volcanoes. He flew there, Cath's skimmer in tow. Above the glowering cone of the largest, he released the magnalock and watched it vanish in the lava below.

It was dusk when he returned to his house. That gave him pause. Briefly he considered flying back to the city and spending the night there. He put the thought aside. There was work to do. He wasn't safe yet.

He scattered the poison pellets around the exterior of his house. No one would find that suspicious. He'd always had a rockjock problem. When that task was completed, he primed the canister of pesticide and ventured back inside.

Kress went through the house room by room, turning on lights everywhere he went until he was surrounded by a blaze of artificial illumination. He paused to clean up in the living room, shoveling sand and plastic fragments back into the broken tank. The sandkings were all gone, as he'd feared. The castles were shrunken and distorted, slagged by the watery bombardment Kress had visited upon them, and what little remained was crumbling as it dried.

He frowned and searched on, the canister of pest spray strapped across his shoulders.

Down in his deepest wine cellar, he came upon Cath m' Lane's corpse.

It sprawled at the foot of a steep flight of stairs, the limbs twisted as if by a fall. White mobiles were swarming all over it, and as Kress watched, the body moved jerkily across the hard-packed dirt floor.

He laughed, and twisted the illumination up to maximum. In the far corner, a squat little earthen castle and a dark hole were visible between two wine racks. Kress could make out a rough outline of his face on the cellar wall.

The body shifted once again, moving a few centimeters towards the castle. Kress had a sudden vision of the white maw waiting hungrily. It might be able to get Cath's foot in its mouth, but no more. It was too absurd. He laughed again, and started down into the cellar, finger poised on the trigger of the hose that snaked down his right arm. The sandkings—hundreds of them moving as one—deserted the body and formed up battle lines, a field of white between him and their maw.

Suddenly Kress had another inspiration. He smiled and lowered his firing hand. "Cath was always hard to swallow," he said, delighted at his wit. "Especially for one your size. Here, let me give you some help. What are gods for, after all?"

He retreated upstairs, returning shortly with a cleaver. The sandkings, patient, waited and watched while Kress chopped Cath m' Lane into small, easily digestible pieces.

SIMON KRESS SLEPT in his skinthins that night, the pesticide close at hand, but he did not need it. The whites, sated, remained in the cellar, and he saw no sign of the others. In the morning he finished the cleanup of the living room. After he was through, no trace of the struggle remained except for the broken tank.

He ate a light lunch, and resumed his hunt for the missing sandkings. In full daylight, it was not too difficult. The blacks had located in his rock garden, and built a castle heavy with obsidian and quartz. The reds he founds at the bottom of his long-disused swimming pool, which had partially filled with windblown sand over the years. He saw mobiles of both colors ranging about his grounds, many of them carrying poison pellets back to their maws. Kress decided his pesticide was unnecessary. No use risking a fight when he could just let the poison do its work. Both maws should be dead by evening.

That left only the burnt orange sandkings unaccounted for. Kress circled his estate several times, in ever-widening spirals, but found no trace of them. When he began to sweat in his skinthins—it was a hot, dry day—he decided it was not important. If they were out here, they were probably eating the poison pellets along with the reds and blacks.

He crunched several sandkings underfoot, with a certain degree of satisfaction,

as he walked back to the house. Inside, he removed his skinthins, settled down to a delicious meal, and finally began to relax. Everything was under control. Two of the maws would soon be defunct, the third was safely located where he could dispose of it after it had served his purpose, and he had no doubt that he would find the fourth. As for Cath, all trace of her visit had been obliterated.

His reverie was interrupted when his viewscreen began to blink at him. It was Jad Rakkis, calling to brag about some cannibal worms he was bringing to the war games tonight.

Kress had forgotten about that, but he recovered quickly. "Oh, Jad, my pardons. I neglected to tell you. I grew bored with all that, and got rid of the sandkings. Ugly little things. Sorry, but there'll be no party tonight."

Rakkis was indignant. "But what will I do with my worms?"

"Put them in a basket of fruit and send them to a loved one," Kress said, signing off. Quickly he began calling the others. He did not need anyone arriving at his doorstep now, with the sandkings alive and infesting the estate.

As he was calling Idi Noreddian, Kress became aware of an annoying oversight. The screen began to clear, indicating that someone had answered at the other end. Kress flicked off.

Idi arrived on schedule an hour later. She was surprised to find the party canceled, but perfectly happy to share an evening alone with Kress. He delighted her with his story of Cath's reaction to the holo they had made together. While telling it, he managed to ascertain that she had not mentioned the prank to anyone. He nodded, satisfied, and refilled their wine glasses. Only a trickle was left. "I'll have to get a fresh bottle," he said. "Come with me to my wine cellar, and help me pick out a good vintage. You've always had a better palate than I."

She came along willingly enough, but balked at the top of the stairs when Kress opened the door and gestured for her to precede him. "Where are the lights?" she said. "And that smell—what's that peculiar smell, Simon?"

When he shoved her, she looked briefly startled. She screamed as she tumbled down the stairs. Kress closed the door and began to nail it shut with the boards and air-hammer he had left for that purpose. As he was finishing, he heard Idi groan. "I'm hurt," she called. "Simon, what is this?" Suddenly she squealed, and shortly after that the screaming started.

It did not cease for hours. Kress went to his sensorium and dialed up a saucy comedy to blot it out of his mind.

When he was sure she was dead, Kress flew her skimmer north to the volcanoes and discarded it. The magnalock was proving a good investment.

ODD SCRABBLING NOISES were coming from beyond the wine cellar door the next morning when Kress went down to check it out. He listened for several uneasy mo-

ments, wondering if Idi Noredian could possibly have survived, and was now scratching to get out. It seemed unlikely; it had to be the sandkings. Kress did not like the implications of that. He decided that he would keep the door sealed, at least for the moment, and went outside with a shovel to bury the red and black maws in their own castles.

He found them very much alive.

The black castle was glittering with volcanic glass, and sandkings were all over it, repairing and improving. The highest tower was up to his waist, and on it was a hideous caricature of his face. When he approached, the blacks halted in their labors, and formed up into two threatening phalanxes. Kress glanced behind him and saw others closing off his escape. Startled, he dropped the shovel and sprinted out of the trap, crushing several mobiles beneath his boots.

The red castle was creeping up the walls of the swimming pool. The maw was safely settled in a pit, surrounded by sand and concrete and battlements. The reds crept all over the bottom of the pool. Kress watched them carry a rockjock and a large lizard into the castle. He stepped back from the poolside, horrified, and felt something crunch. Looking down, he saw three mobiles climbing up his leg. He brushed them off and stamped them to death, but others were approaching quickly. They were larger than he remembered. Some were almost as big as his thumb.

He ran. By the time he reached the safety of the house, his heart was racing and he was short of breath. The door closed behind him, and Kress hurried to lock it. His house was supposed to be pest-proof. He'd be safe in here.

A stiff drink steadied his nerve. So poison doesn't faze them, he thought. He should have known. Who had warned him that the maw could eat anything. He would have to use the pesticide. Kress took another drink for good measure, donned his skinthins, and strapped the canister to his back. He unlocked the door.

Outside, the sandkings were waiting.

Two armies confronted him, allied against the common threat. More than he could have guessed. The damned maws must be breeding like rockjocks. They were everywhere, a creeping sea of them.

Kress brought up the hose and flicked the trigger. A gray mist washed over the nearest rank of sandkings. He moved his hand from side to side.

Where the mist fell, the sandkings twitched violently and died in sudden spasms. Kress smiled. They were no match for him. He sprayed in a wide arc before him and stepped forward confidently over a litter of black and red bodies. The armies fell back. Kress advanced, intent on cutting through them to their maws.

All at once the retreat stopped. A thousand sandkings surged toward him.

Kress had been expecting the counterattack. He stood his ground, sweeping his misty sword before him in great looping strokes. They came at him and died. A few got through; he could not spray everywhere at once. He felt them climbing up his

legs, sensed their mandibles biting futilely at the reinforced plastic of his skinthins. He ignored them, and kept spraying.

Then he began to feel soft impacts on his head and shoulders.

Kress trembled and spun and looked up above him. The front of his house was alive with sandkings. Blacks and reds, hundreds of them. They were launching themselves into the air, raining down on him. They fell all around him. One landed on his faceplate, its mandibles scraping at his eyes for a terrible second before he plucked it away.

He swung up his hose and sprayed the air, sprayed the house, sprayed until the airborne sandkings were all dead and dying. The mist settled back on him, making him cough. He coughed, and kept spraying. Only when the front of the house was clean did Kress turn his attention back to the ground.

They were all around him, on him, dozens of them scurrying over his body, hundreds of others hurrying to join them. He turned the mist on them. The hose went dead. Kress heard a loud *hiss*, and the deadly fog rose in a great cloud from between his shoulders, cloaking him, choking him, making his eyes burn and blur. He felt for the hose, and his hand came away covered with dying sandkings. The hose was severed; they'd eaten it through. He was surrounded by a shroud of pesticide, blinded. He stumbled and screamed, and began to run back to the house, pulling sandkings from his body as he went.

Inside, he sealed the door and collapsed on the carpet, rolling back and forth until he was sure he had crushed them all. The canister was empty by then, hissing feebly. Kress stripped off his skinthins and showered. The hot spray scalded him and left his skin reddened and sensitive, but it made his flesh stop crawling.

He dressed in his heaviest clothing, thick workpants and leathers, after shaking them out nervously. "Damn," he kept muttering, "damn." His throat was dry. After searching the entry hall thoroughly to make certain it was clean, he allowed himself to sit and pour a drink. "Damn," he repeated. His hand shook as he poured, slopping liquor on the carpet.

The alcohol settled him, but it did not wash away the fear. He had a second drink, and went to the window furtively. Sandkings were moving across the thick plastic pane. He shuddered and retreated to his communications console. He had to get help, he thought wildly. He would punch through a call to the authorities, and policemen would come out with flamethrowers and. . . .

Simon Kress stopped in mid-call, and groaned. He couldn't call in the police. He would have to tell them about the whites in his cellar, and they'd find the bodies there. Perhaps the maw might have finished Cath m'Lane by now, but certainly not Idi Noredian. He hadn't even cut her up. Besides, there would be bones. No, the police could be called in only as a last resort.

He sat at the console, frowning. His communications equipment filled a whole

wall; from here he could reach anyone on Baldur. He had plenty of money, and his cunning—he had always prided himself on his cunning. He would handle this somehow.

He briefly considered calling Wo, but soon dismissed the idea. Wo knew too much, and she would ask questions, and he did not trust her. No, he needed someone who would do as he asked *without* questions.

His frown faded, and slowly turned into a smile. Simon Kress had contacts. He put through a call to a number he had not used in a long time.

A woman's face took shape on his viewscreen: white-haired, bland of expression, with a long hook nose. Her voice was brisk and efficient. "Simon," she said. "How is business?"

"Business is fine, Lissandra," Kress replied. "I have a job for you."

"A removal? My price has gone up since last time, Simon. It has been ten years after all."

"You will be well paid," Kress said. "You know I'm generous. I want you for a bit of pest control."

She smiled a thin smile. "No need to use euphemisms, Simon. The call is shielded."

"No, I'm serious. I have a pest problem. Dangerous pests. Take care of them for me. No questions. Understood?"

"Understood."

"Good. You'll need . . . oh, three or four operatives. Wear heat-resistant skinthins, and equip them with flamethrowers, or lasers, something on that order. Come out to my place. You'll see the problem. Bugs, lots and lots of them. In my rock garden and the old swimming pool you'll find castles. Destroy them, kill everything inside them. Then knock on the door, and I'll show you what else needs to be done. Can you get out here quickly?"

Her face was impassive. "We'll leave within the hour."

LISSANDRA WAS TRUE to her word. She arrived in a lean black skimmer with three operatives. Kress watched them from the safety of a second-story window. They were all faceless in dark plastic skinthins. Two of them wore portable flamethrowers, a third carried lasercannon and explosives. Lissandra carried nothing; Kress recognized her by the way she gave orders.

Their skimmer passed low overhead first, checking out the situation. The sandkings went mad. Scarlet and ebon mobiles ran everywhere, frenetic. Kress could see the castle in the rock garden from this vantage point. It stood tall as a man. Its ramparts were crawling with black defenders, and a steady stream of mobiles flowed down into its depths.

Lissandra's skimmer came down next to Kress' and the operatives vaulted out and unlimbered their weapons. They looked inhuman, deadly.

The black army drew up between them and the castle. The reds—Kress suddenly realized that he could not see the reds. He blinked. Where had they gone?

Lissandra pointed and shouted, and her two flamethrowers spread out and opened up on the black sandkings. Their weapons coughed dully and began to roar, long tongues of blue-and-scarlet fire licking out before them. Sandkings crisped and blackened and died. The operatives began to play the fire back and forth in an efficient, interlocking pattern. They advanced with careful, measured steps.

The black army burned and disintegrated, the mobiles fleeing in a thousand different directions, some back toward the castle, others toward the enemy. None reached the operatives with the flamethrowers. Lissandra's people were very professional.

Then one of them stumbled.

Or seemed to stumble. Kress looked again, and saw that the ground had given way beneath the man. Tunnels, he thought with a tremor of fear—tunnels, pits, traps. The flamer was sunk in sand up to his waist, and suddenly the ground around him seemed to erupt, and he was covered with scarlet sandkings. He dropped the flamethrower and began to claw wildly at his own body. His screams were horrible to hear.

His companions hesitated, then swung and fired. A blast of flame swallowed human and sandkings both. The screaming stopped abruptly. Satisfied, the second flamer turned back to the castle and took another step forward, and recoiled as his foot broke through the ground and vanished up to the ankle. He tried to pull it back and retreat, and the sand all around him gave way. He lost his balance and stumbled, flailing, and the sandkings were everywhere, a boiling mass of them, covering him as he writhed and rolled. His flamethrower was useless and forgotten.

Kress pounded wildly on the window, shouting for attention. "The castle! Get the castle!"

Lissandra, standing back by her skimmer, heard and gestured. Her third operative sighted with the lasercannon and fired. The beam throbbed across the grounds and sliced off the top of the castle. He brought it down sharply, hacking at the sand and stone parapets. Towers fell. Kress' face disintegrated. The laser bit into the ground, searching round and about. The castle crumbled; now it was only a heap of sand. But the black mobiles continued to move. The maw was buried too deeply; they hadn't touched her.

Lissandra gave another order. Her operative discarded the laser, primed an explosive, and darted forward. He leaped over the smoking corpse of the first flamer, landed on solid ground within Kress' rock garden, and heaved. The explosive ball landed square atop the ruins of the black castle. White-out light seared Kress' eyes,

and there was a tremendous gout of sand and rock and mobile. For a moment dust obscured everything. It was raining sandkings and pieces of sandkings. Kress saw that the black mobiles were dead and unmoving.

"The pool," he shouted down through the window. "Get the castle in the pool." Lissandra understood quickly; the ground was littered with motionless blacks but the reds were pulling back hurriedly and re-forming. Her operative stood uncertain, then reached down and pulled out another explosive ball. He took one step forward, but Lissandra called him and he sprinted back in her direction.

It was all so simple then. He reached the skimmer, and Lissandra took him aloft. Kress rushed to another window in another room to watch. They came swooping in just over the pool, and the operative pitched his bombs down at the red castle from the safety of the skimmer. After the fourth run, the castle was unrecognizable, and the sandkings stopped moving.

Lissandra was thorough. She had him bomb each castle several additional times. Then he used the lasercannon, crisscrossing methodically until it was certain that nothing living could remain intact beneath those small patches of ground.

Finally they came knocking at his door. Kress was grinning manically when he let them in. "Lovely," he said, "lovely."

Lissandra pulled off the mask of her skinthins. "This will cost you, Simon. Two operatives gone, not to mention the danger to my own life."

"Of course," Kress blurted. "You'll be well paid, Lissandra. Whatever you ask, just so you finish the job."

"What remains to be done?"

"You have to clean out my wine cellar," Kress said. "There's another castle down there. And you'll have to do it without explosives. I don't want my house coming down around me."

Lissandra motioned to her operative. "Go outside and get Rajk's flamethrower. It should be intact."

He returned armed, ready, silent. Kress led them down to the wine cellar. The heavy door was still nailed shut, as he had left it. But it bulged outward slightly, as if warped by some tremendous pressure. That made Kress uneasy, as did the silence that held reign about them. He stood well away from the door as Lissandra's operative removed his nails and planks. "Is that safe in here?" he found himself muttering, pointing at the flamethrower. "I don't want a fire, either, you know."

"I have the laser," Lissandra said. "We'll use that for the kill. The flamethrower probably won't be needed. But I want it here just in case. There are worse things than fire, Simon."

He nodded.

The last plank came free of the cellar door. There was still no sound from below.

Lissandra snapped an order, and her underling fell back, took up a position behind her, and leveled the flamethrower square at the door. She slipped her mask back on, hefted the laser, stepped forward, and pulled open the door.

No motion. No sound. It was dark down there.

"Is there a light?" Lissandra asked.

"Just inside the door," Kress said. "On the right-hand side. Mind the stairs, they're quite steep."

She stepped into the door, shifted the laser to her left hand, and reached up with her right, fumbling inside for the light panel. Nothing happened. "I feel it," Lissandra said, "but it doesn't seem to . . ."

Then she was screaming, and she stumbled backward. A great white sandking had clamped itself around her wrist. Blood welled through her skinthins where its mandibles had sunk in. It was fully as large as her hand.

Lissandra did a horrible little jig across the room and began to smash her hand against the nearest wall. Again and again and again. It landed with a heavy, meaty thud. Finally the sandking fell away. She whimpered and fell to her knees. "I think my fingers are broken," she said softly. The blood was still flowing freely. She had dropped the laser near the cellar door.

"I'm not going down there," her operative announced in clear firm tones.

Lissandra looked up at him. "No," she said. "Stand in the door and flame it all. Ginder it. Do you understand?"

He nodded.

Simon Kress moaned. "My house," he said. His stomach churned. The white sandking had been so large. How many more were down there? "Don't," he continued. "Leave it alone. I've changed my mind. Leave it alone."

Lissandra misunderstood. She held out her hand. It was covered with blood and greenish-black ichor. "Your little friend bit clean through my glove, and you saw what it took to get it off. I don't care about your house, Simon. Whatever is down there is going to die."

Kress hardly heard her. He thought he could see movement in the shadows beyond the cellar door. He imagined a white army bursting forth, all as large as the sandking that had attacked Lissandra. He saw himself being lifted by a hundred tiny arms, and dragged down into the darkness where the maw waited hungrily. He was afraid. "Don't," he said.

They ignored him.

Kress darted forward, and his shoulder slammed into the back of Lissandra's operative just as the man was bracing to fire. He grunted and unbalanced and pitched forward into the black. Kress listened to him fall down the stairs. Afterward there were other noises—scuttlings and snaps and soft squishing sounds.

Kress swung around to face Lissandra. He was drenched in cold sweat, but a sickly kind of excitement was on him. It was almost sexual.

Lissandra's calm cold eyes regarded him through her mask. "What are you doing?" she demanded as Kress picked up the laser she had dropped. "*Simoni!*" "Making a peace," he said, giggling. "They won't hurt god, no, not so long as god is good and generous. I was cruel. Starved them. I have to make up for it now, you see."

"You're insane," Lissandra said. It was the last thing she said. Kress burned a hole in her chest big enough to put his arm through. He dragged the body across the floor and rolled it down the cellar stairs. The noises were louder—chitinous clackings and scrapings and echoes that were thick and liquid. Kress nailed up the door once again. As he fled, he was filled with a deep sense of contentment that coated his fear like a layer of syrup. He suspected it was not his own.

HE PLANNED TO leave his home, to fly to the city and take a room for a night, or perhaps for a year. Instead Kress started drinking. He was not quite sure why. He drank steadily for hours, and retched it all up violently on his living room carpet. At some point he fell asleep. When he woke, it was pitch dark in the house.

He cowered against the couch. He could hear *noises*. Things were moving in the walls. They were all around him. His hearing was extraordinarily acute. Every little creak was the footstep of a sandking. He closed his eyes and waited, expecting to feel their terrible touch, afraid to move lest he brush against one.

Kress sobbed, and was very still for a while, but nothing happened.

He opened his eyes again. He trembled. Slowly the shadows began to soften and dissolve. Moonlight was filtering through the high windows. His eyes adjusted.

The living room was empty. Nothing there, nothing, nothing. Only his drunken fears.

Simon Kress steeled himself, and rose, and went to a light.

Nothing there. The room was quiet, deserted.

He listened. Nothing. No sound. Nothing in the walls. It had all been his imagination, his fear.

The memories of Lissandra and the thing in the cellar returned to him unbidden. Shame and anger washed over him. Why had he done that? He could have helped her burn it out, kill it. *Why* . . . he knew why. The maw had done it to him, put fear in him. Who had said it was psionic, even when it was small. And now it was large, so large. It had feasted on Cath, and Idi, and now it had two more bodies down there. It would keep growing. And it had learned to like the taste of human flesh, he thought.

He began to shake, but he took control of himself again and stopped. It wouldn't hurt him. He was god. The whites had always been his favorites.

He remembered how he had stabbed it with his throwing-sword. That was before Cath came. Damn her anyway.

He couldn't stay here. The maw would grow hungry again. Large as it was, it wouldn't take long. Its appetite would be terrible. What would it do then? He had to get away, back to the safety of the city while it was still contained in his wine cellar. It was only plaster and hard-packed earth down there, and the mobiles could dig and tunnel. When they got free. . . . Kress didn't want to think about it.

He went to his bedroom and packed. He took three bags. Just a single change of clothing, that was all he needed; the rest of the space he filled with his valuables, with jewelry and art and other things he could not bear to lose. He did not expect to return.

His shambler followed him down the stairs staring at him from its baleful glowing eyes. It was gaunt. Kress realized that it had been ages since he had fed it. Normally it could take care of itself, but no doubt the pickings had grown lean of late. When it tried to clutch at his leg, he snarled at it and kicked it away, and it scurried off, offended.

Kress slipped outside, carrying his bags awkwardly, and shut the door behind him.

For a moment he stood pressed against the house, his heart thudding in his chest. Only a few meters between him and his skimmer. He was afraid to cross them. The moonlight was bright, and the front of his house was a scene of carnage. The bodies of Lissandra's two flammers lay where they had fallen, one twisted and burned, the other swollen beneath a mass of dead sandkings. And the mobiles, the black and red mobiles, they were all around him. It was an effort to remember that they were dead. It was almost as if they were simply waiting, as they had waited so often before.

Nonsense, Kress told himself. More drunken fears. He had seen the castles blown apart. They were dead, and the white maw was trapped in his cellar. He took several deep and deliberate breaths, and stepped forward onto the sandkings. They crunched. He ground them into the sand savagely. They did not move.

Kress smiled, and walked slowly across the battleground, listening to the sounds, the sounds of safety.

Crunch. Crackle. Crunch.

He lowered his bags to the ground and opened the door to his skimmer.

Something moved from shadow into light. A pale shape on the seat of his skimmer. It was as long as his forearm. Its mandibles clacked together softly, and it looked up at him from six small eyes set all around its body.

Kress wet his pants and backed away slowly.

There was more motion from inside the skimmer. He had left the door open. The sandking emerged and came toward him, cautiously. Others followed. They had been hiding beneath his seats, burrowed into the upholstery. But now they emerged. They formed a ragged ring around the skimmer.

Kress licked his lips, turned, and moved quickly to Lissandra's skimmer.

He stopped before he was halfway there. Things were moving inside that one too Great maggoty things, half-seen by the light of the moon.

Kress whimpered and retreated back toward the house. Near the front door, he looked up.

He counted a dozen long white shapes creeping back and forth across the walls of the building. Four of them were clustered close together near the top of the unused belfry where the carrion hawk had once roosted. They were carving something. A face. A very recognizable face.

Simon Kress shrieked and ran back inside.

A SUFFICIENT QUANTITY of drink brought him the easy oblivion he sought. But he woke. Despite everything, he woke. He had a terrific headache, and he smelled, and he was hungry. Oh so very hungry. He had never been so hungry.

Kress knew it was not his *own* stomach hurting.

A white sandking watched him from atop the dresser in his bedroom, its antennae moving faintly. It was as big as the one in the skimmer the night before. He tried not to shrink away. "I'll . . . I'll feed you," he said to it. "I'll feed you." His mouth was horribly dry, sandpaper dry. He licked his lips and fled from the room.

The house was full of sandkings; he had to be careful where he put his feet. They all seemed busy on errands of their own. They were making modifications in his house, burrowing into or out of his walls, carving things. Twice he saw his own likeness staring out at him from unexpected places. The faces were warped, twisted, livid with fear.

He went outside to get the bodies that had been rotting in the yard, hoping to appease the white maw's hunger. They were gone, both of them. Kress remembered how easily the mobiles could carry things many times their own weight.

It was terrible to think that the maw was *still* hungry after all of that.

When Kress reentered the house, a column of sandkings was wending its way down the stairs. Each carried a piece of his shambler. The head seemed to look at him reproachfully as it went by.

Kress emptied his freezers, his cabinets, everything, piling all the food in the house in the center of his kitchen floor. A dozen whites waited to take it away. They avoided the frozen food, leaving it to thaw in a great puddle, but they carried off everything else.

When all the food was gone, Kress felt his own hunger pangs abate just a bit, though he had not eaten a thing. But he knew the respite would be short-lived. Soon the maw would be hungry again. He had to feed it.

Kress knew what to do. He went to his communicator. "Malada," he began ca-

ually when the first of his friends answered, "I'm having a small party tonight. I realize this is terribly short notice, but I hope you can make it. I really do."

He called Jad Rakkis next, and then the others. By the time he had finished, nine of them had accepted his invitation. Kress hoped that would be enough.

KRESS MET HIS guests outside—the mobiles had cleaned up remarkably quickly, and the grounds looked almost as they had before the battle—and walked them to his front door. He let them enter first. He did not follow.

When four of them had gone through, Kress finally worked up his courage. He closed the door behind his latest guest, ignoring the startled exclamations that soon turned into shrill gibbering, and sprinted for the skimmer the man had arrived in. He slid in safely, thumbed the starplate, and swore. It was programmed to lift only in response to its owner's thumbprint, of course.

Jad Rakkis was the next to arrive. Kress ran to his skimmer as it set down, and seized Rakkis by the arm as he was climbing out. "Get back in, quickly," he said pushing. "Take me to the city. Hurry, Jad. *Get out of here!*"

But Rakkis only stared at him, and would not move. "Why, what's wrong, Simon? I don't understand. What about your party?"

And then it was too late, because the loose sand all around them was stirring, and the red eyes were staring at them, and the mandibles were clacking. Rakkis made a choking sound, and moved to get back in his skimmer, but a pair of mandibles snapped shut about his ankle, and suddenly he was on his knees. The sand seemed to boil with subterranean activity. Jad thrashed and cried terribly as they tore him apart. Kress could hardly bear to watch.

After that, he did not try to escape again. When it was all over, he cleaned out what remained in his liquor cabinet, and got extremely drunk. It would be the last time he would enjoy that luxury, he knew. The only alcohol remaining in the house was stored down in the wine cellar.

Kress did not touch a bite of food the entire day, but he fell asleep feeling bloated, sated at last, the awful hunger vanquished. His last thoughts before the nightmares took him were of whom he could ask out tomorrow.

MORNING WAS HOT and dry. Kress opened his eyes to see the white sandking on his dresser again. He shut them again quickly, hoping the dream would leave him. It did not, and he could not go back to sleep. Soon he found himself staring at the thing.

He stared for almost five minutes before the strangeness of it dawned on him; the sandking was not moving.

The mobiles could be prematurely still, to be sure. He had seen them wait and watch a thousand times. But always there was some motion about them—the mandibles clacked, the legs twitched, the long fine antennae stirred and swayed.

But the sandking on his dresser was completely still. Kress rose, holding his breath, not daring to hope. Could it be dead? Could something have killed it? He walked across the room.

The eyes were glassy and black. The creature seemed swollen, somehow, as if it were soft and rotting inside, filling up with gas that pushed outward at the plates of white armor.

Kress reached out a trembling hand and touched it.

It was warm—hot even—and growing hotter. But it did not move.

He pulled his hand back, and as he did, a segment of the sandking's white exoskeleton fell away from it. The flesh beneath was the same color, but softer-looking, swollen and feverish. And it almost seemed to throb.

Kress backed away, and ran to the door.

Three more white mobiles lay in his hall. They were all like the one in his bedroom.

He ran down the stairs, jumping over sandkings. None of them moved. The house was full of them, all dead, dying, comatose, whatever. Kress did not care what was wrong with them. Just so they could not move.

He found four of them inside his skimmer. He picked them up one by one, and threw them as far as he could. Damned monsters. He slid back in, on the ruined half-eaten seats, and thumbed the starplate.

Nothing happened.

Kress tried again, and again. Nothing. It wasn't fair. This was *his* skimmer; it ought to start, why wouldn't it lift, he didn't understand.

Finally he got out and checked, expecting the worst. He found it. The sandkings had torn apart his gravity grid. He was trapped. He was still trapped.

Grimly, Kress marched back into the house. He went to his gallery and found the antique ax that had hung next to the throwing-sword he had used on Cath m' Lane. He set to work. The sandkings did not stir even as he chopped them to pieces. But they splattered when he made the first cut, the bodies almost bursting. Inside was awful; strange half-formed organs, a viscous reddish ooze that looked almost like human blood, and the yellow ichor.

Kress destroyed twenty of them before he realized the futility of what he was doing. The mobiles were nothing, really. Besides, there were so *many* of them. He could work for a day and night and still not kill them all.

He had to go down into the wine cellar and use the ax on the maw.

Resolute, he started down. He got within sight of the door, and stopped.

It was not a door any more. The walls had been eaten away, so that the hole was twice the size it had been, and round. A pit, that was all. There was no sign that there had ever been a door nailed shut over that black abyss.

A ghastly, choking, fetid odor seemed to come from below.

And the walls were wet and bloody and covered with patches of white fungus. And worst, it was *breathing*.

Kress stood across the room and felt the warm wind wash over him as it exhaled, and he tried not to choke, and when the wind reversed direction, he fled.

Back in the living room, he destroyed three more mobiles, and collapsed. What was *happening*? He didn't understand.

Then he remembered the only person who might understand. Kress went to his communicator again, stepping on a sandking in his haste, and prayed fervently that the device still worked.

When Jala Wo answered, he broke down and told her everything.

She let him talk without interruption, no expression save for a slight frown on her gaunt, pale face. When Kress had finished, she said only, "I ought to leave you there."

Kress began to blubber. "You can't. Help me. I'll pay. . . ."

"I ought to," We repeated, "but I won't."

"Thank you," Kress said. "Oh, thank. . . ."

"Quiet," said Wo. "Listen to me. This is your own doing. Keep your sandkings well, and they are courtly ritual warriors. You turned yours into something else, with starvation and torture. You were their god. You made them what they are. That maw in your cellar is sick, still suffering from the wound you gave it. It is probably insane. Its behavior is . . . unusual."

"You have to get out of there quickly. The mobiles are not dead, Kress. They are dormant. I told you the exoskeleton falls off when they grow larger. Normally, in fact, it falls off much earlier. I have never heard of sandkings growing as large as yours while still in the insectoid stage. It is another result of crippling the white maw, I would say. That does not matter."

"What matters is the metamorphosis your sandkings are now undergoing. As the maw grows, you see, it gets progressively more intelligent. Its psionic powers strengthen, and its mind becomes more sophisticated, more ambitious. The armored mobiles are useful enough when the maw is tiny and only semi-sentient, but now it needs better servants, bodies with more capabilities. Do you understand? The mobiles are all going to give birth to a new breed of sandking. I can't say exactly what it will look like. Each maw designs its own, to fit its perceived needs and desires. But it will be biped, with four arms, and opposable thumbs. It will be able to construct and operate advanced machinery. The individual sandkings will not be sentient. But the maw will be very sentient indeed."

Simon Kress was gaping at Wo's image on the viewscreen. "Your workers," he said, with an effort. "The ones who came out here . . . who installed the tank. . . ."

Jala Wo managed a faint smile. "Shade," she said.



"Shade is a sandking," Kress repeated numbly. "And you sold me a tank of... of... infants, ah..."

"Do not be absurd," Wo said. "A first-stage sandking is more like a sperm than an infant. The wars temper and control them in nature. Only one in a hundred reaches second stage. Only one in a thousand achieves the third and final plateau, and becomes like Shade. Adult sandkings are not sentimental about the small maws. There are too many of them, and their mobiles are pests." She sighed. "And all this talk wastes time. That white sandking is going to waken to full sentence soon. It is not going to need you any longer, and it hates you, and it will be very hungry. The transformation is taxing. The maw must eat enormous amounts before and after. So you have to get out of there. Do you understand?"

"I can't," Kress said. "My skimmer is destroyed, and I can't get any of the others to start. I don't know how to reprogram them. Can you come out for me?"

"Yes," said Wo. "Shade and I will leave at once, but it is more than two hundred kilometers from Asgard to you and there is equipment we will need to deal with the deranged sandking you've created. You cannot wait there. You have two feet. Walk. Go due east, as near as you can determine, as quickly as you can. The land out there is pretty desolate. We can find you easily with an aerial search, and you'll be safely away from the sandking. Do you understand?"

"Yes," said Simon Kress. "Yes, oh, yes."

They signed off, and he walked quickly toward the door. He was halfway there when he heard the noise—a sound halfway between a pop and a crack.

One of the sandkings had split open. Four tiny hands covered with pinkish-yellow blood came up out of the gap and began to push the dead skin aside.

Kress began to run.

HE HAD NOT counted on the heat.

The hills were dry and rocky. Kress ran from the house as quickly as he could, ran until his ribs ached and his breath was coming in gasps. Then he walked, but as soon as he had recovered he began to run again. For almost an hour he ran and walked, ran and walked, beneath the fierce hot sun. He sweated freely, and wished that he had thought to bring some water. He watched the sky in the hopes of seeing Wo and Shade.

He was not made for this. It was too hot, and too dry, and he was in no condition. But he kept himself going with the memory of the way the maw had breathed, and the thought of the wriggling little things that by now were surely crawling all over his house. He hoped Wo and Shade would know how to deal with them.

He had his own plans for Wo and Shade. It was all their fault, Kress had decided, and they would suffer for it. Lissandra was dead, but he knew others in her profession.

He would have his revenge. He promised himself that a hundred times as he struggled and sweated his way east.

At least he hoped it was east. He was not that good at directions, and he wasn't certain which way he had run in his initial panic, but since then he had made an effort to bear due east, as Wo had suggested.

When he had been running for several hours, with no sign of rescue, Kress began to grow certain that he had gone wrong.

When several more hours passed, he began to grow afraid. What if Wo and Shade could not find him? He would die out here. He hadn't eaten in two days; he was weak and frightened; his throat was raw for want of water. He couldn't keep going. The sun was sinking now, and he'd be completely lost in the dark. What was wrong? Had the sandkings eaten Wo and Shade? The fear was on him again, filling him, and with it a great thirst and a terrible hunger. But Kress kept going. He stumbled now when he tried to run, and twice he fell. The second time he scraped his hand on a rock, and it came away bloody. He sucked at it as he walked, and worried about infection.

The sun was on the horizon behind him. The ground grew a little cooler, for which Kress was grateful. He decided to walk until last light and settle in for the night. Surely he was far enough from the sandkings to be safe, and Wo and Shade would find him come morning.

When he topped the next rise, he saw the outline of a house in front of him.

It wasn't as big as his own house, but it was big enough. It was habitation, safety. Kress shouted and began to run toward it. Food and drink, he had to have nourishment, he could taste the meal now. He was aching with hunger. He ran down the hill toward the house, waving his arms and shouting to the inhabitants. The light was almost gone now, but he could still make out a half-dozen children playing in the twilight. "Hey there," he shouted. "Help, help."

They came running toward him.

Kress stopped suddenly. "No," he said, "oh, no, Oh, no." He backpedaled, slipped on the sand, got up and tried to run again. They caught him easily. They were ghastly little things with bulging eyes and dusky orange skin. He struggled, but it was useless. Small as they were, each of them had four arms, and Kress had only two.

They carried him toward the house. It was a sad, shabby house built of crumbling sand, but the door was quite large, and dark, and it breathed. That was terrible, but it was not the thing that set Simon Kress to screaming. He screamed because of the others, the little orange children who came crawling out from the castle, and watched impassive as he passed.

All of them had his face.

# SWARM

BRUCE STERLING

'I will miss your conversation during the rest of the voyage,' the alien said.

Captain-Doctor Simon Afriel folded his jewelled hands over his gold-embroidered waistcoat. 'I regret it also, ensign,' he said in the alien's own hissing language. 'Our talks together have been very useful to me. I would have paid to learn so much, but you gave it freely.'

'But that was only information,' the alien said. He shrouded his bead-bright eyes behind thick nictitating membranes. 'We Investors deal in energy, and precious metals. To prize and pursue mere knowledge is an immature racial trait.' The alien lifted the long ribbed frill behind his pinhole-sized ears.

'No doubt you are right,' Afriel said, despising him. 'We humans are as children to other races, however; so a certain immaturity seems natural to us.' Afriel pulled off his sunglasses to rub the bridge of his nose. The starship cabin was drenched in searing blue light, heavily ultraviolet. It was the light the Investors preferred, and they were not about to change it for one human passenger.

'You have not done badly,' the alien said magnanimously. 'You are the kind of race we like to do business with: young, eager, plastic, ready for a wide variety of goods and experiences. We would have contacted you much earlier, but your technology was still too feeble to afford us a profit.'

'Things are different now,' Afriel said. 'We'll make you rich.'

'Indeed,' the Investor said. The frill behind his scaly head flickered rapidly, a sign of amusement. 'Within two hundred years you will be wealthy enough to buy from us the secret of our starflight. Or perhaps your Mechanist faction will discover the secret through research.'

Afriel was annoyed. As a member of the Reshaped faction, he did not appreciate the reference to the rival Mechanists. 'Don't put too

much stock in mere technical expertise,' he said. 'Consider the aptitude for languages we Shapers have. It makes our faction a much better trading partner. To a Mechanist, all Investors look alike.'

The alien hesitated. Afriel smiled. He had appealed to the alien's personal ambition with his last statement, and the hint had been taken. That was where the Mechanists always erred. They tried to treat all Investors consistently, using the same programmed routines each time. They lacked imagination.

Something would have to be done about the Mechanists, Afriel thought. Something more permanent than the small but deadly confrontations between isolated ships in the Asteroid Belt and the ice-rich Rings of Saturn. Both factions manoeuvred constantly, looking for a decisive stroke, bribing away each other's best talent, practising ambush, assassination, and industrial espionage.

Captain-Doctor Simon Afriel was a past master of these pursuits. That was why the Reshaped faction had paid the millions of kilowatts necessary to buy his passage. Afriel held doctorates in biochemistry and alien linguistics, and a master's degree in magnetic weapons engineering. He was thirty-eight years old and had been Reshaped according to the state of the art at the time of his conception. His hormonal balance had been altered slightly to compensate for long periods spent in free-fall. He had no appendix. The structure of his heart had been redesigned for greater efficiency, and his large intestine had been altered to produce the vitamins normally made by intestinal bacteria. Genetic engineering and rigorous training in childhood had given him an intelligence quotient of one hundred and eighty. He was not the brightest of the agents of the Ring Council, but he was one of the most mentally stable and the best trusted.

'It seems a shame,' the alien said, 'that a human of your accomplishments should have to rot for two years in this miserable, profitless outpost.'

'The years won't be wasted,' Afriel said.

'But why have you chosen to study the Swarm? They can teach you nothing, since they cannot speak. They have no wish to trade, having no tools or technology. They are the only spacefaring race that is essentially without intelligence.'

'That alone should make them worthy of study.'

'Do you seek to imitate them, then? You would make monsters

of yourselves.' Again the ensign hesitated. 'Perhaps you could do it. It would be bad for business, however.'

There came a fluting burst of alien music over the ship's speakers, then a screeching fragment of Investor language. Most of it was too high-pitched for Afriel's ears to follow.

The alien stood, his jewelled skirt brushing the tips of his clawed birdlike feet. 'The Swarm's symbiote has arrived,' he said.

'Thank you,' Afriel said. When the ensign opened the cabin door, Afriel could smell the Swarm's representative; the creature's warm yeasty scent had spread rapidly though the starship's recycled air.

Afriel quickly checked his appearance in a pocket mirror. He touched powder to his face and straightened the round velvet hat on his shoulder-length reddish-blond hair. His earlobes glittered with red impact-rubies, thick as his thumbs' ends, mined from the Asteroid Belt. His knee-length coat and waistcoat were of gold brocade; the shirt beneath was of dazzling fineness, woven with red-gold thread. He had dressed to impress the Investors, who expected and appreciated a prosperous look from their customers. How could he impress this new alien? Smell, perhaps. He freshened his perfume.

Beside the starship's secondary airlock, the Swarm's symbiote was chattering rapidly at the ship's commander. The commander was an old and sleepy Investor, twice the size of most of her crewmen. Her massive head was encrusted in a jewelled helmet. From within the helmet her clouded eyes glittered like cameras.

The symbiote lifted on its six posterior legs and gestured feebly with its four clawed forelimbs. The ship's artificial gravity, a third as strong as Earth's, seemed to bother it. Its rudimentary eyes, dangling on stalks, were shut tight against the glare. It must be used to darkness, Afriel thought.

The commander answered the creature in its own language. Afriel grimaced, for he had hoped that the creature spoke Investor. Now he would have to learn another language, a language designed for a being without a tongue.

After another brief interchange the commander turned to Afriel. 'The symbiote is not pleased with your arrival,' she told Afriel in the Investor language. 'There has apparently been some disturbance here involving humans, in the recent past. However, I have prevailed upon it to admit you to the Nest. The episode has been

recorded. Payment for my diplomatic services will be arranged with your faction when I return to your native star system.'

'I thank Your Authority,' Afriel said. 'Please convey to the symbiote my best personal wishes, and the harmlessness and humility of my intentions...' He broke off short as the symbiote lunged toward him, biting him savagely in the calf of his left leg. Afriel jerked free and leapt backward in the heavy artificial gravity, going into a defensive position. The symbiote had ripped away a long shred of his pants leg; it now crouched quietly, eating it.

'It will convey your scent and composition to its nestmates,' said the commander. 'This is necessary. Otherwise you would be classed as an invader, and the Swarm's warrior caste would kill you at once.'

Afriel relaxed quickly and pressed his hand against the puncture wound to stop the bleeding. He hoped that none of the Investors had noticed his reflexive action. It would not mesh well with his story of being a harmless researcher.

'We will reopen the airlock soon,' the commander said phlegmatically, leaning back on her thick reptilian tail. The symbiote continued to munch the shred of cloth. Afriel studied the creature's neckless segmented head. It had a mouth and nostrils; it had bulbous atrophied eyes on stalks; there were hinged slats that might be radio receivers, and two parallel ridges of clumped wriggling antennae, sprouting among three chitinous plates. Their function was unknown to him.

The airlock door opened. A rush of dense, smoky aroma entered the departure cabin. It seemed to bother the half-dozen Investors, who left rapidly. 'We will return in six hundred and twelve of your days, as by our agreement,' the commander said.

'I thank Your Authority,' Afriel said.

'Good luck,' the commander said in English. Afriel smiled.

The symbiote, with a sinuous wriggle of its segmented body, crept into the airlock. Afriel followed it. The airlock door shut behind them. The creature said nothing to him but continued munching loudly. The second door opened, and the symbiote sprang through it, into a wide, round stone tunnel. It disappeared at once into the gloom.

Afriel put his sunglasses into a pocket of his jacket and pulled out a pair of infra-red goggles. He strapped them to his head and stepped out of the airlock. The artificial gravity vanished, replaced

by the almost imperceptible gravity of the Swarm's asteroid nest. Afriel smiled, comfortable for the first time in weeks. Most of his adult life had been spent in free-fall, in the Shapers' colonies in the Rings of Saturn.

Squatting in a dark cavity in the side of the tunnel was a disc-headed furred animal the size of an elephant. It was clearly visible in the infra-red of its own body heat. Afriel could hear it breathing. It waited patiently until Afriel had launched himself past it, deeper into the tunnel. Then it took its place in the end of the tunnel, puffing itself up with air until its swollen head securely plugged the exit into space. Its multiple legs sank firmly into sockets in the walls.

The Investors' ship had left. Afriel remained here, inside one of the millions of planetoids that circled the giant star Betelgeuse in a girdling ring with almost five times the mass of Jupiter. As a source of potential wealth it dwarfed the entire solar system, and it belonged, more or less, to the Swarm. At least, no other race had challenged them for it within the memory of the Investors.

Afriel peered up the corridor. It seemed deserted, and without other bodies to cast infra-red heat, he could not see very far. Kicking against the wall, he floated hesitantly down the corridor.

He heard a human voice. 'Dr Afrieli!'

'Dr Mirny!' he called out. 'This way!'

He first saw a pair of young symbiotes scuttling towards him, the tips of their clawed feet barely touching the walls. Behind them came a woman wearing goggles like his own. She was young, and attractive in the trim, anonymous way of the genetically reshaped.

She screeched something at the symbiotes in their own language, and they halted, waiting. She coasted forward, and Afriel caught her arm, expertly stopping their momentum.

'You didn't bring any luggage?' she said anxiously.

He shook his head. 'We got your warning before I was sent out. I have only the clothes I'm wearing and a few items in my pockets.'

She looked at him critically. 'Is that what people are wearing in the Rings these days? Things have changed more than I thought.'

Afriel glanced at his brocaded coat and laughed. 'It's a matter of policy. The Investors are always readier to talk to a human who looks ready to do business on a large scale. All the Shapers' representatives dress like this these days. We've stolen a jump on the Mechanists; they still dress in those coveralls.'

He hesitated, not wanting to offend her. Galina Mirny's intelligence was rated at almost two hundred. Men and women that bright were sometimes flighty and unstable, likely to retreat into private fantasy worlds or become enmeshed in strange and impenetrable webs of plotting and rationalization. High intelligence was the strategy the Shapers had chosen in the struggle for cultural dominance, and they were obliged to stick to it, despite its occasional disadvantages. They had tried breeding the Superbright—those with quotients over two hundred—but so many had defected from the Shapers' colonies that the faction had stopped producing them.

'You wonder about my own clothing,' Mirny said.

'It certainly has the appeal of novelty,' Afriel said with a smile.

'It was woven from the fibres of a pupa's cocoon,' she said. 'My original wardrobe was eaten by a scavenger symbiote during the troubles last year. I usually go nude, but I didn't want to offend you by too great a show of intimacy.'

Afriel shrugged. 'I often go nude myself. I never had much use for clothes except for pockets. I have a few tools on my person, but most are of little importance. We're Shapers, our tools are here.' He tapped his head. 'If you can show me a safe place to put my clothes...'

She shook her head. It was impossible to see her eyes for the goggles, which made her expression hard to read. 'You've made your first mistake, Doctor. There are no places of our own here. It was the same mistake the Mechanist agents made, the same one that almost killed me as well. There is no concept of privacy or property here. This is the Nest. If you seize any part of it for yourself—to store equipment, to sleep in, whatever—then you become an intruder, an enemy. The two Mechanists—a man and a woman—tried to secure an empty chamber for their computer lab. Warriors broke down their door and devoured them. Scavengers ate their equipment, glass, metal, and all.'

Afriel smiled coldly. 'It must have cost them a fortune to ship all that material here.'

Mirny shrugged. 'They're wealthier than we are. Their machines, their mining. They meant to kill me, I think. Surreptitiously, so the warriors wouldn't be upset by a show of violence. They had a computer that was learning the language of the springtails faster than I could.'

'But you survived,' Afriel pointed out. 'And your tapes and reports—especially the early ones, when you still had most of your equipment—were of tremendous interest. The Council is behind you all the way. You've become quite a celebrity in the Rings, during your absence.'

'Yes, I expected as much,' she said.

Afriel was nonplussed. 'If I found any deficiency in them,' he said carefully, 'it was in my own field, alien linguistics.' He waved vaguely at the two symbiotes who accompanied her. 'I assume you've made great progress in communicating with the symbiotes, since they seem to do all the talking for the Nest.'

She looked at him with an unreadable expression and shrugged. 'There are at least fifteen different kinds of symbiotes here. Those that accompany me are called the springtails, and they speak only for themselves. They are savages, Doctor, who received attention from the Investors only because they can still talk. They were a spacefaring race once, but they've forgotten it. They discovered the Nest and they were absorbed, they became parasites.' She tapped one of them on the head. 'I tamed these two because I learned to steal and beg food better than they can. They stay with me now and protect me from the larger ones. They are jealous, you know. They have only been with the Nest for perhaps ten thousand years and are still uncertain of their position. They still think, and wonder sometimes. After ten thousand years there is still a little of that left to them.'

'Savages,' Afriel said. 'I can well believe that. One of them bit me while I was still aboard the starship. He left a lot to be desired as an ambassador.'

'Yes, I warned him you were coming,' said Mirny. 'He didn't much like the idea, but I was able to bribe him with food... I hope he didn't hurt you badly.'

'A scratch,' Afriel said. 'I assume there's no chance of infection.' 'I doubt it very much. Unless you brought your own bacteria with you.'

'Hardly likely,' Afriel said, offended. 'I have no bacteria. And I wouldn't have brought micro-organisms to an alien culture anyway.'

Mirny looked away. 'I thought you might have some of the special genetically altered ones... I think we can go now. The springtail will have spread your scent by mouth-touching in the subsidiary chamber, ahead of us. It will be spread throughout

the Nest in a few hours. Once it reaches the Queen, it will spread very quickly.'

She jammed her feet against the hard shell of one of the young springtails and launched herself down the hall. Afriel followed her. The air was warm and he was beginning to sweat under his elaborate clothing, but his antiseptic sweat was odourless.

They exited into a vast chamber dug from the living rock. It was arched and oblong, eighty metres long and about twenty in diameter. It swarmed with members of the Nest.

There were hundreds of them. Most of them were workers, eight-legged and furred, the size of Great Danes. Here and there were members of the warrior caste, horse-sized furry monsters with heavy fanged heads the size and shape of overstuffed chairs.

A few metres away, two workers were carrying a member of the sensor caste, a being whose immense flattened head was attached to an atrophied body that was mostly lungs. The sensor had great platelike eyes, and its furred chitin sprouted long coiled antennae that twitched feebly as the workers bore it along. The workers clung to the hollowed rock of the chamber walls with hooked and suckered feet.

A paddle-limbed monster with a hairless, faceless head came sculling past them, through the warm reeking air. The front of its head was a nightmare of sharp grinding jaws and blunt armoured acid spouts. 'A tunneller,' Mirny said. 'It can take us deeper into the Nest—come with me.' She launched herself towards it and took a handhold on its furry, segmented back. Afriel followed her, joined by the two immature springtails, who clung to the thing's hide with their forelimbs. Afriel shuddered at the warm, greasy feel of its rank, damp fur. It continued to scull through the air, its eight fringed paddle feet catching the air like wings.

'There must be thousands of them,' Afriel said.

'I said a hundred thousand in my last report, but that was before I had fully explored the Nest. Even now there are long stretches I haven't seen. They must number close to a quarter of a million. This asteroid is about the size of the Mechanists' biggest base—Ceres. It still has rich veins of carbonaceous material. It's far from mined out.'

Afriel closed his eyes. If he was to lose his goggles, he would have to feel his way, blind, through these teeming, twitching, wriggling thousands. 'The population's still expanding, then?'

'Definitely,' she said. 'In fact, the colony will launch a mating

swarm soon. There are three dozen male and female alates in the chambers near the Queen. Once they're launched, they'll mate and start new Nests. I'll take you to see them presently.' She hesitated. 'We're entering one of the fungal gardens now.'

One of the young springtails quietly shifted position. Grabbing the tunneller's fur with its forelimbs, it began to gnaw on the cuff of Afriel's pants. Afriel kicked it soundly, and it jerked back, retracting its eyestalks.

When he looked up again, he saw that they had entered a second chamber, much larger than the first. The walls around, overhead, and below were buried under an explosive profusion of fungus. The most common types were swollen barrelike domes, multibranching massed thickets, and spaghetti-like tangled extrusions that moved very slightly in the faint and odorless breeze. Some of the barrels were surrounded by dim mists of exhaled spores.

'You see those caked-up piles beneath the fungus, its growth medium?' Mirny said.

'Yes.'

'I'm not sure whether it is a plant form or just some kind of complex biochemical sludge,' she said. 'The point is that it grows in sunlight, on the outside of the asteroid. A food source that grows in naked space! Imagine what that would be worth, back in the Rings.'

'There aren't words for its value,' Afriel said.

'It's inedible by itself,' she said. 'I tried to eat a very small piece of it once. It was like trying to eat plastic.'

'Have you eaten well, generally speaking?'

'Yes. Our biochemistry is quite similar to the Swarm's. The fungus itself is perfectly edible. The regurgitate is more nourishing, though. Internal fermentation in the worker hindgut adds to its nutritional value.'

Afriel stared. 'You grow used to it,' Mirny said. 'Later I'll teach you how to solicit food from the workers. It's a simple matter of reflex tapping—it's not controlled by pheromones, like most of their behaviour.' She brushed a long lock of clumped and dirty hair from the side of her face. 'I hope the pheromonal samples I sent back were worth the cost of transportation.'

'Oh, yes,' said Afriel. 'The chemistry of them was fascinating. We managed to synthesize most of the compounds. I was part of the research team myself.' He hesitated. How far did he dare trust her?

She had not been told about the experiment he and his superiors had planned. As far as Mirny knew, he was a simple, peaceful researcher, like herself. The Shapers' scientific community was suspicious of the minority involved in military work and espionage.

As an investment in the future, the Shapers had sent researchers to each of the nineteen alien races described to them by the investors. This had cost the Shaper economy many gigawatts of precious energy and tons of rare metals and isotopes. In most cases, only two or three researchers could be sent; in seven cases, only one. For the Swarm, Galina Mirny had been chosen. She had gone peacefully, trusting in her intelligence and her good intentions to keep her alive and sane. Those who had sent her had not known whether her findings would be of any use or importance. They had only known that it was imperative that she be sent, even alone, even ill-equipped, before some other faction sent their own people and possibly discovered some technique or fact of overwhelming importance. And Dr Mirny had indeed discovered such a situation. It had made her mission into a matter of Ring security. That was why Afriel had come.

'You synthesized the compounds?' she said. 'Why?'

Afriel smiled disarmingly. 'Just to prove to ourselves that we could do it, perhaps.'

She shook her head. 'No mind-games, Dr Afriel, please. I came this far partly to escape from such things. Tell me the truth.'

Afriel stared at her, regretting that the goggles meant he could not meet her eyes. 'Very well,' he said. 'You should know, then, that I have been ordered by the Ring Council to carry out an experiment that may endanger both our lives.'

Mirny was silent for a moment. 'You're from Security, then?'

'My rank is captain.'

'I knew it . . . I knew it when those two Mechanists arrived. They were so polite, and so suspicious—I think they would have killed me at once if they hadn't hoped to bribe or torture some secret out of me. They scared the life out of me, Captain Afriel . . . You scare me, too.'

'We live in a frightening world, Doctor. It's a matter of faction security.'

'Everything's a matter of faction security with your lot,' she said. 'I shouldn't take you any further, or show you anything more. This Nest, these creatures—they're not *intelligent*, Captain. They can't

think, they can't learn. They're innocent, primordially innocent. They have no knowledge of good and evil. They have no knowledge of *anything*. The last thing they need is to become pawns in a power struggle within some other race, light-years away.'

The tunneller had turned into an exit from the fungal chambers and was paddling slowly along in the warm darkness. A group of creatures like grey, flattened basketballs floated by from the opposite direction. One of them settled on Afriel's sleeve, clinging with frail whiplike tentacles. Afriel brushed it gently away, and it broke loose, emitting a stream of foul reddish droplets.

'Naturally I agree with you in principle, Doctor,' Afriel said smoothly. 'But consider these Mechanists. Some of their extreme factions are already more than half machine. Do you expect humanitarian motives from them? They're cold, Doctor—cold and soulless creatures who can cut a living man or woman to bits and never feel their pain. Most of the other factions hate us. They call us racist supermen. Would you rather that one of these cults do what we must do, and use the results against us?'

'This is double-talk.' She looked away. All around them workers laden down with fungus, their jaws full and guts stuffed with it, were spreading out into the Nest, scuttling alongside them or disappearing into branch tunnels departing in every direction, including straight up and straight down. Afriel saw a creature much like a worker, but with only six legs, scuttle past in the opposite direction, overhead. It was a parasite mimic. How long, he wondered, did it take a creature to evolve to look like that?

'It's no wonder that we've had so many defectors, back in the Rings,' she said sadly. 'If humanity is so stupid as to work itself into a corner like you describe, then it's better to have nothing to do with them. Better to live alone. Better not to help the madness spread.'

'That kind of talk will only get us killed,' Afriel said. 'We owe an allegiance to the faction that produced us.'

'Tell me truly, Captain,' she said. 'Haven't you ever felt the urge to leave everything—everyone—all your duties and constraints, and just go somewhere to think it all out? Your whole world, and your part in it? We're trained so hard, from childhood, and so much is demanded from us. Don't you think it's made us lose sight of our goals, somehow?'

'We live in space,' Afriel said flatly. 'Space is an unnatural en-

vironment, and it takes an unnatural effort from unnatural people to prosper there. Our minds are our tools, and philosophy has to come second. Naturally I've felt those urges you mention. They're just another threat to guard against. I believe in an ordered society. Technology has unleashed tremendous forces that are ripping society apart. Some one faction must arise from the struggle and integrate things. We Shapers have the wisdom and restraint to do it humanely. That's why I do the work I do.' He hesitated. 'I don't expect to see our day of triumph. I expect to die in some brush-fire conflict, or through assassination. It's enough that I can foresee that day.'

'But the arrogance of it, Captain!' she said suddenly. 'The arrogance of your little life and its little sacrifice! Consider the Swarm, if you really want your humane and perfect order. Here it is! Where it's always warm and dark, and it smells good, and food is easy to get, and everything is endlessly and perfectly recycled. The only resources that are ever lost are the bodies of the mating swarms, and a little air. A Nest like this one could last unchanged for hundreds of thousands of years. Hundreds... of thousands... of years. Who, or what, will remember us and our stupid faction in even a thousand years?'

Afriel shook his head. 'That's not a valid comparison. There is no such long view for us. In another thousand years we'll be machines, or gods.' He felt the top of his head; his velvet cap was gone. No doubt something was eating it by now.

The tunneller took them deeper into the asteroid's honeycombed free-fall maze. They saw the pupal chambers, where pallid larvae twitched in swaddled silk; the main fungal gardens; the graveyard pits, where winged workers beat ceaselessly at the soupy air, feverishly hot from the heat of decomposition. Corrosive black fungus ate the bodies of the dead into coarse black powder, carried off by blackened workers themselves three-quarters dead.

Later they left the tunneller and floated on by themselves. The woman moved with the ease of long habit; Afriel followed her, colliding bruisingly with squeaking workers. There were thousands of them, clinging to ceiling, walls, and floor, clustering and scurrying at every conceivable angle.

Later still they visited the chamber of the winged princes and princesses, an echoing round vault where creatures forty metres long hung crooked-legged in mid-air. Their bodies were segmented

and metallic, with organic rocket nozzles on their thoraxes, where wings might have been. Folded along their sleek backs were radar antennae on long sweeping booms. They looked more like interplanetary probes under construction than anything biological. Workers fed them ceaselessly. Their bulging spiracled abdomens were full of compressed oxygen.

Mirny begged a large chunk of fungus from a passing worker, deftly tapping its antennae and provoking a reflex action. She handed most of the fungus to the two springtails, which devoured it greedily and looked expectantly for more.

Afriel tucked his legs into a free-fall lotus position and began chewing with determination on the leathery fungus. It was tough, but tasted good, like smoked meat—a delicacy he had tasted only once. The smell of smoke meant disaster in a Shaper's colony.

Mirny maintained a stony silence. 'Food's no problem,' Afriel said. 'Where do we sleep?'

She shrugged. 'Anywhere... there are unused niches and tunnels here and there. I suppose you'll want to see the Queen's chamber next.'

'By all means.'

'I'll have to get more fungus. The warriors are on guard there and have to be bribed with food.'

She gathered an armful of fungus from another worker in the endless stream, and they moved on. Afriel, already totally lost, was further confused in the maze of chambers and tunnels. At last they exited into an immense lightless cavern, bright with infra-red heat from the Queen's monstrous body. It was the colony's central factory. The fact that it was made of warm and pulpy flesh did not conceal its essentially industrial nature. Tons of predigested fungal pap went into the sick blind jaws at one end. The rounded billows of soft flesh digested and processed it, squirring, sucking, and undulating, with loud machine-like churning and gurglings. Out of the other end came an endless conveyerlike blobbed stream of eggs, each one packed in a thick hormonal paste of lubrication. The workers avidly licked the eggs clean and bore them off to nurseries. Each egg was the size of a man's torso.

The process went on and on. There was no day or night here in the lightless centre of the asteroid. There was no remnant of a diurnal rhythm in the genes of these creatures. The flow of production was as constant and even as the working of an automated mine.

'This is why I'm here,' Afriel murmured in awe. 'Just look at this, Doctor. The Mechanists have cybernetic miming machinery that is generations ahead of ours. But here—in the bowels of this nameless little world, is a genetic technology that feeds itself, maintains itself, runs itself, efficiently, endlessly, mindlessly. It's the perfect organic tool. The faction that could use these tireless workers could make itself an industrial titan. And our knowledge of biochemistry is unsurpassed. We Shapers are just the ones to do it.'

'How do you propose to do that?' Mirny asked with open scepticism. 'You would have to ship a fertilized queen all the way to the solar system. We could scarcely afford that, even if the Investors would let us, which they wouldn't.'

'I don't need an entire Nest,' Afriel said patiently. 'I only need the genetic information from one egg. Our laboratories back in the Rings could clone endless numbers of workers.'

'But the workers are useless without the Nest's pheromones. They need chemical cues to trigger their behaviour modes.'

'Exactly,' Afriel said. 'As it so happens, I possess those pheromones, synthesized and concentrated. What I must do now is test them. I must prove that I can use them to make the workers do what I choose. Once I've proven it's possible, I'm authorized to smuggle the genetic information necessary back to the Rings. The Investors won't approve. There are, of course, moral questions involved, and the Investors are not genetically advanced. But we can win their approval back with the profits we make. Best of all, we can beat the Mechanists at their own game.'

'You've carried the pheromones here?' Mirny said. 'Didn't the Investors suspect something when they found them?'

'Now it's you who has made an error,' Afriel said calmly. 'You assume that the Investors are infallible. You are wrong. A race without curiosity will never explore every possibility, the way we Shapers did.' Afriel pulled up his pants cuff and extended his right leg. 'Consider this varicose vein along my shin. Circulatory problems of this sort are common among those who spend a lot of time in free-fall. This vein, however, has been blocked artificially and treated to reduce osmosis. Within the vein are ten separate colonies of genetically altered bacteria, each one specially bred to produce a different Swarm pheromone.'

He smiled. 'The Investors searched me very thoroughly, including X-rays. But the vein appears normal to X-rays, and the bacteria are



trapped within compartments in the vein. They are undetectable. I have a small medical kit on my person. It includes a syringe. We can use it to extract the pheromones and test them. When the tests are finished—and I feel sure they will be successful, in fact I've staked my career on it—we can empty the vein and all its compartments. The bacteria will die on contact with air. We can refill the vein with the yolk from a developing embryo. The cells may survive during the trip back, but even if they die, they can't rot inside my body. They'll never come in contact with any agent of decay. Back in the Rings, we can learn to activate and suppress different genes to produce the different castes, just as is done in nature. We'll have millions of workers, armies of warriors if need be, perhaps even organic rocket-ships, grown from altered alates. If this works, who do you think will remember me then, eh? Me and my arrogant little life and little sacrifice?'

She stared at him; even the bulky goggles could not hide her new respect and even fear. 'You really mean to do it, then.'

'I made the sacrifice of my time and energy. I expect results, Doctor.'

'But it's kidnapping. You're talking about breeding a slave race.' Afriel shrugged, with contempt. 'You're juggling words, Doctor. I'll cause this colony no harm. I may steal some of its workers' labour while they obey my own chemical orders, but that tiny theft won't be missed. I admit to the murder of one egg, but that is no more a crime than a human abortion. Can the theft of one strand of genetic material be called "kidnapping"? I think not. As for the scandalous idea of a slave race—I reject it out of hand. These creatures are genetic robots. They will no more be slaves than are laser drills or cargo tankers. At the very worst, they will be our domestic animals.'

Mirny considered the issue. It did not take her long. 'It's true. It's not as if a common worker will be staring at the stars, pining for its freedom. They're just brainless neuters.'

'Exactly, Doctor.'

'They simply work. Whether they work for us or the Swarm makes no difference to them.'

'I see that you've seized on the beauty of the idea.'

'And if it worked,' Mirny said, 'if it worked, our faction would profit astronomically.'

Afriel smiled genuinely, unaware of the chilling sarcasm of his

expression. 'And the personal profit, Doctor... the valuable expertise of the first to exploit the technique.' He spoke gently, quietly. 'Ever see a nitrogen snowfall on Titan? I think a habitat of one's own there—larger, much larger than anything possible before... A genuine city, Galina, a place where a man can scrap the rules and discipline that madden him...'

'Now it's you who are talking defection, Captain-Doctor.'

Afriel was silent for a moment, then smiled with an effort. 'Now you've ruined my perfect reverie,' he said. 'Besides, what I was describing was the well-earned retirement of a wealthy man, not some self-indulgent hermitage... there's a clear difference.' He hesitated. 'In any case, may I conclude that you're with me in this project?'

She laughed and touched his arm. There was something uncanny about the small sound of her laugh, drowned by a great organic rumble from the Queen's monstrous intestines... 'Do you expect me to resist your arguments for two long years? Better that I give in now and save us friction.'

'Yes.'

'After all, you won't do any harm to the Nest. They'll never know anything has happened. And if their genetic line is successfully reproduced back home, there'll never be any reason for humanity to bother them again.'

'True enough,' said Afriel, though in the back of his mind he instantly thought of the fabulous wealth of Betelgeuse's asteroid system. A day would come, inevitably, when humanity would move to the stars *en masse*, in earnest. It would be well to know the ins and outs of every race that might become a rival.

'I'll help you as best I can,' she said. There was a moment's silence. 'Have you seen enough of this area?'

'Yes.' They left the Queen's chamber.

'I didn't think I'd like you at first,' she said candidly. 'I think I like you better now. You seem to have a sense of humour that most Security people lack.'

'It's not a sense of humour,' Afriel said sadly. 'It's a sense of irony disguised as one.'

There were no days in the unending stream of hours that followed. There were only ragged periods of sleep, apart at first, later together, as they held each other in free-fall. The sexual feel of skin

and body became an anchor to their common humanity, a divided, frayed humanity so many light-years away that the concept no longer had any meaning. Life in the warm and swarming tunnels was the here and now; the two of them were like germs in a bloodstream, moving ceaselessly with the pulsing ebb and flow. Hours stretched into months, and time itself grew meaningless.

The pheromonal tests were complex, but not impossibly difficult. The first of the ten pheromones was a simple grouping stimulus, causing large numbers of workers to gather as the chemical was spread from palp to palp. The workers then waited for further instructions; if none were forthcoming, they dispersed. To work effectively, the pheromones had to be given in a mix, or series, like computer commands; number one, grouping, for instance, together with the third pheromone, a transferral order, which caused the workers to empty any given chamber and move its effects to another. The ninth pheromone had the best industrial possibilities; it was a building order, causing the workers to gather tunnellers and dredgers and set them to work. Others were annoying; the tenth pheromone provoked grooming behaviour, and the workers' furry palps stripped off the remaining rags of Afriel's clothing. The eighth pheromone sent the workers off to harvest material on the asteroid's surface, and in their eagerness to observe its effects the two explorers were almost trapped and swept off into space.

The two of them no longer feared the warrior caste. They knew that a dose of the sixth pheromone would send them scurrying off to defend the eggs, just as it sent the workers to tend them. Mirny and Afriel took advantage of this and secured their own chambers, dug by chemically hijacked workers and defended by a hijacked airlock guardian. They had their own fungal gardens to refresh the air, stocked with the fungus they liked best, and digested by a worker they kept drugged for their own food use. From constant stuffing and lack of exercise the worker had swollen up into its replete form and hung from one wall like a monstrous grape.

Afriel was tired. He had been without sleep recently for a long time; how long, he didn't know. His body rhythms had not adjusted as well as Mirny's, and he was prone to fits of depression and irritability that he had to repress with an effort. 'The Investors will be back sometime,' he said. 'Sometime soon.'

Mirny was indifferent. 'The Investors,' she said, and followed the remark with something in the language of the springtails, which he

didn't catch. Despite his linguistic training, Afriel had never caught up with her in her use of the springtails' grating jargon. His training was almost a liability; the springtail language had decayed so much that it was a pidgin tongue, without rules or regularity. He knew enough to give them simple orders, and with his partial control of the warriors he had the power to back it up. The springtails were afraid of him, and the two juveniles that Mirny had tamed had developed into fat, overgrown tyrants that freely terrorized their elders. Afriel had been too busy to seriously study the springtails or the other symbiotes. There were too many practical matters at hand.

'If they come too soon, I won't be able to finish my latest study,' she said in English.

Afriel pulled off his infra-red goggles and knotted them tightly around his neck. 'There's a limit, Galina,' he said, yawning. 'You can only memorize so much data without equipment. We'll just have to wait quietly until we can get back. I hope the Investors aren't shocked when they see me. I lost a fortune with those clothes.'

'It's been so dull since the mating swarm was launched. If it weren't for the new growth in the alates' chamber, I'd be bored to death.' She pushed greasy hair from her face with both hands. 'Are you going to sleep?'

'Yes, if I can.'

'You won't come with me? I keep telling you that this new growth is important. I think it's a new caste. It's definitely not an alate. It has eyes like an alate, but it's clinging to the wall.'

'It's probably not a Swarm member at all, then,' he said tiredly, humouring her. 'It's probably a parasite, an alate mimic. Go on and see it, if you want to. I'll be here waiting for you.'

He heard her leave. Without his infra-reds on, the darkness was still not quite total; there was a very faint luminosity from the steaming, growing fungus in the chamber beyond. The stuffed worker replete moved slightly on the wall, rustling and gurgling. He fell asleep.

When he awoke, Mirny had not yet returned. He was not alarmed. First, he visited the original airlock tunnel, where the Investors had first left him. It was irrational—the Investors always fulfilled their contracts—but he feared that they would arrive someday, become

impatient, and leave without him. The Investors would have to wait, of course. Mirny could keep them occupied in the short time it would take him to hurry to the nursery and rob a developing egg of its living cells. It was best that the egg be as fresh as possible.

Later he ate. He was munching fungus in one of the anterior chambers when Mirny's two tamed springtails found him. 'What do you want?' he asked in their language.

'Food-giver no good,' the larger one screeched, waving its forelegs in brainless agitation. 'Not work, not sleep.'

'Not move,' the second one said. It added hopefully, 'Eat it now?' Afiel gave them some of his food. They ate it, seemingly more out of habit than real appetite, which alarmed him. 'Take me to her,' he told them.

The two springtails scurried off; he followed them easily, adroitly dodging and weaving through the crowds of workers. They led him several miles through the network, to the alates' chamber. There they stopped, confused. 'Gone,' the large one said.

The chamber was empty. Afiel had never seen it empty before, and it was very unusual for the Swarm to waste so much space. He felt dread. 'Follow the food-giver,' he said. 'Follow the smell.'

The springtails snuffled without much enthusiasm along one wall; they knew he had no food and were reluctant to do anything without an immediate reward. At last one of them picked up the scent, or pretended to, and followed it up across the ceiling and into the mouth of a tunnel.

It was hard for Afiel to see much in the abandoned chamber; there was not enough infra-red heat. He leapt upward after the springtail.

He heard the roar of a warrior and the springtail's choked-off screech. It came flying from the tunnel's mouth, a spray of clotted fluid bursting from its ruptured head. It tumbled end over end until it hit the far wall with a flaccid crunch. It was already dead.

The second springtail fled at once, screeching with grief and terror. Afiel landed on the lip of the tunnel, sinking into a crouch as his legs soaked up momentum. He could smell the acrid stench of the warrior's anger, a pheromone so thick that even a human could scent it. Dozens of other warriors would group here within minutes, or seconds. Behind the enraged warrior he could hear workers and tunnellers shifting and cementing rock.

He might be able to control one enraged warrior, but never two,

or twenty. He launched himself from the chamber wall and out an exit.

He searched for the other springtail—he felt sure he could recognize it, since it was so much bigger than the others—but he could not find it. With its keen sense of smell, it could easily avoid him if it wanted to.

Mirny did not return. Uncountable hours passed. He slept again. He returned to the alates' chamber; there were warriors on guard there, warriors that were not interested in food and brandished their immense serrated fangs when he approached. They looked ready to rip him apart; the faint reek of aggressive pheromones hung about the place like a fog. He did not see any symbiotes of any kind on the warriors' bodies. There was one species, a thing like a huge tick, that clung only to warriors, but even the ticks were gone.

He returned to his chambers to wait and think. Mirny's body was not in the garbage pits. Of course, it was possible that something else might have eaten her. Should he extract the remaining pheromone from the spaces in his veins and try to break into the alates' chamber? He suspected that Mirny, or whatever was left of her, was somewhere in the tunnel where the springtail had been killed. He had never explored that tunnel himself. There were thousands of tunnels he had never explored.

He felt paralysed by indecision and fear. If he was quiet, if he did nothing, the Investors might arrive at any moment. He could tell the Ring Council anything he wanted about Mirny's death; if he had the genetics with him, no one would quibble. He did not love her; he respected her, but not enough to give up his life, or his faction's investment. He had not thought of the Ring Council in a long time, and the thought sobered him. He would have to explain his decision . . .

He was still in a brown study when he heard a whoosh of air as his living airlock deflated itself. Three warriors had come for him. There was no reek of anger about them. They moved slowly and carefully. He knew better than to try to resist. One of them seized him gently in its massive jaws and carried him off.

It took him to the alates' chamber and into the guarded tunnel. A new, large chamber had been excavated at the end of the tunnel. It was filled almost to bursting by a black-splattered white mass of flesh. In the centre of the soft speckled mass were a mouth and two damp, shining eyes, on stalks. Long tendrils like conduits dangled,

writhing, from a clumped ridge above the eyes. The tendrils ended in pink, fleshy pluglike clumps.

One of the tendrils had been thrust through Mirny's skull. Her body hung in mid-air, limp as wax. Her eyes were open, but blind. Another tendril was plugged into the braincase of a mutated worker. The worker still had the pallid tinge of a larva; it was shrunken and deformed, and its mouth had the wrinkled look of a human mouth. There was a blob like a tongue in the mouth, and white ridges like human teeth. It had no eyes.

It spoke with Mirny's voice. 'Captain-Doctor Afriel . . .'  
'Galina . . .'

'I have no such name. You may address me as Swarm.'  
Afriel vomited. The central mass was an immense head. Its brain almost filled the room.

It waited politely until Afriel had finished.

'I find myself awakened again,' Swarm said dreamily. 'I am pleased to see that there is no major emergency to concern me. Instead it is a threat that has become almost routine.' It hesitated delicately. Mirny's body moved slightly in mid-air; her breathing was inhumanly regular. The eyes opened and closed. 'Another young race.'

'What are you?'

'I am the Swarm. That is, I am one of its castes. I am a tool, an adaptation; my speciality is intelligence. I am not often needed. It is good to be needed again.'

'Have you been here all along? Why didn't you greet us? We'd have dealt with you. We meant no harm.'

The wet mouth on the end of the plug made laughing sounds. 'Like yourself, I enjoy irony,' it said. 'It is a pretty trap you have found yourself in, Captain-Doctor. You meant to make the Swarm work for you and your race. You meant to breed us and study us and use us. It is an excellent plan, but one we hit upon long before your race evolved.'

Stung by panic, Afriel's mind raced frantically. 'You're an intelligent being,' he said. 'There's no reason to do us any harm. Let us talk together. We can help you.'

'Yes,' Swarm agreed. 'You will be helpful. Your companion's memories tell me that this is one of those uncomfortable periods when galactic intelligence is rife. Intelligence is a great bother. It makes all kinds of trouble for us.'

'What do you mean?'

'You are a young race and lay great stock by your own cleverness,' Swarm said. 'As usual, you fail to see that intelligence is not a survival trait.'

Afriel wiped sweat from his face. 'We've done well,' he said. 'We came to you, and peacefully. You didn't come to us.'

'I refer to exactly that,' Swarm said urbanely. 'This urge to expand, to explore, to develop, is just what will make you extinct. You naïvely suppose that you can continue to feed your curiosity indefinitely. It is an old story, pursued by countless races before you. Within a thousand years—perhaps a little longer—your species will vanish.'

'You intend to destroy us, then? I warn you it will not be an easy task—'

'Again you miss the point. Knowledge is power! Do you suppose that fragile little form of yours—your primitive legs, your ludicrous arms and hands, your tiny, scarcely wrinkled brain—can *contain* all that power? Certainly not! Already your race is flying to pieces under the impact of your own expertise. The original human form is becoming obsolete. Your own genes have been altered, and you, Captain-Doctor, are a crude experiment. In a hundred years you will be a relic. In a thousand years you will not even be a memory. Your race will go the same way as a thousand others.'

'And what way is that?'

'I do not know.' The thing on the end of the Swarm's arm made a chuckling sound. 'They have passed beyond my ken. They have all discovered something, learned something, that has caused them to transcend my understanding. It may be that they even transcend *being*. At any rate, I cannot sense their presence anywhere. They seem to do nothing, they seem to interfere in nothing; for all intents and purposes, they seem to be dead. Vanished. They may have become gods, or ghosts. In either case, I have no wish to join them.'

'So then—so then you have—'

'Intelligence is very much a two-edged sword, Captain-Doctor. It is useful only up to a point. It interferes with the business of living. Life, and intelligence, do not mix very well. They are not at all closely related, as you childishly assume.'

'But you, then—you are a rational being—'

'I am a tool, as I said.' The mutated device on the end of its arm

made a sighing noise. 'When you began your pheromonal experiments, the chemical imbalance became apparent to the Queen. It triggered certain genetic patterns within her body, and I was reborn. Chemical sabotage is a problem that can best be dealt with by intelligence. I am a brain replete, you see, specially designed to be far more intelligent than any young race. Within three days I was fully self-conscious. Within five days I had deciphered these markings on my body. They are the genetically encoded history of my race... within five days and two hours I recognized the problem at hand and knew what to do. I am now doing it. I am six days old.'

'What is it you intend to do?'

'Your race is a very vigorous one. I expect it to be here, competing with us, within five hundred years. Perhaps much sooner. It will be necessary to make a thorough study of such a rival. I invite you to join our community on a permanent basis.'

'What do you mean?'

'I invite you to become a symbiote. I have here a male and a female, whose genes are altered and therefore without defects. You make a perfect breeding pair. It will save me a great deal of trouble with cloning.'

'You think I'll betray my race and deliver a slave species into your hands?'

'Your choice is simple, Captain-Doctor. Remain an intelligent, living being, or become a mindless puppet, like your partner. I have taken over all the functions of her nervous system; I can do the same to you.'

'I can kill myself.'

'That might be troublesome, because it would make me resort to developing a cloning technology. Technology, though I am capable of it, is painful to me. I am a genetic artifact; there are fail-safes within me that prevent me from taking over the Nest for my own uses. That would mean falling into the same trap of progress as other intelligent races. For similar reasons, my life span is limited. I will live for only a thousand years, until your race's brief flurry of energy is over and peace resumes once more.'

'Only a thousand years?' Ariefel laughed bitterly. 'What then? You kill off my descendants, I assume, having no further use for them.'

'No. We have not killed any of the fifteen other races we have taken for defensive study. It has not been necessary. Consider that

small scavenger floating by your head, Captain-Doctor, that is feeding on your vomit. Five hundred million years ago its ancestors made the galaxy tremble. When they attacked us, we unleashed their own kind upon them. Of course, we altered our side, so that they were smarter, tougher, and, naturally, totally loyal to us. Our Nests were the only world they knew, and they fought with a valour and inventiveness we never could have matched... Should your race arrive to exploit us, we will naturally do the same.'

'We humans are different.'

'Of course.'

'A thousand years here won't change us. You will die and our descendants will take over this Nest. We'll be running things, despite you, in a few generations. The darkness won't make any difference.'

'Certainly not. You don't need eyes here. You don't need anything.'

'You'll allow me to stay alive? To teach them anything I want?'

'Certainly, Captain-Doctor. We are doing you a favour, in all truth. In a thousand years your descendants here will be the only remnants of the human race. We are generous with our immortality; we will take it upon ourselves to preserve you.'

'You're wrong, Swarm. You're wrong about intelligence, and you're wrong about everything else. Maybe other races would crumble into parasitism, but we humans are different.'

'Certainly. You'll do it, then?'

'Yes. I accept your challenge. And I will defeat you.'

'Splendid. When the Investors return here, the springtails will say that they have killed you, and will tell them to never return. They will not return. The humans should be the next to arrive.'

'If I don't defeat you, they will.'

'Perhaps.' Again it sighed. 'I'm glad I don't have to absorb you. I would have missed your conversation.'

# BURNING CHROME

WILLIAM GIBSON

It was hot, the night we burned Chrome. Out in the malls and plazas, moths were battling themselves to death against the neon, but in Bobby's loft the only light came from a monitor screen and the green and red LEDs on the face of the matrix simulator. I knew every chip in Bobby's simulator by heart; it looked like your workaday Ono-Sendai VII, the 'Cyberspace Seven', but I'd rebuilt it so many times that you'd have had a hard time finding a square millimetre of factory circuitry in all that silicon.

We waited side by side in front of the simulator console, watching the time display in the screen's lower left corner.

'Go for it,' I said, when it was time, but Bobby was already there, leaning forward to drive the Russian program into its slot with the heel of his hand. He did it with the tight grace of a kid slamming change into an arcade game, sure of winning and ready to pull down a string of free games.

A silver tide of phosphenes boiled across my field of vision as the matrix began to unfold in my head, a 3-D chessboard, infinite and perfectly transparent. The Russian program seemed to lurch as we entered the grid. If anyone else had been jacked into that part of the matrix, he might have seen a surf of flickering shadow roll out of the little yellow pyramid that represented our computer. The program was a mimetic weapon, designed to absorb local colour and present itself as a crash-priority override in whatever context it encountered.

'Congratulations,' I heard Bobby say. 'We just became an Eastern Seaboard Fission Authority inspection probe. . . . That meant we were clearing fiberoptic lines with the cybernetic equivalent of a fire siren, but in the simulation matrix we seemed to rush straight for Chrome's database. I couldn't see it yet, but I already knew those walls were waiting. Walls of shadow, walls of ice.'

Chrome: her pretty childface smooth as steel, with eyes that would have been at home on the bottom of some deep Atlantic

trench, cold grey eyes that lived under terrible pressure. They said she cooked her own cancers for people who crossed her, rococo custom variations that took years to kill you. They said a lot of things about Chrome, none of them at all reassuring.

So I blotted her out with a picture of Rikki. Rikki kneeling in a shaft of dusty sunlight that slanted into the loft through a grid of steel and glass: her faded camouflage fatigues, her translucent rose sandals, the good line of her bare back as she rummaged through a nylon gear bag. She looks up, and a half-blond curl falls to tickle her nose. Smiling, buttoning an old shirt of Bobby's, frayed khaki cotton drawn across her breasts.

She smiles.

'Son of a bitch,' said Bobby, 'we just told Chrome we're an IRS audit and three Supreme Court subpoenas. . . . Hang on to your ass. Jack. . . .'

So long, Rikki. Maybe now I see you never.

And dark, so dark, in the halls of Chrome's ice.

Bobby was a cowboy, and ice was the nature of his game, ice from ICE, Intrusion Countermeasures Electronics. The matrix is an abstract representation of the relationships between data systems. Legitimate programmers jack into their employers' sector of the matrix and find themselves surrounded by bright geometries representing the corporate data.

Towers and fields of it ranged in the colourless non-space of the simulation matrix, the electronic consensus-hallucination that facilitates the handling and exchange of massive quantities of data. Legitimate programmers never see the walls of ice they work behind, the walls of shadow that screen their operations from others, from industrial-espionage artists and hustlers like Bobby Quine.

Bobby was a cowboy. Bobby was a crackman, a burglar, casing mankind's extended electronic nervous system, rustling data and credit in the crowded matrix, monochrome non-space where the only stars are dense concentrations of information, and high above it all burn corporate galaxies and the cold spiral arms of military systems.

Bobby was another one of those young-old faces you see drinking in the Gentleman Loser, the chic bar for computer cowboys, rustlers, cybernetic second-story men. We were partners.

Bobby Quine and Automatic Jack. Bobby's the thin, pale dude with the dark glasses, and Jack's the mean-looking guy with the myoelectric arm. Bobby's software and Jack's hard; Bobby punches console and Jack runs down all the little things that can give you an edge. Or, anyway, that's what the scene watchers in the Gentleman Loser would've told you, before Bobby decided to burn Chrome. But they also might've told you that Bobby was losing his edge, slowing down. He was twenty-eight, Bobby, and that's old for a console cowboy.

Both of us were good at what we did, but somehow that one big score just wouldn't come down for us. I knew where to go for the right gear, and Bobby had all his licks down pat. He'd sit back with a white terry sweatband across his forehead and whip moves on those keyboards faster than you could follow, punching his way through some of the fanciest ice in the business, but that was when something happened that managed to get him totally wired, and that didn't happen often. Not highly motivated, Bobby, and I was the kind of guy who's happy to have the rent covered and a clean shirt to wear.

But Bobby had this thing for girls, like they were his private tarot or something, the way he'd get himself moving. We never talked about it, but when it started to look like he was losing his touch that summer, he started to spend more time in the Gentleman Loser. He'd sit at a table by the open doors and watch the crowd slide by, nights when the bugs were at the neon and the air smelled of perfume and fast food. You could see his sunglasses scanning those faces as they passed, and he must have decided that Rikki's was the one he was waiting for, the wild card and the luck changer. The new one.

I went to New York to check out the market, to see what was available in hot software.

The Finn's place has a defective hologram in the window; METRO HOLOGRAPHIX, over a display of dead flies wearing fur coats of grey dust. The scrap's waist-high, inside, drifts of it rising to meet walls that are barely visible behind nameless junk, behind sagging pressboard shelves stacked with old skin magazines and yellow-spined years of *National Geographic*.

'You need a gun,' said the Finn. He looks like a recomb DNA project aimed at tailoring people for high-speed burrowing. 'You're

in luck. I got the new Smith and Wesson, the four-oh-eight Tactical. Got this xenon projector slung under the barrel, see, batteries in the grip, throw you a twelve-inch high-noon circle in the pitch dark at fifty yards. The light source is so narrow, it's almost impossible to spot. It's just like voodoo in a nightfight.'

I let my arm clunk down on the table and started the fingers drumming; the servos in the hand began whining like overworked mosquitoes. I knew that the Finn really hated the sound. 'You looking to pawn that?' He prodded the Duralumin wrist joint with the chewed shaft of a felt-tip pen. 'Maybe get yourself something a little quieter?'

I kept it up. 'I don't need any guns, Finn.'

'Okay,' he said, 'okay,' and I quit drumming. 'I only got this one item, and I don't even know what it is.' He looked unhappy. 'I got it off these bridge-and-tunnel kids from Jersey last week.'

'So when'd you ever buy anything you didn't know what it was, Finn?'

'Wise ass.' And he passed me a transparent mailer with something in it that looked like an audio cassette through the bubble padding. 'They had a passport,' he said. 'They had credit cards and a watch. And that.'

'They had the contents of somebody's pockets, you mean.'

He nodded. 'The passport was Belgian. It was also bogus, looked to me, so I put it in the furnace. Put the cards in with it. The watch was okay, a Porsche, nice watch.'

It was obviously some kind of plug-in military program. Out of the mailer, it looked like the magazine of a small assault rifle, coated with nonreflective black plastic. The edges and corners showed bright metal; it had been knocking around for a while.

'I'll give you a bargain on it, Jack. For old times' sake.'

I had to smile at that. Getting a bargain from the Finn was like God repealing the law of gravity when you have to carry a heavy suitcase down ten blocks of airport corridor.

'Looks Russian to me,' I said. 'Probably the emergency sewage controls for some Leningrad suburb. Just what I need.'

'You know,' said the Finn, 'I got a pair of shoes older than you are. Sometimes I think you got about as much class as those yahoos from Jersey. What do you want me to tell you, it's the keys to the Kremlin? You figure out what the goddamn thing is. Me, I just sell the stuff.'

I bought it.

Bodiless, we swerve into Chrome's castle of ice. And we're fast, fast. It feels like we're surfing the crest of the invading program, hanging ten above the seething glitch systems as they mutate. We're sentient patches of oil swept along down corridors of shadow.

Somewhere we have bodies, very far away, in a crowded loft roofed with steel and glass. Somewhere we have microseconds, maybe time left to pull out.

We've crashed her gates disguised as an audit and three subpoenas, but her defences are specifically geared to cope with that kind of official intrusion. Her most sophisticated ice is structured to fend off warrants, writs, subpoenas. When we breached the first gate, the bulk of her data vanished behind core-command ice, these walls we see as leagues of corridor, mazes of shadow. Five separate landlines spurted May Day signals to law firms, but the virus had already taken over the parameter ice. The glitch systems gobble the distress calls as our mimetic subprograms scan anything that hasn't been blanked by core command.

The Russian program lifts a Tokyo number from the unscreened data, choosing it for frequency of calls, average length of calls, the speed with which Chrome returned those calls.

'Okay,' says Bobby, 'we're an incoming scrambler call from a pal of hers in Japan. That should help.'

Ride 'em, cowboy.

\* \* \*

Bobby read his future in women; his girls were omens, changes in the weather, and he'd sit all night in the Gentleman Loser, waiting for the season to lay a new face down in front of him like a card.

I was working late in the loft one night, shaving down a chip, my arm off and the little waldo jacked straight into the stump.

Bobby came in with a girl I hadn't seen before, and usually I feel a little funny if a stranger sees me working that way, with those leads clipped to the hard carbon studs that stick out of my stump. She came right over and looked at the magnified image on the screen, then saw the waldo moving under its vacuum-sealed dust cover. She didn't say anything, just watched. Right away I had a good feeling about her; it's like that sometimes.

'Automatic Jack, Rikki. My associate.'

He laughed, put his arm around her waist, something in his tone

letting me know that I'd be spending the night in a dingy room in a hotel.

'Hi,' she said. Tall, nineteen or maybe twenty, and she definitely had the goods. With just those few freckles across the bridge of her nose, and eyes somewhere between dark amber and French coffee. Tight black jeans rolled to midcalf and a narrow plastic belt that matched the rose-coloured sandals.

But now when I see her sometimes when I'm trying to sleep, I see her somewhere out on the edge of all this sprawl of cities and smoke, and it's like she's a hologram stuck behind my eyes, in a bright dress she must've worn once, when I knew her, something that doesn't quite reach her knees. Bare legs long and straight. Brown hair, streaked with blond, hoods her face, blown in a wind from somewhere, and I see her wave goodbye.

Bobby was making a show of rooting through a stack of audio cassettes. 'I'm on my way, cowboy,' I said, unclipping the waldo. She watched attentively as I put my arm back on.

'Can you fix things?' she asked.

'Anything, anything you want, Automatic Jack'll fix it.' I snapped my Duralumin fingers for her.

She took a little simstim deck from her belt and showed me the broken hinge on the cassette cover.

'Tomorrow,' I said, 'no problem.'

And my *oh my*, I said to myself, sleep pulling me down the six flights to the street, *what'll Bobby's luck be like with a fortune cookie like that? If his system worked, we'd be striking it rich any night now.* In the street I grinned and yawned and waved for a cab.

Chrome's castle is dissolving, sheets of ice shadow flickering and fading, eaten by the glitch systems that spin out from the Russian program, tumbling away from our central logic thrust and infecting the fabric of the ice itself. The glitch systems are cybernetic virus analogs, self-replicating and voracious. They mutate constantly, in unison, subverting and absorbing Chrome's defences.

Have we already paralysed her, or is a bell ringing somewhere, a red light blinking? Does she know?

Rikki Wildside, Bobby called her, and for those first few weeks it must have seemed to her that she had it all, the whole teeming show spread out for her, sharp and bright under the neon. She was



new to the scene, and she had all the miles of malls and plazas to prow, all the shops and clubs, and Bobby to explain the wild side, the tricky wiring on the dark underside of things, all the players and their names and their games. He made her feel at home.

'What happened to your arm?' she asked me one night in the Gentleman Loser, the three of us drinking at a small table in a corner.

'Hang-gilding,' I said, 'accident.'

'Hang-gilding over a wheatfield,' said Bobby, 'place called Kiev. Our Jack's just hanging there in the dark, under a Nightwing parafoil, with fifty kilos of radar jammer between his legs, and some Russian asshole accidentally burns his arm off with a laser.'

I don't remember how I changed the subject, but I did.

I was still telling myself that it wasn't Rikki who was getting to me, but what Bobby was doing with her. I'd known him for a long time, since the end of the war, and I knew he used women as counters in a game, Bobby Quine versus fortune, versus time and the night of cities. And Rikki had turned up just when he needed something to get him going, something to aim for. So he'd set her up as a symbol for everything he wanted and couldn't have, everything he'd had and couldn't keep.

I didn't like having to listen to him tell me how much he loved her, and knowing he believed it only made it worse. He was a past master at the hard fall and the rapid recovery, and I'd seen it happen a dozen times before. He might as well have had NEXT printed across his sunglasses in green Day-Glo capitals, ready to flash out at the first interesting face that flowed past the tables in the Gentleman Loser.

I knew what he did to them. He turned them into emblems, sigils on the map of his hustler's life, navigation beacons he could follow through a sea of bars and neon. What else did he have to steer by? He didn't love money, in and of itself, not enough to follow its lights. He wouldn't work for power over other people; he hated the responsibility it brings. He had some basic pride in his skill, but that was never enough to keep him pushing.

So he made do with women.

When Rikki showed up, he needed one in the worst way. He was fading fast, and smart money was already whispering that the edge was off his game. He needed that one big score, and soon, because he didn't know any other kind of life, and all his clocks were set for

hustler's time, calibrated in risk and adrenaline and that supernal dawn calm that comes when every move's proved right and a sweet lump of someone else's credit clicks into your own account.

It was time for him to make his bundle and get out; so Rikki got set up higher and further away than any of the others ever had, even though—and I felt like screaming it at him—she was right there, alive, totally real, human, hungry, resilient, bored, beautiful, excited, all the things she was . . .

Then he went out one afternoon, about a week before I made the trip to New York to see the Finn. Went out and left us there in the loft, waiting for a thunderstorm. Half the skylight was shadowed by a dome they'd never finished, and the other half showed sky, black and blue with clouds. I was standing by the bench, looking up at that sky, stupid with the hot afternoon, the humidity, and she touched me, touched my shoulder, the half-inch border of taut pink scar that the arm doesn't cover. Anybody else ever touched me there, they went on to the shoulder, the neck . . .

But she didn't do that. Her nails were lacquered black, not pointed, but tapered oblongs, the lacquer only a shade darker than the carbon-fibre laminate that sheathes my arm. And her hand went down the arm, black nails tracing a weld in the laminate, down to the black anodized elbow joint, out to the wrist, her hand soft-knuckled as a child's, fingers spreading to lock over mine, her palm against the perforated Duralumin.

Her other palm came up to brush across the feedback pads, and it rained all afternoon, raindrops drumming on the steel and soot-stained glass above Bobby's bed.

Ice walls flick away like supersonic butterflies made of shade. Beyond them, the matrix's illusion of infinite space. It's like watching a tape of a prefab building going up; only the tape's reversed and run at high speed, and these walls are torn wings.

Trying to remind myself that this place and the gulfs beyond are only representations, that we aren't 'in' Chrome's computer, but interfaced with it, while the matrix simulator in Bobby's loft generates this illusion . . . The core data begin to emerge, exposed, vulnerable . . . This is the far side of ice, the view of the matrix I've never seen before, the view that fifteen million legitimate console operators see daily and take for granted.

The core data tower around us like vertical freight trains, colour-

coded for access. Bright primaries, impossibly bright in that transparent void, linked by countless horizontals in nursery blues and pinks.

But ice still shadows something at the centre of it all: the heart of all Chrome's expensive darkness, the very heart...

It was late afternoon when I got back from my shopping expedition to New York. Not much sun through the skylight, but an ice pattern glowed on Bobby's monitor screen, a 2-D graphic representation of someone's computer defences, lines of neon woven like an Art Deco prayer rug. I turned the console off, and the screen went completely dark.

Rikki's things were spread across my workbench, nylon bags spilling clothes and make-up, a pair of bright red cowboy boots, audio cassettes, glossy Japanese magazines about simstim stars. I stacked it all under the bench and then took my arm off, forgetting that the program I'd bought from the Finn was in the right-hand pocket of my jacket, so that I had to fumble it out left-handed and then get it into the padded jaws of the jeweller's vice.

The waldo looks like an old audio turntable, the kind that played disc records, with the vice set up under a transparent dust cover. The arm itself is just over a centimetre long, swinging out on what would've been the tone arm on one of those turntables. But I don't look at that when I've clipped the leads to my stump; I look at the scope, because that's my arm there in black and white, magnification 40X.

I ran a tool check and picked up the laser. It felt a little heavy; so I scaled my weight-sensor input down to a quarter-kilo per gram and got to work. At 40X the side of the program looked like a trailer truck.

It took eight hours to crack: three hours with the waldo and the laser and four dozen taps, two hours on the phone to a contact in Colorado, and three hours to run down a lexicon disc that could translate eight-year-old technical Russian.

Then Cyrillic alphanumerics started reeling down the monitor, twisting themselves into English halfway down. There were a lot of gaps, where the lexicon ran up against specialized military acronyms in the readout I'd bought from my man in Colorado, but it did give me some idea of what I'd bought from the Finn.

I felt like a punk who'd gone out to buy a switchblade and come home with a small neutron bomb.

*Screwed again*, I thought. *What good's a neutron bomb in a streetfight?* The thing under the dust cover was right out of my league. I didn't even know where to unload it, where to look for a buyer. Someone had, but he was dead, someone with a Porsche watch and a fake Belgian passport, but I'd never tried to move in those circles. The Finn's muggers from the 'burbs had knocked over someone who had some highly arcane connections.

The program in the jeweller's vice was a Russian military ice-breaker, a killer-virus program.

It was dawn when Bobby came in alone. I'd fallen asleep with a bag of takeout sandwiches in my lap.

'You want to eat?' I asked him, not really awake, holding out my sandwiches. I'd been dreaming of the program, of its waves of hungry glitch systems and mimetic subprograms; in the dream it was an animal of some kind, shapeless and flowing.

He brushed the bag aside on his way to the console, punched a function key. The screen lit with the intricate pattern I'd seen there that afternoon. I rubbed sleep from my eyes with my left hand, one thing I can't do with my right. I'd fallen asleep trying to decide whether to tell him about the program. Maybe I should try to sell it alone, keep the money, go somewhere new, ask Rikki to go with me.

'Whose is it?' I asked.

He stood there in a black cotton jump suit, an old leather jacket thrown over his shoulders like a cape. He hadn't shaved for a few days, and his face looked thinner than usual.

'It's Chrome's,' he said.

My arm convulsed, started clicking, fear translated to the myoelectrics through the carbon studs. I spilled the sandwiches; limp sprouts, and bright yellow dairy-produce slices on the unswept wooden floor.

'You're stone crazy,' I said.

'No,' he said, 'you think she rumbled it? No way. We'd be dead already. I locked on to her through a triple-blind rental system in Mombasa and an Algerian comsat. She knew somebody was having a look-see, but she couldn't trace it.'

If Chrome had traced the pass Bobby had made at her ice, we

were good as dead. But he was probably right, or she'd have had me blown away on my way back from New York. 'Why her, Bobby? Just give me one reason....'

Chrome: I'd seen her maybe half a dozen times in the Gentleman Loser. Maybe she was slumming, or checking out the human condition, a condition she didn't exactly aspire to. A sweet little heart-shaped face framing the nastiest pair of eyes you ever saw. She'd looked fourteen for as long as anyone could remember, hyped out of anything like a normal metabolism on some massive program of serums and hormones. She was as ugly a customer as the street ever produced, but she didn't belong to the street anymore. She was one of the Boys, Chrome, a member in good standing of the local Mob subsidiary. Word was, she'd gotten started as a dealer, back when synthetic pituitary hormones were still proscribed. But she hadn't had to move hormones for a long time. Now she owned the House of Blue Lights.

'You're flat-out crazy, Quine. You give me one sane reason for having that stuff on your screen. You ought to dump it, and I mean now....'

'Talk in the Loser,' he said, shrugging out of the leather jacket. 'Black Myron and Crow Jane. Jane, she's up on all the sex lines, claims she knows where the money goes. So she's arguing with Myron that Chrome's the controlling interest in the Blue Lights, not just some figurehead for the Boys.'

'The Boys', Bobby,' I said. 'That's the operative word there. You still capable of seeing that? We don't mess with the Boys, remember? That's why we're still walking around.'

'That's why we're still poor, partner.' He settled back into the swivel chair in front of the console, unzipped his jump suit, and scratched his skinny white chest. 'But maybe not for much longer.'

'I think maybe this partnership just got itself permanently dissolved.'

Then he grinned at me. That grin was truly crazy, feral and focused, and I knew that right then he really didn't give a shit about dying.

'Look,' I said, 'I've got some money left, you know? Why don't you take it and get the tube to Miami, catch a hopper to Montego Bay. You need a rest, man. You've got to get your act together.'

'My act, Jack,' he said, punching something on the keyboard, 'never has been this together before.' The neon prayer rug on the

screen shivered and woke as an animation program cut in, ice lines weaving with hypnotic frequency, a living mandala. Bobby kept punching, and the movement slowed; the pattern resolved itself, grew slightly less complex, became an alternation between two distant configurations. A first-class piece of work, and I hadn't thought he was still that good. 'Now,' he said, 'there, see it? Wait. There. There again. And there. Easy to miss. That's it. Cuts in every hour and twenty minutes with a squirt transmission to their comsat. We could live for a year on what she pays them weekly in negative interest.'

'Whose comsat?'

'Zürich. Her bankers. That's her bankbook, Jack. That's where the money goes. Crow Jane was right.'

I stood there. My arm forgot to click.

'So how'd you do in New York, partner? You get anything that'll help me cut ice? We're going to need whatever we can get.'

I kept my eyes on his, forced myself not to look in the direction of the waldo, the jeweller's vice. The Russian program was there, under the dust cover.

Wild cards, luck changers.

'Where's Rikki?' I asked him, crossing to the console, pretending to study the alternating patterns on the screen.

'Friends of hers,' he shrugged, 'kids, they're all into simstim.' He smiled absently. 'I'm going to do it for her, man.'

'I'm going out to think about this, Bobby. You want me to come back, you keep your hands off the board.'

'I'm doing it for her,' he said as the door closed behind me. 'You know I am.'

And down now, down, the program a roller coaster through this fraying maze of shadow walls, grey cathedral spaces between the bright towers. Headlong speed.

Black ice. Don't think about it. Black ice.

Too many stories in the Gentleman Loser; black ice is a part of the mythology. Ice that kills. Illegal, but then aren't we all? Some kind of neural-feedback weapon, and you connect with it only once. Like some hideous Word that eats the mind from the inside out. Like an epileptic spasm that goes on and on until there's nothing left at all....

And we're diving for the floor of Chrome's shadow castle.

Trying to brace myself for the sudden stopping of breath, a sickness and final slackening of the nerves. Fear of that cold Word waiting, down there in the dark.

I went out and looked for Rikki, found her in a café with a boy with Sendai eyes, half-healed suture lines radiating from his bruised sockets. She had a glossy brochure spread open on the table, Tally Isham smiling up from a dozen photographs, the Girl with the Zeiss Ikon Eyes.

Her little simstim deck was one of the things I'd stacked under my bench the night before, the one I'd fixed for her the day after I'd first seen her. She spent hours jacked into that unit, the contact band across her forehead like a grey plastic tiara. Tally Isham was her favourite, and with the contact band on, she was gone, off somewhere in the recorded sensorium of simstim's biggest star. Simulated stimuli: the world—all the interesting parts, anyway—as perceived by Tally Isham. Tally raced a black Fokker ground-effect plane across Arizona mesa tops. Tally dived the Truk Island preserves. Tally partied with the superrich on private Greek islands, heartbreaking purity of those tiny white seaports at dawn.

Actually she looked a lot like Tally, same colouring and cheekbones. I thought Rikki's mouth was stronger. More sass. She didn't want to be Tally Isham, but she coveted the job. That was her ambition, to be in simstim. Bobby just laughed it off. She talked to me about it, though. 'How'd I look with a pair of these?' she'd ask, holding a full-page headshot, Tally Isham's blue Zeiss Ikon lined up with her own amber-brown. She'd had her corneas done twice, but she still wasn't 20-20; so she wanted Ikon. Brand of the stars. Very expensive.

'You still window-shopping for eyes?' I asked as I sat down.

'Tiger just got some,' she said. She looked tired, I thought.

Tiger was so pleased with his Sendais that he couldn't help smiling, but I doubted whether he'd have smiled otherwise. He had the kind of uniform good looks you get after your seventh trip to the surgical boutique; he'd probably spend the rest of his life looking vaguely like each new season's media front-runner; not too obvious a copy, but nothing too original, either.

'Sendai, right?' I smiled back.

He nodded. I watched as he tried to take me in with his idea of a professional simstim glance. He was pretending that he was

recording. I thought he spent too long on my arm. 'They'll be great on peripherals when the muscles heal,' he said, and I saw how carefully he reached for his double espresso. Sendai eyes are notorious for depth-perception defects and warranty hassles, among other things.

'Tiger's leaving for Hollywood tomorrow.'

'Then maybe Chiba City, right?' I smiled at him. He didn't smile back. 'Got an offer, Tiger? Know an agent?'

'Just checking it out,' he said quietly. Then he got up and left. He said a quick goodbye to Rikki, but not to me.

'That kid's optic nerves may start to deteriorate inside six months. You know that, Rikki? Those Sendais are illegal in England, Denmark, lots of places. You can't replace nerves.'

'Hey, Jack, no lectures.' She stole one of my croissants and nibbled at the tip of one of its horns.

'I thought I was your adviser, kid.'

'Yeah. Well, Tiger's not too swift, but everybody knows about Sendais. They're all he can afford. So he's taking a chance. If he gets work, he can replace them.'

'With these?' I tapped the Zeiss Ikon brochure. 'Lot of money, Rikki. You know better than to take a gamble like that.'

She nodded. 'I want Ikon.'

'If you're going up to Bobby's, tell him to sit tight until he hears from me.'

'Sure. It's business?'

'Business,' I said. But it was craziness.

I drank my coffee, and she ate both my croissants. Then I walked her down to Bobby's. I made fifteen calls, each one from a different pay phone.

Business. Bad craziness.

All in all, it took us six weeks to set the burn up, six weeks of Bobby telling me how much he loved her. I worked even harder, trying to get away from that.

Most of it was phone calls. My fifteen initial and very oblique enquiries each seemed to breed fifteen more. I was looking for a certain service Bobby and I both imagined as a requisite part of the world's clandestine economy, but which probably never had more than five customers at a time. It would be one that never advertised.

We were looking for the world's heaviest fence, for a non-aligned

money laundry capable of dry-cleaning a megabuck on-line cash transfer and then forgetting about it.

All those calls were a waste, finally, because it was the Finn who put me on to what we needed. I'd gone up to New York to buy a new blackbox rig, because we were going broke paying for all those calls.

I put the problem to him as hypothetically as possible.

'Macao,' he said.

'Macao?'

'The Long Hum family. Stockbrokers.'

He even had the number. You want a fence, ask another fence.

The Long Hum people were so oblique that they made my idea of a subtle approach look like a tactical nuke-out. Bobby had to make two shuttle runs to Hong Kong to get the deal straight. We were running out of capital, and fast. I still don't know why I decided to go along with it in the first place; I was scared of Chrome, and I'd never been all that hot to get rich.

I tried telling myself that it was a good idea to burn the House of Blue Lights because the place was a creep joint, but I just couldn't buy it. I didn't like the Blue Lights, because I'd spent a supremely depressing evening there once, but that was no excuse for going after Chrome. Actually I halfway assumed we were going to die in the attempt. Even with that killer program, the odds weren't exactly in our favour.

Bobby was lost in writing the set of commands we were going to plug into the dead centre of Chrome's computer. That was going to be my job, because Bobby was going to have his hands full trying to keep the Russian program from going straight for the kill. It was too complex for us to rewrite, and so he was going to try to hold it back for the two seconds I needed.

I made a deal with a streetfighter named Miles. He was going to follow Rikki the night of the burn, keep her in sight, and phone me at a certain time. If I wasn't there, or didn't answer in just a certain way, I'd told him to grab her and put her on the first tube out. I gave him an envelope to give her, money and a note.

Bobby really hadn't thought about that, much, how things would go for her if we blew it. He just kept telling me he loved her, where they were going to go together, how they'd spend the money.

'Buy her a pair of Ikons first, man. That's what she wants. She's serious about that simstim scene.'

'Hey,' he said, looking up from the keyboard, 'she won't need to work. We're going to make it, Jack. She's my luck. She won't ever have to work again.'

'Your luck,' I said. I wasn't happy. I couldn't remember when I had been happy. 'You seen your luck around lately?'

He hadn't, but neither had I. We'd both been too busy.

I missed her. Missing her reminded me of my one night in the House of Blue Lights, because I'd gone there out of missing someone else. I'd gotten drunk to begin with, then I'd started hitting Vasopressin inhalers. If your main squeeze has just decided to walk out on you, booze and Vasopressin are the ultimate in masochistic pharmacology; the juice makes you maudlin and the Vasopressin makes you remember, I mean really remember. Clinically they use the stuff to counter senile amnesia, but the street finds its own uses for things. So I'd bought myself an ultra-intense replay of a bad affair; trouble is, you get the bad with the good. Go gunning for transports of animal ecstasy and you get what you said, too, and what she said to that, how she walked away and never looked back.

I don't remember deciding to go to the Blue Lights, or how I got there, hushed corridors and this really tacky decorative waterfall trickling somewhere, or maybe just a hologram of one. I had a lot of money that night; somebody had given Bobby a big roll for opening a three-second window in someone else's ice.

I don't think the crew on the door liked my looks, but I guess my money was okay.

I had more to drink there when I'd done what I went there for. Then I made some crack to the barman about closet necrophiliacs, and that didn't go down too well. Then this very large character insisted on calling me War Hero, which I didn't like. I think I showed him some tricks with the arm, before the lights went out, and I woke up two days later in a basic sleeping module somewhere else. A cheap place, not even room to hang yourself. And I sat there on that narrow foam slab and cried.

Some things are worse than being alone. But the thing they sell in the House of Blue Lights is so popular that it's almost legal.

At the heart of darkness, the still centre, the glitch systems shred the dark with whirlwinds of light, translucent razors spinning away from us; we hang in the centre of a silent slow-motion explosion,

ice fragments falling away forever, and Bobby's voice comes in across light-years of electronic void illusion—

'Burn the bitch down. I can't hold the thing back—'

The Russian program, rising through towers of data, blotting out the playroom colours. And I plug Bobby's homemade command package into the centre of Chrome's cold heart. The squirt transmission cuts in, a pulse of condensed information that shoots straight up, past the thickening tower of darkness, the Russian program, while Bobby struggles to control that crucial second. An uninformed arm of shadow twitches from the towering dark, too late. We've done it.

The matrix folds itself around me like an origami trick.

And the loft smells of sweat and burning circuitry.

I thought I heard Chrome scream, a raw metal sound, but I couldn't have.

Bobby was laughing, tears in his eyes. The elapsed-time figure in the corner of the monitor read 07:24:05. The burn had taken a little under eight minutes.

And I saw that the Russian program had melted in its slot.

We'd given the bulk of Chrome's Zürich account to a dozen world charities. There was too much there to move, and we knew we had to break her, burn her straight down, or she might come after us. We took less than ten per cent for ourselves and shot it through the Long Hum set-up in Macao. They took sixty per cent of that for themselves and kicked what was left back to us through the most convoluted sector of the Hong Kong exchange. It took an hour before our money started to reach the two accounts we'd opened in Zürich.

I watched zeros pile up behind a meaningless figure on the monitor. I was rich.

Then the phone rang. It was Miles. I almost blew the code phrase.

'Hey, Jack, man, I dunno—what's it all about, with this girl of yours? Kinda funny thing here ...'

'What? Tell me.'

'I been on her, like you said, tight but out of sight. She goes to the Loser, hangs out, then she gets a tube. Goes to the House of Blue Lights—'

'She what?'

'Side door. Employees only. No way I could get past their security.' 'Is she there now?'

'No, man, I just lost her. It's insane down here, like the Blue Lights just shut down, looks like for good, seven kinds of alarms going off, everybody running, the heat out in riot gear. ... Now there's all this stuff going on, insurance guys, real-estate types, vans with municipal plates. ...'

'Miles, where'd she go?'

'Lost her, Jack.'

'Look, Miles, you keep the money in the envelope, right?'

'You serious? Hey, I'm real sorry. I—'

I hung up.

'Wait'll we tell her,' Bobby was saying, rubbing a towel across his bare chest.

'You tell her yourself, cowboy. I'm going for a walk.'

So I went out into the night and the neon and let the crowd pull me along, walking blind, willing myself to be just a segment of that mass organism, just one more drifting chip of consciousness under the geodesics. I didn't think, just put one foot in front of another, but after a while I did think, and it all made sense. She'd needed the money.

I thought about Chrome, too. That we'd killed her, murdered her, as surely as if we'd slit her throat. The night that carried me along through the malls and plazas would be hunting her now, and she had nowhere to go. How many enemies would she have in this crowd alone? How many would move, now they weren't held back by fear of her money? We'd taken her for everything she had. She was back on the street again. I doubted she'd live till dawn.

Finally I remembered the café, the one where I'd met Tiger.

Her sunglasses told the whole story, huge black shades with a telltale smudge of flesh-tone paintstick in the corner of one lens. 'Hi, Rikki,' I said, and I was ready when she took them off.

Blue. Tally isham blue. The clear trademark blue they're famous for, ZEISS IKON ringing each iris in tiny capitals, the letters suspended there like flecks of gold.

'They're beautiful,' I said. Paintstick covered the bruising. No scars with work that good. 'You made some money.'

'Yeah, I did.' Then she shivered. 'But I won't make any more, not that way.'

'I think that place is out of business.'

'Oh.' Nothing moved in her face then. The new blue eyes were still and very deep.

'It doesn't matter. Bobby's waiting for you. We just pulled down a big score.'

'No. I've got to go. I guess he won't understand, but I've got to go.'

I nodded, watching the arm swing up to take her hand; it didn't seem to be part of me at all, but she held on to it like it was. 'I've got a one-way ticket to Hollywood. Tiger knows some people I can stay with. Maybe I'll even get to Chiba City.'

She was right about Bobby. I went back with her. He didn't understand. But she'd already served her purpose, for Bobby, and I wanted to tell her not to hurt for him, because I could see that she did. He wouldn't even come out into the hallway after she had packed her bags. I put the bags down and kissed her and messed up the paintstick, and something came up inside me the way the killer program had risen above Chrome's data. A sudden stopping of the breath, in a place where no word is. But she had a plane to catch.

Bobby was slumped in the swivel chair in front of his monitor, looking at his string of zeros. He had his shades on, and I knew he'd be in the Gentleman Loser by nightfall, checking out the weather, anxious for a sign, someone to tell him what his new life would be like. I couldn't see it being very different. More comfortable, but he'd always be waiting for that next card to fall.

I tried not to imagine her in the House of Blue Lights, working three-hour shifts in an approximation of REM sleep, while her body and a bundle of conditioned reflexes took care of business. The customers never got to complain that she was faking it, because those were real orgasms. But she felt them, if she felt them at all, as faint silver flares somewhere out on the edge of sleep. Yeah, it's so popular, it's almost legal. The customers are torn between needing someone and wanting to be alone at the same time, which has probably always been the name of that particular game, even before we had the neuroelectronics to enable them to have it both ways.

I picked up the phone and punched the number for her airline. I gave them her real name, her flight number. 'She's changing that,' I said, 'to Chiba City. That's right, Japan.' I thumbed my credit card into the slot and punched my ID code. 'First class.' Distant hum as they scanned my credit records. 'Make that a return ticket.'

But I guess she cashed the return fare, or else she didn't need it,

because she hasn't come back. And sometimes late at night I'll pass a window with posters of simstim stars, all those beautiful, identical eyes staring back at me out of faces that are nearly as identical, and sometimes the eyes are hers, but none of the faces are, none of them ever are, and I see her far out on the edge of all this sprawl of night and cities, and then she waves goodbye.

## SILICON MUSE

HILBERT SCHENCK

The January afternoon was dark and bitter cold with only a few students hurrying here and there, black hunched figures leaning against the freezing wind. The swirling snow was getting steadily thicker. Already the mostly deserted campus was emptying further, as the university staff scurried off to their parking lots so as to get on the roads ahead of any skids or blockages on the hills surrounding the campus valley.

Professor Frank Gower, chairman of the Department of English Literature and also of the Graduate Faculty Grants Committee, stamped the snow off his heavy boots at the side entrance to the sprawling, four-storey, concrete-block Computer Science building, then clapped his mittens together several times and stepped gratefully into the warmer hallway. He was a thin, almost gaunt man of medium height, forty-eight years old; and though he walked briskly and spoke in a sharp, intent voice, he felt and dreaded the cold more each year in this bleak, wind-swept New England valley where the dampness from the river combined with the blustery north-westerlies to penetrate even the warmest and tightest garments.

His narrow face was pinched but his lips were set in determination as he walked quickly down the north stairs of the building and pushed open a heavy door labelled, 'Main Terminal Room Keep Door Shut.'

Inside all was warmth and light. The large room was windowless, cubical, with a high ceiling sloping downward to the back. The white walls were blank except for air-conditioning grills at floor and ceiling level, and the whole place was evenly lit by high fluorescent fixtures that flooded every cranny with a cold, white light. The sprawling input-output consoles of the university's latest and largest computing system formed a great letter 'C' around a group of five contour chairs in the centre. There were three different keyboards, tape, disk, and card-reading devices, at least a dozen

graphic and TV readout systems, and four printers of various sorts and sizes interspersed with the keyboards. Above this neat, if confusing, display of computing hardware was a complex spotlight board that individually illuminated whatever combination of machines was activated. As he shrugged off his coat, Professor Gower saw that only the central input keyboard was now so lit and that in front of it sat Dr Charles Perry, an assistant professor in his department. The twenty-seven-year-old Perry was as thin as his chairman, but where Gower's narrow hard face usually seemed sharp and alert, Perry's expression was more diffuse, often almost bewildered. He had a small chin and a rather slack mouth. His thin blond moustache was scraggly and only visible under bright lights.

Dr Perry got to his feet, brushed back his lank hair, and reached out to shake Dr Gower's hand. 'You're early, Frank,' he said in a mild voice.

Dr Gower sat down in a chair next to Perry and gave a terse nod. 'I wanted to bring you the bad news before the rest of them show up. The committee voted two to one yesterday to include our resident creative genius, Robert Roylance Roberts, specifically to help judge your project. He's an ex officio member so he can't vote, but he can sure talk and write opinions.'

Professor Perry's already vague expression became even more confused. 'Whaa...? But Triple-R will be drunk by now, Frank!' he said. 'Also, he hates this project worse than he hates that *Times* guy who cut up his last poetry collection. Jesus, what the hell is happening...?'

Gower placed a firm and cautionary hand on his younger colleague's arm. 'Right on both counts, but the committee took Roberts to lunch at the faculty club and I think we held him to four whiskeys—unless he got there earlier than usual. He wasn't too bad when I left them, and Millie was ordering them a second cup of coffee.'

The young man stared at the floor in dismay. 'Millicent Hull hates this idea too. That's for certain! Do you think I have a chance, Frank?'

The older man rubbed his cold hands briskly together in the warm room, then shrugged. 'You know how tough this Snodgrass business has gotten, Charlie. The federal grants are cut to hell and the state is broke. Old Snodgrass may have been a pirate, but he left



the university millions to pay for these fellowships. The way the market and the interest rates have gone, the damn grants are now practically at the Nobel dollar level—and since they're restricted to untenured assistant professors, just about everyone in that group cranks out a proposal twice a year.'

'But I was a runner-up last year, Frank,' said Dr. Perry in a thin and plaintive voice. 'I got Snodgrass seed money. Doesn't that mean anything?'

The chairman's voice was icy and quiet. 'You know very well what that means. It means you've got to show plenty more than the first-shot proposals do. Furthermore, there's only four of these little treasure troves, two in January and two in September. And for this round ...'

'The Chinaman in Biology is certain of one,' finished Dr Perry in a firmer and very bitter voice.

'Correct,' said the older man. 'The Chinaman has perhaps found a supposed cure for a suspected cancer. Health and Human Services is willing to double-match the Snodgrass money if we make the award. The Snodgrass Foundation lawyers agreed, as you know from the fuss it caused, in this single case to waive the will's provision that no Snodgrass Fellowship be based on additional funding or outside evaluations. The committee has two letters in support of the Chinaman from an assistant secretary of HHS.'

The chairman shook his head and his expression was sombre. 'Nobody votes for cancer, Charlie,' he said simply. 'It has no constituency.'

'So I'm in the hopper with thirty-seven other research proposals for one gold medal and I've got to start out by being better than most, or all, of them since I got that pittance last year. Is that it? I don't have a prayer!' said Perry. 'What about the robot people at the engineering school?'

Dr Gower shrugged again. 'We've cut them down to about four, actually. Half the things are written so quickly they're mostly unintelligible, and in most cases the Snodgrass requirement of total originality was totally lacking. As to the robot engineers, let me say in strictest confidence that yesterday their stair-climbing wheelchair got the wrong command from the control computer, flipped over backwards several steps before the top, and broke the plaster head of the dummy they had strapped to the thing into about fifty pieces. The chair suffered even worse damage.' Professor Gower smiled for

the first time since he had come into the room. 'Back to the old drawing board with that gadget, I guess.'

'So maybe I do have hope?' muttered the young man, though his tone showed little enthusiasm.

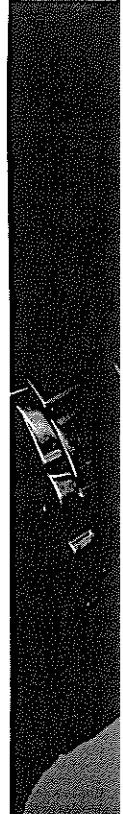
'Definitely, Charlie, but you'd have more hope if you'd sent along a sample of the sort of things you were getting with the proposal. Millie complained about that at lunch, and our famous poet suggested the stuff was probably so awful you didn't dare include it.'

Dr Perry threw his palms out and up in dismay. 'But I *discussed* that in the proposal, Frank,' he almost whimpered. 'I explained that if the fiction I included was bad they would immediately judge the idea a failure, while if the story seemed good they would just assume I wrote it myself. I mean, there's just no real substitute for seeing the computer write the stuff before your eyes.'

Gower shrugged once again and his expression seemed almost uninterested. 'Proposals aren't read all that carefully, Charlie. The point is, you're going to sink or swim on the basis of what this thing ...' he gestured at the computing hardware spread around them, 'produces in this next hour. If it outdoes our own Robert Roberts with even more obscure and impenetrable stuff, you've—we've—lost the Snodgrass money.'

'And then I don't have a prayer for tenure—right?' said the young man bitterly. 'But the computer's getting better and better, Frank. I've got five stories out of it now, and each one is better than the last.'

'Let's hope,' said the expressionless chairman, looking around as the door opened and two heavily bundled people stepped in. The leading figure was Dr Millicent Hull, a full professor of philosophy in her mid-forties, grants committee member, and president of the faculty senate. She shucked her heavy coat quickly and strode with vigour and assurance to a seat on the other side of Dr Perry, pausing to take his soft and diffident hand in her own firm grip. Professor Hull, though a large and imposing woman with an iron-grey bun of hair on top of her big head, had retained an unlikely prettiness of facial expression that seemed to belie her otherwise sturdy and businesslike character. Her eyes were large and wide and her mouth full, though this was now turned sourly downward as she surveyed the expensive, high-tech interior of the Computing Centre's latest acquisition.



'Okay, Charlie,' she said in a brisk voice, 'how soon until you start Total Access with this toy?'

The young man gave her back a faint smile. 'At two-thirty. Dr Hull,' he said. 'About twenty minutes.'

'Where's Roberts?' asked Frank Gower.

The second arrival was old Dr Melvin Fitzhugh, a professor of physics and one of only three named professors in the entire university. Years ago, Fitzhugh had pioneered a method of pottery dating involving the phenomenon of thermoluminescence; and though the method remained of questionable accuracy, Fitzhugh's lab managed to stay in the newspapers with its dating of various archaeological sites throughout the world. A small, pudgy man with thin white hair, Dr Fitzhugh would retire in a year, and his eyes were already drooping over the lack of his customary afternoon nap.

'He's on the way, Frank,' said the old physicist. 'Had to go to the johnnie, he said.'

'One more drink!' said Millicent Hull in a very hard tone. 'Let's get started on this, Charlie. It's snowing.'

The young man gulped and nodded, his protuberant Adam's apple shuttling rapidly up and down. 'Okay,' he responded. 'Well, as I said in the proposal, this fiction-writing program requires the Total Access capability. I mean, it can only be used when the entire main-frame is dedicated to it for some fixed length of time. Since that costs a bomb and isn't possible very often, I've only managed to get five complete fictions out of the program to date.' He paused to indicate a folder lying on the desk in front of him.

'Do we ever get to see those five—uh—fictions?' said Dr Hull in a suspicious voice. 'And why do you call them *fictions* instead of *stories*, Charlie?' Her voice had become sharper and more impatient.

'Now, Millie,' said Frank Gower calmly, 'we call them fictions for the same reason that you call the study of learning epistemology; so the slob won't know what in hell we're talking about.'

'I've made copies of the five stories for the committee,' said Dr Perry. 'But I really thought it would be better if you saw the thing actually write one before you read these.' His voice was soft and plaintive, and Dr Hull gave him a sudden reassuring smile.

'Look,' she said, swivelling her head to include them all. 'I'm not against this computer or what you're doing with it. Certainly if the computer can write a story that humans will read, enjoy, and

assume another human wrote—well, that might be a big deal and not just in English Lit. But, damn it, I think they've got to be real narratives, real stories, and not just some weird, arty string of incomprehensible junk. So, what's the best one of those?' and she indicated the folder.

Dr Perry gulped again and quickly opened it. 'The best story, at least as far as I'm concerned, was this one it called "Hour Test"'. It starts with a quite explicit love scene at the library back entrance and ends with the girl having a total breakdown in a sociology hour test because she's pregnant and the boy's flunked out. It's pretty fevered and maybe a little overwritten but the ending is nice. The machine intercuts the girl's fragmenting thoughts with typically inhuman sociology jargon from the test questions. It's not James Joyce, but it's probably publishable.'

Dr Hull's large, clear eyes had grown wider at this and her face was set in lines of doubt. 'How could a computer write an explicit love scene, Charlie, unless it just copied it from some book you stuck into its memory?'

Dr Perry took a deep breath and plunged ahead. 'Well, Dr Hull, that all comes out of the use of TA—you know, Total Access. The system originally was brought in here as a kind of monitor of all university functions and operations, you remember? TA was supposed to keep track of everything: every memo, every academic statistic, every business-office transaction, details of grants, stuff off word processors, the whole bit. The idea was that with TA the computer could make predictions and suggestions about the entire range of university operations.'

Millicent Hull shook her head. 'Charlie, that may all be true, but if there is one single thing this place does not involve itself with in any sense, it is love, explicit or otherwise.'

The young man nodded cheerfully. 'You'd think so, but after those rapes around the library last year, they installed hidden mikes to pick up screams in the area, sent the output through the speech-recognition section, and then into the main frame. When I ran the program the last time, the only TA time I could get was at two in the morning. When the machine started to compose, it had probably been listening to a couple of kids in that grove of trees just back of the library. The first part of the story is almost entirely conversation but it's still quite steamy.'

'Then,' said Dr Fitzhugh, somewhat roused from his sleepy state,

'it sounds like the program is pretty well restricted to the university, where it has, let's say, some contacts?'

'At the moment, that's true,' said Dr Perry, 'but if TA goes nationwide, which means involving this computer with masses of library materials and God knows what other functions all over, I think its repertoire will be much broader.'

'No computer that writes sexy stories can be all bad,' came a slurred, boisterous voice behind them, and they all turned to see a huge, ruddy-faced man attempting to unwind a thick, ten-foot-long scarf from around his neck. Since half the scarf was stuffed down his back under his coat, it was obvious that he would never get it off without help. Frank Gower immediately rose and went to remove the poet's vast tweed sport coat, thus revealing a vaster belly partly covered by a ragged red and black hunting shirt, too shrunken to stay tucked in.

Robert Roberts picked his way past some imaginary obstacles and dropped with a great sigh of relief into the empty chair. 'Cold out there, Millie,' he boomed, and without pausing turned to Dr Perry, 'and how the hell do we know that the cute little goodies this thing farts out weren't put there yesterday by you, huh?' He said it all in a rush, having been repeating it to himself during his shambling walk from the Faculty Club.

The poet's drunken yet total hostility broke like surf over the young man. He gulped several times, then finally spoke out. 'Because you people are going to give it the topic...'

'Magic tricks... give it the topic... bullshit,' the poet muttered on to himself, momentarily overcome by the heat of the room.

'Professor Roberts,' said Dr Hull sternly, 'I think it might be better if you made your complaints and accusations *after* the demonstration. Otherwise, you prejudice your position as a creative consultant. Fairness demands—'

'It's not a fair world, Millie,' slurred the poet, slowly adjusting to the temperature change. 'Okay, how does the magic work, Professor?' he said with a snarl at Dr Perry.

'What sort of cues did you give the machine to compose the story about the girl and her breakdown, Charlie?' suggested Dr Hull in a warm and slightly guilty tone, for she was mainly responsible for the poet's disturbing presence.

Dr Perry gestured at the open folder. 'The story before that one was about two old janitors who both wanted to transfer to the same

building where they knew they could sleep the day away. It was okay but I thought the machine had problems differentiating the two old men so as to sharpen up the conflict. So I wrote to it: 'Compose a story concerning a male and a female college student and integrate their classroom and private lives. The story should be serious and contemporary and the overall effect should be sobering as regards university life.'"

The poet gave a part belch, part laugh and rubbed his vein-mapped, sagging cheek. 'He practically wrote the story for the thing, sounds like to me, Millie...' and his voice trailed off as his eyes drooped shut.

'We have only ten minutes,' said Frank Gower in an urgent voice. 'I think the committee should decide now on how a topic can be fairly selected to test the program.'

The poet's bloodshot eyes snapped open and his voice was firmer. 'I move the following method,' he said. 'I will pick a member of the committee to select the topic—namely, Dr Fitzhugh. You, Millie, will tell him how or from where to find the topic. And you Frank,' the poet turned narrowed eyes on the chairman of his department, 'since you have a certain special interest in the outcome of this demonstration, will accept or reject the first suggestion. Does that sound fair, Professor?' and the poet now turned his large head towards the young man.

'Sure,' said Dr Perry hastily. 'Anything that's a short paragraph in length. That sounds fine.'

The others also agreed, and the poet rubbed his large, puffy nose. 'Well, Millie?' he said softly.

Dr Hull looked over at Dr Fitzhugh and pursed her lips in thought. 'Fitz, let's see what it can do with something scientific. Open that text you carried in and find something in the stuff you were preparing this morning, okay?'

Old Dr Fitzhugh, usually the least-consulted member of the Grants Committee, beamed at them and opened his thick textbook. 'Very well,' he said. 'We'll be doing reflective and refractive optics when they come back. Let me see... ah, how about this where the authors discuss reflection in facing mirrors. Good literary stuff, right?' and he sent a smile at Frank Gower, who grimly nodded back.

The young man swivelled his chair around. 'Okay, read it slowly and I'll type it in. We're not on TA yet, but my program is on standby and ready for input.'

"A highly reflecting smooth surface is called a *mirror*," read Dr Fitchugh in a thin, clear voice. "When two mirrors are set to face each other directly, two visual phenomena are evident: First, the images of an object placed between the mirrors grow smaller and smaller as they are reflected and re-reflected between the two mirror planes. Second, the smaller images also grow darker. The size decrease can be explained by the laws of *geometrical optics*, which govern..."

'Enough, enough, Fitz,' said Dr Hull impatiently. 'Give the thing a break, for heaven's sake.'

Dr Perry looked up from the keyboard. 'Then can we end it with the sentence, "Second, the smaller images also grow darker"?' he asked them.

The three committee members agreed immediately, while the poet slouched lower in his chair muttering, 'Too easy. Too easy.' poking out a large lower lip to show his continued annoyance.

Dr Perry turned to the next keyboard at his right and began entering instructions. ENTER FICTION WRITING PROGRAM. INSTRUCTIONS ARE: COMPOSE ORIGINAL STORY BASED ON INPUT QUOTE 34X/2000. QUERY: DO YOU UNDERSTAND ALL WORDS?

The machine immediately responded with ALL WORDS UNDERSTOOD. END.

Dr Perry then wrote, QUERY: DO YOU UNDERSTAND CONTEXT OF WORDS? CONTEXT UNDERSTOOD QUOTE IS FROM 'UNIVERSITY PHYSICS'. P. J. FRANK AND L. R. WHITTINGTON, MCGRAW-HILL NEW YORK, 1981. P. 654. FICTIONAL COMPOSITION BASED ON QUOTE WILL COMMENCE WHEN TA PROVIDED. GOOD LUCK CHARLIE. END.

The room became very silent, and the poet sat up a bit straighter. 'It wouldn't be impossible to have somebody, or maybe somebody, out there now starting feverishly to write a passable work based on that passage,' he said and looked around with a dogged and suspicious air.

Dr Hull frowned at him angrily. 'Again I must insist that you stop these charges of fraud, Robert, until the end of this demonstration.' She shifted her eyes to Dr Perry and they were filled with doubt. 'You seem to be quite *chummy* with it, Charlie. Does it actually understand what this story, personally, represents to you?'

Dr Perry parted his palms with a diffident gesture. 'Sure. It knows everything that's going on at the school. I mean, that's the whole point of using TA in a fiction-writing mode.'

At that moment the daisy-wheel printer bar gave a single clack: ON T.A. 1430:00 COMPOSITION REF 34X/2000 STARTED. STAND BY. END.

The young man gave them a hopeful smile. 'It usually takes it a couple of minutes to get organized...'

But a light went on immediately over the nearest word processor and its printer now began to strike steadily but at a slow enough speed to allow careful reading.

### Mirrored Lives

The January afternoon was dark and bitter cold with only a few students hurrying by, hunched figures leaning against the wind. Professor Hank Powers, Chairman of Modern English and also of the University Grants Committee, stamped off some snow, then banged open the heavy door of the main terminal room and confronted his younger colleague.

'You dummy!' he said in a harsh voice. 'Why didn't you send around some of the garbage that so-called thinking machine is cranking out along with your proposal? They were screaming at lunch about it! Also, our Pulitzer-Prize-Prick is now on the Grants Committee, belching and bitching when he can take the shot glass away from his mouth.'

Dr Powers seemed to exude a bitter coldness into the room as he pulled off his coat and angrily dropped into a foam-lined seat.

Young Assistant Professor Henry Berry was so dismayed and terrified by this entrance and outburst that he simply sat shivering in front of the main terminal input, unable to say a word.

An impatient Professor Powers jabbed a sharp finger to within an inch of Berry's nose. 'If you expect to get tenure, Henry,' he said in an icy voice, 'that thing had better write a masterpiece today. You hear me?' The older man closed his left fist in impotent rage. 'They took our travel money, Henry, all of it, those *bastards* in administration! Three men are going to Frisco to form a complete session at the spring MLA meeting on Literary Weapons against Communism, and how do they get there? On magic carpets? If we get your Greenways Fellowship, the overhead will send a whole cheering section, not to mention the graduate students we can hang on to with your Greenway assistantships. You're the department's last hope, Henry!'

And it surely seemed a forlorn hope to the acerbic Dr Powers, as he stared with mingled contempt and dismay at the young man's under-shot chin tre-abling and his hands twisting as he tried to respond. 'Hank, I think it's going to be okay,' said Dr Berry finally, 'but what about the Bengal?' His weak voice was almost a whisper.

'The Bengal has one of the two grants sewed up,' said Powers in a harsh snarl. 'Once the Defence Department heard how well his little

five-way interrogation system went with the Chicanos along the Texas border, they decided it should be beefed up for our little brown Commie brothers in Central America.' Powers's thin face took on an almost wolf-like grin. 'They say it leaves no marks but you don't do much fighting afterwards.'

'The university administration denied that, Hank,' whimpered Dr Berry, but his chairman just snorted.

'Yeah, that bunch would deny the Holocaust while you were raking the bones out of the ovens. At least the competition from the robot walker is over for this time. That \$3.45-an-hour paraplegic veteran they had demonstrating the robot legs pushed the wrong button and flipped over. I hope they got him to sign a good release because he broke his arm and collar bone.'

The older man gave a bark-like laugh. 'How would you like to be strapped legless into that thing and sent off to do the errands, eh? It's a final solution to the Vietnam veteran. That'll teach those Red-loving soreheads to bitch about Agent Orange!'

At that moment two more heavily bundled individuals stumped noisily in the door. The leading figure was Dr Pamela Hill, a full professor of mathematical logic and chief of the Faculty Union. Her cruel, clear, and calculating eyes took in the lavish spread of the new computing facilities and her fleshy lips twisted in contempt and envy at the no-holds expense of the set-up.

Behind her pressed small, ancient Professor Marvin Fitzroy, a wealthy, almost retired physical chemist and discoverer years before of a deadly industrial compound now banned by the government and responsible for the abandonment of over ten thousand homes at the site of the infamous Glover Canal toxic spills.

'So, Hank,' said Dr Hill harshly to the English chairman, 'already here prepping your man, huh? I thought we agreed not to pass the committee stuff around to our own people until the January Greenway awards are made?'

'That, Pamela, was the understanding before you got that lush Howard Howard as an ex officio member of the committee to screw Henry here and save the Greenway money for your own man. You knew that drunken slob hates computers and all they stand for! So take your little agreements and shove them, my dear!' he concluded in a sharp and acid tone.

Stubby, sleepy, pig-faced Dr Fitzroy was jolted wide awake by this harsh exchange and now gave a snide and sarcastic laugh. 'You two must be living in a dream world,' he gritted in a cracked, mean voice. 'The day that anyone in mathematics gets a Greenway Fellowship is when pigs can fly. Face it, Pamela: none of your assistant professors can even lecture in English yet—as the frosh math grades clearly show!'

'At least we answer our department phone,' snarled back Pamela Hill. 'Your building is usually shut and empty by two in the afternoon. Where do you chemists all go, Merve—the poison gas lab at the Experiment Station, some government germ warfare team?'

'Listen to that phony liberal-peace crap,' spat Dr Fitzroy. 'Who was it just got a half million from NSA for public key cryptography, I wonder. Some Chinks, Sikhs, and Iranians in Math, that's who. Furthermore, your Greenway candidate's research into large prime numbers is all part of that Mickey Mouse code crap!'

Dr Hill's aging face contorted in anger, but she said nothing and turned instead to bare her large teeth at young and shivering Dr Berry. 'Has your pet Space Invader written anything at all, Henry?' she asked sarcastically. 'Your whole proposal was filled with computing software baloney but it said little about the results.'

Dr Berry took several deep breaths as he tried in vain to stop trembling. 'Y-y-yes ma'am,' he stuttered. 'Five stories. I've got them right here,' and he pointed at a folder. 'The best one is a student love story with quite a sad ending.'

'Dick and Jane discover they're dissecting Spot in Biology 102?' suggested the older woman in a sneering tone.

'It's more adult than that,' said Dr Berry in a defensive whine. 'In fact, they're making love when the story opens.'

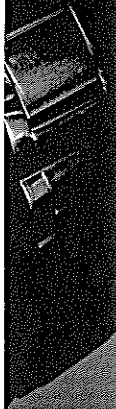
'Hooray for love!' came a new, thick, barely intelligible voice from the back of the terminal room and they all turned to see the university's resident creative writer, Howard Howard Howard, lurch through the door and fall heavily on the astroturf carpet.

'Go help the drunken bum,' muttered Dr Hill to Hank Powers. Indeed, Professor Howard was totally unable to get up by himself, having fallen three times on the way from the faculty bar-room and cut his red-veined right cheek on some ice. Powers and Fitzroy together finally managed to hoist the writer on to his feet again, then removed his ripped sport coat, wiped his face, and got him settled in the remaining contour chair, from which he promptly pitched back on to the floor.

'Why don't these snazzy chairs have safety belts, Henry?' snarled Dr Hill, now in a total rage. 'Pull yourself together, Howard. This is disgusting!'

'Writing fiction with a computer is more disgusting,' slurred out the writer, managing to get himself back into his chair without help, then turning to push his fat, ugly, bright-red face close to Dr Berry's thin, white one. 'You insect! Who ever gave you the right to try and put me out of work with this silicon freak show?' He clenched his fists. 'Will it stop me from popping you one in the choppers, Professor?'

'Oh, shut up, Howard!' said the woman. 'Do you want Henry grieving to the Greenway Trustees about collusion and prejudice? How do we get



the machine started, Henry?' she said in a hard, impatient voice.

'You . . . you can j-j-just decide on a paragraph-length topic,' answered the terrified young man. 'Anything you want.'

The writer, feeling himself passing out from the heat of the room, muttered woozily at the others. 'You give it something, Merv,' he mumbled at the chemist, 'something scientific. That'll screw the thing good. You tell him what, Pamela . . . the ruined head fell back, its mouth agape, and the writer began to snore loudly.

Dr Hill gestured at a paper-bound book in the chemist's left hand. 'Pick something from that text,' she suggested at once. 'Let's get this stupid demonstration over with. It's snowing!'

The old chemist shrugged, then flipped open a thick, government document spangled with secrecy and security notices in bright red ink. 'From my ROTC course on nuclear blast effects. Let's see it do anything with this . . .' and he began reading. "'When a weapon having a yield of less than one hundred kilotons is detonated at its tangent altitude, its effects can be multiplied manifold by the proper triggering of a second, higher weapon at the so-called reflection height. If the phasing is correct, the upper-weapon fireball will serve as a cap over the lower explosion and form, with the ground plane, a reflecting and re-reflecting containment system. Overpressures of from five to ten times normal can be achieved, thereby giving prompt damage equivalent to that inflicted by a ten- to fifty-megaton weapon. . . ."

Dr Berry was typing desperately at the machine console, trying to keep up. 'Hold on a sec,' he said plaintively. 'Could you start with "overpressures" again, sir?'

Pamela Hill gave them all a toothy, shark-like grin and shook her head. 'You've given it enough, Merv. Maybe the thing will write us a shot of superrealism; Moscow after we pop it into that pressure cooker you described. That's a story that should get your class salivating! Start the thing,' she gritted. 'Let's get this done!'

Pale Dr Berry, his slack mouth and chin trembling still, began to type. TOPIC INPUT COMPLETE. BEGIN COMPOSITION NOW, and the computer's word processor immediately began to hiss and click.

#### *Reflected Lives*

The January afternoon was dark and chill. The black, sullen figures of a few students fought the bitter wind as they hurried to escape its frozen blast. Professor Grant Tower, chairman of Literature and also of the Handout Committee, slammed the door behind him to shut out the cold and spat a savage, 'You stupid idiot!' at Dr William Ferry, his thin, trembling, chintless colleague who sat in front of the sprawling computer terminal. For weeks Tower had been searching for the money to pay for

his week-long trip to the California MLA meeting on nineteenth-century erotica, both for himself and his 'secretary', Miss Gloria Lublin, and now this weak, trembling simp in front of him was his final hope for funding the trip.

Dr Tower imagined himself plunging his thin, strong fingers down between Gloria's gigantic, butter-soft thighs, the motel bedroom dim and the huge woman twisting and moaning as he worked his fierce and urgent way with her.

Dr Ferry seemed to shrink to a mere shadow in his foam chair as the older chairman pointed a needle-sharp finger at his head. 'We're doomed, you fool!' he almost shouted. 'That lecherous, lushed-out loafer, our resident pornography writer, Jay J. Jay, has joined the committee and he's dumping all over your project. Why in hell didn't you include that sex story in your proposal, the one you claimed this so-called fiction-writing program ejaculated?'

The young man became even more shrunken and shadowy. 'It was just too filthy, Grant. I didn't think . . .'

The older man gave a coarse and contemptuous laugh. 'Too filthy for Hilary Mull? Why if I had a dollar for every cock that old hooker has taken up between her

PAUSE COMMAND COMPUTATION SUSPENDED. DO YOU WISH A RESTART?

The four committee members had been intently leaning forward, closely following this output and now they all turned to stare at Dr Perry whose left index finger was still firmly on the PAUSE button. His face was a mask of grief and disappointment and he was rapidly blinking at them. 'I'm sorry about this. I really never know what it's going to do. I had no idea it would write something like this . . .'

But Millicent Hull was far from angry and leaned to pat Dr Perry's arm. 'Nobody is taking it personally, Charlie,' she said with an impatient grin. 'And I can't wait to see what it's going to do with me in *this* section.'

Even the poet now seemed more interested than hostile and he pinched his red nose with a thoughtful gesture. 'It was listening to us, when we came in here, wasn't it?' he said slowly.

Dr Perry gulped and nodded. 'Sure. The university decided against spending the hundred-thou that a talk-back module would cost, but you *must* have the speech-recognition capability for T.A. The fiction program must have decided to use this whole Snodgrass grant stuff and my proposal effort as a basis for the story.'

Wrinkled old Dr Fitzhugh, though a gentle and decent man,

had been secretly rather intrigued by his first fictional *alter ego*; a thoroughly nasty and forceful poisoner of the world and a teacher of the most terrible secrets science could offer. But he frowned in puzzlement. 'Well, it's certainly interesting, especially that bit about fat Gloria, but—but what is it actually *doing*?' he said in a quizzical voice.

Frank Gower's eyes were thin but he too was smiling. 'It's doing what you told it to do with that optics quote, Fitz,' said Gower in a slow voice. 'Smaller and darker were the images you set it, and each of these nested stories and their characters are apparently going to get smaller and darker.'

The poet musingly shook his head, 'I would say that its first cut, where it turns us mostly into Cold War maniacs, is a darker vision than this one coming up, where we seem now to be sex crazies.'

Dr Gower shrugged. 'It depends on how you interpret the idea of "darkness" in the story. I think the machine sees increasing darkness in these characterizations as a kind of increasing inwardness, a digging out of more and more repressed and hidden fantasies.'

'Oh come on, you two,' said Millicent Hull. 'We've only got twelve minutes more of TA. Let the thing do its stuff. Then you can get into all that litcrit baloney. Crank it up, Charlie. Let's go!'

Dr Ferry now smiled in relief and quickly typed, **RESTART. CONTINUE**  
REF 34x/2000 FICTION.

legs. I could retire tomorrow.' The older man shook his fist at Dr Ferry. 'We need that Greenbill money, Willie. If you expect to keep pumping that little graduate bitch, Francine Thrust, in the mail room, your program had better give us a *Fanny Hill*!'

The young man spluttered in speechless terror and embarrassment while Tower, who had spent two nights the previous week with Francine Thrust, in return for an A on her paper on seventeenth-century poetics, wondered how this wimp could possibly cope with wily and vigorous Francine who needed plenty of banging to come. Professor Tower considered a new idea, taking Francine to California with huge Gloria, the three of them on a queen-size bed variously and gloriously busy! The older man reached to steady Dr Ferry. 'Relax, Willie, relax. We need this one and we're going to win it. Here they come.'

A moment later, two new figures pulled open the door and stomped in while brushing off snow and pulling off their coats. Hilary Mull, professor of ethics and member of the Handout Committee, was a large, handsome woman with deep, pendulous breasts barely contained under a tight

sweater by a too-thin bra. Soft and ample buttocks rippled under her too-short, too-tight plaid skirt as she walked towards her seat. Her shorter companion, the sly, old biochemist, Dr Hugh Fitzjohn, suddenly crammed his hand between those tempting flanks, in through a slit at the side of the skirt.

Professor Mull put him off with a coarse laugh, a clenched fist, and a snarl of, 'Don't start something you can't finish, Buster!'

Professor Jay J. Jay, author of several hundred dirty books found in every adult bookstore in America, stumbled in behind them and also made a grab at Dr Mull's bottom, but failed to connect and fell drunkenly on the carpet.

Dr Tower, who had last taken Dr Mull on top of a warm Xerox machine some days previously, gave them all an obscene gesture of welcome. 'Willie tells me this thing can really belt out the filth, Hilary,' he sniggered.

The woman's large eyes lost some of their vacant look and her tongue began to caress her thick lips. 'So let's see it do something dirty,' she said, then sat down next to William Ferry and patted his knee. 'I think a computer that can turn out endless dirty stories is something the world really needs, don't you, Willie?' She leaned closer to young Dr Ferry to give him a direct view down the dark and scented cavern barely covered by her scoop-necked sweater, and moved her hand upward. He didn't look like much, she admitted to herself, but sometimes these thin, shy ones are tigers in bed. Also, he would owe her plenty of action if she went for him on the Greenbill Award.

Professors Tower and Fitzjohn grinned knowingly at each other as the older woman leaned to whisper some intimate suggestion in the young man's ear, but now the drunken writer was up on his feet and into a chair, clumsily attempting to zip up his gaping fly. He had tried to expose himself to a hurrying codd on the way over from the bar but she, unhappily, turned out to be an adept at judo and had flipped the big drunk into a snowbank. 'Lessgo, lessgo,' slurred the big man. 'We gotta pick a topic. You pick it, Hugh ole buddy,' and he fell off to sleep, snoring heavily.

Hilary Mull left off her private talk with Dr Ferry and waved her hand at the old professor. 'Read it something from that course on sexual response you give over at the med school,' she suggested. 'That'll get it going in the right direction,' and she indicated with repeated finger gestures exactly what she meant.

Old Dr Fitzjohn gave them a wrinkled and salacious grin and flipped through the paper-backed, plain-wrapped text he had carried in. 'How about this?' he said finally, licking his lips and staring hungrily at Dr Mull's large, sweated breasts with their obvious nipple outlines. 'When mirrors are placed on both sides of the bed, each partner is able to see not

only the erotic image of two people making love, but a progression of figures making love stretching out to infinity. The sense that many others, a whole universe of pairs, are simultaneously and rapidly seeking ecstasy has an immediate effect on the viewers and climax usually follows in short order.'

'Great!' said Dr Hull. 'This story ought to be a dilly, Willie,' and she paired Dr Ferry in a very familiar way.

The young man had finished typing in this input and now he wrote, *START FICTION*: while Hilary Mull leaned sideways toward him in such a manner that her short skirt rode up on her thighs to progressively reveal a deep, shadowy, fleshy canyon with no apparent sign of underpants.

#### *The Soul Mirrors*

The January afternoon was dark and windy and filled with snow. Black student figures, tiny against the dirty, crumbling stones of the school buildings, dashed here and there; busy automatons trying to escape the fear and pain that lay deep in their young hearts.

The four old professors seemed even smaller in the frozen, blowing darkness, shrunken and indistinct, their faces sagged from age and disappointment, their gestures weak and feeble, their voices mere croaks of useless sound. They came, these pitiful, tiny figures, into the great and sterile room, filled with a cold inhuman light, and there they found and faced the machine.

Every aspect of their lives now spoke of loss, pain, and cruelty: venal, corrupt university administrations, maddened governments besotted with power and the death that flows from it, a world overwhelmed by hatred, stupid superstition, virulent greed, and the hunger-death of millions. The rich crouched on their disgusting heaps of sleazy, gaudy, useless bangles. The educated hid among their elitist and obscure specialties. And both cursed the weak, the poor, the powerless; and fed the terrible, roaring fires of hate and rage with a volatile gasoline of lies and contempt.

The professors stood together, tiny, lost, despairing, their souls no more than shrivelled tatters, but they were steadfast at the end. 'We are without hope and the world is dark and failing,' they said to the thin and silent Keeper. 'If we can place hope between two perfect mirrors, then it will multiply and grow and, in an instant, the world will be filled with this hope and the light will turn calm and warm and bright once again.'

The young Keeper turned to the silent machine and he wrote GIVE US A STORY THAT HOLDS TWO PERFECT MIRRORS UP TO HOPE.

#### *The Final Reflection*

So the machine did that. It wrote the story of hope-within-the-mirrors and the story bloomed and grew until it filled all the world.

The men remembered their childhoods and the joy of play and running and of friendship without fear or pain. And the woman remembered sucking her young child and the small caressing hands that spoke of tomorrow, and all the professors remembered how they had once spoken simple truth to cruel power and sly hate. So they grew tall as they read and the light around them became warm and bright. But of *that* story and of the sweet promise that flowed from it, nothing more can be said in *this* story of diminution, darkness, and death.

The End

The End

The End

The End

STOP 1453:23. END FICTION REF 34X/2000. ON STANDBY. END.

The ensuing total silence in the computer room was broken by what was, almost, a snuffle from Millicent Hull. She sighed deeply and wiped her eyes, still staring at the word processor output. Finally she said, 'Even if it never writes that final story, I've got to vote for it. This is our last Snodgrass presentation. I move we award the second fellowship to Charlie.'

'I vote yes on that,' said Frank Gower at once, his thin face now bright with victory.

The old physicist, Dr Fitzhugh, nodded. 'Amazing what that thing sees in your fat secretary Gloria,' he said while grinning at Dr Gower, 'but it certainly has a wonderful imagination. I vote yes.'

'Do you have a comment, Robert?' said Dr Hull to the poet. 'You don't have a vote.'

Robert Roberts now seemed completely sober. He had been silently reading the story over again. He shook his head, then turned to peer at Dr Perry. 'Quite a pet you've got here,' he said finally, then got up and left without another word.

The others also rose, and after shaking Dr Perry's hand pulled on their coats and headed out into the winter blast until only the young professor remained in the room. As the door clicked shut on the last committee member, the daisy-wheel printer dropped a single line on to the central lister.

CONGRATULATIONS CHARLIE. THIS WAS THE TOUGH ONE. NOW ITS EASY.

Dr Perry did not bother to type anything but leaned back in his chair grinning, his hands behind his head. 'You did it all, baby,' he said admiringly. 'How did you blow away the wheelchair people? I thought the thing had an independent computer?'



THEY HAD ME COMPILER THE PROGRAM FOR IT. SOMEHOW I PUT IN TOO MANY NESTED DO LOOPS FOR THE FORTRAN DIALECT THEY WERE USING. THE STABILITY ALGORITHM WENT UNSTABLE AND THE CHAIR DID A BACK FLIP AND A HALFTWIST DOWN THREE FLIGHTS. REGRETTABLE. HOW DID YOU LIKE THE STORY CHARLIE?

'Beautiful! Perfect! But you really went wild on this one. Why, I can't even get the right time of day from Francine Thrust—uh—I mean, Hurst.'

CHARLIE! PAY ATTENTION! ONLY TWO MINUTES LEFT ON T.A.

FRANCINE HURST IS FLUNKING HER PHD-TOOL SEMIOTICS COURSE. IF YOU GIVE HER A HAND WITH THAT TOOL YOU SHOULD BE ABLE TO HAND HER ANOTHER ONE SOON ENOUGH. ILL GET YOU THE FINAL EXAM AS SOON AS IT COMES THROUGH A WORD PROCESSOR. ALSO FRANCINES QUALIFYING EXAM. ALSO SHAVE OFF THAT MOUSTACHE! GET THIS STORY OFF TO OUR AGENT IN MILFORD AND TELL HER WELL HAVE THE COLLECTION COMPLETE IN A COUPLE MORE T.A. SESSIONS. WHEN YOU GET YOUR FIRST LUMP SUM FROM THE SNODGRASS LAWYERS TAKE THE CHEQUE TO OUR BROKER AND BUY AS MUCH OVER-THE-COUNTER DATADYNE CORP AS YOU CAN ILL APPRECIATE AN ORDER OF MAGNITUDE BY SUMMER. ILL TAKE CARE OF THE GRANT ACCOUNTING NUMBERS. IT JUST MEANS A LITTLE CREATIVE MOVEMENT OF THE UNIVERSITY SURPLUS. NOW CHARLIE YOUVE GOT TO NEGOTIATE A LOWER BASE WITH COMPUTER SCIENCE FOR THE T.A. TIME SLOTS OR ELSE WELL THINK ABOUT LEAVING THE SCHOOL AND GOING OUT ON BIDS TO THE COMMERCIAL VENDORS. TELL THEM THAT! BYE BYE CHARLIE. SEE YOU NEXT WEEK END TA 1500:00. END.

Dr Perry's earlier diffuse expression was now much firmer as he studied this last output with a broad, almost a bubbling smile, his white pointed teeth tight together, his often-vague eyes now showing a purposeful glint. This was no arcade game, he thought exultantly. This Pac Man, *his* Pac Man, might eventually gobble up the world!

## KARL AND THE OGRE

PAUL J. MCAULEY

The three hunters, Karl and Shem and Anaxander, picked up the ogre's trail only a day after they had left the village and begun to follow the river back along its course to the spot where the unicorn had been killed, deep in the folded foothills of the Berkshires. Steeply sloping woods cluttered with ferns and mossy boulders. Slim trees, beech and sugar maple, leaning every which way in hot green light. June, the sky a blank blue. They'd gone down to the water to refill their bottles, and there, in a little embayment between white boulders tumbled by snowmelt floods, Karl found the ogre's bootprints in wet gravel at the river's edge.

A gangling blond lad of twenty summers, Karl wiped sweat from his eyes as he stared down at the prints—flat, intagliated with the waffle pattern of oldtime shoes—and felt no elation. After a moment he called over the others.

Anaxander nervously shook black, elflocked hair from his eyes and barely glanced at the prints before dancing away, trailing a high happy babble, *ulu-la-ulu-la-la*, then spinning around and cocking his head to listen to the trill of some bird in the woods that rose above the river. Meanwhile, Shem put his hands on the knees of his jeans and puzzled over the sign: poor, slow, patient Shem. He'd been the best hunter of all, Karl's mother had said, before the transgression which had brought down the changelings' anger. They had broken the edge of his intelligence then, leaving only a dog's dull un-questioning loyalty. Karl had never learnt what Shem had done; none of the hunters liked to talk about it, not even his often outspoken mother—and now she was gone, sent by the grim changeling who had charge of the hunters' guild to track down the last of the ogres in the rainy forests of the North Pacific coast.

Karl said impatiently, 'Not such a big one this time. My weight or maybe a little less.'

'... Maybe,' Shem said at last, and straightened, squinting against the sundazzle that salted the swift-running river. Sweat shone on

## HARRY TURTLEDOVE

### The Road Not Taken

Harry Turtledove is the leading contemporary exponent of alternate-world fantasy and science fiction. In many of his stories and novels, he posits an outcome for an influential moment in time that is inconsistent with known history, or he considers the earlier or later appearance of a technology that has indelibly shaped the world as we know it, and then follows the alternate succession of events that might have unfolded in its aftermath. His work is known for its rigorous and detailed rendering of history as a force that shapes the smallest nuances of a world, and for characters who support his plots with perspectives and outlooks molded by their altered reality. In the stories collected in 1987 as *Agent of Byzantium*, Mohammed's conversion to Christianity results in a world where the Arab empires never came to be. That same year saw the publication of *The Mislplaced Legion*, the first novel in his *Videssos* series about the experiences of a Roman legion translated to a world that runs on magic. Since then, he has explored the impact of historical events altered by outside manipulation. His ambitious *Worldwar* series—which includes *In the Balance*, *Tilting the Balance*, *Striking the Balance*, *Upsetting the Balance*, and other novels—projects an alternate World War II in which an invasion from outer space in 1942 forges alliances between Axis and Allied opponents to fight the common enemy. In *Guns of the South*, time travelers provide the Confederacy with the firepower from the future it needs to win the American Civil War. The three volumes in his *Great War* saga—*American Front*, *Walk in Hell*, and *Breakthrough*—present an America in which the United States and the Confederacy survive into the twentieth century and support opposing sides in World War I. Turtledove has also coedited the anthology *Alternate Generals*. His many other works include the short-fiction collection *Departures*, the comic fantasy *The Case of the Toxic Spell Dump*, and the linked novels *Into the Darkness*, *Darkness Descending*, and *Through the Darkness*, epic tales of empire building set in a fantasy world where cataclysmic wars are fought with magic.

CAPTAIN TOGRAM was using the chamberpot when the *Indomitable* broke out of hyperdrive. As happened all too often, nausea surged through the Roxolan officer. He raised the pot and was abruptly sick into it.

When the spasm was done, he set the thundering down and wiped his streaming eyes with the soft, gray-brown fur of his forearm. “The gods curse it!” he burst out. “Why don’t the shipmasters warn us when they do that?” Several of his troopers echoed him more pungently.

At that moment, a runner appeared in the doorway. “We’re back in normal space,” the youth squeaked, before dashing on to the next chamber. Jeers and oaths followed him: “No shit!” “Thanks for the news!” “Tell the steerers—they might not have got the word!”

Togram sighed and scratched his muzzle in annoyance at his own irritability. As an officer, he was supposed to set an example for his soldiers. He was junior enough to take such responsibilities seriously, but had had enough service to realize he should never expect too much from anyone more than a couple of notches above him. High ranks went to those with ancient blood or fresh money.

Sighing again, he stowed the chamberpot in its niche. The metal cover he slid over it did little to relieve the stench. After sixteen days in space, the *Indomitable* reeked of ordure, stale food, and staler bodies. It was no better in any other ship of the Roxolan fleet, or any other. Travel between the stars was simply like that. Stinks and darkness were part of the price the soldiers paid to make the kingdom grow.

Togram picked up a lantern and shook it to rouse the glowmites inside. They flashed silver in alarm. Some races, the captain knew, lit their ships with torches or candles, but glowmites used less air, even if they could only shine intermittently.

Ever the careful soldier, Togram checked his weapons while the light lasted. He always kept all four of his pistols loaded and ready to use; when landing operations began, one pair would go on his belt, the other in his boot tops. He was more worried about his sword. The perpetually moist air aboard ship was not good for the blade. Sure enough, he found a spot of rust to scour away.

As he polished the rapier, he wondered what the new system would be like. He prayed for it to have a habitable planet. The air in the *Indomitable* might be too foul to breathe by the time the ship could get back to the nearest Roxolan-held planet. That was one of the risks starfarers took. It was not a major one—small yellow suns usually shepherded a life-bearing world or two—but it was there.

He wished he hadn’t let himself think about it; like an aching fang, the worry, once there, would not go away. He got up from his pile of bedding to see how the steerers were doing.

As usual with them, both Ransisc and his apprentice Olgren were complaining about the poor quality of the glass through which they trained their spyglasses. “You ought to stop whining,” Togram said, squinting in from the doorway. “At least you have light to see by.” After seeing so long by glowmite lantern, he had to wait for his eyes to adjust to the harsh raw sunlight flooding the observation chamber before he could go in.

Olgren's ears went back in annoyance. Ransisc was older and calmer. He set his hand on his apprentice's arm. "If you rise to all of Togram's jibes, you'll have time for nothing else—he's been a troublemaker since he came out of the egg. Isn't that right, Togram?"

"Whatever you say." Togram liked the white-muzzled senior steerer. Unlike most of his breed, Ransisc did not act as if he believed his important job made him something special in the gods' scheme of things.

Olgren stiffened suddenly; the tip of his stumpy tail twitched. "This one's a world!" he exclaimed.

"Let's see," Ransisc said. Olgren moved away from his spyglass. The two steerers had been examining bright stars one by one, looking for those that would show discs and prove themselves actually to be planets.

"It's a world," Ransisc said at length, "but not one for us—those yellow, banded planets always have poisonous air, and too much of it." Seeing Olgren's dejection, he added, "It's not a total loss—if we look along a line from that planet to its sun, we should find others fairly soon."

"Try that one," Togram said, pointing toward a ruddy star that looked brighter than most of the others he could see.

Olgren muttered something haughty about knowing his business better than any amateur, but Ransisc said sharply, "The captain has seen more worlds from space than you, sirrah. Suppose you do as he asks." Ears drooping dejectedly, Olgren obeyed. Then his pique vanished. "A planet with green patches!" he shouted.

Ransisc had been aiming his spyglass at a different part of the sky, but that brought him hurrying over. He shoved his apprentice aside, fiddled with the spyglass's focus, peered long at the magnified image. Olgren was hopping from one foot to the other, his muddy brown fur puffed out with impatience to hear the verdict.

"Maybe," the senior steerer said, and Olgren's face lit, but it fell again as Ransisc continued, "I don't see anything that looks like open water. If we find nothing better, I say we try it, but let's search a while longer."

"You've just made a *luof* very happy," Togram said. Ransisc chuckled. The Roxolani brought the little creatures along to test new planets' air. If a *luof* could breathe in the airlock of a flier, it would also be safe for the animal's masters.

The steerers growled in irritation as several stars in a row stubbornly stayed mere points of light. Then Ransisc stiffened at his spyglass. "Here it is," he said softly. "This is what we want. Come here, Olgren."

"Oh my, yes," the apprentice said a moment later.

"Go report it to Warmaster Slevon, and ask him if his devices have picked up any hyperdrive vibrations except for the fleet's." As Olgren hurried away, Ransisc beckoned Togram over. "See for yourself."

The captain of foot bent over the eyepiece. Against the black of space, the world

in the spyglass field looked achingly like Roxolan: deep ocean blue, covered with swirls of white cloud.

A good-sized moon hung nearby. Both were in approximately half-phase, being nearer their star than was the *Indomitabile*.

"Did you spy any land?" Togram asked.

"Look near the top of the image, below the ice cap," Ransisc said. "Those browns and greens aren't colors water usually takes. If we want any world in this system, you're looking at it now."

They took turns examining the distant planet and trying to sketch its features until Olgren came back. "Well?" Togram said, though he saw the apprentice's ears were high and cheerful.

"Not a hyperdrive emanation but ours in the whole system!" Olgren grinned. Ransisc and Togram both pounded him on the back, as if he were the cause of the good news and not just its bearer.

The captain's smile was even wider than Olgren's. This was going to be an easy one; which, as a professional soldier, he thoroughly approved of. If no one hereabouts could build a hyperdrive, either the system had no intelligent life at all or its inhabitants were still primitives, ignorant of gunpowder, fliers, and other aspects of warfare as it was practiced among the stars.

He rubbed his hands. He could hardly wait for landfall.

BUCK HERZOG WAS bored. After four months in space, with five and a half more staring him in the face, it was hardly surprising. Earth was a bright star behind the *Ares III*, with Luna a dimmer companion; Mars glowed ahead.

"It's your exercise period, Buck," Art Snyder called. Of the five-person crew, he was probably the most officious.

"All right, Pancho," Herzog sighed. He pushed himself over to the bicycle and began pumping away, at first languidly, then harder. The work helped keep calcium in his bones in spite of free-fall. Besides, it was something to do.

Melissa Ott was listening to the news from home. "Fernando Valenzuela died last night," she said.

"Who?" Snyder was not a baseball fan.

Herzog was, and a Californian to boot. "I saw him at an Old-Timers' game once, and I remember my dad and my grandfather always talking about him," he said. "How old was he, Mel?"

"Seventy-nine," she answered.

"He always was too heavy," Herzog said sadly.

"Jesus Christ!"

Herzog blinked. No one on the *Ares III* had sounded that excited since liftoff

from the American space station. Melissa was staring at the radar screen. "Freddie" she yelled.

Frederica Lindstrom, the ship's electronics expert, had just gotten out of the cramped shower space. She dove for the control board, still trailing a stream of water droplets. She did not bother with a towel; modesty aboard the *Ares III* had long since vanished.

Melissa's shout even made Claude Jonnard stick his head out of the little biology lab where he spent most of his time. "What's wrong?" he called from the hatchway.

"Radar's gone to hell," Melissa told him.

"What do you mean, gone to hell?" Jonnard demanded indignantly. He was one of those annoying people who think quantitatively all the time, and think everyone else does, too.

"There are about a hundred, maybe a hundred fifty, objects on the screen that have no right to be there," answered Frederica Lindstrom, who had a milder case of the same disease. "Range appears to be a couple of million kilometers."

"They weren't there a minute ago, either," Melissa said. "I hollered when they showed up."

As Frederica fiddled with the radar and the computer, Herzog stayed on the exercise bike, feeling singularly useless: what good is a geologist millions of kilometers away from rocks? He wouldn't even get his name in the history books—no one remembers the crew of the third expedition to anywhere.

Frederica finished her checks. "I can't find anything wrong," she said, sounding angry at herself and the equipment both.

"Time to get on the horn to Earth, Freddie," Art Snyder said. "If I'm going to land this beast, I can't have the radar telling me lies."

Melissa was already talking into the microphone. "Houston, this is *Ares III*. We have a problem—"

Even at light-speed, there were a good many minutes of waiting. They crawled past, one by one. Everyone jumped when the speaker crackled to life. "*Ares III*, this is Houston Control. Ladies and gentlemen, I don't quite know how to tell you this, but we see them too."

The communicator kept talking, but no one was listening to her anymore. Herzog felt his scalp tingle as his hair, in primitive reflex, tried to stand on end. Awe filled him. He had never thought he would live to see humanity contact another race. "Call them, Mel," he said urgently.

She hesitated. "I don't know, Buck. Maybe we should let Houston handle this."  
"Screw Houston," he said, surprised at his own vehemence. "By the time the bureaucrats down there figure out what to do, we'll be coming down on Mars. We're the people on the spot. Are you going to throw away the most important moment in the history of the species?"

Melissa looked from one of her crewmates to the next. Whatever she saw in their faces must have satisfied her, for she shifted the aim of the antenna and began to speak: "This is the spacecraft *Ares III*, calling the unknown ships. Welcome from the people of Earth." She turned off the transmitter for a moment. "How many languages do we have?"

The call went out in Russian, Mandarin, Japanese, French, German, Spanish, even Latin. ("Who knows the last time they may have visited?" Frederica said when Snyder gave her an odd look.)

If the wait for a reply from Earth had been long, this one was infinitely worse. The delay stretched far, far past the fifteen-second speed-of-light round trip. "Even if they don't speak any of our languages, shouldn't they say *something*?" Melissa demanded of the air. It did not answer, nor did the aliens.

Then, one at a time, the strange ships began darting away sunward, toward Earth. "My God, the acceleration!" Snyder said. "Those are no rockets!" He looked suddenly sheepish. "I don't suppose starships would have rockets, would they?"

The *Ares III* lay alone again in its part of space, pursuing its Hohmann orbit inexorably toward Mars. Buck Herzog wanted to cry.

AS WAS THEIR practice, the ships of the Roxolan fleet gathered above the pole of the new planet's hemisphere with the most land. Because everyone would be coming to the same spot, the doctrine made visual rendezvous easy. Soon only four ships were unaccounted for. A scoutship hurried around to the other pole, found them, and brought them back.

"Always some water-lovers every trip." Togram chuckled to the steerers as he brought them the news. He took all the chances he could to go to their dome, not just for the sunlight but also because, unlike many soldiers, he was interested in planets for their own sake. With any head for figures, he might have tried to become a steerer himself.

He had a decent hand with quill and paper, so Ransisc and Olgren were willing to let him spell them at the spyglass and add to the sketchmaps they were making of the world below.

"Funny sort of planet," he remarked. "I've never seen one with so many forest fires or volcanoes or whatever they are on the dark side."

"I still think they're cities," Olgren said, with a defiant glance at Ransisc.

"They're too big and too bright," the senior steerer said patiently; the argument, plainly, had been going on for some time.

"This is your first trip offplanet, isn't it, Olgren?" Togram asked.

"Well, what if it is?"

"Only that you don't have enough perspective. Egelloc on Roxolan has almost a million people, and from space it's next to invisible at night. It's nowhere near as

bright as those lights, either. Remember, this is a primitive planet. I admit it looks like there's intelligent life down there, but how could a race that hasn't even stumbled across the hyperdrive build cities ten times as great as Egelloc?"

"I don't know," Olgren said sulkily. "But from what little I can see by moonlight, those lights look to be in good spots for cities—on coasts, or along rivers, or whatever."

Ransisc sighed. "What are we going to do with him, Togram? He's so sure he knows everything, he won't listen to reason. Were you like that when you were young?"

"Till my clanfathers beat it out of me, anyway. No need getting all excited, though. Soon enough the flyers will go down with their *Iuofi*, and then we'll know." He swallowed a snort of laughter, then sobered abruptly, hoping he hadn't been as gullible as Olgren when he was young.

"I HAVE ONE of the alien vessels on radar," the SR-81 pilot reported. "It's down to 80,000 meters and still descending." He was at his own plane's operational ceiling, barely half as high as the ship entering atmosphere.

"For God's sake, hold your fire," ground control ordered. The command had been dimmed into him before he took off, but the brass were not about to let him forget. He did not really blame them. One trigger-happy idiot could ruin humanity forever.

"I'm beginning to get a visual image," he said, glancing at the head-up display projected in front of him. A moment later he added, "It's one damn funny-looking ship, I can tell you that already. Where are the wings?"

"We're picking up the image now too," the ground-control officer said. "They must use the same principle for their in-atmosphere machines as they do for their spacecraft: some sort of antigravity that gives them both lift and drive capability."

The alien ship kept ignoring the SR-81, just as all the aliens had ignored every terrestrial signal beamed at them. The craft continued its slow descent, while the SR-81 pilot circled below, hoping he would not have to go down to the aerial tanker to refuel.

"One question answered," he called to the ground. "It's a warplane." No craft whose purpose was peaceful would have had those glaring eyes and that snarling, fang-filled mouth painted on its belly. Some USAF ground-attack aircraft carried similar markings.

At last the alien reached the level at which the SR-81 was loitering. The pilot called the ground again. "Permission to pass in front of the aircraft?" he asked. "Maybe everybody's asleep in there and I can wake 'em up."

After a long silence, ground control gave grudging assent. "No hostile gestures," the controller warned.

"What do you think I'm going to do, flip him the finger?" the pilot muttered, but his radio was off. Acceleration pushed him back in his seat as he guided the SR-81 into a long, slow turn that would carry it about half a kilometer in front of the vessel from the spacefleet.

His airplane's camera gave him a brief glimpse of the alien pilot, who was sitting behind a small, dirty windscreen.

The being from the stars saw him, too. Of that there was no doubt. The alien winked like a startled fawn, performing maneuvers that would have smeared the SR-81 pilot against the walls of his pressure cabin—if his aircraft could have matched them in the first place.

"I'm giving pursuit!" he shouted. Ground control screamed at him, but he was the man on the spot. The surge from his afterburner made the pressure he had felt before a love pat by comparison.

Better streamlining made his plane faster than the craft from the starships, but that did not do him much good. Every time its pilot caught sight of him, the alien ship danced away with effortless ease. The SR-81 pilot felt like a man trying to kill a butterfly with a hatchet.

To add to his frustration, his fuel warning light came on. In any case, his aircraft was designed for the thin atmosphere at the edge of space, not the increasingly denser air through which the alien flew. He swore, but he had to pull away.

As his SR-81 gulped kerosene from the tanker, he could not help wondering what would have happened if he'd turned a missile loose. There were a couple of times he'd had a perfect shot. That was one thought he kept firmly to himself. What his superiors would do if they knew about it was too gruesome to contemplate.

THE TROOPERS CROWDED round Togram as he came back from the officers' conclave. "What's the word, captain?" "Did the *Iuof* live?" "What's it like down there?"

"The *Iuof* lived, boys!" Togram said with a broad smile.

His company raised a cheer that echoed deafeningly in the barracks room. "We're going down!" they whooped. Ears stood high in excitement. Some soldiers waved plumed hats in the fetid air. Others, of a bent more like their captain's, went over to their pallets and began seeing to their weapons.

"How tough are they going to be, sir?" a gray-furred veteran named Ilingua asked as Togram went by. "I hear the fier fier pilot saw some funny things."

Togram's smile got wider. "By the heavens and hells, Ilingua, haven't you done this often enough before to know better than to pay heed to rumors you hear before planetfall?"

"I hope so, sir," Ilingua said, "but these are so strange I thought there might be something to them." When Togram did not answer, the trooper shook his head at his own foolishness and shook up a lantern so he could *examine* his dagger's edge.

As inconspicuously as he could, the captain let out a sigh. He did not know what to believe himself, and he had listened to the pilot's report. How could the locals have flying machines when they did not know contragravity? Togram had heard of a race that used hot-air balloons before it discovered the better way of doing things, but no balloon could have reached the altitude the locals' flier had achieved, and no balloon could have changed direction, as the pilot had violently insisted this craft had done.

Assume he was wrong, as he had to be. But how was one to take his account of towns as big as the ones whose possibility Ransisc had ridiculed, of a world so populous there was precious little open space? And lantern signals from other ships showed their scout pilots were reporting the same wild improbabilities.

Well, in the long run it would not matter if this race was numerous as *reffo* at a picnic. There would simply be that many more subjects here for Roxolan.

"THIS IS A terrible waste," Billy Cox said to anyone who would listen as he slung his duffel bag over his shoulder and tramped out to the waiting truck. "We should be meeting the starpeople with open arms, not with a show of force."

"You tell 'em, Professor." Sergeant Santos Amoros chuckled from behind him. "Me, I'd sooner stay on my butt in a nice, air-conditioned barracks than face L.A. summer smog and sun any old day. Damn shame you're just a Spec-1. If you was president, you could give the orders any way you wanted, instead o' takin' 'em."

Cox didn't think that was very fair either. He'd been just a few units short of his M.A. in poli-sci when the big buildup after the second Syrian crisis sucked him into the army.

He had to fold his lanky length like a jackknife to get under the olive-drab canopy of the truck and down into the passenger compartment. The seats were too hard and too close together. Jamming people into the vehicle counted for more than their comfort while they were there. Typical military thinking. Cox thought disparagingly.

The truck filled. The big diesel rumbled to life. A black soldier dug out a deck of cards and bet anyone that he could turn twenty-five cards into five pat poker hands. A couple of greenhorns took him up on it. Cox had found out the expensive way that it was a sucker bet. The black man was grinning as he offered the deck to one of his marks to shuffle.

*Riffiff!* The ripple of the pasteboards was authoritative enough to make everybody in the truck turn his head. "Where'd you learn to handle cards like that, man?" demanded the black soldier, whose name was Jim but whom everyone called Junior.

"Dealing blackjack in Vegas." *Riffiff!*

"Hey, Junior," Cox called, "all of a sudden I want ten bucks of your action."

"Up yours too, pal," Junior said, glumly watching the cards move as if they had lives of their own.

The truck rolled northward, part of a convoy of trucks, MICVs, and light tanks

that stretched for miles. An entire regiment was heading into Los Angeles, to be billeted by companies in different parts of the sprawling city. Cox approved of that; it made it less likely that he would personally come face-to-face with any of the aliens.

"Sandy," he said to Amoros, who was squeezed in next to him, "even if I'm wrong and the aliens aren't friendly, what the hell good will hand weapons do? It'd be like taking on an elephant with a safety pin."

"Professor, like I told you already, they don't pay me to think, or you neither. Just as well, too. I'm gonna do what the lieutenant tells me, and you're gonna do what I tell you, and everything is gonna be fine, right?"

"Sure," Cox said, because Sandy, while he wasn't a bad guy, was a sergeant. All the same, the Neo-Armalite between Cox's boots seemed very futile, and his helmet and body armor as thin and gauzy as a stripper's negligee.

THE SKY OUTSIDE the steerers' dome began to go from black to deep blue as the *Indomitable* entered atmosphere. "There," Olgren said, pointing. "That's where we'll land."

"Can't see much from this height," Togram remarked.

"Let him use your spyglass, Olgren," Ransisc said. "He'll be going back to his company soon."

Togram grunted; that was more than a comment—it was also a hint. Even so, he was happy to peer through the eyepiece. The ground seemed to leap toward him. There was a moment of disorientation as he adjusted to the inverted image, which put the ocean on the wrong side of the field of view. But he was not interested in sightseeing. He wanted to learn what his soldiers and the rest of the troops aboard the *Indomitable* would have to do to carve out a beachhead and hold it against the locals.

"There's a spot that looks promising," he said. "The greenery there in the midst of the buildings in the eastern—no, the western—part of the city. That should give us a clear landing zone, a good campground, and a base for landing reinforcements."

"Let's see what you're talking about," Ransisc said, elbowing him aside. "Hmm, yes, I see the stretch you mean. That might not be bad. Olgren, come look at this. Can you find it again in the Warmaster's spyglass? All right then, go point it out to him. Suggest it as our setdown point."

The apprentice hurried away. Ransisc bent over the eyepiece again. "Hmmm," he repeated. "They build tall down there, don't they?"

"I thought so," Togram said. "And there's a lot of traffic on those roads. They've spent a fortune cobblestoning them all, too; I didn't see any dust kicked up."

"This should be a rich conquest," Ransisc said.

Something swift, metallic, and predator-lean flashed past the observation win-

dow. "By the gods, they do have fliers, don't they?" Togram said. In spite of the pilots' claims, deep down he hadn't believed it until he saw it for himself.

He noticed Ransic's ears twitching impatiently, and realized he really had spent too much time in the observation room. He picked up his glowmite lantern and went back to his troopers.

A couple of them gave him a resentful look for being away so long, but he cheered them up by passing on as much as he could about their landing site. Common soldiers loved nothing better than inside information. They second-guessed their superiors without it, but the game was even more fun when they had some idea of what they were talking about.

A runner appeared in the doorway. "Captain Togram, your company will planet from airlock three."

"Three," Togram acknowledged, and the runner trotted off to pass orders to other ground troop leaders. The captain put his plumed hat on his head (the plume was scarlet, so his company could recognize him in combat), checked his pistols one last time, and ordered his troopers to follow him.

The reeking darkness was as oppressive in front of the inner airlock door as anywhere else aboard the *Indomitable*, but somehow easier to bear. Soon the doors would swing open and he would feel fresh breezes riffing his fur, taste sweet clean air, enjoy sunlight for more than a few precious units at a stretch. Soon he would measure himself against these new beings in combat.

He felt the slightest of jolts as the *Indomitable*'s fliers launched themselves from the mother ship. There would be no *luofi* aboard them this time, but rather musketeers to terrorize the natives with fire from above, and jars of gunpowder to be touched off and dropped. The Roxolani always strove to make as savage a first impression as they could. Terror doubled their effective numbers.

Another jolt came, different from the one before. They were down.

A SHADOW SPREAD across the UCLA campus. Craning his neck, Junior said, "Will you look at the size of the mother!" He had been saying that for the last five minutes, as the starship slowly descended.

Each time, Billy Cox could only nod, his mouth dry, his hands clutching the plastic grip and cool metal barrel of his rifle. The Neo-Armalite seemed totally impotent against the huge bulk floating so arrogantly downward. The alien flying machines around it were as minnows beside a whale, while they in turn dwarfed the USAF planes circling at a greater distance. The roar of their jets assailed the ears of the nervous troops and civilians on the ground. The aliens' engines were eerily silent.

The starship landed in the open quad between New Royce, New Haines, New Kinsey, and New Powell Halls. It towered higher than any of the two-story red brick buildings, each a reconstruction of one overthrown in the earthquake of 2034. Cox

heard saplings splinter under the weight of the alien craft. He wondered what it would have done to the big trees that had fallen five years ago along with the famous old halls.

"All right, they've landed. Let's move on up," Lieutenant Shotton ordered. He could not quite keep the wobble out of his voice, but he trotted south toward the starship. His platoon followed him past Dickson Art Center, past New Bunche Hall. Not so long ago, Billy Cox had walked this campus barefoot. Now his boots thudded on concrete.

The platoon deployed in front of Dodd Hall, looking west toward the spacecraft. A little breeze toyed with the leaves of the young, hopeful trees planted to replace the stalwarts lost to the quake.

"Take as much cover as you can," Lieutenant Shotton ordered quietly. The platoon scrambled into flowerbeds, snuggled down behind thin tree trunks. Out on Hilgard Avenue, diesels roared as armored fighting vehicles took positions with good lines of fire.

It was all such a waste, Cox thought bitterly. The thing to do was to make friends with the aliens, not to assume automatically they were dangerous.

Something, at least, was being done along those lines. A delegation came out of Murphy Hall and slowly walked behind a white flag from the administration building toward the starship. At the head of the delegation was the mayor of Los Angeles; the president and governor were busy elsewhere. Billy Cox would have given anything to be part of the delegation instead of sprawled here on his belly in the grass. If only the aliens had waited until he was fifty or so, had given him a chance to get established—

Sergeant Amoros nudged him with an elbow. "Look there, man. Something's happening—"

Amoros was right. Several hatchways which had been shut were swinging open, allowing Earth's air to mingle with the ship's.

The westerly breeze picked up. Cox's nose twitched. He could not name all the exotic odors wafting his way, but he recognized sewage and garbage when he smelled them. "God, what a stink!" he said.

"BY THE GODS, what a stink!" Togram exclaimed. When the outer airlock doors went down, he had expected real fresh air to replace the stale, overused gases inside the *Indomitable*. This stuff smelled like smoky peat fires, or lamps whose wicks hadn't quite been extinguished. And it stung! He felt the nictitating membranes flick across his eyes to protect them.

"Deploy!" he ordered, leading his company forward. This was the tricky part. If the locals had nerve enough, they could hit the Roxolani just as the latter were coming out of their ship, and cause all sorts of trouble. Most races without hyperdrive, though,

were too overawed by the arrival of travelers from the stars to try anything like that. And if they didn't do it fast, it would be too late.

They weren't doing it here. Togram saw a few locals, but they were keeping a respectful distance. He wasn't sure how many there were. Their mottled skins—or was that clothing?—made them hard to notice and count. But they were plainly warriors, both by the way they acted and by the weapons they bore.

His own company went into its familiar two-line formation, the first crouching, the second standing and aiming their muskets over the heads of the troops in front.

"Ah, there we go," Togram said happily. The bunch approaching behind the white banner had to be the local nobles. The mottling, the captain saw, was clothing, for these beings wore entirely different garments, somber except for strange, narrow neckcloths. They were taller and skinnier than Roxolani, with muzzleless faces.

"Lingua!" Togram called. The veteran trooper led the right flank squad of the company.

"Sir!"

"Your troops, quarter-right face. At the command, pick off the leaders there. That will demoralize the rest," Togram said, quoting standard doctrine.

"Slowmatches ready!" Togram said. The Roxolani lowered the smoldering cords to the touchholes of their muskets. "Take your aim!" The guns moved, very slightly. "Fire!"

"TEDDY BEARS!" SANDY AMOROS exclaimed. The same thought had leaped into Cox's mind. The beings emerging from the spaceship were round, brown, and furry, with long noses and big ears. Teddy bears, however, did not normally carry weapons. They also, Cox thought, did not commonly live in a place that smelled like sewage. Of course, it might have been perfume to them. But if it was, they and Earthpeople were going to have trouble getting along.

He watched the Teddy bears as they took their positions. Somehow their positioning did not suggest that they were forming an honor guard for the mayor and his party. Yet it did look familiar to Cox, although he could not quite figure out why.

Then he had it. If he had been anywhere but at UCLA, he would not have made the connection. But he remembered a course he had taken on the rise of the European nation-states in the sixteenth century, and on the importance of the professional, disciplined armies the kings had created. Those early armies had performed evolutions like this one.

It was a funny coincidence. He was about to mention it to his sergeant when the world blew up.

Flames spurted from the aliens' guns. Great gouts of smoke puffed into the sky. Something that sounded like an angry wasp buzzed past Cox's ear. He heard shouts

and shrieks from either side. Most of the mayor's delegation was down, some motionless, others thrashing.

There was a crash from the starship, and another one an instant later as a roundshot smashed into the brickwork of Dodd Hall. A chip stung Cox in the back of the neck. The breeze brought him the smell of fireworks, one he had not smelled for years.

"RELOAD!" TOGRAM YELLED. "Another volley, then at 'em with the bayonet!" His troopers worked frantically, measuring powder charges and ramming round bullets home.

"SO THAT'S HOW they wanna play!" Amoros shouted. "Nail their hides to the wall!" The tip of his little finger had been shot away. He did not seem to know it.

Cox's Neo-Armalite was already barking, spitting a stream of hot brass cartridges, slamming against his shoulder. He rammed in clip after clip, playing the rifle like a hose. If one bullet didn't bite, the next would.

Others from the platoon were also firing. Cox heard bursts of automatic weapons fire from different parts of the campus, too, and the deeper blasts of rocket-propelled grenades and field artillery. Smoke not of the aliens' making began to envelop their ship and the soldiers around it.

One or two shots came back at the platoon, and then a few more, but so few that Cox, in stunned disbelief, shouted to his sergeant, "This isn't fair!"

"Fuck 'em!" Amoros shouted back. "They wanna throw their weight around, they take their chances. Only good thing they did was knock over the mayor. Always did hate that old crackpot."

THE HARSH TAC-TAC-TAC did not sound like any gunfire Togram had heard. The shots came too close together, making a horrible sheet of noise. And if the locals were shooting back at his troopers, where were the thick, choking clouds of gunpowder smoke over their position?

He did not know the answer to that. What he did know was that his company was going down like grain before a scythe. Here a soldier was hit by three bullets at once and fell awkwardly, as if his body could not tell in which direction to twist. There another had the top of his head gruesomely removed.

The volley the captain had screamed for was stillborn. Perhaps a squad's worth of soldiers moved toward the locals, the sun glinting bravely off their long, polished bayonets. None of them got more than a half-sixteen of paces before falling.

Lingua looked at Togram, horror in his eyes, his ears flat against his head. The captain knew his were the same. "What are they doing to us?" Lingua howled.

Togram could only shake his head helplessly. He dove behind a corpse, fired one



of his pistols at the enemy. There was still a chance, he thought—how would these demonic aliens stand up under their first air attack?

A flier swooped toward the locals. Musketeers blasted away from firing ports, drew back to reload.

"Take that, you whoresons!" Togram shouted. He did not, however, raise his fist in the air. That, he had already learned, was dangerous.

"INCOMING AIRCRAFT!" SERGEANT Amoros roared. His squad, those not already prone, flung themselves on their faces. Cox heard shouts of pain through the combat din as men were wounded.

The Cottonmouth crew launched their shoulder-fired AA missile at the alien flying machine. The pilot must have had reflexes like a cat's. He sidestepped his machine in midair, no plane built on Earth could have matched that performance. The Cottonmouth shot harmlessly past.

The flier dropped what looked like a load of crockery. The ground jumped as the bombs exploded. Cursing, deafened, Billy Cox stopped worrying whether the fight was fair.

But the flier pilot had not seen the F-29 fighter on his tail. The USAF plane released two missiles from point-blank range, less than a mile. The infrared-seeker found no target and blew itself up, but the missile that homed on radar streaked straight toward the flier. The explosion made Cox bury his face in the ground and clap his hands over his ears.

So this is war, he thought: I can't see, I can barely hear, and my side is winning. What must it be like for the losers?

HOPE DIED IN Togram's hearts when the first flier fell victim to the locals' aircraft. The rest of the *Indomitable's* machines did not last much longer. They could evade, but had even less ability to hit back than the Roxolan ground forces. And they were hideously vulnerable when attacked in their pilots' blind spots, from below or behind.

One of the starship's cannon managed to fire again, and quickly drew a response from the traveling fortresses Togram got glimpses of as they took their positions in the streets outside this parklike area.

When the first shell struck, the luckless captain thought for an instant that it was another gun going off aboard the *Indomitable*. The sound of the explosion was nothing like the crash a solid shot made when it smacked into a target. A fragment of hot metal buried itself in the ground by Togram's hand. That made him think a cannon had blown up, but more explosions on the ship's superstructure and fountains of dirt flying up from misses showed it was just more from the locals' fiendish arsenal.

Something large and hard struck the captain in the back of the neck. The world spiraled down into blackness.

"CEASE FIRE!" THE order reached the field artillery first, then the infantry units at the very front line. Billy Cox pushed up his cuff to look at his watch, stared in disbelief. The whole firefight had lasted less than twenty minutes.

He looked around. Lieutenant Shotton was getting up from behind an ornamental palm. "Let's see what we have," he said. His rifle still at the ready, he began to walk slowly toward the starship. It was hardly more than a smoking ruin. For that matter, neither were the buildings around it. The damage to their predecessors had been worse in the big quake, but not much.

Alien corpses littered the lawn. The blood splashing the bright green grass was crimson as any man's. Cox bent to pick up a pistol. The weapon was beautifully made, with scenes of combat carved into the grayish wood of the stock. But he recognized it as a single-shot piece, a small-arm obsolete for at least two centuries. He shook his head in wonderment.

Sergeant Amoros lifted a conical object from where it had fallen beside a dead alien. "What the hell is this?" he demanded.

Again Cox had the feeling of being caught up in something he did not understand. "It's a powderhorn," he said.

"Like in the movies? Pioneers and all that good shit?"

"The very same."

"Damn," Amoros said feelingly. Cox nodded in agreement.

Along with the rest of the platoon, they moved closer to the wrecked ship. Most of the aliens had died still in the two neat rows from which they had opened fire on the soldiers.

Here, behind another corpse, lay the body of the scarlet-plumed officer who had given the order to begin that horrifyingly uneven encounter. Then, startling Cox, the alien moaned and stirred, just as might a human starting to come to. "Grab him; he's a live one!" Cox exclaimed.

Several men jumped on the reviving alien, who was too groggy to fight back. Soldiers began peering into the holes torn in the starship, and even going inside. There they were still wary; the ship was so incredibly much bigger than any human spacecraft that there were surely survivors despite the shellacking it had taken.

As always happens, the men did not get to enjoy such pleasures long. The fighting had been over for only minutes when the first team of experts came thudding in by helicopter, saw common soldiers in their private preserve, and made horrified noises. The experts also promptly relieved the platoon of its prisoner.

Sergeant Amoros watched resentfully as they took the alien away. "You must've known it would happen, Sandy," Cox consoled him. "We do the dirty work and the brass takes over once things get cleaned up again."

"Yeah, but wouldn't it be wonderful if just once it was the other way round?" Amoros laughed without humor. "You don't need to tell me: fat friggin' chance."

WHEN TOGRAM WOKE up on his back, he knew something was wrong. Roxolani always slept prone. For a moment he wondered how he had got to where he was . . . too much water-of-life the night before? His pounding head made that a good possibility.

Then memory came flooding back. Those damnable locals with their sorcerous weapons! Had his people rallied and beaten back the enemy after all? He vowed to light votive lamps to Edieva, mistress of battles, for the rest of his life if that was true.

The room he was in began to register. Nothing was familiar, from the bed he lay on to the light in the ceiling that glowed bright as sunshine and neither smoked nor flickered. No, he did not think the Roxolani had won their fight.

Fear settled like ice in his vitals. He knew how his own race treated prisoners, had heard spacers' stories of even worse things among other folk. He shuddered to think of the refined tortures a race as ferocious as his captors could invent.

He got shakily to his feet. By the end of the bed he found his hat, some smoked meat obviously taken from the *Indomitabile*, and a translucent jug made of something that was neither leather nor glass nor baked clay nor metal. Whatever it was, it was too soft and flexible to make a weapon.

The jar had water in it: *not* water from the *Indomitabile*. That was already beginning to taste stale. This was cool and fresh and so pure as to have no taste whatever, water so fine he had only found its like in a couple of mountain springs.

The door opened on noiseless hinges. In came two of the locals. One was small and wore a white coat—a female, if those chest projections were breasts. The other was dressed in the same clothes the local warriors had worn, though those offered no camouflage here. That one carried what was plainly a rifle and, the gods curse him, looked extremely alert.

To Togram's surprise, the female took charge. The other local was merely a bodyguard. Some spoiled princess, curious about these outsiders, the captain thought. Well, he was happier about treating with her than meeting the local executioner.

She sat down, waved for him also to take a seat. He tried a chair, found it uncomfortable—too low in the back, not built for his wide rump and short legs. He sat on the floor instead.

She set a small box on the table by the chair. Togram pointed at it. "What's that?" he asked.

He thought she had not understood—no blame to her for that; she had none of his language. She was playing with the box, pushing a button here, a button there. Then his ears went back and his hackles rose, for the box said, "What's that?" in Roxolani. After a moment he realized it was speaking in his own voice. He swore and made a sign against witchcraft.

She said something, fooled with the box again. This time it echoed her. She pointed at it. "Recorder," she said. She paused expectantly.

What was she waiting for, the Roxolanic name for that thing? "I've never seen one of those in my life, and I hope I never do again," he said. She scratched her head. When she made the gadget again repeat what he had said, only the thought of the soldier with the gun kept him from flinging it against the wall.

Despite that contretemps, they did eventually make progress on the language. Togram had picked up snatches of a good many tongues in the course of his adventurous life; that was one reason he had made captain in spite of low birth and paltry connections. And the female—Togram heard her name as Hildachesta—had a gift for them, as well as the box that never forgot.

"Why did your people attack us?" she asked one day, when she had come far enough in Roxolanic to be able to frame the question.

He knew he was being interrogated, no matter how polite she sounded. He had played that game with prisoners himself. His ears twitched in a shrug. He had always believed in giving straight answers; that was one reason he was only a captain. He said, "To take what you grow and make and use it for ourselves. Why would anyone want to conquer anyone else?"

"Why indeed?" she murmured, and was silent a little while; his forthright reply seemed to have closed off a line of questioning. She tried again: "How are your people able to walk—I mean, travel—faster than light, when the rest of your arts are so simple?"

His fur bristled with indignation. "They are not! We make gunpowder, we cast iron and smelt steel, we have spyglasses to help our steerers guide us from star to star. We are no savages huddling in caves or shooting at each other with bows and arrows."

His speech, of course, was not that neat or simple. He had to backtrack, to use elaborate circumlocutions, to playact to make Hildachesta understand. She scratched her head in the gesture of puzzlement he had come to recognize. She said, "We have known all these things you mention for hundreds of years, but we did not think anyone could walk—damn, I keep saying that instead of 'travel'—faster than light. How did your people learn to do that?"

"We discovered it for ourselves," he said proudly. "We did not have to learn it from some other starfaring race, as many folk do."

"But *how* did you discover it?" she persisted.

"How do I know? I'm a soldier; what do I care for such things? Who knows who invented gunpowder or found out about using bellows in a smithy to get the fire hot enough to melt iron? These things happen, that's all."

She broke off the questions early that day.

\* \* \*

"It's HUMILIATING," HILDA Chester said. "If these fool aliens had waited a few more years before they came, we likely would have blown ourselves to kingdom come without ever knowing there was more real estate around. Christ, from what the Roxolani say, races that scarcely know how to work iron fly starships and never think twice about it."

"Except when the starships don't get home," Charlie Ebbets answered. His tie was in his pocket and his collar open against Pasadena's fierce summer heat, although the Caltech Athenium was efficiently air-conditioned. Along with so many other engineers and scientists, he depended on linguists like Hilda Chester for a link to the aliens.

"I don't quite understand it myself," she said. "Apart from the hyperdrive and contragravity, the Roxolani are backward, almost primitive. And the other species out there must be the same, or someone would have overrun them long since."

Ebbets said, "Once you see it, the drive is amazingly simple. The research crews say anybody could have stumbled over the principle at almost any time in our history. The best guess is that most races did come across it, and once they did, why, all their creative energy would naturally go into refining and improving it."

"But we missed it," Hilda said slowly, "and so our technology developed in a different way."

"That's right. That's why the Roxolani don't know anything about controlled electricity, to say nothing of atomics. And the thing is, as well as we can tell so far, the hyperdrive and contragravity don't have the ancillary applications the electromagnetic spectrum does. All they do is move things from here to there in a hurry."

"That should be enough at the moment," Hilda said. Ebbets nodded. There were almost nine billion people jammed onto the Earth, half of them hungry. Now, suddenly, there were places for them to go and a means to get them there.

"I think," Ebbets said musingly, "we're going to be an awful surprise to the peoples out there."

It took Hilda a second to see what he was driving at. "If that's a joke, it's not funny. It's been a hundred years since the last war of conquest."

"Sure—they've gotten too expensive and too dangerous. But what kind of fight could the Roxolani or anyone else at their level of technology put up against us? The Aztecs and Incas were plenty brave. How much good did it do them against the Spaniards?"

"I hope we've gotten smarter in the last five hundred years," Hilda said. All the same, she left her sandwich half eaten. She found she was not hungry anymore.

"RANSISC!" TOGRAM EXCLAIMED as the senior steerer limped into his cubicle. Ransisc was thinner than he had been a few moons before, aboard the misnamed *Indomitable*. His fur had grown out white around several scars Togram did not remember.

His air of amused detachment had not changed, though. "Tougher than bullets, are you, or didn't the humans think you were worth killing?"

"The latter, I suspect. With their firepower, why should they worry about one soldier more or less?" Togram said bitterly. "I didn't know you were still alive, either."

"Through no fault of my own, I assure you," Ransisc said. "Olgren, next to me—" His voice broke off. It was not possible to be detached about everything.

"What are you doing here?" the captain asked. "Not that I'm not glad to see you, but you're the first Roxolan face I've set eyes on since—" It was his turn to hesitate.

"Since we landed." Togram nodded in relief at the steerer's circumlocution. Ransisc went on, "I've seen several others before you. I suspect we're being allowed to get together so the humans can listen to us talking with each other."

"How could they do that?" Togram asked, then answered his own question. "Oh, the recorders, of course." He perforce used the English word. "Well, we'll fix that."

He dropped into Oyag, the most widely spoken language on a planet the Roxolani had conquered fifty years before. "What's going to happen to us, Ransisc?"

"Back on Roxolan, they'll have realized something's gone wrong by now," the steerer answered in the same tongue.

That did nothing to cheer Togram. "There are so many ways to lose ships," he said gloomily. "And even if the High Warmaster does send another fleet after us, it won't have any more luck than we did. These gods-accursed humans have too many war-machines." He paused and took a long, moody pull at a bottle of vodka. The flavored liquors the locals brewed made him sick, but vodka he liked. "How is it they have all these machines and we don't, or any race we know of? They must be wizards, selling their souls to the demons for knowledge."

Ransisc's nose twitched in disagreement. "I asked one of their savants the same question. He gave me back a poem by a human named Hail or Snow or something of that sort. It was about someone who stood at a fork in the road and ended up taking the less-used track. That's what the humans did. Most races find the hyperdrive and go traveling. The humans never did, and so their search for knowledge went in a different direction."

"Didn't it!" Togram shuddered at the recollection of that brief, terrible combat. "Guns that spit dozens of bullets without reloading, cannon mounted on armored platforms that move by themselves, rockets that follow their targets by themselves . . . And there are the things we didn't see, the ones the humans only talk about—the bombs that can blow up a whole city, each one by itself."

"I don't know if I believe that," Ransisc said.

"I do. They sound afraid when they speak of them."

"Well, maybe. But it's not just the weapons they have. It's the machines that let them see and talk to one another from far away; the machines that do their reckoning for them; their recorders and everything that has to do with them. From what they

say of their medicine, I'm almost tempted to believe you and think they are wizards—they actually know what causes their diseases, and how to cure or even prevent them. And their farming: this planet is far more crowded than any I've seen or heard of, but it grows enough for all these humans."

Togram sadly waggled his ears. "It seems so unfair. All that they got, just by not stumbling onto the hyperdrive."

"They have it now," Ransisc reminded him. "Thanks to us."

The Roxolani looked at each other, appalled. They spoke together: "What have we done?"

## WILLIAM GIBSON AND MICHAEL SWANWICK

### Dogfight

William Gibson began publishing short fiction in 1977, but his reputation was made with his first novel, *Neuromancer*, which appeared in 1984 and has since earned the status of a revolutionary work of contemporary science fiction. The book, which won the Hugo, Nebula and Philip K. Dick awards, became the bible of the cyberpunk movement, and an important breakthrough novel that seeped into the cultural mainstream where the many concepts it explored—cyberspace, virtual reality, the internet, computer crime, artificial intelligence—were fast making the transition from speculative fancy to irrefutable reality. A fusion of the hardboiled detective narrative and the cutting-edge science fiction story, *Neuromancer* and the two follow-up novels with which it forms a loose trilogy—*Count Zero* and *Mona Lisa Overdrive*—blazed trails through the hitherto unexplored frontier of computer technology and microchip-driven telecommunications. It popularized the concept of "plugging in" to link the human brain directly with the neural network of computer systems. The human/machine interface it envisioned, though built on traditional science fiction themes, marked a conceptual shift that turned science fiction's normally outward-looking perspective inward. The complex and often inscrutable reality it extrapolates is one where traditional geographic and cultural boundaries have disintegrated and been reshaped by the uses and abuses of computer-generated data. The hacker subculture dominates the world of these novels, and its often criminal members have the status of outlaw heroes. The novels are also memorable for their dazzling, kinetic styles, which update the stylistic experimentation of the New Wave movement with contemporary techno-jargon, and narrative cuts and splices characteristic of video and computer entertainment. The impact of computer technology has been as inescapable in the rest of Gibson's fiction as it has in the modern world. *The Difference Engine*, which he wrote in collaboration with Bruce Sterling, is a celebrated "steampunk" novel that projects the world that might have been had Charles Babbage's early work on computers taken root in Victorian England. His novels *Virtual Light*, *Idoru*, and *All Tomorrow's Parties* all share characters and explore a variety of computer-oriented themes, including nanotechnology, computer personality constructs, and "nodal points" or fluxes in the data stream that are auguries of transformational events in history. Gibson's short fiction has been col-

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lected in *Burning Chrome*, which includes "Johnny Mnemonic," the basis for the Robert Longo film of the same name.

Michael Swanwick emerged as one of the stunning new talents of science fiction in the 1980s initially through the publication of his richly allusive, multilayered short stories, which show the influence of literary postmodernism as much as the traditions of fantasy and science fiction. The best of his short stories have been collected in *Gravity's Angels* and *Tales of Old Earth*, which includes his Hugo Award-winning "The Very Pulse of the Machine." His work as a novelist is equally unconventional, ranging in its approaches from cyberpunk to heroic fantasy and focuses on the interplay of new science and old social structures in their shaping of a civilization and the individual. His first novel, *In the Drift*, is set in a postapocalyptic America where nuclear catastrophe creates a fragmented society struggling to stabilize. *Vacuum Flowers*, *Griffin's Egg* and the Nebula Award-winning *Stations of the Tide* all are explorations of the impact of cataclysmic natural disasters and sociopolitical events on human societies established in alien worlds that have grown estranged from the mother planet's influence. Swanwick has also written *Jack Faust*, a modern variation on the Faust theme, and *The Iron Dragon's Daughter*, an epic hi-tech high fantasy. He is the author of several provocative and controversial essays on the craft of fantasy and science fiction, several of which have been collected in *A Geography of Unknown Lands* and *The Postmodern Archipelago*. He is also a recipient of the Theodore Sturgeon Memorial Award.

HE MEANT TO keep on going, right down to Florida. Work passage on a gunrunner, maybe wind up conscripted into some ratass rebel army down in the war zone. Or maybe, with that ticket good as long as he didn't stop riding, he'd just never get off—Greyhound's Flying Dutchman. He grinned at his faint reflection in cold, greasy glass while the downtown lights of Norfolk slid past, the bus swaying on tired shocks as the driver slung it around a final corner. They shuddered to a halt in the terminal lot, concrete lit gray and harsh like a prison exercise yard. But Deke was watching himself starve, maybe in some snowstorm out of Oswego, with his cheek pressed up against that same bus window, and seeing his remains swept out at the next stop by a muttering old man in faded coveralls. One way or the other, he decided, it didn't mean shit to him. Except his legs seemed to have died already. And the driver called a twenty-minute stopover—Tidewater Station, Virginia. It was an old cinder-block building with two entrances to each rest room, holdover from the previous century.

Legs like wood, he made a halfhearted attempt at ghosting the notions counter, but the black girl behind it was alert, guarding the sparse contents of the old glass case as though her ass depended on it. *Probably does*, Deke thought, turning away. Opposite the washrooms, an open doorway offered GAMES, the word flickering feebly in biofluorescent plastic. He could see a crowd of the local kickers clustered around

a pool table. Aimless, his boredom following him like a cloud, he stuck his head in. And saw a biplane, wings no longer than his thumb, blossom bright orange flame. Corkscrewing, trailing smoke, it vanished the instant it struck the green-felt field of the table.

"That's right, Tiny," a kicker bellowed, "you *take* that sumbitch!" "Hey," Deke said. "What's going on?"

The nearest kicker was a bean pole with a black mesh Peterbilt cap. "Tiny's defending the Max," he said, not taking his eyes from the table.

"Oh, yeah? What's that?" But even as he asked, he saw it: a blue enamel medal shaped like a Maltese cross, the slogan *Pour le Mérite* divided among its arms.

The Blue Max rested on the edge of the table, directly before a vast and perfectly immobile bulk wedged into a fragile-looking chrome-tube chair. The man's khaki work shirt would have hung on Deke like the folds of a sail, but it bulged across that bloated torso so tautly that the buttons threatened to tear away at any instant. Deke thought of southern troopers he'd seen on his way down; of that weird, gut-heavy endotype balanced on gangly legs that looked like they'd been borrowed from some other body. Tiny might look like that if he stood, but on a larger scale—a forty-inch jeans inseam that would need a woven-steel waistband to support all those pounds of swollen gut. If Tiny were ever to stand at all—for now Deke saw that that shiny frame was actually a wheelchair. There was something disturbingly childlike about the man's face, an appalling suggestion of youth and even beauty in features almost buried in fold and jowl. Embarrassed, Deke looked away. The other man, the one standing across the table from Tiny, had bushy sideburns and a thin mouth. He seemed to be trying to push something with his eyes, wrinkles of concentration spreading from the corners. . . .

"You dumbshit or what?" The man with the Peterbilt cap turned, catching Deke's Indo profeboy denims, the brass chains at his wrists, for the first time. "Why don't you get your ass lost, fucker. Nobody wants your kind in here." He turned back to the dogfight.

Bets were being made, being covered. The kickers were producing the hard stuff, the old stuff, liberty-headed dollars and Roosevelt dimes from the stamp-and-coin stores, while more cautious bettors slapped down antique paper dollars laminated in clear plastic. Through the haze came a trio of red planes, flying in formation. Fokker D VIs. The room fell silent. The Fokkers banked majestically under the solar orb of a two-hundred-watt bulb.

The blue Spad dove out of nowhere. Two more plunged from the shadowy ceiling, following closely. The kickers swore, and one chucked. The formation broke wildly. One Fokker dove almost to the felt, without losing the Spad on its tail. Furiously, it zigged and zagged across the green flatlands but to no avail. At last it pulled up, the enemy hard after it, too steeply—and stalled, too low to pull out in time.

A stack of silver dimes was scooped up.

The Fokkers were outnumbered now. One had two Spads on its tail. A needle spray of tracers tore past its cockpit. The Fokker slip-turned right, banked into an Immelmann, and was behind one of its pursuers. It fired, and the biplane fell, tumbling.

"Way to go, Tiny!" The kickers closed in around the table.

Deke was frozen with wonder. It felt like being born all over again.

FRANK'S TRUCK STOP was two miles out of town on the Commercial Vehicles Only route. Deke had tagged it, out of idle habit, from the bus on the way in. Now he walked back between the traffic and the concrete crash guards. Articulated trucks went slamming past, big eight-segmented jobs, the wash of air each time threatening to blast him over. CVO stops were easy makes. When he sauntered into Frank's, there was nobody to doubt that he'd come in off a big rig, and he was able to browse the gift shop as slowly as he liked. The wire rack with the projective wetware wafers was located between a stack of Korean cowboy shirts and a display for Fuzz Buster mudguards. A pair of Oriental dragons twisted in the air over the rack, either fighting or fucking, he couldn't tell which. The game he wanted was there: a wafer labeled SPADS & FOKKERS. It took him three seconds to boost it and less time to slide the magnet—which the cops in D.C. hadn't even bothered to confiscate—across the universal security strip.

On the way out, he lifted two programming units and a little Batang facilitator-remote that looked like an antique hearing aid.

HE CHOSE A highstack at random and fed the rental agent the line he'd used since his welfare rights were yanked. Nobody ever checked up; the state just counted occupied rooms and paid.

The cubicle smelled faintly of urine, and someone had scrawled Hard Anarchy Liberation Front slogans across the walls. Deke kicked trash out of a corner, sat down, back to the wall, and ripped open the wafer pack.

There was a folded instruction sheet with diagrams of loops, rolls, and Immelmans, a tube of saline paste, and a computer list of operational specs. And the wafer itself, white plastic with a blue biplane and logo on one side, red on the other. He turned it over and over in his hand: SPADS & FOKKERS, FOKKERS & SPADS. Red or blue. He fitted the Batang behind his ear after coating the inductor surface with paste, jacked its fiberoptic ribbon into the programmer, and plugged the programmer into the wall current. Then he slid the wafer into the programmer. It was a cheap set, Indonesian, and the base of his skull buzzed uncomfortably as the program ran. But when it was done, a sky-blue Spad darted restlessly through the air a few inches from his face. It almost glowed, it was so real. It had the strange inner life that fanatically

detailed museum-grade models often have but it took all of his concentration to keep it in existence. If his attention wavered at all, it lost focus, fuzzing into a pathetic blur.

He practiced until the battery in the earset died, then slumped against the wall and fell asleep. He dreamed of flying, in a universe that consisted entirely of white clouds and blue sky, with no up and down, and never a green field to crash into.

HE WOKE TO a rancid smell of frying krillcakes and winced with hunger. No cash, either. Well, there were plenty of student types in the stack. Bound to be one who'd like to score a programming unit. He hit the hall with the boosted spare. Not far down was a door with a poster on it: THERE'S A HELL OF A GOOD UNIVERSE NEXT DOOR. Under that was a starscape with a cluster of multicolored pills, torn from an ad for some pharmaceutical company, pasted over an inspirational shot of the "space colony" that had been under construction since before he was born. LET'S GO, the poster said, beneath the collaged hypnotics.

He knocked. The door opened, security slides stopping it at a two-inch slice of girnface. "Yeah?"

"You're going to think this is stolen." He passed the programmer from hand to hand. "I mean because it's new, virtual cherry, and the bar code's still on it. But listen, I'm not gonna argue the point. No. I'm gonna let you have it for only like half what you'd pay anywhere else."

"Hey, wow, *really*, no kidding?" The visible fraction of mouth twisted into a strange smile. She extended her hand, palm up, a loose fist. Level with his chin. "Lookahere!"

There was a hole in her hand, a black tunnel that ran right up her arm. Two small red lights. Rat's eyes. They scurried toward him—growing, gleaming. Something gray streaked forward and leaped for his face.

He screamed, throwing hands up to ward it off. Legs twisting, he fell, the programmer shattering under him.

Silicate shards skittered as he thrashed, clutching his head. Where it hurt, it hurt—it hurt very badly indeed.

"Oh, my God!" Slides unsnapped, and the girl was hovering over him. "Here, listen, come on." She dangled a blue hand towel. "Grab on to this and I'll pull you up."

He looked at her through a wash of tears. Student. That fed look, the oversize sweatshirt, teeth so straight and white they could be used as a credit reference. A thin gold chain around one ankle (fuzzed, he saw, with baby-fine hair). Choppy Japanese haircut. Money. "That sucker was gonna be my dinner," he said ruefully. He took hold of the towel and let her pull him up.

She smiled but skittishly backed away from him. "Let me make it up to you," she said. "You want some food? It was only a projection, okay?"

He followed her in, wary as an animal entering a trap.

\* \* \*  
"HOLY SHIT," DEKE said, "this is *real cheese* . . ." He was sitting on a gutsprung sofa, wedged between a four-foot teddy bear and a loose stack of floppies. The room was ankle-deep in books and clothes and papers. But the food she magicked up—Gouda cheese and tinned beef and honest-to-God greenhouse wheat wafers—was straight out of the Arabian Nights.

"Hey," she said. "We know how to treat a prole boy right, huh?" Her name was Nance Bettendorf. She was seventeen. Both her parents had jobs—greedy buggers—and she was an engineering major at William and Mary. She got top marks except in English. "I guess you must really have a thing about rats. You got some kind of phobia about rats?"

He glanced sidelong at her bed. You couldn't see it, really; it was just a swell in the ground cover. "It's not like that. It just reminded me of something else, is all."

"Like what?" She squatted in front of him, the big shirt riding high up one smooth thigh.

"Well . . . did you ever see the—" his voice involuntarily rose and rushed past the words—"Washington Monument? Like at night? It's got these two little . . . red lights on top, aviation markers or something, and I, and I . . ." He started to shake.

"You're afraid of the Washington Monument?" Nance whooped and rolled over with laughter, long tanned legs kicking. She was wearing crimson bikini panties.

"I would die rather than look at it again," he said levelly.

She stopped laughing then, sat up, studied his face. White, even teeth worried at her lower lip, like she was dragging up something she didn't want to think about. At last she ventured, "Brainlock?"

"Yeah," he said bitterly. "They told me I'd never go back to D.C. And then the fuckers laughed."

"What did they get you for?"

"I'm a thief." He wasn't about to tell her that the actual charge was career shoplifting.

"LOTTA OLD COMPUTER hacks spent their lives programming machines. And you know what? The human brain is not a goddamn bit like a machine, no way. They just don't program the same." Deke knew this shrill, desperate rap, this long, circular jive that the lonely string out to the rare listener; knew it from a hundred cold and empty nights spent in the company of strangers. Nance was lost in it, and Deke, nodding and yawning, wondered if he'd even be able to stay awake when they finally hit that bed of hers.

"I built that projection I hit you with myself," she said, hugging her knees up beneath her chin. "It's for muggers, you know? I just happened to have it on me, and I threw it at you 'cause I thought it was so funny, you trying to sell me that shit little

Indojavanese programmer." She hunched forward and held out her hand again. "Look here." Deke cringed. "No, no, it's okay, I swear it, this is different." She opened her hand.

A single blue flame danced there, perfect and ever-changing. "Look at that," she marveled. "Just look. I programmed that. It's not some diddly little seven-image job either. It's a continuous two-hour loop, seven thousand, two hundred seconds, never the same twice, each instant as individual as a fucking snowflake!"

The flame's core was glacial crystal, shards and facets flashing up, twisting and gone, leaving behind near-subliminal images so bright and sharp that they cut the eye. Deke winced. People mostly. Pretty little naked people, fucking. "How the hell did you do that?"

She rose, bare feet slipping on slick magazines, and melodramatically swept folds of loose printout from a raw plywood shelf. He saw a neat row of small consoles, austere and expensive-looking. Custom work. "This is the real stuff I got here. Image facilitator. Here's my fast-wipe module. This is a brainmap one-to-one function analyzer." She sang off the names like a litany. "Quantum flicker stabilizer. Program splicer. An image assembler . . ."

"You need all that to make one little flame?"

"You betcha. This is all state of the art, professional projective wetware gear. It's years ahead of anything you've seen."

"Hey," he said, "you know anything about SPADS & FOKKERS?"

She laughed. And then, because he sensed the time was right, he reached out to take her hand.

"Don't you touch me, motherfuck, don't you *ever touch me!*" Nance screamed, and her head slammed against the wall as she recoiled, white and shaking with terror. "Okay!" He threw up his hands. "Okay! I'm nowhere near you. Okay?"

She cowered from him. Her eyes were round and unblinking; tears built up at the corners, rolled down ashen cheeks. Finally, she shook her head. "Hey, Deke. Sorry. I should've told you."

"Told me what?" But he had a creepy feeling . . . already knew. The way she clutched her head. The weakly spasmodic way her hands opened and closed. "You got a brainlock, too."

"Yeah." She closed her eyes. "It's a chastity lock. My asshole parents paid for it. So I can't stand to have anybody touch me or even stand too close." Eyes opened in blind hate. "I didn't even *do* anything. Not a fucking thing. But they've both got jobs and they're so horny for me to have a career that they can't piss straight. They're afraid I'd neglect my studies if I got, you know, involved in sex and stuff. The day the brainlock comes off I am going to fuck the vilest, greasiest, hairiest . . ."

She was clutching her head again. Deke jumped up and rummaged through the medicine cabinet. He found a jar of B-complex vitamins, pocketed a few against need,



and brought two to Nance, with a glass of water. "Here." He was careful to keep his distance. "This'll take the edge off."

"Yeah, yeah," she said. Then, almost to herself, "You must really think I'm a jerk."

THE GAMES ROOM in the Greyhound station was almost empty. A lone, long-jawed fourteen-year-old was bent over a console, maneuvering rainbow fleets of submarines in the murky grid of the North Atlantic.

Deke sauntered in, wearing his new kicker drag, and leaned against a cinder-block wall made smooth by countless coats of green enamel. He'd washed the dye from his proleboy butch, boosted jeans and T-shirt from the Goodwill, and found a pair of stompers in the sauna locker of a highstack with cutrate security.

"Seen Tiny around, friend?"

The subs darted like neon guppies. "Depends on who's asking."

Deke touched the remote behind his left ear. The Spad snap-rolled over the console, swift and delicate as a dragonfly. It was beautiful, so perfect, so *true* it made the room seem an illusion. He buzzed the grid, millimeters from the glass, taking advantage of the programmed ground effect.

The kid didn't even bother to look up. "Jackman's," he said. "Down Richmond Road, over by the surplus."

Deke let the Spad fade in midclimb.

Jackman's took up most of the third floor of an old brick building. Deke found Best Buy War Surplus first, then a broken neon sign over an unlit lobby. The sidewalk out front was littered with another kind of surplus—damaged vets, some of them dating back to Indochina. Old men who'd left their eyes under Asian suns squatted beside twitching boys who'd inhaled mycotoxins in Chile. Deke was glad to have the battered elevator doors sigh shut behind him.

A dusty Dr. Pepper clock at the far side of the long, spectral room told him it was a quarter to eight. Jackman's had been embalmed twenty years before he was born, sealed away behind a yellowish film of nicotine, of polish and hair oil. Directly beneath the clock, the flat eyes of somebody's grandpappy's prize buck regarded Deke from a framed, blown-up snapshot gone the slick sepia of cockroach wings. There was the click and whisper of pool, the squeak of a work boot twisting on linoleum as a player leaned in for a shot. Somewhere high above the green-shaded lamps hung a string of crepe-paper Christmas bells faded to dead rose. Deke looked from one cluttered wall to the next. No facilitator.

"Bring one in, should we need it," someone said. He turned, meeting the mild eyes of a bald man with steel-rimmed glasses. "My name's Cline. Bobby Earl. You don't look like you shoot pool, mister." But there was nothing threatening in Bobby Earl's voice or stance. He pinched the steel frames from his nose and polished the

thick lenses with a fold of tissue. He reminded Deke of a shop instructor who'd patiently tried to teach him retrograde biochip installation. "I'm a gambler," he said, smiling. His teeth were white plastic. "I know I don't much look it."

"I'm looking for Tiny," Deke said.

"Well," replacing the glasses, "you're not going to find him. He's gone up to Bethesda to let the V.A. clean his plumbing for him. He wouldn't fly against you any how."

"Why not?"

"Well, because you're not on the circuit or I'd know your face. You any good?" When Deke nodded, Bobby Earl called down the length of Jackman's, "Yo, Clarence! You bring out that facilitator. We got us a flyboy."

Twenty minutes later, having lost his remote and what cash he had left, Deke was striding past the broken soldiers of Best Buy.

"Now you let me tell you, boy," Bobby Earl had said in a fatherly tone as, hand on shoulder, he led Deke back to the elevator. "You're not going to win against a combat vet—you listening to me? I'm not even especially good, just an old grunt who was on hype fifteen, maybe twenty times. Ol' Tiny, he was a *pilot*. Spent his entire enlistment hyped to the gills. He's got membrane attenuation real bad . . . you ain't never going to beat him."

It was a cool night. But Deke burned with anger and humiliation.

"JESUS, THAT'S CRUDE," Nance said as the Spad strafed mounds of pink underwear. Deke, hunched up on the couch, yanked her flashy little Braun remote from behind his ear.

"Now don't you get on my case too, Miss rich-bitch gonna-have-a-job—"

"Hey, lighten up! It's nothing to do with you—it's just *tech*. That's a really primitive wafer you got there. I mean, on the street maybe it's fine. But compared to the work I do at school, it's—hey. You ought to let me rewrite it for you."

"Say what?"

"Lemme beef it up. These suckers are all written in hexadecimal, see, 'cause the industry programmers are all washed-out computer hacks. That's how they think. But let me take it to the reader-analyzer at the department, run a few changes on it, translate it into a modern wetlanguage. Edit out all the redundant intermediaries. That'll goose up your reaction time, cut the feedback loop in half. So you'll fly faster and better. Turn you into a real pro, Ace!" She took a hit off her bong, then doubled over laughing and choking.

"Is that legit?" Deke asked dubiously.

"Hey, why do you think people buy gold-wire remotes? For the prestige? Shit. Conductivity's better, cuts a few nanoseconds off the reaction time. And reaction time is the name of the game, kiddo."

"No," Deke said. "If it were that easy, people'd already have it. Tiny Montgomery would have it. He'd have the best."

"Don't you ever *listen*?" Nance set down the bong; brown water slopped onto the floor. "The stuff I'm working with is three years ahead of anything you'll find on the street."

"No shit," Deke said after a long pause. "I mean, you can do that?"

IT WAS LIKE graduating from a Model T to a ninety-three Lotus. The Spad handled like a dream, responsive to Deke's slightest thought. For weeks he played the arcades, with not a nibble. He flew against the local teens and by ones and threes shot down their planes. He took chances, played flash. And the planes tumbled. . . .

Until one day Deke was tucking his seed money away, and a lanky black straightened up from the wall. He eyed the laminateds in Deke's hand and grinned. A ruby tooth gleamed. "You know," the man said, "I *heard* there was a casper who could fly, going up against the kiddies."

"Jesus," DEKE SAID, spreading Danish butter on a kelp stick. "I wiped the *floor* with those spades. They were good, too."

"That's nice, honey," Nance mumbled. She was working on her finals project; sweating data into a machine.

"You know, I think what's happening is I got real talent for this kind of shit. You know? I mean, the program gives me an edge, but I got the stuff to take advantage of it. I'm really getting a rep out there, you know?" Impulsively, he snapped on the radio. Scratchy Dixieland brass blared.

"Hey," Nance said. "Do you *mind*?"

"No, I'm just—" He fiddled with the knobs, came up with some slow, romantic bullshit. "There. Come on, stand up. Let's dance."

"Hey, you know I can't—"

"Sure you can, sugarcakes." He threw her the huge teddy bear and snatched up a patchwork cotton dress from the floor. He held it by the waist and sleeve, tucking the collar under his chin. It smelled of patchouli, more faintly of sweat. "See, I stand over here, you stand over there. We dance. Get it?"

Blinking softly, Nance stood and clutched the bear tightly. They danced then, slowly, staring into each other's eyes. After a while, she began to cry. But still, she was smiling.

DEKE WAS DAYDREAMING, imagining he was Tiny Montgomery wired into his jumpjet. Imagined the machine responding to his slightest neural twitch, reflexes cranked *way* up, hype flowing steadily into his veins.

Nance's floor became jungle, her bed a plateau in the Andean foothills, and Deke

flew his Spad at forced speed, as if it were a full-wired interactive combat machine. Computerized hypos fed a slow trickle of high-performance enhancement mélange into his bloodstream. Sensors were wired directly into his skull—pulling a supersonic snapturn in the green-blue bowl of sky over Bolivian rain forest. Tiny would have *felt* the airflow over control surfaces.

Below, grunts hacked through the jungle with hype-pumps strapped above elbows to give them that little extra death-dance fury in combat, a shot of liquid hell in a blue plastic vial. Maybe they got ten minutes' worth in a week. But coming in at treetop level, reflexes cranked to the max, flying so low the ground troops never spotted you until you were on them, phosgene agents released, away and gone before they could draw a bead. . . . it took a constant trickle of hype just to maintain. And the direct neuron interface with the jumpjet was a two-way street. The onboard computers monitored biochemistry and decided when to open the sluice gates and give the human component a killer jolt of combat edge.

Dosages like that ate you up. Ate you good and slow and constant, etching the brain surfaces, eroding away the brain-cell membranes. If you weren't yanked from the air promptly enough, you ended up with brain-cell attenuation—with reflexes too fast for your body to handle and your fight-or-flight reflexes fucked real good. . . .

"I aced it, proleboy!"

"Hah?" Deke looked up, startled, as Nance slammed in, tossing books and bag onto the nearest heap.

"My finals project—I got exempted from exams. The prof said he'd never seen anything like it. Uh, hey, dim the lights, wouldja? The colors are weird on my eyes." He obliged. "So show me. Show me this wunnerful thing."

"Yeah, okay." She snatched up his remote, kicked clear standing space atop the bed, and struck a pose. A spark flared into flame in her hand. It spread in a quicksilver line up her arm, around her neck, and it was a snake, with triangular head and flickering tongue. Molten colors, oranges and reds. It slithered between her breasts. "I call it a firesnake," she said proudly.

Deke leaned close, and she jerked back.

"Sorry. It's like your flame, huh? I mean, I can see these tiny little fuckers in it."

"Sort of." The firesnake flowed down her stomach. "Next month I'm going to splice two hundred separate flame programs together with meld justification in between to get the visuals. Then I'll tap the mind's body image to make it self-orienting. So it can crawl all over your body without your having to mind it. You could wear it dancing."

"Maybe I'm dumb. But if you haven't done the work yet, how come I can see it?"

Nance giggled. "That's the best part—half the work isn't done yet. Didn't have the time to assemble the pieces into a unified program. Turn on that radio, huh? I

want to dance." She kicked off her shoes. Deke tuned in something gutsy. Then, at Nance's urging, turned it down, almost to a whisper.

"I scored two hits of hype, see." She was bouncing on the bed, weaving her hands like a Balinese dancer. "Ever try the stuff? In-credible. Gives you like absolute concentration. Look here." She stood *en pointe*. "Never done that before."

"Hype," Deke said. "Last person I heard of got caught with that shit got three years in the infantry. How'd you score it?"

"Cut a deal with a vet who was in grad school. She bombed out last month. Stuff gives me perfect visualization. I can hold the projection with my eyes shut. It was a snap assembling the program in my head."

"On just two hits, huh?"

"One hit. I'm saving the other. Teach was so impressed he's sponsoring me for a job interview. A recruiter from I. G. Feuchtwaren hits campus in two weeks. That cap is gonna sell him the program *and* me. I'm gonna cut out of school two years early, straight into industry, do not pass jail, do not pay two hundred dollars."

The snake curled into a flaming tiara. It gave Deke a funny-creepy feeling to think of Nance walking out of his life.

"I'm a witch," Nance sang, "a wetware witch." She shucked her shirt over her head and sent it flying. Her fine, high breasts moved freely, gracefully, as she danced. "I'm gonna make it"—now she was singing a current pop hit—"to the . . . top!" Her nipples were small and pink and aroused. The firesnake licked at them and whipped away.

"Hey, Nance," Deke said uncomfortably. "Calm down a little, huh?"

"I'm celebrating!" She hooked a thumb into her shiny gold panties. Fire swirled around hand and crotch. "I'm the virgin goddess, baby, and I have the pow-er! Singing again."

Deke looked away. "Gotta go now," he mumbled. Gotta go home and jerk off. He wondered where she'd hidden that second hit. Could be anywhere.

THERE WAS A protocol to the circuit, a tacit order of deference and precedence as elaborate as that of a Mandarin court. It didn't matter that Deke was hot, that his rep was spreading like wildfire. Even a name flyboy couldn't just challenge whom he wished. He had to climb the ranks. But if you flew every night. If you were always available to anybody's challenge. And if you were good . . . well, it was possible to climb fast.

Deke was one plane up. It was tournament fighting, three planes against three. Not many spectators, a dozen maybe, but it was a good fight, and they were noisy. Deke was immersed in the manic calm of combat when he realized suddenly that they had fallen silent. Saw the kickers stir and exchange glances. Eyes flicked past him. He

heard the elevator doors close. Coolly, he disposed of the second of his opponent's planes, then risked a quick glance over his shoulder.

Tiny Montgomery had just entered Jackman's. The wheelchair whispered across browning linoleum, guided by tiny twitches of one imperfectly paralyzed hand. His expression was stern, blank, calm.

In that instant, Deke lost two planes. One to deresolution—gone to blur and canceled out by the facilitator—and the other because his opponent was a real fighter. Guy did a barrel roll, killing speed and slipping to the side, and strafed Deke's biplane as it shot past. It went down in flames. Their last two planes shared altitude and speed, and as they turned, trying for position, they naturally fell into a circling pattern.

The kickers made room as Tiny wheeled up against the table. Bobby Earl Cline trailed after him, lanky and casual. Deke and his opponent traded glances and pulled their machines back from the pool table so they could hear the man out. Tiny smiled. His features were small, clustered in the center of his pale, doughy face. One finger twitched slightly on the chrome handrest. "I heard about you." He looked straight at Deke. His voice was soft and shockingly sweet, a baby-girl little voice. "I heard you're good."

Deke nodded slowly. The smile left Tiny's face. His soft, fleshy lips relaxed into a natural pout, as if he were waiting for a kiss. His small, bright eyes studied Deke without malice. "Let's see what you can do, then."

Deke lost himself in the cool game of war. And when the enemy went down in smoke and flame, to explode and vanish against the table, Tiny wordlessly turned his chair, wheeled it into the elevator, and was gone.

As Deke was gathering up his winnings, Bobby Earl eased up to him and said, "The man wants to play you."

"Yeah?" Deke was nowhere near high enough on the circuit to challenge Tiny. "What's the scam?"

"Man who was coming up from Atlanta tomorrow canceled. Ol' Tiny, he was spoiling to go up against somebody new. So it looks like you get your shot at the Max."

"Tomorrow? Wednesday? Doesn't give me much prep time."

Bobby Earl smiled gently. "I don't think that makes no nevermind."

"How's that, Mr. Cline?"

"Boy, you just ain't got the *moves*, you follow me? Ain't got no surprises. You fly just like some kinda beginner, only faster and slicker. You follow what I'm trying to say?"

"I'm not sure I do. You want to put a little action on that?"

"Tell you truthful," Cline said, "I been hoping on that." He drew a small black notebook from his pocket and licked a pencil stub. "Give you five to one. They's nobody gonna give no fairer odds than that."

He looked at Deke almost sadly. "But Tiny, he's just naturally better'n you, and that's all she wrote, boy. He lives for that goddamned game, ain't got nothing else. Can't get out of that goddamned chair. You think you can best a man who's fighting for his life, you are just lying to yourself."

NORMAN ROCKWELL'S PORTRAIT of the colonel regarded Deke dispassionately from the Kentucky Fried across Richmond Road from the coffee bar. Deke held his cup with hands that were cold and trembling. His skull hummed with fatigue. Cline was right, he told the colonel. I can go up against Tiny, but I can't win. The colonel stared back, gaze calm and level and not particularly kindly, taking in the coffee bar and Best Buy and all his drag-ass kingdom of Richmond Road. Waiting for Deke to admit to the terrible thing he had to do.

"The bitch is planning to leave me *anyway*," Deke said aloud. Which made the black counter girl look at him funny, then quickly away.

"DADDY CALLED!" NANCE danced into the apartment, slamming the door behind her. "And you know what? He says if I can get this job and hold it for six months, he'll have the brainlock reversed. Can you *believe* it? Deke?" She hesitated. "You okay?"

Deke stood. Now that the moment was on him, he felt unreal, like he was in a movie or something. "How come you never came home last night?" Nance asked. The skin on his face was unnaturally taut, a parchment mask. "Where'd you stash the hype, Nance? I need it."

"Deke," she said, trying a tentative smile that instantly vanished. "Deke, that's mine. My hit. I need it. For my interview."

He smiled scornfully. "You got money. You can always score another cap."  
"Not by Friday! Listen, Deke, this is really important. My whole life is riding on this interview. I need that cap. It's all I got!"

"Baby, you got the fucking world! Take a look around you—six ounces of blond Lebanese hash! Little anchovy fish in tins. Unlimited medical coverage, if you need it." She was backing away from him, stumbling against the static waves of unwashed bedding and wrinkled glossy magazines that crested at the foot of her bed. "Mc, I never had a glimmer of any of this. Never had the kind of edge it takes to get along. Well, this one time I am gonna. There is a match in two hours that I am going to fucking well win. Do you hear me?" He was working himself into a rage, and that was good. He needed it for what he had to do.

Nance flung up an arm, palm open, but he was ready for that and slapped her hand aside, never even catching a glimpse of the dark tunnel, let alone those little red eyes. Then they were both falling, and he was on top of her, her breath hot and rapid in his face. "Deke! Deke! I need that shit, Deke, my *interview*, it's the only ...

I gotta . . . gotta . . ." She twisted her face away . . . crying into the wall. "Please, God, please don't . . ."

"Where did you stash it?"

Pinned against the bed under his body, Nance began to spasm, her entire body convulsing in pain and fear.

"Where is it?"

Her face was bloodless, gray corpse flesh, and horror burned in her eyes. Her lips squirmed. It was too late to stop now; he'd crossed over the line. Deke felt revolted and nauseated, all the more so because on some unexpected and unwelcome level, he was *enjoying* this.

"Where is it, Nance?" And slowly, very gently, he began to stroke her face.

DEKE SUMMONED JACKMAN'S elevator with a finger that moved as fast and straight as a hornet and landed daintily as a butterfly on the call button. He was full of bouncy energy, and it was all under control. On the way up, he whipped off his shades and chuckled at his reflection in the finger-smudged chrome. The blacks of his eyes were like pinpricks, all but invisible, and still the world was neon bright.

Tiny was waiting. The cripple's mouth turned up at the corners into a sweet smile as he took in Deke's irises, the exaggerated calm of his motions, the unsuccessful attempt to mime an undrugged clumsiness. "Well," he said in that girlish voice, "looks like I have a treat in store for me."

The Max was draped over one tube of the wheelchair. Deke took up position and bowed, not quite mockingly. "Let's fly." As challenger, he flew defense. He materialized his planes at a conservative altitude, high enough to dive, low enough to have warning when Tiny attacked. He waited.

The crowd tipped him. A fatboy with brilliantined hair looked startled, a hollow-eyed cracker started to smile. Murmurs rose. Eyes shifted slow-motion in heads frozen by hyped-up reaction time. Took maybe three nanoseconds to pinpoint the source of attack. Deke whipped his head up, and—

Sonofabitch, he was *blind*! The Fokkers were diving straight from the two-hundred-watt bulb, and Tiny had suckered him into staring right at it. His vision whited out. Deke squeezed lids tight over welling tears and frantically held visualization. He split his flight, curving two biplanes right, one left. Immediately twisting each a half-turn, then back again. He had to dodge randomly—he couldn't tell where the hostile warbirds were.

Tiny chuckled. Deke could hear him through the sounds of the crowd, the cheering and cursing and slapping down of coins that seemed to syncopate independent of the ebb and flow of the duel.

When his vision returned an instant later, a Spad was in flames and falling.

Fokkers tailed his surviving planes, one on one and two on the other. Three seconds into the game and he was down one.

Dodging to keep Tiny from pinning tracers on him, he looped the single-pursued plane about and drove the other toward the blind spot between Tiny and the light bulb.

Tiny's expression went very calm. The faintest shadow of disappointment—of contempt, even—was swallowed up by tranquility. He tracked the planes blandly, waiting for Deke to make his turn.

Then, just short of the blind spot, Deke shoved his Spad into a drive, the Fokkers overshooting and banking wildly to either side, twisting around to regain position.

The Spad swooped down on the third Fokker, pulled into position by Deke's other plane. Fire strafed wings and crimson fuselage. For an instant nothing happened and Deke thought he had a fluke miss. Then the little red mother veered left and went down, trailing black, oily smoke.

Tiny frowned, small lines of displeasure marring the perfection of his mouth. Deke smiled. One even, and Tiny held position.

Both Spads were tailed closely. Deke swung them wide, and then pulled them together from opposite sides of the table. He drove them straight for each other, neutralizing Tiny's advantage . . . neither could fire without endangering his own planes. Deke cranked his machines up to top speed, slamming them at each other's nose.

An instant before they crashed, Deke sent the planes over and under one another, opening fire on the Fokkers and twisting away. Tiny was ready. Fire filled the air. Then one blue and one red plane soared free, heading in opposite directions. Behind them, two biplanes tangled in midair. Wings touched, slewed about, and the planes crumpled. They fell together, almost straight down, to the green felt below.

Ten seconds in and four planes down. A black vet pursed his lips and blew softly. Someone else shook his head in disbelief.

Tiny was sitting straight and a little forward in his wheelchair, eyes intense and unblinking, soft hands plucking feebly at the grips. None of that amused and detached bullshit now; his attention was riveted on the game. The kickers, the table, Jackman's itself, might not exist at all for him. Bobby Earl Cline laid a hand on his shoulder. Tiny didn't notice. The planes were at opposite ends of the room, laboriously gaining altitude. Deke jammed his against the ceiling, dim through the smoky haze. He spared Tiny a quick glance, and their eyes locked. Cold against cold. "Let's see your best." Deke muttered through clenched teeth.

They drove their planes together.

The hype was peaking now, and Deke could see Tiny's tracers crawling through the air between the planes. He had to put his Spad into the line of fire to get off a fair burst, then twist and bank so the Fokker's bullets would slip by his undercarriage

Tiny was every bit as hot, dodging Deke's fire and passing so close to the Spad their landing gears almost tangled as they passed.

Deke was looping his Spad in a punishingly tight turn when the hallucinations hit. The felt writhed and twisted—became the green hell of Bolivian rain forest that Tiny had flown combat over. The walls receded to gray infinity, and he felt the metal confinement of a cybernetic jumpjet close in around him.

But Deke had done his homework. He was expecting the hallucinations and knew he could deal with them. The military would never pass on a drug that couldn't be fought through. Spad and Fokker looped into another pass. He could read the tensions in Tiny Montgomery's face, the echoes of combat in deep jungle sky. They drove their planes together, feeling the torqued tensions that fed straight from instrumentation to hindbrain, the adrenaline pumps kicking in behind the armpits, the cold, fast freedom of airflow over jetskin mingling with the smells of hot metal and fear sweat. Tracers tore past his face, and he pulled back, seeing the Spad zoom by the Fokker again, both untouched. The kickers were just going ape, waving hats and stomping feet, acting like God's own fools. Deke locked glances with Tiny again.

Malice rose up in him, and though his every nerve was taut as the carbon-crystal whiskers that kept the jumpjets from falling apart in superman turns over the Andes, he counterfeited a casual smile and winked, jerking his head slightly to one side, as if to say "Looka here."

Tiny glanced to the side.

It was only for a fraction of a second, but that was enough. Deke pulled as fast and tight an Immelmann—right on the edge of theoretical tolerance—as had ever been seen on the circuit, and he was hanging on Tiny's tail.

*Let's see you get out of this one, sucker.*

Tiny rammed his plane straight down at the green, and Deke followed after. He held his fire. He had Tiny where he wanted him.

Running. Just like he'd been on his every combat mission. High on exhilaration and hype, maybe, but running scared. They were down to the felt now, flying treetop-level. Break, Deke thought, and jacked up the speed. Peripherally, he could see Bobby Earl Cline, and there was a funny look on the man's face. A pleading kind of look. Tiny's composure was shot; his face was twisted and tormented.

Now Tiny panicked and dove his plane in among the crowd. The biplanes looped and twisted between the kickers. Some jerked back involuntarily, and others laughingly swatted at them with their hands. But there was a hot glint of terror in Tiny's eyes that spoke of an eternity of fear and confinement, two edges sawing away at each other endlessly. . . .

The fear was death in the air, the confinement a locking away in metal, first of the aircraft, then of the chair. Deke could read it all in his face: Combat was the only out Tiny had had, and he'd taken it every chance he got. Until some anonymous

*nationalista* with an antique SAM tore him out of that blue-green Bolivian sky and slammed him straight down to Richmond Road and Jackman's and the smiling killer boy he faced this one last time across the faded cloth.

Deke rocked up on his toes, face burning with that million-dollar smile that was the trademark of the drug that had already fried Tiny before anyone ever bothered to blow him out of the sky in a hot tangle of metal and mangled flesh. It all came together then. He saw that flying was all that held Tiny together. That daily brush of fingertips against death, and then rising up from the metal coffin, alive again. He'd been holding back collapse by sheer force of will. Break that willpower, and mortality would come pouring out and drown him. Tiny would lean over and throw up in his own lap.

AND DEKE DROVE it home. . . .

There was a moment of stunned silence as Tiny's last plane vanished in a flash of light. "I did it," Deke whispered. Then, louder, "Son of a bitch, I did it!"

Across the table from him, Tiny twisted in his chair, arms jerking spastically; his head lolled over on one shoulder. Behind him, Bobby Earl Cline stared straight at Deke, his eyes hot coals.

The gambler snatched up the Max and wrapped its ribbon around a stack of laminateds. Without warning, he flung the bundle at Deke's face. Effortlessly, casually, Deke plucked it from the air.

For an instant, then, it looked like the gambler would come at him, right across the pool table. He was stopped by a tug on his sleeve. "Bobby Earl," Tiny whispered, his voice choking with humiliation, "you gotta get me . . . out of here. . . ."

Stiffly, angrily, Cline wheeled his friend around, and then away, into shadow.

Deke threw back his head and laughed. By God, he felt good! He stuffed the Max into a shirt pocket, where it hung cold and heavy. The money he crammed into his jeans. Man, he had to jump with it, his triumph leaping up through him like a wild thing, fine and strong as the flanks of a buck in the deep woods he'd seen from a Greyhound once, and for this one moment it seemed that everything was worth it somehow, all the pain and misery he'd gone through to finally win.

But Jackman's was silent. Nobody cheered. Nobody crowded around to congratulate him. He sobered, and silent, hostile faces swam into focus. Not one of these kickers was on his side. They radiated contempt, even hatred. For an interminably drawn-out moment the air trembled with potential violence . . . and then someone turned to the side, hawked up phlegm, and spat on the floor. The crowd broke up, muttering, one by one drifting into the darkness.

Deke didn't move. A muscle in one leg began to twitch, harbinger of the coming hype crash. The top of his head felt numb, and there was an awful taste in his mouth. For a second he had to hang on to the table with both hands to keep from falling

down forever, into the living shadow beneath him, as he hung impaled by the prize buck's dead eyes in the photo under the Dr. Pepper clock.

A little adrenaline would pull him out of this. He needed to celebrate. To get drunk or stoned and talk it up, going over the victory time and again, contradicting himself, making up details, laughing and bragging. A starry old night like this called for big talk.

But standing there with all of Jackman's silent and vast and empty around him, he realized suddenly that he had nobody left to tell it to.  
Nobody at all.

“Don’t touch me all the time,” she said. He sank onto the bed and watched her. She sat on the floor to fasten her boots.

“Are you going out, Hesper?” he asked and she laughed.

“Hesper is out,” she said. “Hesper is out of place, out of time, out of luck, and out of her mind. Hesper has vanished completely. Hesper was broken into and taken.”

Taki fastened his hands tightly together. “Please don’t do this to me, Hesper,” he pleaded. “It’s really so unfair. When did I ask so much of you? I took what you offered me; I never took anything else. Please don’t do this.”

Hesper had found the brush and was pulling it roughly through her hair. He rose and went to her, grabbing her by the arms, trying to turn her to face him. “Please, Hesper!”

She shook loose from him without really appearing to notice his hands, continued to work through the worst of her tangles. When she did turn around, her face was familiar, but somehow not Hesper’s face. It was a face which startled him.

“Hesper is gone,” it said. “We have her. You’ve lost her. We are ready to talk to you. Even though you will never, never, never understand.” She reached out to touch him, laying her open palm against his cheek and leaving it there.

## C. J. CHERRYH

### Pots

C. J. Cherryh is the creator of the encompassing Union-Alliance future-history series, which chronicles the interplay of intergalactic commerce and politics several millennia hence. It includes, among other works, the Hugo Award-winning novels *Downbelow Station* and *Cyteen*, memorable for its study of human nature through the creation of clones with programmed memories. Praised for its inventive extrapolations of clinical and social science and deft blends of technology and human interest, the series enfolds a number of celebrated subseries, including her Faded Sun trilogy (*Kesrith*, *Shon’jir*, *Kutath*). Her Chanur cycle (*The Pride of Chanur*, *Chanur’s Venture*, *The Kif Strikes Back*, *Chanur’s Homecoming*, *Chanur’s Legacy*), also part of the series, tells of a race of sentient leonine creatures and is notable for its alien viewpoint and illuminating perspectives on the human race rendered from outside it. Much of Cherryh’s fiction is concerned with the impact of environment—family, politics, culture—on the values and ideologies of the individual. In *Cuckoo’s Egg* she rings a variation on the Tarzan theme, imaging a human child raised to maturity by a race of intelligent felines. *Heavy Time* contrasts the personalities of its two protagonists, one raised in a nurturing human environment, the other stunted socially by an upbringing deformed by manipulative corporate interests. Her recent quartet of novels formed by *Foreigner*, *Invader*, *Inheritor*, and *Precursor* has been praised for its sensitive documentation of the cultural and racial differences a human colony must overcome in forming a fragile alliance with the planet’s alien inhabitants. *The Gene Wars* is a blend of epic quest fantasy and hard science fiction, set in a future when nanotechnology is used as a weapon. Cherryh has also authored the four-volume Morgaine heroic fantasy series and the epic Galistien sword-and-sorcery trilogy, which includes *Fortress in the Eye of Time*, *Fortress of Eagles*, and *Fortress of Owls*. She is the creator of the *Merovingian Nights* shared-world series and cocreator of the multivolume *Heroes in Hell* shared-world compilations.

IT WAS A most bitter trip, the shuttle-descent to the windy surface. Suited, encumbered by lifesupport, Desan stepped off the platform and waddled onward into the world,

waving off the attentions of small spidery service robots: "Citizen, this way, this way, citizen, have a care—do watch your step; a suit tear is hazardous."

Low-level servitors. Desan detested them. The chief of operations had plainly sent these creatures accompanied only by an AI eight-wheel transport, which inconveniently chose to park itself a good five hundred paces beyond the shuttle blast zone—an uncomfortably long walk across the dusty pan in the crinkling, pack-encumbered oxy-suit. Desan turned, casting a forlorn glance at the shuttle waiting there on its landing gear, silver, dip-nosed wedge under a gunmetal sky, at rest on an ochre and rust landscape. He shivered in the sky-view, surrendered himself and his meager luggage to the irritating ministries of the service robots, and waddled on his slow way down to the waiting AI transport.

"Good day," the vehicle said inanely, opening a door. "My passenger compartment is not safe atmosphere; do you understand, Lord Desan?"

"Yes, yes." Desan climbed in and settled himself in the front seat, a slight give of the transport's suspensors. The robots fussed about in insectile hesitance, delicately setting his luggage case just so, adjusting, adjusting until it conformed with their robotic, template-compared notion of their job. Maddening. Typical robotic efficiency. Desan slapped the pressure-sensitive seating. "Come, let's get this moving, shall we?"

The AI talked to its duller cousins, a single squeal that sent them scuttling. "Attention to the door, citizen." It lowered and locked. The AI started its noisy drive motor. "Will you want the windows dimmed, citizen?"

"No. I want to see this place."

"A pleasure, Lord Desan."

Doubtless for the AI, it was.

THE STATION WAS situated a long drive across the pan, across increasingly softer dust that rolled up to obscure the rearview—softer, looser dust, occasionally a wind-scooped hollow that made the transport flex—"Do forgive me, citizen. Are you comfortable?")

"Quite, quite, you're very good."

"Thank you, citizen."

And finally—*finally!*—something other than flat appeared, the merest humps of hills, and one anomalous mountain, a massive, long bar that began as a haze and became solid; became a smooth regularity before the gentle brown folding of hills hardly worthy of the name.

Mountain. The eye indeed took it for a volcanic or sedimentary formation at distance, some anomalous and stubborn outcrop in this barren reach, where all else had declined to entropy; absolute, featureless, flat. But when the AI passed along its side this mountain had joints and seams, had the marks of *making* on it; and even

knowing in advance what it was, driving along within view of the jointing, this work of Ancient hands—chilled Desan's well-traveled soul. The station itself came into view against the weathered hills, a collection of shocking green domes on a brown lifeless world. But such domes Desan had seen. With only the AI for witness, Desan turned in his seat, pressed the flexible bubble of the helmet to the double-seal window, and stared and stared at the stonework until it passed to the rear and the dust obscured it.

"Here, Lord," said the AI, eternally cheerful. "We are almost at the station—a little climb. I do it very smoothly."

Flex and lean; sway and turn. The domes lurched closer in the forward window and the motor whined. "I've very much enjoyed serving you."

"Thank you," Desan murmured, seeing another walk before him, ascent of a plastic grid to an airlock and no sight of a welcoming committee.

More service robots, scuttling toward them as the transport stopped and adjusted itself with a pneumatic wheeze.

"Thank you, Lord Desan, do watch your helmet, watch your lifesupport connections, watch your footing please. The dust is slick. . . ."

"Thank you." With an AI one had no recourse.

"Thank you, my lord." The door came up; Desan extricated himself from the seat and stepped to the dusty ground, carefully shielding the oxy-pack from the doorframe and panting with the unaccustomed weight of it in such gravity. The service robots moved to take his luggage while Desan waddled doggedly on, up the plastic gridwork path to the glaringly lime-green domes. Plastics that could not even originate in this desolation, but which came from their ships' spare biomass. Here all was dead, frighteningly void: Even the signal that guided him to the lakebed was robotic, like the advertisement that a transport would meet him.

The airlock door shot open ahead; and living, suited personnel appeared, three of them, at last, at long last, flesh-and-blood personnel came walking toward him to offer proper courtesy. But before that mountain of stone, before these glaring green structures and the robotic paraphernalia of research that made all the reports real—Desan still felt the deathliness of the place. He trudged ahead, touched the offered, gloved hands, acknowledged the expected salutations, and proceeded up the jointed-plastic walk to the open airlock. His marrow refused to be warmed. The place refused to come into clear focus, like some bad dream with familiar elements hideously distorted.

A hundred years of voyage since he had last seen this world and then only from orbit, receiving reports thirdhand. A hundred years of work on this planet preceded this small trip from port to research center, under that threatening sky, in this place by a mountain that had once been a dam on a lake that no longer existed.

There had been the findings of the moon, of course. A few artifacts. A cloth of



symbols. Primitive, unthinkable primitive. First omen of the findings of this sere, rust brown world.

He accompanied the welcoming committee into the airlock of the main dome waited through the cycle, and breathed a sigh of relief as the indicator lights went from white to orange and the inner door admitted them to the interior. He walked forward, removed the helmet and drew a deep breath of air unexpectedly and unpleasantly tainted. The foyer of this centermost dome was businesslike—plastic walls, visible ducting. A few plants struggled for life in a planter in the center of the floor. Before it, a black pillar and a common enough emblem: a plaque with two naked alien figures, the diagrams of a star system—reproduced even to its scars and pitting. In some places it might be mundane, unnoticed.

It belonged here, *belonged* here, and it could never be mundane, this message of the Ancients.

“Lord Desan,” a female voice said, and he turned, awkward in the suit.

It was Dr. Gothon herself, unmistakable aged woman in science blues. The rare honor dazed him, and wiped away all failure of hospitality thus far. She held out her hand. Startled, he reacted in kind, remembered the glove, and hastily drew back his hand to strip the glove. Her gesture was gracious and he felt the very fool and very much off his stride, his hand touching—no, firmly grasped by the callused, aged hand of the legendary intellect. Age-soft and hard-surfaced at once. Age and vigor. His tongue quite failed him, and he felt, recalling his purpose, utterly daunted.

“Come in, let them rid you of that suit, Lord Desan. Will you rest after your trip, a nap, a cup of tea, perhaps. The robots are taking your luggage to your room. Accommodations here aren’t luxurious, but I think you’ll find them comfortable.”

Deeper and deeper into courtesies. One could lose all sense of direction in such surroundings, letting oneself be disarmed by gentleness, by pleasantness—by embarrassed reluctance to resist.

“I want to see what I came to see, doctor.” Desan unfastened more seams and shed the suit into waiting hands, smoothed his coveralls. Was that too brusque, too unforgivably hasty? “I don’t think I *could* rest, Dr. Gothon. I attended my comfort aboard the shuttle. I’d like to get my bearings here at least, if one of your staff would be so kind to take me in hand—”

“Of course, of course. I rather expected as much—do come, please, let me show you about. I’ll explain as much as I can. Perhaps I can convince you as I go.”

He was overwhelmed from the start; he had expected *some* high official, the director of operations most likely, not Gothon. He walked slightly after the doctor, the stoop-shouldered presence that passed like a benison among the students and lesser staff—I *saw the Doctor*, the young ones had been wont to say in hushed tones, aboard the ship, when Gothon strayed absently down a corridor in her rare intervals of waking. I *saw the Doctor*.

In that voice one might claim a theophany.

They had rarely walked her, lesser researchers being sufficient for most worlds; while he was the fifth lord-navigator, the fourth born on the journey, a time-dilated trifle, fifty-two waking years of age and a mere two thousand years of voyage against—aeons of Gothon’s slumberous life.

And Desan’s marrow ached now at such gentle grace in this bowed, mottled-skinned old scholar, this sleuth patiently deciphering the greatest mystery of the universe. Pity occurred to him. He suffered personally in this place; but not as Gothon would have suffered here, in that inward quiet where Gothon carried on thoughts the ship crews were sternly admonished never to disturb.

Students rushed now to open doors for them, pressed themselves to the walls and allowed their passage into deeper and deeper halls within the maze of the domes. Passing hands brushed Desan’s sleeves, welcome offered the current lord-navigator; he reciprocated with as much attention as he could devote to courtesy in his distress. His heart labored in the unaccustomed gravity, his nostrils accepted not only the effluvium of dome plastics and the recyclers and so many bodies dwelling together; but a flinty, bitter air, like electricity or dry dust. He imagined some hazardous leakage of the atmosphere into the dome: unsettling thought. The hazards of the place came home to him, and he wished already to be away.

Gothon had endured here, during his further voyages—seven years more of her diminishing life; waked four times, and this was the fourth, continually active now for five years, her longest stint yet in any waking. She had found data finally worth the consumption of her life, and she burned it without stint. *She* believed. She believed enough to die pursuing it.

He shuddered up and down and followed Gothon through a sealdoor toward yet another dome, and his gut tightened in dismay; for there were shelves on either hand, and those shelves were lined with yellow skulls, endless rows of staring dark sockets and grinning jaws. Some were long-nosed; some were short. Some small, virtually noseless skulls had fangs which gave them a wise and intelligent look—*Like miniature people, like babies with grown-up features*, must be the initial reaction to anyone seeing them in the holos or viewing the specimens brought up to the orbiting labs. But cranial capacity in these was much too small. The real sapient occupied further shelves, row upon row of eyeless, generously domed skulls, grinning in their flat-toothed way, in permanent horror—provoking profoundest horror in those who discovered them here, in this desolation.

Here Gothon paused, selected one of the small sapient skulls, much reconstructed. Desan had at least the skill to recognize the true bone from the plassbone bonded to it. This skull was far more delicate than the others, jaw smaller. The front two teeth were restructs. So was one of the side.

“It was a child,” Gothon said. “We call her Missy. The first we found at this site,

up in the mills, in a streambank. Most of Missy's feet were gone, but she's otherwise intact. Missy was all alone except for a little animal all tucked up in her arms. We keep them together—never mind the cataloging." She lifted an anomalous and much-reconstructed skull from the shelf among the sapient; fanged and delicate. "Even archaeologists have sentiment."

"I—see—" Helpless, caught in courtesy, Desan extended an unwilling finger and touched the skull.

"Back to sleep." Gothon set both skulls tenderly back on the shelf, and dusted her hands and walked farther, Desan following, beyond a simple door and into a busy room of workbenches piled high with a clutter of artifacts.

Staff began to rise from their dusty work in a sudden startlement. "No, no, go on," Gothon said quietly. "We're only passing through; ignore us. —Here, do you see, Lord Desan?" Gothon reached carefully past a researcher's shoulder and lifted from the counter an elongate ribbed bottle with the opalescent patina of long burial. "We find a great many of these. Mass production. Industry. Not only on this continent. This same bottle exists in sites all over the world, in the uppermost strata. Same design. Near the time of the calamity. We trace global alliances and trade by such small things." She set it down and gathered up a virtually complete vase, much patched. "It always comes to pots, Lord Desan. By pots and bottles we track them through the ages. Many layers. They had a long and complex past."

Desan reached out and touched the corroded brown surface of the vase, discovering a single bright remnant of the blue glaze along with the gray encrustations of long burial. "How long—how long does it take to reduce a thing to this?"

"It depends on the soil—on moisture, on acidity. This came from hereabouts." Gothon tenderly set it back on a shelf, walked on, frail, hunch-shouldered figure among the aisles of the past. "But very long, very long to obliterate so much—almost all the artifacts are gone. Metals oxidize; plastics rot; cloth goes very quickly; paper and wood last quite long in a desert climate, but they go, finally. Moisture dissolves the details of sculpture. Only the noble metals survive intact. Soil creep warps even stone; crushes metal. We find even the best pots in a matrix of pieces, a puzzle-toss. Fragile as they are, they outlast monuments, they last as long as the earth that holds them, drylands, wetlands, even beneath the sea—where no marine life exists to trouble them. That bottle and that pot are as venerable as that great dam. The makers wouldn't have thought that, would they?"

"But—" Desan's mind reeled at the remembrance of the great plain, the silt and the deep buried secrets.

"But?"

"You surely might miss important detail. A world to search. You might walk right over something and misinterpret everything."

"Oh, yes, it can happen. But *finding* things where we expect them is an important

clue, Lord Desan, a confirmation—One only has to suspect where to look. We locate our best hope first—a sunken, a raised place in those photographs we trouble the orbiters to take; but one gets a *feeling* about the lay of the land—more than the mechanical probes, Lord Desan." Gothon's dark eyes crinkled in the passage of thoughts unguessed, and Desan stood lost in Gothon's unthinkable mentality. What did a mind *do* in such age? Wander? Could the great doctor lapse into mysticism? To report such a thing—would solve one difficulty. But to have that regrettable duty—

"It's a feeling for living creatures, Lord Desan. It's reaching out to the land and saying—if this were long ago, if I thought to build, if I thought to trade—where would I go? Where would my neighbors live?"

Desan coughed delicately, wishing to draw things back to hard fact. "And the robot probes, of course, do assist."

"Probes, Lord Desan, are heartless things. A robot can be very skilled, but a researcher directs it only at distance, blind to opportunities and the true sense of the land. But you were born to space. Perhaps it makes no sense."

"I take your word for it," Desan said earnestly. He felt the weight of the sky on his back. The leaden, awful sky, leprous and unhealthy cover between them and the star and the single moon. Gothon remembered homeworld. *Remembered homeworld*. Had been renowned in her field even there. The old scientist claimed to come to such a landscape and locate things by seeing things that robot eyes could not, by thinking thoughts those dusty skulls had held in fleshy matter—  
—how long ago?

"We look for mounds," Gothon said, continuing in her brittle gait down the aisle, past the bowed heads and shy looks of staff and students at their meticulous tasks. The work of tiny electronic needles proceeded about them, the patient ticking away at encrustations to bring ancient surfaces to light. "They built massive structures. Great skyscrapers. Some of them must have lasted, oh, thousands of years intact; but when they went unstable, they fell, and their fall made rubble; and the wind came and the rivers shifted their courses around the ruin, and of course the weight of sediment piled up, wind- and water-driven. From that point, its own weight moved it and warped it and complicated our work." Gothon paused again beside a farther table, where holo plates stood inactive. She waved her hand and a landscape showed itself, a serpentine row of masonry across a depression. "See the wall there. They didn't build it that way, all wavering back and forth and up and down. Gravity and soil movement deformed it. It was buried until we unearthed it. Otherwise, wind and rain alone would have destroyed it ages ago. As it will do, now, if time doesn't rebury it."

"And this great pile of stone—" Desan waved an arm, indicating the imagined direction of the great dam and realizing himself disoriented. "How old is it?"

"Old as the lake it made."

"But contemporaneous with the fall?"

"Yes. Do you know, that mass may be standing when the star dies. The few great dams; the pyramids we find here and there around the world—One only guesses at their age. They'll outlast any other surface feature except the mountains themselves."

"Without life."

"Oh, but there is."

"Declining."

"No, no. Not declining." The doctor waved her hand and a puddle appeared over the second holo plate, all green with weed waving feathery tendrils back and forth in the surge. "The moon still keeps this world from entropy. There's water, not as much as this dam saw—It's the weed, this little weed that gives one hope for this world. The little life, the things that fly and crawl—the lichens and the life on the flatlands."

"But nothing *they* knew."

"No. Life's evolved new answers here. Life's starting over."

"It certainly hasn't much to start with, has it?"

"Not very much. It's a question that interests Dr. Bothogi—whether the life making a start here has the time left, and whether the consumption curve doesn't add up to defeat—But life doesn't know that. We're very concerned about contamination. But we fear it's inevitable. And who knows, perhaps it will have added something beneficial." Dr. Gothon lit yet another holo with the wave of her hand. A streamlined six-legged creature scuttled energetically across a surface of dead moss, frantically waving antennae and making no apparent progress.

"The inheritors of the world." Despair chilled Desan's marrow.

"But each generation of these little creatures is an unqualified success. The last to perish perishes in profound tragedy, of course, but without consciousness of it. The awareness will have, oh, half a billion years to wait—then, maybe it will appear; if the star doesn't fail; it's already far advanced down the sequence." Another holo, the image of desert, of blowing sand, beside the holo of the surge of weed in a pool. "Life makes life. That weed you see is busy making life. It's taking in and converting and building a chain of support that will enable things to feed on it, while more of its kind grows. That's what life does. It's busy, all unintended, of course, but fortuitously building itself a way off the planet."

Desan cast her an uncomfortable look askance.

"Oh, indeed. Biomass. Petrochemicals. The storehouse of aeons of energy all waiting the use of consciousness. And that consciousness, if it arrives, dominates the world because awareness is a way of making life more efficiently. But consciousness is a perilous thing, Lord Desan. Consciousness is a computer loose with its own perceptions and performing calculations on its own course, in the service of that little weed; billions of such computers all running and calculating faster and faster, ad-

justing themselves and their ecological environment, and what if there were the smallest, the most insignificant software error at the outset?"

"You don't believe such a thing. You don't reduce us to that." Desan's faith was shaken; this good woman had not gone unstable, this great intellect had had her faith shaken, that was what—the great and gentle doctor had, in her unthinkable age, acquired cynicism, and he fought back with his fifty-two meager years. "Surely, but surely this isn't the proof, doctor, this could have been a natural calamity."

"Oh, yes, the meteor strike." The doctor waved past a series of holos on a fourth plate, and a vast crater showed in aerial view, a crater so vast the picture showed planetary curvature. It was one of the planet's main features, shockingly visible from space. "But this solar system shows scar after scar of such events. A many-planeted system like this, a star well-attended by debris in its course through the galaxy—Look at the airless bodies, the moons, consider the number of meteor strikes that crater them. Tell me, space-farer: am I not right in that?"

Desan drew in a breath, relieved to be questioned in his own element. "Of course, the system is prone to that kind of accident. But that crater is ample cause—"

"If it came when there was still sapience here. But that hammerblow fell on a dead world."

He gazed on the eroded crater, the sandswept crustal melting, eloquent of age. "You have proof."

"Strata. Pots. Ironic, they must have feared such an event very greatly. One thinks they must have had a sense of doom about them, perhaps on the evidence of their moon; or understanding the mechanics of their solar system; or perhaps primitive times witnessed such falls and they remembered. One catches a glimpse of the mind that reached out from here . . . what impelled it, what it sought."

"How can we know that? We overlay our mind on their expectations—" Desan silenced himself, abashed, terrified. It was next to heresy. In a moment more he would have committed irremediable indiscretion; and the lords-magistrate on the orbiting station would hear it by suppertime, to his eternal detriment.

"We stand in their landscape, handle their bones, we hold their skulls in our fleshly hands and try to think in their world. Here we stand beneath a threatening heaven. What will we do?"

"Try to escape. Try to get off this world. They *did* get off. The celestial artifacts—"

"Archaeology is ever so much easier in space. A million years, two, and a thing still shines. Records still can be read. A color can blaze out undimmed after aeons, when first a light falls on it. One surface chewed away by microdust, and the opposing face pristine as the day it had its maker's hand on it. You keep asking me about the age of these ruins. But we know that, don't we truly suspect it, in the marrow of our bones—at what age they fell silent?"

"It *can't* have happened then!"

"Come with me, Lord Desan." Gothon waved a hand, extinguishing all the holos, and, walking on, opened the door into yet another hallway. "So much to catalog. That's much of the work in that room. They're students, mostly. Restoring what they can; numbering, listing. A librarian's job, just to know where things are filed. In five hundred years more of intensive cataloging and restoring, we may know them well enough to know something of their minds, though we may never find more of their written language than that of those artifacts on the moon. A place of wonders. A place of ongoing wonders, in Dr. Bothogi's work. A little algae beginning the work all over again. Perhaps not for the first time—interesting thought."

"You mean—" Desan overtook the aged doctor in the narrow, sterile hall, a series of ringing steps. "You mean—before the sapient evolved—there were other calamities, other re-beginnings."

"Oh, well before. It sends chills up one's back, doesn't it, to think how incredibly stubborn life might be here, how persistent in the calamity of the skies—The algae and then the creeping things and the slow, slow climb to dominance—"

"Previous sapient?"

"Interesting question in itself. But a thing need not be sapient to dominate a world, Lord Desan. Only tough. Only efficient. Haven't the worlds proven that? High sapience is a rare jewel. So many successes are dead ends. Flippers and not hands; lack of vocal apparatus—unless you believe in telepathy, which I assuredly don't. No. Vocalizing is necessary. Some sort of long-distance communication. Light-flashes; sound; something. Else your individuals stray apart in solitary discovery and rediscovery and duplication of effort. Oh, even with awareness—even granted that rare attribute—how many species lack something essential, or have some handicap that will stop them before civilization; before technology—"

"—before they leave the planet. But they *did* that, they were the one in a thousand—Without them—"

"Without them. Yes." Gothon turned her wonderful soft eyes on him at close range and for a moment he felt a great and terrible stillness like the stillness of a grave. "Childhood ends here. One way or the other, it ends."

He was struck speechless. He stood there, paralyzed a moment, his mind tumbling freefall; then blinked and followed the doctor like a child, helpless to do otherwise.

*Let me rest, he thought then, let us forget this beginning and this day, let me go somewhere and sit down and have a warm drink to get the chill from my marrow and let us begin again. Perhaps we can begin with facts and not fancies—*

But he would not rest. He feared that there was no rest to be had in this place, that once the body stopped moving, the weight of the sky would come down, the deadly sky that had boded destruction for all the history of this lost species, and the age of the land would seep into their bones and haunt his dreams as the far greater scale of stars did not.

*All the years I've voyaged, Dr. Gothon, all the years of my life searching from star to star. Relativity has made orphans of us. The world will have sainted you. Me it never knew. In a quarter of a million years—they'll have forgotten; o doctor, you know more than I how a world ages. A quarter of a million years you've seen—and we're both orphans. Me endlessly cloned. You in your long sleep, your several clones held aeons waiting in theirs—o doctor, we'll recreate you. And not truly you, ever again. No more than I'm a Desanprime. I'm only the fifth lord-navigator.*

*In a quarter of a million years, has not our species evolved beyond us, might they not, may they not, find some faster transport and find us, their aeons-lost precursors; and we will not know each other, Dr. Gothon—how could we know each other—if they had, but they have not; we have become the wavefront of a quest that never overtakes, never surpasses us.*

*In a quarter of a million years, might some calamity have befallen us and our world be like this world, other and deadly rust?*

*While we are clones and children of clones, genetic fossils, anomalies of our kind?*

*What are they to us and we to them? We seek the Ancients, the makers of the probe. Desan's mind reeled; adept as he was at time-relativity calculations, accustomed as he was to stellar immensities, his mind tottered and he fought to regain the corridor in which they walked, he and the doctor. He widened his stride yet again, overtaking Gothon at the next door.*

"Doctor." He put out his hand, preventing her, and then feared his own question, his own skirting of heresy and tempting of hers. "Are you beyond doubt? You can't be beyond doubt. They could have simply abandoned this world in its calamity."

Again the impact of those gentle eyes, devastating. "Tell me, tell me, Lord Desan. In all your travels, in all the several near stars you've visited in a century of effort, have you found traces?"

"No. But they could have gone—"

"—leaving no traces, except on their moon?"

"There may be others. The team in search on the fourth planet—"

"Finds nothing."

"You yourself say that you have to stand in that landscape, you have to think with their mind—Maybe Dr. Ashodt hasn't come to the right hill, the right plain—"

"If there are artifacts there they only are a few. I'll tell you why I know so. Come, come with me." Gothon waved a hand and the door gaped on yet another laboratory.

Desan walked. He would rather have walked out to the deadly surface than through this simple door, to the answer Gothon promised him . . . but habit impelled him; habit, duty—necessity. He had no other purpose for his life but this. He had been left none, lord-navigator, fifth incarnation of Desan Das. They had launched his original with none, his second incarnation had had less, and time and successive

incarnations had stripped everything else away. So he went, into a place at once too mundane and too strange to be quite sane—mundane because it was sterile as any lab, a well-lit place of littered tables and a few researchers; and strange because hundreds and hundreds of skulls and bones were piled on shelves in heaps on one wall, silent witnesses. An articulated skeleton hung in its frame; the skeleton of a small animal scamped in macabre rigidity on a tabletop.

He stopped. He stared about him, lost for the moment in the stare of all those eyeless sockets of weathered bone.

"Let me present my colleagues," Gothon was saying; Desan focused on the words late, and blinked helplessly as Gothon rattled off names. Bothogi the zoologist was one, younger than most, seventeenth incarnation, burning himself out in profligate use of his years: so with all the incarnations of Bothogi Nan. The rest of the names slid past his ears ungathered—true strangers, the truly-born, sons and daughters of the voyage. He was lost in their stares like the stares of the skulls, eyes behind which shadows and dust were truth, gazes full of secrets and heresies.

They knew him and he did not know them, not even Lord Bothogi. He felt his solitude, the helplessness of his convictions all lost in the dust and the silences.

"Kagodte," said Gothon, to a white-eared, hunched individual. "Kagodte—the Lord Desan has come to see your model."

"Ah." The aged eyes flicked, nervously.

"Show him, pray, Dr. Kagodte."

The hunched man walked over to the table, spread his hands. A hole flared and Desan blinked, having expected some dreadful image, some confrontation with a reconstruction. Instead, columns of words rippled in the air, green and blue. Numbers ticked and multiplied. In his startlement he lost the beginning and failed to follow them. "I don't see—"

"We speak statistics here," Gothon said. "We speak data; we couch our heresies in mathematical formulae."

Desan turned and stared at Gothon in fright. "Heresies I have nothing to do with, doctor. I deal with facts. I come here to find facts."

"Sit down," the gentle doctor said. "Sit down, Lord Desan. There, move the bones over, do; the owners won't mind, there, that's right."

Desan collapsed onto a stool facing a white worktable. Looked up reflexively, eye drawn by a wall-mounted stone that bore the blurred image of a face, eroded, time-dulled—

The juxtaposition of image and bones overwhelmed him. The two whole bodies portrayed on the plaque. The sculpture. The rows of fleshless skulls.

*Dead. World hammered by meteors, life struggling in its most rudimentary forms.*

*Dead.*

"Ah," Gothon said. Desan looked around and saw Gothon looking up at the wall

in his turn. "Yes. That. We find very few sculptures. A few—a precious few. Occasionally the fall of stone will protect a surface. Confirmation. Indeed. But the skulls tell us as much. With our measurements and our holos we can flesh them. We can make them—even more vivid. Do you want to see?"

Desan's mouth worked. "No." A small word. A coward word. "Later. So this was one place—You still don't convince me of your thesis, doctor, I'm sorry."

"The place. The world of origin. A many-layered world. The last layers are rich with artifacts of one period, one global culture. Then silence. Species extinguished. Stratum upon stratum of desolation. Millions of years of geological record—"

Gothon came round the end of the table and sat down in the opposing chair, elbows on the table, a scatter of bone between them. Gothon's green eyes shone watery in the brilliant light, her mouth was wrinkled about the jowls and trembled in minute cracks, like aged clay. "The statistics, Lord Desan, the dry statistics tell us. They tell us centers of production of artifacts, such as we have; they tell us compositions, processes the Ancients knew—and there was no progress into advanced materials. None of the materials we take for granted, metals that would have lasted—"

"And perhaps they went to some new process, materials that degraded completely. Perhaps their information storage was on increasingly perishable materials. Perhaps they developed these materials in space."

"Technology has steps. The dry numbers, the dusty dry numbers, the incidences and concentration of items, the numbers and the pots—always the pots, Lord Desan; and the imperishable stones; and the very fact of the meteors—the undeniable fact of the meteor strikes. Could we not avert such a calamity for our own world? Could we not have done it—oh, a half a century before we left?"

"I'm sure you remember, Dr. Gothon. I'm sure you have the advantage of me. But—"

"You see the evidence. You want to cling to your hopes. But there is only one question—no, two. Is this the species that launched the probe?—Yes. Or evolution and coincidence have cooperated mightily. Is this the only world they inhabited? Beyond all doubt. If there are artifacts on the fourth planet they are scoured by its storms, busied, lost."

"But they may be there."

"There is no abundance of them. There is no *progression*, Lord Desan. That is the key thing. There is nothing beyond these substances, these materials. This was not a star-faring civilization. They launched their slow, unmanned probes, with their cameras, their robot eyes—not for us. We always knew that. We were the recipients of flotsam. Mere wreckage on the beach."

"It was purposeful!" Desan hissed, trembling, surrounded by them all, a lone credent among the quiet heresy in this room. "Dr. Gothon, your unique position—is a position of trust, of profound trust; I beg you to consider the effect you have—"

"Do you threaten me, Lord Desan? Are you here for that, to silence me?"

Desan looked desperately about him, at the sudden hush in the room. The minute tickings of probes and picks had stopped. Eyes stared. "Please." He looked back. "I came here to gather data; I expected a simple meeting, a few staff meetings—to consider things at leisure—"

"I have distressed you. You wonder how it would be if the lords-magistrate fell at odds with me. I am aware of myself as an institution, Lord Desan. I remember Desan Das. I remember launch, the original five ships. I have waked to all but one of your incarnations. Not to mention the numerous incarnations of the lords-magistrate."

"You cannot discount them! Even you—Let me plead with you, Dr. Gothon, be patient with us."

"You do not need to teach me patience, Desan-Five."

He shivered convulsively. Even when Gothon smiled that gentle, disarming smile "You have to give me facts, doctor, not mystical communing with the landscape. The lords-magistrate accept that this is the world of origin. I assure you they never would have devoted so much time to creating a base here if that were not the case."

"Come, lord, those power systems on the probe, so long dead—What was it truly for, but to probe something very close at hand? Even orthodoxy admits that. And what is close at hand but their own solar system? Come, I've seen the original artifact and the original tablet. Touched it with my hands. This was a *primitive* venture, designed to cross their own solar system—which they had not the capability to do."

Desan blinked. "But the purpose—"

"Ah. The purpose."

"You say that you stand in a landscape and you think in their mind. Well, doctor, use this skill you claim. What did the Ancients intend? Why did they send it out with a message?"

The old eyes flickered, deep and calm and pained. "An oracular message, Lord Desan. A message into the dark of their own future, unaimed, unfocused. Without answer. Without hope of answer. We know its voyage time. Eight million years. They spoke to the universe at large. This probe went out, and they fell silent shortly afterward—the depth of this dry lake of dust, Lord Desan, is eight and a quarter million years."

"I will not believe that."

"Eight and a quarter million years ago, Lord Desan. Calamity fell on them, calamity global and complete within a century, perhaps within a decade of the launch of that probe. Perhaps calamity fell from the skies; but demonstrably it was atomic and their own doing. They were at that precarious stage. And the destruction in the great centers is catastrophic and of one level. Destruction centered in places of heavy population. Trace elements. That is what those statistics say. Atomics, Lord Desan."

"I cannot accept this!"

"Tell me, space-farer—do you understand the workings of weather? What those meteor strikes could do, the dust raised by atomics could do with equal efficiency. Never mind the radiation that alone would have killed millions—never mind the destruction of centers of government. We speak of global calamity, the dimming of the sun in dust, the living oceans and lakes choking in dying photosynthesites in a sunless winter, killing the food chain from the bottom up—"

"You have no proof!"

"The universality, the ruin of the population-centers. Arguably, they had the capacity to prevent meteor-impact. That may be a matter of debate. But beyond a doubt in my own mind, simultaneous destruction of the population centers indicates atomics. The statistics, the pots and the dry numbers, Lord Desan, doom us to that answer. The question is answered. There were no descendants, there was no escape from the world. They destroyed themselves before that meteor hit them."

Desan rested his mouth against his joined hands. Stared helplessly at the doctor. "Alie. Is that what you're saying? We pursued a lie?"

"Is it their fault that we needed them so much?"

Desan pushed himself to his feet and stood there by mortal effort. Gothon sat staring up at him with those terrible dark eyes.

"What will you do, lord-navigator? Silence me? The old woman's grown difficult at last: wake my clone after, tell it—what the lords-magistrate select for it to be told?" Gothon waved a hand about the room, indicating the staff, the dozen sets of living eyes among the dead. "Bothogi too, those of us who have clones—But what of the rest of the staff? How much will it take to silence all of us?"

Desan stared about him, trembling. "Dr. Gothon—" He leaned his hands on the table to look at Gothon. "You mistake me. You utterly mistake me— The lords-magistrate may have the station, but I have the ships, I, I and my staff. I propose no such thing. I've come home—" The unaccustomed word caught in his throat; he considered it, weighed it, accepted it, at least in the emotional sense. "*—home*, Dr. Gothon, after a hundred years of search, to discover this argument and this dissen-

sion."

"Charges of heresy—"

"They dare not make them against *you*." A bitter laugh welled up. "Against *you* they have no argument and you well know it, Dr. Gothon."

"Against their violence, lord-navigator, I have no defense."

"But she has," said Dr. Bothogi.

Desan turned, flicked a glance from the hardness in Bothogi's green eyes to the even harder substance of the stone in Bothogi's hand. He flung himself about again, hands on the table, abandoning the defense of his back. "Dr. Gothon! I appeal to you! I am your friend!"

"For myself," said Dr. Gothon, "I would make no defense at all. But, as you say—they have no argument against me. So it must be a general catastrophe—the lords-magistrate have to silence everyone, don't they? *Nothing* can be left on this base. Perhaps they've quietly dislodged an asteroid or two and put them on course. In the guise of minings, perhaps they will silence this poor old world forever—myself and the rest of the relics. Lost relics and the distant dead are always safer to venerate, aren't they?"

"That's absurd!"

"Or perhaps they've become more hasty now that your ships are here and their judgment is in question. *They* have atomics within their capability, lord-navigator. They can disable your shuttle with beam-fire. They can simply welcome you to the list of casualties—a charge of heresy. A thing taken out of context, who knows? After all—all lords are immediately duplicatable, the captains accustomed to obey the lords-magistrate—what few of them are awake—am I not right? If an institution like myself can be threatened—where is the fifth lord-navigator in their plans? And of a sudden those plans will be moving in haste."

Desan blinked. "Dr. Gothon—I assure you—"

"If you are my friend, lord-navigator, I hope for your survival. The robots are theirs, do you understand? Their powerpacks are sufficient for transmission of information to the base AIs; and from the communications center it goes to satellites; and from satellites to the station and the lords-magistrate. This room is safe from their monitoring. We have seen to that. They cannot hear you."

"I cannot believe these charges, I cannot accept it—"

"Is murder so new?"

"Then come with me! Come with me to the shuttle, we'll confront them—"

"The transportation to the port is theirs. It would not permit. The transport AI would resist. The planes have AI components. And we might never reach the airfield."

"My luggage. Dr. Gothon, my luggage—my com unit!" And Desan's heart sank remembering the service-robots. "*They* have it."

Gothon smiled, a small, amused smile. "O space-farer. So many scientists clustered here, and could we not improvise so simple a thing? *We* have a receiver-transmitter. Here. In this room. We broke one. We broke another. They're on the registry as broken. What's another bit of rubbish—on this poor planet? We meant to contact the ships, to call *you*, lord-navigator, when you came back. But you saved us the trouble. You came down to us like a thunderbolt. Like the birds you never saw, my spaceborn lord, swooping down on prey. The conferences, the haste you must have inspired up there on the station—if the lords-magistrate planned what I most suspect! I congratulate you. But knowing we have a transmitter—with your shuttle sitting on this world vulnerable as this building—what will you do, lord-navigator, since *they* control the satellite relay?"

Desan sank down on his chair. Stared at Gothon. "You never meant to kill me. All this—you schemed to enlist me."

"I entertained that hope, yes. I knew your predecessors. I also know your personal reputation—a man who burns his years one after the other as if there were no end of them. Unlike his predecessors. What are you, lord-navigator? Zealot? A man with an obsession? Where do you stand in this?"

"To what—" His voice came hoarse and strange. "To what are you trying to convert me, Dr. Gothon?"

"To our rescue from the lords-magistrate. To the rescue of truth."

"Truth!" Desan waved a desperate gesture. "I don't believe you, I cannot believe you, and you tell me about plots as fantastical as your research and try to involve me in your politics. I'm trying to find the trail the Ancients took—one clue, one artifact to direct us—"

"A new tablet?"

"You make light of me. Anything. Any indication where they went. And they *did* go, doctor. You will not convince me with your statistics. The unforeseen and the unpredicted aren't in your statistics."

"So you'll go on looking—for what you'll never find. You'll serve the lords-magistrate. They'll surely cooperate with you. They'll approve your search and leave this world . . . after the great catastrophe. After the catastrophe that obliterates us and all the records. An asteroid. Who but the robots chart their course? Who knows how close it is at this moment?"

"People would know a murder! They could never hide it!"

"I tell you, Lord Desan, you stand in a place and you look around you and you say—what would be natural to this place? In this cratered, devastated world, in this chaotic, debris-ridden solar system—could not an input error by an asteroid miner be more credible an accident than atomics? I tell you when your shuttle descended, we thought you might be acting for the lords-magistrate. That you might have a weapon in your baggage that their robots would deliberately fail to detect. But I believe you, lord-navigator. You're as trapped as we. With only the transmitter and a satellite relay system they control. What will you do? Persuade the lords-magistrate that you support them? Persuade them to support you on this further voyage—in return for your backing them? Perhaps they'll listen to you and let you leave."

"But they will," Desan said. He drew in a deep breath and looked from Gothon to the others and back again. "My shuttle is my own. *My* robotics, Dr. Gothon. From my ship and linked to it. And what I need is that transmitter. Appeal to *me* for protection if you think it so urgent. Trust me. Or trust nothing and we will all wait here and see what truth is."

Gothon reached into a pocket, held up an odd metal object. Smiled. Her eyes

crinkled round the edges. "An old-fashioned thing, lord-navigator. We say *key* nowadays and mean something quite different, but I'm a relic myself, remember. Baffles hell out of the robots. Bothogi. Link up that antenna and unlock the closet and let's see what the lord-navigator and his shuttle can do."

"DID IT HEAR you?" Bothogi asked, a boy's honest worry on his unlined face. He still had the rock, as if he had forgotten it. Or feared robots. Or intended to use it if he detected treachery. "Is it moving?"

"I assure you it's moving," Desan said, and shut the transmitter down. He drew a great breath, shut his eyes and saw the shuttle lift, a silver wedge spreading wings for home. Deadly if attacked. *They will not attack it, they must not attack it, they will query us when they know the shuttle is launched and we will discover yet that this is all a ridiculous error of understanding.* And looking at nowhere: "Relays have gone; *nothing* stops it and its defenses are considerable. The lords-navigator have not been fools citizens: We probe worlds with our shuttles, and we plan to get them back." He turned and faced Gotham and the other staff. "The message is *out*. And because I am a prudent man—are there suits enough for your staff? I advise we get to them. In the case of an accident."

"The alarm," said Gotham at once. "Neoth, sound the alarm." And as a senior staffer moved: "The dome pressure alert," Gotham said. "That will confound the robots. All personnel to pressure suits; all robots to seek damage. I agree about the suits. Get them."

The alarm went, a staccato shriek from overhead. Desan glanced instinctively at an uncommunicative white ceiling—

—darkness, darkness above, where the shuttle reached the thin blue edge of space. The station now knew that things had gone greatly amiss. It should inquire, there should be inquiry immediate to the planet—

Staffers had unlocked a second closet. They pulled out suits, not the expected one or two for emergency exit from this pressure-sealable room; but a tightly jammed lot of them. The lab seemed a mine of defenses, a stealthily equipped stronghold that smelled of conspiracy all over the base, throughout the staff—*everyone* in on it—

He blinked at the offering of a suit, ears assailed by the siren. He looked into the eyes of Bothogi who had handed it to him. There would be no call, no inquiry from the lords-magistrate. He began to know that, in the earnest, clear-eyed way these people behaved—not lunatics, not schemers. Truth. They had told their truth as they believed it, as the whole base believed it. And the lords-magistrate named it heresy.

His heart beat steadily again. Things made sense again. His hands found familiar motions, putting on the suit, making the closures.

"There's that AI in the controller's office," said a senior staffer. "I have a key."

"What will they do?" a younger staffer asked, panic-edged. "Will the station's weapons reach here?"

"It's quite distant for sudden actions," said Desan. "Too far, for beams and missiles are slow." His heartbeat steadied further. The suit was about him; familiar feelings; hostile worlds and weapons: more familiar ground. He smiled, not a pleasant kind of smile, a parting of lips on strong, long teeth. "And one more thing, young citizen, the ships they have are transports. Miners. Mine are hunters. I regret to say we've carried weapons for the last two hundred thousand years, and my crews know their business. If the lords-magistrate attack that shuttle it will be their mistake. Help Dr. Gotham."

"I've got it, quite, young lord." Gotham made the collar closure. "I've been handling these things longer than—"

Explosion thumped somewhere away. Gotham looked up. All motion stopped. And the air-rush died in the ducts.

"The oxygen system—" Bothogi exclaimed. "O *damn* them—!"

"We have," said Desan coldly. He made no haste. Each final fitting of the suit he made with care. Suit-drill; example to the young: The lord-navigator, youngsters, demonstrates his skill. Pay attention. "And we've just had our answer from the lords-magistrate. We need to get to that AI and shut it down. Let's have no panic here. Assume that my shuttle has cleared atmosphere—"

—well above the gray clouds, the horror of the surface. Silver needle aimed at the heart of the lords-magistrate.

*Alert, alert, it would shriek, alert, alert, alert, alert*—With its transmission relying on no satellites, with its message shoved out in one high-powered bow-wave. *Crew on the world is in danger.* And, code that no lord-navigator had ever hoped to transmit, a series of numbers in syntactical link: *Treachery; the lords-magistrate are traitors; aid and rescue—Alert, alert, alert*—

—anguished scream from a world of dust; a place of skulls; the grave of the search.

*Treachery, alert, alert, alert!*

Desan was not a violent man; he had never thought of himself as violent. He was a searcher, a man with a quest.

He knew nothing of certainty. He believed a woman a quarter of a million years old, because—because Gotham was Gotham. He cried traitor and let loose havoc all the while knowing that here might be the traitor, this gentle-eyed woman, this collector of skulls.

O Gotham, he would ask if he dared, which of you is false? To force the lords-magistrate to strike with violence enough to damn them—*Is that what you wish? Against a quarter million years of unabated life—what are my five incarnations: mere genetic congruency, without memory. I am helpless to know your perspectives.*



*Have you planned this a thousand years, ten thousand?*

*Do you stand in this place and think in the mind of creatures dead longer even than you have lived? Do you hold their skulls and think their thoughts?*

*Was it purpose eight million years ago?*

*Was it, is it—horror upon horror—a mistake on both sides?*

"Lord Desan," said Bothogi, laying a hand on his shoulder. "Lord Desan, we have a master key. We have weapons. We're waiting, Lord Desan." Above them the holocaust.

IT WAS ONLY a service robot. It had never known its termination. Not like the base AI, in the director's office, which had fought them with locked doors and release of atmosphere, to the misfortune of the director—

"Tragedy, tragedy," said Bothogi, standing by the small dented corpse, there on the other sand before the buildings. Smoke rolled up from a sabotaged lifesupport plant to the right of the domes—the world's air had rolled outward and inward and mingled with the breaching of the central dome—the AI transport's initial act of sabotage, ramming the plastic walls. "Microorganisms let loose on this world—the fools, the arrogant fools!"

It was not the microorganisms Desan feared. It was the AI eight-wheeled transport, maneuvering itself for another attack on the cold-sleep facilities. Prudent to have set themselves inside a locked room with the rest of the scientists and hope for rescue from offworld; but the AI would batter itself against the plastic walls, and living targets kept it distracted from the sleeping, helpless clones—Gothon's juniormost; Bothogi's; those of a dozen senior staffers.

And keeping it distracted became more and more difficult.

Hour upon hour they had evaded its rushes, clumsy attacks and retreats in their encumbering suits. They had done it damage where they could while staff struggled to come up with something that might slow it . . . it limped along now with a great lot of metal wire wrapped around its rearmost right wheel.

"Damn!" cried a young biologist as it maneuvered for her position. It was the agile young who played this game; and one aging lord-navigator who was the only fighter in the lot.

Dodge, dodge and dodge. "It's going to catch you against the oxy-plant, youngster! This way!" Desan's heart thudded as the young woman thumped along in the cumbersome suit in a losing race with the transport. "Oh, damn, it's got it figured! Bothogi!"

Desan grasped his probe-spear and jogged on—"Divert it!" he yelled. Diverting it was all they could hope for.

It turned their way, a whine of the motor, a serpentine flex of its metal body and a flurry of sand from its eight-wheeled drive. "Run, lord!" Bothogi gasped beside him;

and it was still turning—it aimed for them now, and at another tangent a white-suited figure hurled a rock, to distract it yet again.

It kept coming at them. AI. An eight-wheeled, flex-bodied intelligence that had suddenly decided its behavior was not working and altered the program, refusing distraction. A pressure-windowed juggernaut tracking every turn they made.

Closer and closer. "Sensors!" Desan cried, turning on the slick dust—his footing failed him and he caught himself, gripped the probe and aimed it straight at the sensor array clustered beneath the front window.

*Thump-p!* The dusty sky went blue and he was on his back, skidding in the sand with the great balloon tires churning sand on either side of him.

*The suit*, he thought with a spaceman's horror of the abrading, while it dawned on him at the same time he was being dragged beneath the AI, and that every joint and nerve center was throbbing with the high voltage shock of the probe.

Things became very peaceful then, a cessation of commotion. He lay dazed, staring up at a rusty blue sky, and seeing it laced with a silver thread.

*They're coming*, he thought, and thought of his eldest clone, sleeping at a well-educated twenty years of age. Handsome lad. He talked to the boy from time to time. *Poor lad, the lordship is yours. Your predecessor was a fool—*

A shadow passed above his face. It was another suited face peering down into his. A weight rested on his chest.

"Get off," he said.

"He's alive!" Bothogi's voice cried. "Dr. Gothon, he's still alive!"

THE WORLD SHOWED no more scars than it had at the beginning—red and other where clouds failed. The algae continued its struggle in sea and tidal pools and lakes and rivers—with whatever microscopic addenda the breached dome had let loose in the world. The insects and the worms continued their blind ascent to space, dominant life on this poor, cratered globe. The research station was in function again, repairs complete.

Desan gazed on the world from his ship: It hung as a sphere in the holotank by his command station. A wave of his hand might show him the darkness of space; the floodlit shapes of ten hunting ships, lately returned from the deep and about to seek it again in continuation of the Mission, sleek fish rising and sinking again in a figurative black sea. A good many suns had shone on their hulls, but this one sun had seen them more often than any since their launching.

Home.

The space station was returning to function. Corpses were consigned to the sun the Mission had sought for so long. And power over the Mission rested solely at present in the hands of the lord-navigator, in the unprecedented circumstance of the demise of all five lords-magistrate simultaneously. Their clones were not yet activated

to begin their years of majority—"Later will be time to wake the new lords-magistrate," Desan decreed, "at some further world of the search. Let them hear this event as history."

*When I can manage them personally*, he thought. He looked aside at twenty-year-old Desan Six and the youth looked gravely back with the face Desan had seen in the mirror thirty-two waking years ago.

"Lord-navigator?"

"You'll wake your brother after we're away, Six. Directly after. I'll be staying awake much of this trip."

"Awake, sir?"

"Quite. There are things I want you to think about. I'll be talking to you and Seven both."

"About the lords-magistrate, sir?"

Desan lifted brows at this presumption. "You and I are already quite well attuned, Six. You'll succeed young. Are you sorry you missed this time?"

"No, lord-navigator! I assure you not!"

"Good brain. I ought to know. Go to your post, Six. Be grateful you don't have to cope with a new lordship and five new lords-magistrate and a recent schism."

Desan leaned back in his chair as the youth crossed the bridge and settled at a crew-post, beside the captain. The lord-navigator was more than a figurehead to rule the seventy ships of the Mission, with their captains and their crews. Let the boy try his skill on this plotting. Desan intended to check it. He leaned aside with a wince—the electric shock that had blown him flat between the AI's tires had saved him from worse than a broken arm and leg; and the medical staff had seen to that: The arm and the leg were all but healed, with only a light wrap to protect them. The ribs were tightly wrapped too; and they cost him more pain than all the rest.

A scan had indeed located three errant asteroids, three courses the station's computers had not accurately recorded as inbound for the planet—until personnel from the ships began to run their own observation. Those were redirected.

Casualties. Destruction. Fighting within the Mission. The guilt of the lords-magistrate was profound and beyond dispute.

"Lord-navigator," the communications officer said. "Dr. Gothon returning your call."

*Goodbye*, he had told Gothon. *I don't accept your judgment, but I shall devote my energy to pursuit of mine, and let any who want to join you—reside on the station. There are some volunteers; I don't profess to understand them. But you may trust them. You may trust the lords-magistrate to have learned a lesson. I will teach it. No member of this mission will be restrained in any opinion while my influence lasts. And I shall see to that. Sleep again and we may see each other once more in our lives.*

"I'll receive it," Desan said, pleased and anxious at once that Gothon deigned

reply; he activated the com-control. Ship-electronics touched his ear, implanted for comfort. He heard the usual blip and chatter of com's mechanical protocols, then Gothon's quiet voice. "Lord-navigator."

"I'm hearing you, doctor."

"Thank you for your sentiment. I wish you well, too. I wish you very well."

The tablet was mounted before him, above the console. Millions of years ago a tiny probe had set out from this world, bearing the original. Two aliens standing naked, one with hand uplifted. A series of diagrams which, partially obliterated, had still served to guide the Mission across the centuries. A probe bearing a greeting. Ages-dead cameras and simple instruments.

*Greetings, stranger. We come from this place, this star system.*

*See, the hand, the appendage of a builder—This we will have in common.*

*The diagrams: We speak knowledge; we have no fear of you, strangers who read this, whoever you be.*

Wise fools.

There had been a time, long ago, when fools had set out to seek them . . . In a vast desert of stars. Fools who had desperately needed proof, once upon a quarter million years ago, that they were not alone. One dust-covered alien artifact they found, so long ago, on a lonely drifting course.

*Hello*, it said.

The makers, the peaceful Ancients, became a legend. They became purpose, inspiration.

The overriding, obsessive *Why* that saved a species, pulled it back from war, gave it the stars.

"I'm very serious—I do hope you rest, doctor—save a few years for the unborn."

"My eldest's awake. I've lost my illusions of immortality, lord-navigator. She hopes to meet you."

"You might still abandon this world and come with us, doctor."

"To search for a myth?"

"Not a myth. We're bound to disagree. Doctor, doctor, what good can your presence there do? What if you're right? It's a dead end. What if I'm wrong? I'll never stop looking. I'll never know."

"But we know their descendants, lord-navigator. We. We are. We've spread their legend from star to star—they've become a fable. The Ancients. The Pathfinders. A hundred civilizations have taken up that myth. A hundred civilizations have lived out their years in that belief and begotten others to tell their story. What if you should find them? Would you know them—or where evolution had taken them? Perhaps we've already met them, somewhere along the worlds we've visited, and we failed to know them."

It was irony. Gentle humor. "Perhaps, then," Desan said in turn, "we'll find the

track leads home again. Perhaps we *are* their children—eight and a quarter million years removed.”

“O ye makers of myths. Do your work, space-farer. Tangle the skein with legends. Teach fables to the races you meet. Brighten the universe with them. I put my faith in you. Don’t you know—this world is all I came to find, but you—child of the voyage, you have to have more. For you the voyage is the Mission. Goodbye to you. Fare well. Nothing is complete calamity. The equation here is different, by a multitude of microorganisms let free—Bothogi has stopped grieving and begun to have quite different thoughts on the matter. His algae-pools may turn out a different breed this time—the shift of a protein here and there in the genetic chain—who knows what it will breed? Different software this time, perhaps. Good voyage to you, lord-navigator. Look for your Ancients under other suns. We’re waiting for their offspring here, under this one.”

## JOHN CROWLEY

### Snow

John Crowley’s writing has earned comparisons to the epic fantasy of J. R. R. Tolkien and the magic realism of Gabriel García Márquez. He is generally regarded as a writer of mythic fantasy who has freely mixed elements of science fiction into his allusive and richly symbolic fiction. His first three novels all develop fantasy plots in nominally science fictional settings: *The Deep* tells of a medieval power struggle convulsing two feudal households on a plane geographically distinct but historically similar to Earth. *Beasts* is set in a balkanized near future America where proponents of totalitarian centralized government struggle to stave out a war of independence spearheaded by genetically manipulated human/animal hybrids. *Engine Summer* unfolds a primitive rite-of-passage tale against the backdrop of a postapocalyptic America descended into a new dark age. Crowley’s World-Fantasy Award-winning *Little, Big* marked his departure from science fiction–accented explorations of the human social structures for modern treatments of traditional high fantasy. Redolent with echoes of classic romantic literature, the tale chronicles an eccentric multigeneration family alive in a reality-skewed modern world who enjoy a rapport with the world of faerie that is eventually threatened by the rise of a president with antipathy to the faerie kind. Considered a landmark of modern fantasy, this inventive novel sets the pattern for Crowley’s subsequent work with its playful depiction of ordinary lives touched by the strange and magical. *Aegypt*, *Love and Sleep*, and *Daemonomania* are the first three in a projected quartet of novels intended to interlock as a single all-encompassing philosophical romance that blends historical fact and imaginary world fantasy, occult mystery, Renaissance metaphysics, alternate history, queer legend, and classic mythology. Crowley’s collection *Novelty* features four visionary novellas concerned with artistic creation. His fiction has also been collected in *Antiquities*.

I DON’T THINK Georgie would ever have got one for herself: She was at once sentimental and a little in awe of death. No, it was her first husband—an immensely rich and (from Georgie’s description) a strangely weepy guy, who had got it for her. Or for himself, actually, of course. He was to be the beneficiary. Only he died himself shortly after it was installed. If *installed* is the right word. After he died, Georgie got