Preface to the Second Edition and Acknowledgements

This second edition of the Routledge New Critical Idiom Science Fiction has been very thoroughly reworked. Several chapters have been extensively rewritten from the first edition, and the final chapter is wholly new, whilst a fair proportion of the first edition has been excised entirely. This reflects two main facts. One is that SF as a field is rapidly developing; its current practice and the body of critical assumptions about its past have changed in the five years since the first edition was issued. The second is that, whilst no book of criticism can hope to be entirely error free, the first edition of this book contained more errors than were acceptable; I am very grateful to the readers and reviewers who pointed out errors. I would like, in particular, to thank Mark Bould, Ria Cheyne, Robert Eaglestone, Malcolm Edwards, Brian Green, Julie Green, Gareth Griffiths, David Langford, Roger Levy, James Lovegrove, Roger Luckhurst, Nick Lowe, Abraham Kawa, Liam McNamara, Una O'Farrell Tate, Gillian Redfern, Rachel Roberts and Simon Spanton. John Drakakis read the entire manuscript and made many helpful suggestions; he has been an exemplary general editor.

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DEFINING SCIENCE FICTION

The term 'science fiction' resists easy definition. This is a strange thing, because most people have a sense of what science fiction is. Any bookstore will have a section devoted to SF: shelves of mostly brightly coloured paperback volumes, illustrated on their covers with photorealist paintings of intricate spaceships perhaps, or of men and women in futuristic cities or bizarre alien landscapes. Most of these novels are narratives that elaborate some imaginative or fantastic premise, perhaps involving a postulated future society, encounters with creatures from another world, travel between planets or in time. In other words, science fiction as a genre or division of literature distinguishes its fictional worlds to one degree or another from the world in which we actually live: a fiction of the imagination rather than observed reality, a fantastic literature.

But when it comes down to specifying in precisely what ways SF is distinctive, and in what ways it is different from other imaginative and fantastic literatures, there is disagreement. All of the many definitions offered by critics have been contradicted or modified by other critics, and it is always possible to point to texts consensually called SF that fall outside the usual definitions. It is, perhaps, for this reason that some critics try to content themselves with definitions of the mode that are mere tautologies, as if 'we' all know what it is and elaboration is superfluous. Edward James suggests that 'SF is what is marketed as SF'

(although he concedes that, as a definition, this is 'a beginning, nothing more') (James 1994: 3). Damon Knight says that 'science fiction is what we point to when we say it'; and Norman Spinraid argues that 'science fiction is anything published as science fiction' (quoted in Clute and Nicholls 1993: 314). There is a kind of weariness in this sort of circular reasoning, as if the whole business of definition is nothing more than a cynical marketing exercise. Lance Parkin suggests that 'SF is a notoriously difficult term to define, but when it comes down to it, a book appears on the SF shelves if the publisher thinks they will maximize their sales by labelling it as such' (Parkin 1999: 4). This mistrust of definition has interesting implications for the self-image of SF as a genre, although it doesn't get us very far as a starting point.

There are different ways of coming at the business of 'definition' of a cultural phenomenon, or collection of texts, such as science fiction. This study attempts to approach the matter from a variety of different perspectives. The danger in this approach is that it may result in an account of SF that is merely fragmented; but its overwhelming advantage is that it does not propose, tacitly or otherwise, that any one approach to this complex matter is the only way. Definitions of SF, like histories of SF, are manifold not because critics and historians of the form are confused, or can't agree on key points, but because SF itself is a wide-ranging, multivalent and endlessly cross-fertilising cultural idiom.

So, one approach to the business of defining SF is to attempt to encapsulate the fundamental conceptual premise or premises out of which science fiction is produced. A related approach is what we might call formalist: the attempt to draw out, from a wide range of specific examples of SF (novels, stories, films and so on), the underlying grammar or essence that they all share. This approach to the business of defining, and indeed describing, SF has been very influential in various critical discourses, and this first chapter, the one you are reading now, will provide key examples of this.

A second approach at definition is what we might call 'historicist'. This seeks to arrive at a definition of the genre not by boiling it down to apothegmic 'rules' or descriptors, but by providing an account of the history of the genre, paying attention to its cultural contexts and effects. Damien Broderick, one of the most insightful current critics of SF, has explored what he calls the 'megatext' of SF, the conglomeration of all

those SF novels, stories, films, TV shows, comics and other media with which 'SF fandom' is familiar. The protocols of SF are in large part determined by a knowledge of this 'megatext', and many SF fans are extremely well versed in it. This means that a new SF text – say a new novel set in a world in which Hitler won the Second World War (which is to say an 'alternate history') – will be read by fans who are familiar with some or all of the many previous SF treatments of this theme. Derivative, unoriginal or obtuse treatments will get short shrift. Writers ignorant of the megatext run the risk of in effect reinventing the wheel, or proposing imaginative conceits they consider new and exciting but which have in fact been worked through many times by previous SF writers. Having a sense of the SF megatext is in itself a way of approaching a definition of SF; and this study, by sketching out a number of chronological 'histories of SF' in Chapters 2 and 3, will work in that direction.

According to Roger Luckhurst, in the best of the recent critical accounts of SF, 'a historicist definition of SF necessarily produces a broader, more inclusive definition of SF than a formalist or conceptual one' (Luckhurst 2005: 11). This present study shares this belief to the extent that it is probably true that only somebody with some sense of the history of the genre is in a position to move towards anything as difficult as 'definition'. But the problem here is that there are very many different histories of the genre, sometimes telling stories about SF at odds with one another. One history might see SF as a predominantly male, adolescent, machine-oriented type of writing; another as a mode through which groups who have often been socially marginalised can find imaginative expression, as, for instance, with the many writers and readers of the genre who see it as a way of interrogating questions of gender (this is discussed in Chapter 4), or who see SF's continuing fascination with the alien as a means of exploring issues of race (Chapter 5). Another history would be interested less in the content of SF texts than in the form – not so much the aliens in the story, as the textual strategies of alienation or metaphorisation (Chapter 6).

SOME FORMALIST DEFINITIONS OF SF

The *Oxford English Dictionary* defines science fiction as 'imaginative fiction based on postulated scientific discoveries or spectacular environmental

changes, frequently set in the future or on other planets and involving space or time travel', adding that the term did not come into common usage until the 1920s. The terms of this basic dictionary definition are instructive: 'imaginative fiction' differentiates SF from 'realist' fiction, in which there is some attempt at a literary verisimilitude that reproduces the experience of living in the world we recognise as ours. Where the realist writer needs to focus on accuracy, the SF author can use her imagination to invent things not found in our world. These points of difference, the 'scientific discoveries' or 'environmental changes' of the dictionary definition, may be such things as 'space or time travel' but they could be many other premises not listed by the OED, to do with robots, computers, alternative histories and the like. This makes SF a literature of ideas predicated on some substantive difference or differences between the world described and the world in which readers actually live.

But whilst SF is imaginative fiction, it does not follow that all imaginative fiction can be usefully categorised as SF. Stories in which the protagonists travel from Earth to colonies on Mars by rocket ship are usually taken to be science fiction because no such colonies, and no such available mode of transport, are available to us today. But fairytales, surreal fictions (such as André Breton's *Nadja*, 1928) or magic realism (like Salman Rushdie's *Midnight's Children*, 1981) all involve substantive differences between the world of the text and the world the readership actually lives in, and they are not categorised as science fiction. For example, there is a novel by Ian Watson called *The Jonah Kit* (1975), which involves a new technology that maps the brainwave patterns of a human on to the mind of a whale. This human consciousness then inhabits the whale. We might compare this tale with Franz Kafka's short novel *Metamorphosis* (1915), in which the protagonist wakes up one morning to find himself transformed into the shape of a giant insect. Watson's novel is classified as SF, where Kafka's is not. Why should this be? Both are imaginative fictions based on the premise of a radical change; neither is concerned with space or time travel, or is set on other planets. What makes them different?

There could be two answers to this question. The first would assert that science fiction is a much broader category than is usually admitted and should be used to describe a wide range of 'fantasy' literatures; according to this argument, Kafka's *Metamorphosis* is indeed a science-

fiction tale, even if it is not usually categorised as such. The second answer would deny this and stress the differences of approach of the two writers. Kafka never explains how his hero turns into a bug: the metamorphosis is literally inexplicable, a physical impossibility. Indeed, Kafka isn't interested in the change as such, which is why he does not feel any need to explain how it has come about. He is interested in the alienation his character subsequently suffers, the reactions of his family to his new monstrosity. In other words, the transformation of man into bug is only a premise, a symbolic facilitator for the subsequent narrative and not a focus for narrative explication in itself. Watson's metamorphosis of man into whale, on the other hand, is placed in a context of scientific research and is given a particular rationalisation, an explanation for how it has come about. This change does not 'just happen'; it is made to happen via a machine that reads brain-wave patterns and reproduces them in another brain. This is not to say, quite, that Watson's metamorphosis is 'scientific', where Kafka's is, we might say, 'arbitrary' or 'magical'. Science today could not effect the sort of change upon which Watson's book is premised, and it is a moot question whether it ever will be able to. It is equally impossible, in strict scientific terms, to manipulate DNA to create dinosaurs in the ways required by Michael Crichton's book *Jurassic Park* (1993), or to design spaceships that can travel between the stars like *Star Trek*'s USS Enterprise. But it is part of the logic of SF, and not of other forms of fiction, that these changes be made plausible within the structure of the text. This means that the premise of an SF novel requires material, physical rationalisation, rather than a supernatural or arbitrary one. This grounding of SF in the material rather than the supernatural becomes one of its key features. Sometimes this materialism is rooted in a 'scientific' outlook – science is, after all, one of the dominant materialist discourses of the present day. But sometimes the materialism is not, strictly speaking, scientific. Stephen Baxter's *Titan* (1998) is a novel about a journey of space exploration to Jupiter. Everything that happens in that novel adheres strictly to scientific laws as Baxter understands them – his characters even reuse the tried-and-tested technology of the Saturn V Moon programme from the 1970s. Kim Stanley Robinson's *Red Mars* (1992) also begins with a journey of exploration to another planet, again carefully imagined so as not to violate the constraints of current science and technology. Later in

Robinson's novel a technique is discovered for hugely extending human life span. This is certainly not within the discourse of current science, and may well be impossible, but the plot development is integrated into the pseudo-scientific idiom of the book. Instead of just asserting without explaining, as a magic-realist or surrealist writer might, that his characters can now postpone growing old for hundreds of years, Robinson introduces a material device, a gene resplicing bath, to explain and make plausible this idea.

To give another example of the contrast between SF and other fiction: John Updike's magic-realist novel *Brazil* (1994) tells the story of two lovers, a black boy and a white girl. In the course of the novel, the skin colours of these two figures change such that by the end of the book the boy is white and the girl black. This change is not rationalised in terms of the fictional world the characters inhabit, which is in all other respects a closely observed representation of contemporary South America; it is exactly the kind of unexplained literary device we associate with magic realism. On the other hand, there is a novel by John Kessel called *Good News from Outer Space* (1989) set in the near-future USA, one part of which is concerned with a new drug which alters skin pigmentation. Characters in the novel plan to release this drug in the American water supply as a terrorist gesture to undermine the ingrained racism of their society. Once again, we are tempted to call Kessel's book science fiction and Updike's not. Although both books are making points about the arbitrariness of racial definition by positing an interchangeability of skin colour, Kessel provides a specific mechanism for this change and Updike does not. Kessel's imaginary drug is not scientific – it does not and probably could not actually exist – but it is a material device and within the realm of the discourse it inhabits it is a plausible facilitator. Kessel's science fiction depends upon a certain premise, and that premise is symbolic of change. In other words, the drug is a symbol in terms of the text, but it is a concrete and material symbol that is integrated into a certain discourse of scientific possibility. Updike's text dispenses with the need for such a symbol.

It seems that this 'point of difference', the thing or things that differentiate the world portrayed in science fiction from the world we recognise around us, is the crucial separator between SF and other forms of imaginative or fantastic literature. The critic Darko Suvin has usefully

coined the term 'novum', the Latin for 'new' or 'new thing', to refer to this 'point of difference' (the plural is 'nova'). An SF text may be based on one novum, such as the device that enables H.G. Wells's hero to travel through time in *The Time Machine* (1895). More usually it will be predicated on a number of interrelated nova, such as the varieties of futuristic technology found aboard the starship Enterprise in *Star Trek*, from faster-than-light travel to matter-transportation machines. This 'novum' must not be supernatural but need not necessarily be a piece of technology. The central 'novum' of Ursula Le Guin's *The Left Hand of Darkness* (1969), for instance, is a different model of gender, although there are other, more technological, 'nova' in that book, including interstellar transport and a hyperspace walkie-talkie called an 'ansible'. Unlike such premises as the human inexplicably metamorphosed into an insect in Kafka's story, these nova are grounded in a discourse of possibility, which is usually science or technology and which renders the difference a material rather than just a conceptual or imaginative one. The emphasis is on difference, and the systematic working out of the consequences of a difference or differences, of a novum or nova, becomes the strength of the mode.

THREE DEFINITIONS

There have been a great many attempts to define science fiction in more exact terms than these. Once we accept that the particularities of the 'novum' distinguish SF from other forms of imaginative literature, the urge is to expand upon the sorts of literary context in which these nova are elaborated – to flesh out, in other words, the broader features of the SF text beyond its notional, material point of difference with our familiar world.

It is worth detailing three definitions of SF that have been particularly influential on the study of the subject, from three influential critics: Darko Suvin, Robert Scholes and Damien Broderick. First, there is respected elder statesman of SF criticism Darko Suvin, who in 1979 defined SF as:

> a literary genre or verbal construct whose necessary and sufficient conditions are the *presence and interaction of estrangement and cognition,*

> *and whose main device is an imaginative framework alternative to the author's empirical environment.*
>
> (Suvin 1988: 37)

'Cognition', with its rational, logical implications, refers to that aspect of SF that prompts us to try and understand, to comprehend, the alien landscape of a given SF book, film or story. 'Estrangement' is a term from Brecht, more usually rendered in English-language criticism as 'alienation'; in this context it refers to that element of SF that we recognise as different, that 'estranges' us from the familiar and everyday. If the SF text were entirely concerned with 'estrangement', then we would not be able to understand it; if it were entirely to do with 'cognition', then it would be scientific or documentary rather than science fiction. According to Suvin, both features need to be present; and it is this co-presence that allows SF both relevance to our world and the position to challenge the ordinary, the taken-for-granted. The main 'formal device' of Suvin's version of SF is the novum.

Suvin goes on to insist that this 'alternative' world of SF, determined by 'estrangement' *and* 'cognition', must be possible, by which he means it must reflect the constraints of science. This is how he distinguishes SF from the looser category of 'fantasy'; and indeed, he often seems to have little respect for 'fantasy' precisely because it lacks 'cognitive plausibility'. It might perhaps be argued that 'cognitive' is almost a synonym for 'scientific', that his phrase 'cognitive estrangement' is just another way of restating the phrase that is to be defined, 'science fiction'. One of the strengths of Suvin's definition is that it seems to embody a certain common-sense tautology, that science fiction is scientific fictionalising. But, as we have seen, science is just as frequently represented in the SF novel by pseudo-science, by some device outside the boundaries of science that is none the less rationalised in the *style* of scientific discourse. We might want to define 'science' as a body of observations and derived laws established by experiment in the real world; but, according to this definition, several of the frequently deployed 'nova' of SF are things that 'science' has specifically ruled out of court as literally impossible. The most obvious example of this is faster-than-light travel, a staple of a great many SF tales but something that scientists assure us can never happen. Rather than abandon the rationale of science, though, SF stories that involve

'faster-than-light' travel slip into the idiom of 'pseudo-science', providing rationalisations of these impossible activities in terms that *sound* like scientific discourse.

For Suvin, the important thing about the 'science' part of 'science fiction' is that it is a discourse built on certain logical principles that avoids self-contradiction; that it is rational rather than emotional or instinctual. Scientists sometimes like to assert that they deal in 'facts' and 'truth', where fiction deals in 'imagination' and is a form of lying. But it is more accurate to describe science as a discipline based on falsifiability, a discourse in which hypotheses are tested by experiment. Accordingly, whilst a scientific premise may be proved false, it cannot be proved true. In science fiction it is not that the use of science gives the texts a particular, privileged access to truth. Often the reverse is true. Gwyneth Jones points out that Larry Niven's *Ringworld* (1970), 'one of the great, classic "engineering feat" SF novels, reached print in the first instance with terrible mistakes in its science' (Jones 1999: 16). Niven revised the novel for subsequent publication after fans pointed out a number of scientific impossibilities, but Jones makes the point that 'the challenge, which had to be met, was not to Niven's scientific accuracy, but to his appearance of command over the *language* of science'. Many early SF novels followed the scientific thinking of the day and imagined canals on Mars, oceans on Venus. The fact that more recent scientific experiment has concluded that there are no such canals or oceans does not invalidate these novels, because the point about the science in SF is not 'truth' but the entry into a particular, material and often rational discourse. We might indeed see SF as a form of thought experiment, an elaborate 'what if?' game, where the consequences of some or other novum are worked through. In other words, it is not the 'truth' of science that is important to SF; it is the scientific method, the logical working through of a particular premise. This is precisely what Suvin asserts: 'SF is distinguished by the narrative dominance or hegemony of a fictional "novum" ... validated by cognitive logic' (Suvin 1979: 63). By this he means that the implications of the 'novum' dominate, or create a 'hegemony' (a term from Marxist theory to describe the maintenance of power by indirect and pervasive means rather than by direct force) throughout the text. 'Cognitive Logic' becomes for Suvin a crucial formal convention of SF.

If Suvin takes his starting point from the 'science' part of 'science fiction', another highly influential critic has concentrated more on the literary features of SF texts. Robert Scholes, in his book *Structural Fabulation*, has stressed the metaphorical strain of SF. He defines 'fabulation' as any 'fiction that offers us a world clearly and radically discontinuous from the one we know, yet returns to confront that known world in some cognitive way' (Scholes 1975: 2). This point of 'discontinuity' with the known world is the Suvinian novum, but Scholes inflects this rather differently. He wants to acknowledge that SF is interested in things being different from the world we actually inhabit, but does not want to concede that this makes SF merely escapist or irrelevant. According to Scholes, SF is both different and the same, both 'discontinuous' from our world and also 'confronting' that world 'in some cognitive way'. Scholes notes that 'fabulation' is a category including any and all fantastic or imaginative literature, including non-SF writers like Borges, Thomas Pynchon and Herman Hesse, to mention three of Scholes's own examples. Accordingly, Scholes adds 'structural' to his 'fabulation' definition in order to pin things down more tightly. As with Suvin, there's a certain re-duplication here. 'Fabulation' seems synonymous with 'fiction' in pretty much the same way that 'structural' is with science; we could abbreviate both 'science fiction' and 'structural fabulation' to SF if we wanted to. In fact, Scholes's point is a little more subtle than that. For him, SF is permeated by 'an awareness of the universe as a system of systems, a structure of structures'. Whilst he concedes that, for SF, 'the insights of the past century of science are accepted as fictional points of departure', he is none the less adamant that SF is more than just a 'scientific' version of fabulation. 'Structural fabulation is neither scientific in its methods, nor a substitute for actual science. It is a fictional exploration of human situations made perceptible by the implications of recent science.' (Scholes 1975: 8). One of the reasons Scholes thinks so highly of SF is because of the possibilities it opens up as a distinctive, twentieth-century 'scientific' mode of literature. More particularly, 'science', which is an observational method, is only the starting point for Scholes's SF. He is more interested in the fictionalisation of the premise, and accordingly his emphasis is rather different from Suvin's.

This 'scientific' – cognitive, rational, categorical – approach to the issues of defining the genre has the upper hand in much critical discussion of SF. Damien Broderick, an SF author as well as being a theoretically engaged critic, concludes his analysis of the contemporary SF scene with the following definition of what SF is now:

> Sf is that species of storytelling native to a culture undergoing the epistemic changes implicated in the rise and supercession of technical–industrial modes of production, distribution, consumption and disposal. It is marked by (i) metaphoric strategies and metonymic tactics, (ii) the foregrounding of icons and interpretative schemata from a collectively constituted generic 'mega-text' and the concomitant de-emphasis of 'fine writing' and characterisation, and (iii) certain priorities more often found in scientific and postmodern texts than in literary models: specifically, attention to the object in preference to the subject.
>
> (Broderick 1995: 155)

The sheer complexity of this definition enacts the pseudo-scientific discourse that is also at the heart of much SF. Indeed, it is so complex that it would take many pages for me to unpack all the terminology of this definition, although I discuss one key element of it, 'metaphoric strategies and metonymic tactics', at length in Chapter 6. But one point is worth dwelling on for a moment; Broderick's insight that we recognise SF in part because it deploys certain 'icons' that are consensually taken as 'SF'. Many of these devices, as Broderick mentions, derive from a corpus of accepted 'nova': starships, time-machines, robots and the like. Each of these connects with a particular 'estranged' version of our reality.

Broderick develops and deepens the Suvinian sense of 'cognitive estrangement' and Scholes's 'structural fabulation'; but he also brings in aspects not dwelt upon by either of those critics. In particular, he is very aware of SF as a *popular* genre, one that shares many features with other 'pulp' fictions and popular modes, what he calls a 'de-emphasis on fine writing' and the use of a range of accepted or even worn-out conventional 'icons': the mad scientist, say, or the robot yearning for humanity. Lurking behind this is a sense that SF is popular because it is populist, that it panders to the lowest common denominator, that it is an adolescent mode of writing, that it is not 'serious' or 'high art'.

Broderick's perspective here is part of a larger critical unease about SF as a genre, a sense that it does not provide readers with many of the things that serious literature does: for instance, beautiful or experimental writing styles, detailed and subtle analyses of character or psychological analyses. It may be possible to think of SF texts that do these things, but most do not. Instead of style, SF texts often concentrate on concept, subject and narrative. Instead of the abstract, SF texts prefer the concrete, so, rather than meditate upon 'alienness', a SF novel is more likely to present us with an actual, concretely realised alien, with blue skin and bug eyes. According to SF author and critic Gwyneth Jones, SF avoids the trappings of mainstream fiction so as not to distract its readership from the conceptual experiment it represents; fine writing is 'de-emphasised' in order to allow content and concept to come more obviously to the fore. 'A typical science fiction novel has little space for deep and studied characterisation,' argues Jones, 'not because writers lack the skill (although they may) but because in the final analysis the characters are not people, they are pieces of equipment ... the same reductive effect is at work on the plot, where naked, artless ur-scenarios of quest, death and desire are openly displayed' (Jones 1999: 5). This is a version of Broderick's suggestion that SF is more interested in 'object' than subject.

It is hard to deny that many SF texts are limited and narrow if judged by the aesthetic criteria sometimes applied to other literatures; that their characterisation often is thin, their style dull and unadventurous, their plots hackneyed. Moreover, the nova that differentiate the SF world from the recognisable world of realist fiction are more often than not drawn from a fairly narrow range of stock themes and situations. In fact, it is possible to classify the major tropes of SF into half a dozen categories. Books that take any of the following subjects, themes, trappings or props are liable to be thought of as science fiction:

- spaceships, interplanetary or interstellar travel
- aliens and the encounter with aliens
- mechanical robots, genetic engineering, biological robots
- computers, advanced technology, virtual reality
- time travel
- alternative history
- futuristic utopias and dystopias.

A body of literature built on so narrow a base of premises runs the risk of becoming, in practice, repetitive and crude, and Broderick sometimes gives the impression that he is picking only a few exceptional texts from a morass of formulaic and mass-market examples. He talks of 'the poverty of mass-market SF' being 'visible even in the new work of attested and once-fresh writers' of the calibre of Asimov.

There can certainly be a wearying sense of déjà vu in reading a new SF novel. Broderick himself quotes the blurbs from recent SF publishers' catalogues to illustrate that SF nova have in large part lost all newness because of their endless circulation and recirculation:

> CYBERSTEALTH, S. N. Lewitt – The cyberstealth pilots are the best of the breed. But Cargo, the best of the best, needs more than expert flying to seek and destroy a traitor.
>
> REVENGE OF THE VALKYRIE, Thorarinn Gunnarsson – Here is the blazing epic sequel to Song of the Dwarves.
>
> GUARDIANS OF THE THREE VOL II. KEEPER OF THE CITY, Bill Fawcett – This is a magnificent epic of adventure, romance and wizardry set in the unique world of the catlike mrem.
>
> BROTHER TO DEMONS, BROTHER TO GODS, Jack Williamson – From the test tubes of a dying humanity comes the first of a race of gods.
>
> (Broderick 1995: 11–12)

Broderick considers these 'hilariously awful ... blazing sequel to dwarves, indeed!', but there is a serious point, too. As he observes, it is 'one of the comforts of this list, for habituated readers', that 'the catlike mrem live in a world which is precisely not unique' (Broderick 1995: 12). Many fans of SF seek out the comfort of the familiar and mask that desire under the illusory rhetoric of difference, of 'catlike mrem' and their like.

This helps us draw these different definitions towards some sort of common conclusion. It seems that one of the axes of critical enquiry has to do with the degree of proximity of the 'difference' of SF to the world

we live in: too removed and the SF text loses purchase, becomes impossible for the reader to identify with or care about the imaginary world portrayed; too close and it might as well be a conventional novel, it loses the force and penetration the novum can possess when it comes to providing newness of perspective. Balancing 'cognition' and 'estrangement', or the continuities and discontinuities of the SF text, becomes the index of success of the SF text. More than this, it seems that this balance is focused through the novum. In other words, implicit within these three definitions is a sense of SF as a *symbolist* genre, one where the novum acts as symbolic manifestation of something that connects it specifically with the world we live in, the attempt to represent the world within reproducing it in its own terms. Suvin puts the emphasis here, describing SF as 'a symbolic system' which is 'centred on a novum which is to be cognitively validated within the narrative reality of the tale' (Suvin 1979: 80).

There are important differences in seeing SF as symbolist rather than allegorical. Symbolism opens itself up to a richness of possible interpretation, where allegory maps significance from one thing on to one other thing. More than this, any symbolist movement in literature, such as the late nineteenth-century movement of symbolist poetry, will tend to reuse a fairly limited corpus of symbols. M. H. Abrams lists some of the recurring icons of nineteenth-century symbolist writing, 'such as the morning and evening star, a boat moving upstream, winding caves, and the conflict between a serpent and an eagle' (Abrams 1985: 186). He goes on to quote symbolist poet Baudelaire to the effect that symbolism draws on 'the correspondences' between 'the spiritual and the natural world'. The point of SF, on the other hand, is to be less spiritual and more material, and accordingly this line of criticism enables us to look again at the limited range of nova deployed in most science fiction not as a narrow and exhausted set of clichés, but as a supple and wide-referencing body of material symbols. The catlike mrem, for example, can be seen less as a feeble rehashing of worn-out tropes and more as a fictional inhabiting – successful or not depending on the skill with which the author deploys these emblems – of a potent SF symbol of alienness.

The obvious point of contrast might be thought to be with a deliberately non-symbolist mode of writing, such as 'realism'. Realist fiction seeks to reproduce the experience of living in a particular milieu exactly, and often exhaustively, and aims for a sense of documentary verisimilitude. But in a strange way, SF has more in common with realism than it has with other, more obviously imaginative, mainstream literatures. To elaborate this point it is worth noting that 'realism' is only one form of mainstream writing; much ordinary fiction introduces 'symbolic' devices, various imaginative strategies to provide 'discontinuities' with our experience of the world, without thereby becoming science fiction. But the textual function of these nova in SF sets them apart from other usage. In other words, SF gives us a unique version of the symbolist approach, one where the symbol is drained of transcendental or metaphysical aura and relocated back in the material world. For example, a 'realist' novel like Emile Zola's *Germinal* (1885) creates a sense of what it was actually like to live in a nineteenth-century French mining community by accumulating a great deal of accurately observed material detail. By contrast, a non-realist modernist novel like Virginia Woolf's *The Waves* (1931) is built around the stream-of-consciousness meanderings of its six characters. Instead of a large amount of realistic material detail, Woolf concentrates on certain recurring symbolic images, such as the sun rising and setting over a seascape, or the fin of a fish breaking the surface of the waves. Science fiction is symbolic, but it usually adopts the realist mode of an accumulation of detail, rather than the poetic and lyrical method of a writer like Woolf. To quote Suvin again, the symbolic novum 'has to be convincingly explained in concrete, even if imaginary, terms, that is, in terms of the specific time, place, agents, and cosmic and social totality of each tale'. Suvin goes on to note that 'this means that, in principle, SF has to be judged, like most naturalistic or "realistic" fiction and quite unlike [supernatural] horror fantasy, by the density and richness of objects and agents described in the microcosm of the text' (Suvin 1979: 80). The attention to detail and the density of the described reality in many SF texts mean that, very often, they read like realist novels; or perhaps a better phrase would be pseudo-realist. But the crucial point is that science fiction reconfigures symbolism for our materialist age.

It is this materialism, once again, that distinguishes the effectiveness of the SF use of symbol from the widespread use of symbolism in other literatures. To take another example, the trope of the 'invisible man' is one we might think of as a classic SF novum. H G Wells wrote a short novel

on this theme in 1897. The difference between this SF text and Ralph Ellison's celebrated novel of Black American experience, also called *Invisible Man* (1952) – a book never described as SF – has to do with the operation of this novum in the text itself. Ellison's protagonist is invisible because people simply don't see him, and they don't see him because he is black. Ellison's point, in other words, is to express metaphorically, through the trope of the invisible man, the social invisibility and alienation that are part of the experience of being black in America. Wells's protagonist, on the other hand, is a scientist. His invisibility is specifically rationalised as the result of scientific research. The particular alienation experienced by Wells's invisible man stems from his own antisocial personality, which in turn is an expression of the way science denies common nature and humanity. Ellison's invisibility is a transcendent device, in the sense of being something that transcends or passes beyond conventional literary expectations; it is a means of metaphorically apprehending the experience of a whole group of people. Wells's is a concrete symbol of the dehumanisation of science, a particular coding of the very materiality of science's practice. Both have things to say about the real world, but the two works go about this in different manners.

DIFFERENCE

The problematic of this encounter with difference, the difficulty of representing the other without losing touch with the familiar, becomes exactly the point of some of the most celebrated SF texts. It is possible to explore the strangeness and threat of the other without surrendering to two-dimensional caricature of otherness as evil. A classic example is Stanislaw Lem's novel *Solaris* (1961), set aboard a research station on another planet, a planet almost entirely covered with a strange ocean. It seems that this ocean is sentient, making the whole world a sort of giant brain. The scientist-protagonists of Lem's tale are trying to comprehend this unprecedented place, trying, in other words, to reduce it to the sameness of scientific explanation. But the world defies comprehension; it sends out hallucinations of people important to the scientists. The contact drives some of them mad. Snow, one of the occupants of the station, comes to an important realisation late in the novel and anatomises the human urge to explore the universe:

> We don't want to conquer the cosmos, we simply want to extend the boundaries of Earth to the frontiers of the cosmos. For us, such and such a planet is as arid as the Sahara, another as frozen as the North Pole, yet another as lush as the Amazon basin ... We are only seeking Man. We have no need of other worlds. We need mirrors.
>
> (Lem, *Solaris* (1961): 75–6)

The ocean-planet of Solaris, in its strangeness and unpredictability, denies this devouring urge to transmute all alterity into versions of sameness, and that is why the scientists cannot cope with it. The perfectly judged tone of uncanny uncertainty in Lem's novel, the way it consistently refuses the straightforward explanation of the characters' situation, precisely captures the way encountering the other forces us to encounter ourselves, the way it can reveal things about ourselves which are intensely uncomfortable. 'We arrive here as we are in reality, and when the page is turned and that reality is revealed to us – that part of our reality which we would prefer to pass over in silence – then we don't like it any more' (p. 76).

What these various definitions of SF have in common, then, is a sense of SF as in some central way about the encounter with difference. This encounter is articulated through a 'novum', a conceptual, or more usually material, embodiment of alterity, the point at which the SF text distils the difference between its imagined world and the world which we all inhabit. For Scott McCracken, 'at the root of all science fiction lies the fantasy of alien encounter'. He adds that 'the meeting of self with other is perhaps the most fearful, most exciting and most erotic encounter of all' (McCracken 1998: 102). This serves as the basis of many critics' affection for the genre, the fact that SF provides a means, in a popular and accessible fictional form, for exploring alterity. Specific SF nova are more than just gimmicks, and much more than clichés; they provide a symbolic grammar for articulating the perspectives of normally marginalised discourses of race, of gender, of non-conformism and alternative ideologies. We might think of this as the progressive or radical potential of science fiction.

But it is not necessarily clear that SF is as positive a mode as this optimistic assessment suggests. Even if we set aside the more obviously retrograde examples of SF that introduce difference only to demonise it,

some critics are not sanguine about the ability of the genre to access otherness. Damien Broderick, for instance, wonders if SF does, 'above all else, write the narrative of the other/s?', but goes on to say that even if we take that 'in the spirit of description (though hardly of definition)', we still have to accept that 'SF writes, rather, the narrative of the same, as other' (Broderick 1995: 51). Could we argue that all these SF nova, from aliens to machines, are merely elaborations of a monolithic conception of Identity?

The demographics of the genre are not hopeful in this regard. Until relatively recently, SF was dominated by a fan culture of young white males. Science fiction's tendency to make a fetish of technology, particularly military technology, and its reliance on stock types of character and plot that are often flat and two dimensional surely limit its engagement with any meaningful comprehension of the marginal, of otherness. But there are features of this readership that start to redeem it: the energy of youth, for example, has a part to play in constructing SF as, to quote Roger Luckhurst, 'an adolescent and exuberantly kinetic genre' (Luckhurst 1997: 4). Indeed, despite the strong attachment of SF to its own canonical conventions and the tendency of much SF tacitly to accept dominant ideological and political belief systems, the genre has always had sympathies with the marginal and the different. Gary Westfahl admits that 'science fiction [is] regularly condemned as the quintessentially masculine genre, long written almost exclusively by and for young men, filled with muscle-bound macho heroes swaggering and bullying their way through the galaxy'. But, Westfahl argues, the reality is not at all like this, because in fact SF has what he calls a 'feminine' aura. He itemises the way that American SF from the 1940s and 1950s – the so-called 'Golden Age' of SF – demonstrated remarkable sensitivities on the subjects of gender and racial diversity and contact, and asks:

> Why should this be, given the undeniable fact that most of the writers and readers were male? Well, the young nerds attracted to science fiction may have shared the gender and skin-colour of the era's dominant class, but in every other way they were alienated and marginalized members of society, dreaming of domed cities and Martian canals when most people longed for an idealized past and idolized [cowboy icons] Gene Autry and Andy Hardy. If, at that time, you read magazines with pictures of squid-like monsters and built miniature rockets in your backyard, you undoubtedly felt rejected, ridiculed, and out of place. Such people often bond with, and adopt the attitudes of, other members of society who feel rejected, ridiculed, and out of place. By this logic, one would expect to find in early science-fiction stories passionate arguments against prejudice and racism, celebrations of oppressed workers struggling against evil bosses, and proto-feminist tracts applauding the abilities and sentiments of women. And if you look carefully, you will find, in the science fiction of the 1930s and thereafter, numerous examples of all the above.
>
> (Westfahl 1999: 32)

Reading SF, in other words, is about reading the marginal experience coded through the discourses of material symbolism; which is to say, it allows the symbolic expression of what it is to be female, or black, or otherwise marginalised. SF, by focusing its representations of the world not through *reproduction* of that world but instead by figuratively symbolising it, is able to foreground precisely the ideological constructions of otherness. In other words, in societies such as ours where otherness is often demonised, SF can pierce the constraints of this ideology by circumventing the conventions of traditional fiction.

A film such as *Lost in Space* (1998) represents a number of 'nova' and a variety of versions of difference; but at the same time it is so scared of difference that all possible manifestations of it need to be fully demonised and then utterly vanquished. Sameness in this movie is tightly defined as 'belonging to the white family unit'; every good quantity encountered in the film either belongs to the family or is adopted by it – from the cute baby-like alien adopted by the family to the space pilot who is courting the blonde, blue-eyed, scientist's daughter. Everything that is not 'of the family' is represented as evil and threatening. The hidden agenda here, it seems to me, is racial. The Robinson family are so egregiously White that all representations of blackness become freighted with particular significance. When the fey English villain is bitten by a being from a breed of half-organic, half-machine, alien monsters, he is metamorphosed into something terrible:

'evil always finds its true form', as Papa Robinson puts it. Its true form in this instance is that of a towering black man, who paces menacingly around the margins of the family, having perpetrated some unspeakable doom upon Will Robinson's mother and sister ('I can still hear the screaming of the women,' says a traumatised Will). The Robinsons are certainly encountering difference, but only in the limited sense of racial caricature, a violent, sexually predatory libel on black manhood. Difference, in other words, has been reduced to stereotype, and stereotype is always at the bottom of racism, sexism or any other bigotry. Ultimately, this black threat to the White family is flushed down a cosmic plughole like the rubbish he is represented as being, and the family is reunited to its stifling conformity. Here the symbolic field of signification seems racial, something that we examine in more detail in Chapter 4. This is one example of many in SF of a refusal to think through the implications of encountering difference. Not all SF is so crude or bigoted.

STRUCTURALIST APPROACHES

The logic behind these sorts of definition is basically *structuralist*. Structuralism is the name given to a loose affiliation of critics and scholars whose approach to the business of criticism dominated academies in the 1960s and early 1970s. Linguists had shown that the many different specific languages spoken in the world can be analysed in terms of a complex but consistent set of grammatical and syntactical rules underpinning them all. Structuralist critics such as Roland Barthes or Gérard Genette attempted to apply this approach to literature and culture as well as language, claiming to uncover, for instance, the underlying grammar of narrative (we are probably all familiar with the idea that all stories can be seen as variations on seven fundamental patterns), or of cultural forms more generally. Structuralist literary criticism was, in part, a reaction to older forms of criticism premised on ideas of 'the genius the author', stressing instead literature as a system of signification.

At the risk of oversimplifying a complicated period in academic history, structuralism was superseded in most universities during the 1980s by 'post-structuralism' or 'deconstruction', a set of more radical and philosophically nuanced critical strategies that denied the universalising, pseudo-scientific claims of structuralism. Insightful if obscure critics such as Jacques Derrida and Paul de Man insisted instead on close readings of the particularity of literature, an attention to the margins of texts and an understanding of the radical instability of the very categories structuralist critics had tried to establish as universals.

It is probably true to say most critics of SF, even those working currently, are more influenced by structuralist assumptions than post-structuralist ones. The magisterial and indispensable *Encyclopedia of Science Fiction* (second edition 1993, edited by John Clute and Peter Nicholls), whilst acknowledging the immense hybridity of SF with genres such as Fantasy, Horror, Techno-thriller and Magic Realism, nevertheless attempts to establish the categories 'fundamental to SF'. Much of the critical discussion about SF, for instance online, worries away obsessively about what is and what isn't 'proper' science fiction, establishing sets of conceptual pigeonholes as an implicit grammar of the genre. Many critical studies of SF are, in essence, taxonomies. Indeed, given the hospitality to otherness that ought to be a feature of the best SF, it is rather dispiriting to see so many SF critics labouring so strenuously to establish a 'pure race' model of what SF is. Moreover, it is probably true to say that 'deconstruction' is taken by many readers today, and some critics as well, as a byword for wilful obscurity and meaningless jargonised flapdoodle.

But it is worth rehearsing, in brief, why so many academic critics fell under the spell of deconstruction in the 1980s, and the ways in which structuralist critical conventions came to be seen as flawed. The impulse towards systematic categorisation of any literature, whilst superficially beguiling, is dangerously flattening and distorting in practice. For example, a recent neo-structuralist study by Christopher Brooker claimed to codify, as its title declares, *The Seven Basic Plots* (2004). The first of Brooker's archetypal stories, 'Overcoming the Monster', is presented as a timeless category, including both the old-English poem *Beowulf* and the late twentieth-century SF film *The Terminator* (1984) as examples. Brooker's self-satisfaction, evident throughout his book, can be shared by the reader who notices, perhaps for the first time, that – yes, those two texts are based on very similar premises: young hero must fight seemingly indestructible monster,

eventually defeating him. There are, as Brooker points out, thousands of similar stories. But the satisfaction of sorting all those stories into that one conceptual drawer is a puerile one, the delight of the child who notices for the first time that human beings, monkeys and shopfront dummies are all similar. Because the inescapable fact is that, having read *Beowulf*, we do not load *Terminator* into the DVD player for 'more of the same'. We go to specific texts for their specificities. Although there are similarities between *Beowulf* and the *Terminator*, there are very many more points of difference, and it is those differences, the particularised intensities and localised qualia of actual textual production, that provide us without our major satisfactions. Here are three SF texts: Kurt Vonnegut's novel *Slaughterhouse-Five* (1969), the TV series *Quantum Leap* (1989–1993) and the recent bestseller by Audrey Niffenegger, *The Time Traveler's Wife* (2004). All three of these share the same novum: a character who has come loose in time, in some sense, and whose consciousness is hurtled backwards and forwards within the time frame of their own life, or only a little way beyond it. But although the structuralist temptation is to file all three away in the same pigeonhole, in fact these are three radically different texts. The Vonnegut is a profound and thought-provoking meditation on the experience of the Second World War, and civilian mass murder in particular, that achieves its uniquely moving effect through a brilliantly handled deadpan deftness of style. The TV series is a witty, bizarre and entertaining conceit that enables a disconnected series of dramatic set pieces. The Niffenegger novel is a conventional contemporary-set love story that uses its SF novum as garnish to an otherwise rather ordinary tale of the tribulations of courtship. Any criticism that blurs the very different particularities of these texts is, at the least, lacking in nuance and, at the worst, a positively unhelpful way of looking at culture.

To instance one more attempt at defining SF. Gary Westfahl is a better informed and more intelligent critic than many, yet even he can come up with a definition as procrustean as this:

> Science fiction is a twentieth-century literary genre consisting of texts labelled 'science fiction' which are associated with explicit or implicit claims that each of its labelled texts has these three narrative traits:
>
> A. It is a prose narrative.
> B. It includes language which either describes scientific facts, or explains or reflects the processes of scientific thought; and
> C. It describes or depicts some aspect or development which does not exist at the time of writing.
>
> (Westfahl 1998)

This is a definition that serves Westfahl's purposes and includes all the SF that he is interested in discussing. But what about the SF it explicitly excludes? What, for instance, about the film *Star Wars* (1977), the play *R.U.R, Rossum's Universal Robots* (1920), the graphic novel *Watchmen* (1987), the work of musician Sun-Ra, such as *We Travel the Spaceways* (1965), the video game *Doom* (1993), the SF concept album *Time* (1981) by ELO, or the paintings of British artist Chris Foss? Not to mention novels such as David Lindsay's *A Voyage to Arcturus* (1920), which offends Westfahl's rubric under 'B', or novels like Philip Dick's *The Man in the High Castle* (1962) and William Gibson and Bruce Sterling's *The Difference Engine* (1990), which offend Westfahl's rubric under 'C'?

The temptation, once a critic has established a definition, is for him or her simply to dismiss texts which fall outside it as 'not truly SF', a circular logic that can become self-sustaining. The case is similar to a joke from Douglas Adams' very popular SF radio serial *The Hitch-Hiker's Guide to the Galaxy* (1978–80) – another text not SF by Westfahl's definition – in which the fabulous prosperity of a certain planet is described as so comprehensive that 'nobody was really poor; at least, nobody worth mentioning'. This runs the risk of opening up a sort of critical binary: 'SF classics' that the critics include as respectable, and material that is ignored as not really SF, or not worthy of critical attention. But SF, whatever it is, is not a binary; it is a multiplicity of complexly interacting discourses, each of which contains material good, bad and indifferent.

At the beginning of the chapter I quoted, amongst the many bickering versions of 'a definition of SF', Damon Knight's tautological statement: 'science fiction is what we point to when we say it'. Strangely enough, this approach at defining the genre might be more useful than Westfahl's more deeply thought-through schema. The problem with it

is that, of itself, it gives us no purchase on two key terms: who 'we' are and what the 'it' is at which we are pointing, when we point at 'it'. But, a little tentatively, we can start by saying that 'we' are the people who are interested in SF: fans, readers, critics, students. And we can add that amongst the things we point at are texts like *Star Wars* and graphic novels like *Watchmen* as well as many novels and short stories. One of the most important features of this 'we' is precisely that it includes difference, that it is not defined by monolithic agreement. When Neal Stephenson's novel *Quicksilver* (2003) won the prestigious Arthur C Clarke award in 2004, many greeted it as a masterpiece, but some contended that, set as it is wholly within a detailed historical reconstruction of the late seventeenth century, it is not really science fiction. The Clarke judges clearly thought it was and recognised its excellence. In the words of Farah Mendlesohn, 'science fiction is less a genre ... than an ongoing discussion' (James and Mendlesohn 2003: 1).

PREDICTION AND NOSTALGIA

These difficulties of defining SF are, in part, a function of the sheer number of SF texts that need to be brought beneath the bar of any notional inclusive definition. Where SF once upon a time constituted a small body of texts, nearly all of them novels and short stories, which most fans could be expected to have read, nowadays SF texts are impossibly legion. Scott McCracken points out that 'Science Fiction is enormously popular. It accounts for one in ten books sold in Britain, and in the United States the number is as high as one in four' (McCracken 1998: 102). John Clute has pointed out that the number of texts classified as SF has ballooned since the early years of the twentieth century. According to Clute, even at the height of the 'Golden Age' the number of separate novels published as science fiction was a few hundred a year. Nowadays, taking together science fiction and fantasy, thousands of novels are published annually. Now 'what was once a field [has] become the Mississippi Delta'. In Clute's opinion, if Golden Age SF could be perceived as '*a family of books* which created (and inhabited) a knowable stage (or matrix) of possible worlds', then contemporary SF has exploded that family: 'no longer could an ostensible definition of SF ... even begin to match the corrosive intricacies of the exploded genre' (Clute 1995: 17–18).

SF, then, clearly constitutes a wide range of varying discourses, so wide a range indeed that it becomes difficult to assert that all the different manifestations of 'SF' actually belong under the one umbrella term, not merely in terms of genre or mode, short stories, novels, films, TV shows, comics, video games, pop music and so on, but in the broader sense of cultural discourse. Talking about NASA's space programme, or the present construction of the International Space Station, automatically, it seems, inhabits the idiom of SF; and the number of New Age or mystical belief systems that have replaced conventional religion with a belief in one or another SF prop is remarkable, from abduction-enthusiasts who believe the Earth to be in the care of spiritually intense aliens, to cults that practise mass suicide in the belief that their souls will be carried away by an alien spacecraft hidden in a comet.

This was not always the case. In the so-called 'Golden Age' of science fiction, from the late 1930s through to the early 1960s, the term 'science fiction' had a greater degree of coherence. It referred to a particular body of texts that were, specifically, founded in science and the extrapolation of science into the future. Hugo Gernsback (1884–1967), founder of a number of influential SF magazines, inserted an editorial into the first number of his *Science Wonder Stories* (June 1929) in which he declared his 'policy' to be the publishing of 'only such stories that have their basis in scientific laws as we know them, or in the logical deduction of new laws from what we know'. He went so far as to announce that a panel of experts would judge the scientific correctness of stories submitted to the magazine. But there has been a shift in the role of the scientific novum; it now connects its readership less with a particular discourse of 'science' and more, as I have been arguing, with a materialist, symbolic fiction for reconsidering the world. The balance, to reuse Scholes's distinction, has shifted towards the fabulation and away from the structural. As we have seen, the term 'science fiction' today suggests an imaginative fiction in which one or more of the contemporary constraints upon the business of living are removed or modified. John Clute sees 1957 as the significant historical moment, with the launch of the Russian satellite Sputnik.

> There may have been a time, in the morning of the world, before Sputnik, when the empires of our SF dreams were governed according

> to rules neatly written out in the pages of *Astounding*, and we could all play the game of a future we all shared, readers, writers, fans ... But something happened. The future began to come true.
>
> (Clute 1995: 17)

This has something to do with a certain shift in cultural sensibilities. Space flight changed from being a thing of a gleamingly imagined future to being real, and then went on to pass that by and become, as it is nowadays, a thing of *the past*. A film such as Ron Howard's *Apollo 13* (1996) illustrates this neatly enough. It is a film about the adventures of the crew of a spaceship, off on a perilous mission, who have to battle with near-fatal malfunction, and accordingly it is a film that follows a standard SF trajectory, one seen in such classic films as *2001: A Space Odyssey* (1968) and *Dark Star* (1974). But this is a text that looks *backwards* not forwards. The key thing, it seems to me, is less that the film is 'true' – although, of course, it is – but that the film is so specifically *historical*. The astonishing special effects that recreate what lift-off in Saturn V and a journey through space must have been like are paralleled in the film by a precise recreation of the early 1970s milieu that is the setting for the picture. Watching *Apollo 13* is an experience that parallels more straightforwardly science-fictional films in interesting ways; but watching it also creates an acute awareness that 'going to the Moon' was something our ancestors did, not something we do today or are going to do in the future.

What *Apollo 13* does, in fact, is epitomise an important argument about SF made by several critics: although many people think of SF as something that looks to the future, the truth is that most SF texts are more interested in the way things have been. SF uses the trappings of fantasy to explore again age-old issues; or, to put it another way, the chief mode of science fiction is not prophecy but nostalgia. That SF is not prophetic seems clear enough. There have been hundreds of thousands of SF texts throughout the twentieth century, but only very rarely – statistically no more than would be expected by the operations of chance – have any of those texts accurately predicted anything. Jules Verne predicted that men would fly to the Moon, blasting off from a location very close to Cape Canaveral in Florida; but he also thought that firing capsules out of cannons would be a good way of propelling people on this space voyage, when in fact the suddenness of the acceleration would squash the astronauts like bugs. H. G. Wells predicted the inventions of tanks and aerial bombing. But he didn't anticipate computers, didn't realise that life in space would be weightless, and confidently predicted that a world-wide government of scientists and rational men would create a global utopia by the 1950s. SF prediction is wrong far more than it is right, but we needn't be embarrassed on this account, because the recent developments in 'Chaos Theory' have taught us that the business of accurate prediction in a chaotic system like 'The World' is literally impossible. No, despite a surface attachment to 'the future', it seems clear that SF actually enacts a fascination with the past for which 'nostalgia' is the best description. *Star Wars* (1977) begins with the caption 'A Long Time Ago in a Galaxy Far Away ...', and the action of that film owes more to the past, and specifically to director George Lucas's youth, than to any coherently imagined future. His spaceships are more like warplanes, going off on sorties straight out of *633 Squadron* or *The Dam Busters*, than spaceships; this is why they make screaming and whooshing noises when flying though the noiseless vacuum of space. A spaceship would be silent, but the X-Wing fighters aren't really spaceships, they're Spitfires and P-51s. Frank Herbert's *Dune* (1965), one of the most famous SF novels of the postwar period, is also thoroughly grounded in this retro-vision. Despite being set in the 211th century, it introduces us to a world that owes more to a dream of Arabia in the Middle Ages than to any future we can plausibly conceive: a world without computers or science, a religious, mystical and superstitious world, a reactionary and intensely old-fashioned world. I could run through all the classic SF texts in a similar fashion. Philip K Dick, seen by some as the most significant writer of SF in the American postwar tradition, sets his books in a future that almost exactly resembles 1950s American suburbia; Sheri Tepper's *Grass* (1989) takes us to a distant future and a faraway planet in order to tell a story-line about Catholic guilt and fox-hunting.

Let me restate this point with another example. When the television series *Star Trek* was first aired in the late 1960s, it worked hard to produce a design of futuristic living that seemed plausibly of the future. But watching original-series *Star Trek* today is an interesting temporally dislocated experience. It is a show that purports to be set in the twenty-third century, and which includes many things, such as faster-than-light

travel, matter-transportation beams and so on, that are more advanced than current technology. In that regard, it is 'futuristic'. But it is also, and at the same time, egregiously dated in a rather quaint and unmistakably 1960s fashion. The clothes worn, the spaces inhabited, even the relative crudity of the special effects, constantly remind us that we are looking backwards not forwards. I remember watching *Star Trek: the Next Generation* when that show was first aired in the 1980s and being struck only by how suave and futuristic it looked. Watching re-runs, I am amazed by how extraordinarily dated and of-its-time it seems. The effect, I think, is to problematise in an interesting way our attitudes towards the temporal component of SF.

According to Fredric Jameson, the older cultural genres have 'spread out and colonised reality itself' (Jameson 1990: 371). This is more true of SF, I think, than any other genre. Just count the number of ways in which we can think about the world today that have been shaped by science fiction. The symbolic purchase of SF on contemporary living is so powerful, and speaks so directly to the realities of our accelerated culture, that it provides many of the conceptual templates of the modern Western world. The complex debates surrounding the genetic engineering of foodstuffs, for instance, enter popular consciousness in SF terms as 'Frankenstein foods'. The dangers of asteroid impact on our world find expression in such SF texts as the films *Deep Impact* (1997) and *Armageddon* (1998). Our feelings about computers have been rehearsed by every SF text that includes artificial intelligence; actual exploration of our solar system seems tame to us because our expectations have been raised by the thrills of SF imagery; many people regard the trope of UFO abductions to be fact rather than science fiction, partly because of the expertness of SF texts such as *The X-Files*. As Istvan Csicsery-Ronay Jr puts it, 'SF has ceased to be a genre per se, becoming instead a mode of awareness about the world' (Csicsery-Ronay 1991: 308). SF does not project us into the future; it relates to us stories about our present, and more importantly about the past that has led to this present.

CASE STUDY: FRANK HERBERT'S *DUNE* (1965)

These various ways of defining SF, as a literature of cognitive estrangement, as a literature of alterity that does not necessarily escape a reductive sense of 'difference' as dangerous, as materialistic symbolism and as a nostalgic, historiographic mode of writing, can all be illustrated via a reading of one of the undisputed masterpieces of 1960s SF, Frank Herbert's large novel *Dune*.

The novel as we have it is divided into three parts: *Dune*, *Muad'Dib* and *The Prophet*, which is a rough index of how Herbert orchestrates his components. Paul Atreides, the hero, comes to Dune as an outsider; he is born on the Earth-like planet Caladan and arrives on Arrakis (Dune) at the age of 16 with his father Duke Leto. This enables the first part of the book to introduce the world and culture of the desert planet, thus arranging our encounter with difference through the device of the initiation of the protagonist. At the end of this first part, the evil Baron Harkonnen seizes the planet and murders Paul's father, forcing Paul to flee. The second part, which takes as its title the name Paul adopts among the Fremen, the desert dwellers, details his Lawrence-of-Arabia-style encounter with the ways of the desert tribes, his acceptance by the Fremen, his adoption of the position of ruler and his taking of a Fremen wife. The third section is where the religious strand takes centre stage. In terms of basic narrative the final third of the book is a return: Paul takes his revenge against Harkonnen and the Emperor and the book comes full circle.

In many senses, then, this is an old-fashioned book. As critic Timothy O'Reilly describes it: 'It is a heroic romance of the best kind. Good and evil are clear-cut. The growth of young Paul to a heroic figure who can snatch victory from overwhelming defeat is a growth in awareness and self-mastery, as well as power. What reader is not heartened when Paul triumphs over all the forces massed against him?' (O'Reilly 1981: 150). And, of course, the whole universe that Herbert creates is almost medieval in terms of its technological non-sophistication. To put it another way, the nostalgic cast of this novel inflects its representation of technology. Herbert's universe is one without much by way of machinery, and with nothing at all by way of thinking machines or computers; these were wiped out in the 'Butlerian jihad', 'the crusade against computers, thinking machines, and conscious robots' (Herbert, *Dune* (1965): 594). Generally speaking, most of the technology in this novel would not be out of place in a shop today. More particularly, there are only two areas in which *Dune* introduces

items that we might think of as technological nova, and even these are compromised by the logic of the novel. One is interstellar travel, a necessary precondition for the book we might think; and yet this premise is explained not scientifically but mystically, with the spaceships depending upon pilots who are Spice-addicted (drug-addicted) mutants and therefore no longer human: 'The Guildsman was an elongated figure, vaguely humanoid with finned feet and hugely fanned membranous hands ... his tank's vents emitted a pale orange cloud rich with the smell of the geriatric spice, melange' (Herbert 1967: 11). The Spice and the Guildsman's mutated form enable him to somehow sense his path through 'foldspace', the SF-standard hyperspace, and guide a spaceship on its path. We are given no sense of the mechanics or technology of space flight apart from this peculiar quasi-religious staging, and there are no scenes set in space in Dune or the next three of its sequels (*Dune Messiah*, *Children of Dune* and *God Emperor of Dune*). The effect of this is to defamiliarise technology, to characterise it as 'magic' or 'religion' rather than quotidian machinery.

The other technological novum of the novel has to do with weaponry and war. We are introduced to a variety of alarming-sounding weapons in the novel: the 'lasgun', a 'continuous wave laser projector', the 'Maula Pistol' with its poisoned darts, the five-centimetre-long Hunter-Seeker, 'a common assassination weapon that every child of royal blood learned about at an early age. It was a ravening sliver of metal guided by some near-by hand and eye. It could burrow into moving flesh and chew its way up nerve channels to the nearest vital organ' (Herbert, *Dune* (1965): 84). We also learn about Defensive Shields, which can be worn individually or arranged about buildings or whole cities, that 'will permit entry only to objects moving at slow speeds' and that have rendered the use of lasguns almost irrelevant, since a lasgun fired at a shield will result in 'explosive pyrotechnics' powerful enough to destroy both attacker and defender. But at the same time that Herbert is detailing these fancy war technologies, he is undercutting the futuristic burden. An early chapter sees Paul being trained in knife-fighting by the Atreides weapons-master Gurney Halleck. As with 1977's *Star Wars*, a film which, as several critics have noted, owes a great deal to *Dune*, a fascination with the toy-like ingenuity of machine technology is ultimately undercut by a deeper sense of satisfaction at a retro-defined sense of chivalric conflict. This

happens on a personal level, so that the battles in *Dune* are fought by individuals with knives and swords. But it also happens on a larger one: Paul eventually defeats the Emperor and captures the planet by resorting to antique weaponry, namely atomic bombs, that had been long outlawed.

In both these senses, then, *Dune* is a novel built around a sense of stepping backwards; it portrays a world supposedly immensely removed from us in time and space, thousands of light years away and in the year 10,190, but actually intensely familiar to us because of its groundedness in a medieval Arabian paradigm made familiar to us through literature and film (particularly through David Lean's film *Lawrence of Arabia* of 1962). Its familiarity depends upon its old-fashionedness, and the old-fashioned heroic-romance storyline and old-fashioned props only reinforce this. Nor, to be clear about this, am I suggesting that this is entirely a bad thing. It helps explain why *Dune* is so effective. The sense of detail and completeness, of an imagined universe that is larger than the bits that happen to be presented to us in the novel, gives the book a breadth most novels, let alone SF novels, lack; and that sense of verisimilitude in turn depends upon the fact that the book is rooted in actual experience. To mention an example from a parallel mode of writing, Fantasy, J. R. R. Tolkien does something similar in *The Lord of the Rings* by writing a personal and idiosyncratic mythology that is firmly rooted in the actual mythologies of northern Europe.

But this begs certain questions about *Dune* in respect of its encounter with otherness or the alien. A world so familiar, with so little that is radically new to us, could easily be a stale and imaginatively poor world. This situation is made more acute by the way Herbert uses a binarism at least as old as the novel itself to propel his story onwards. What I mean by this is that the motor for this story is a straightforward moral battle, a battle between good and evil. The good is the family Atreides, and Paul in particular, and their 'goodness' is emphasised by a hundred details – they are humane, civilised, cultured, intelligent. When Paul's mother, the Lady Jessica, realises that physician Yueh's wife had been killed by Harkonnen, her reaction is one of instinctive compassion: '"Forgive me," Jessica said. "I do not mean to open an old wound." And she thought Those animals!' (Herbert, *Dune* (1965): 79). In a key scene Duke Leto, flying over the desert to inspect

one of his own Spice-mining operations, saves the crew from attack by the ravenous giant sandworms that infest the desert. The ecologist Kynes, watching the bravery and humanity of the action, is impressed despite himself:

> *This Duke was concerned more over the men than he was over the spice. He risked his own life and that of his son to save the men. He passed off the loss of a spice crawler with a gesture. The threat to men's lives had him in a rage. A leader such as that would command fanatical loyalty* ... Against his own will and all previous judgments, Kynes admitted to himself: *I like this Duke.*
>
> (Herbert, *Dune* (1965): 150)

After the Duke is betrayed and killed, Paul survives by virtue of physical strength and bravery, ingenuity and determination. He is unambiguously heroic.

By way of contrast, the 'evil' half of the moral equation is painted in utterly despicable colours. The villains of the piece come close to caricature. 'Beast' Rabban, with his unspeakable (and unspoken) wickednesses; Feyd-Rautha, who is fond of fighting to the death in – once again – old-fashioned 'Roman Empire' gladiatorial-style combats, but so as not to risk getting hurt, only ever fights carefully chosen opponents who are drugged beforehand to render them almost helpless; the Padishah Emperor Shaddam IV, a two-dimensional mixture of decadent obsession with the splendour of court and brutally oppressive tyranny enforced by his SS-like shock troops the Sardaukar. But worst of all is the grotesque figure of Baron Harkonnen, and it is the Baron's overweight body that is the most obvious focus for the limitations of the representation of otherness in *Dune*.

Harkonnen is a very effective villain, but his villainy is a direct function of his otherness. He is, to begin with, foreign: his name ('Vladimir') suggests that he is coded as Russian. As O'Reilly points out, 'the Russian sound' of the Baron's name 'was clearly meant to engage our prejudices, which, it must be remembered, were much stronger when *Dune* was written in the early sixties than they are now' (O'Reilly 1981: 55). He is physically grotesque, enormously fat, so obese that he can only move around with 'suspensors' strapped to his

body to carry most of its weight. It is his physical repulsiveness that is most consistently dwelt upon. His first appearance is crudely if effectively orchestrated, as he plots the downfall of the Atreides house in the shadows like a Bond villain: 'a relief globe of the world, partly in shadows, spinning under the impetus of a fat hand that glittered with rings' (Herbert, *Dune* (1965): 25). The point of this goes beyond a class-based characterisation of Harkonnen as 'decadent', although he is that. The response is more visceral. 'As he emerged from the shadows, his figure took on dimension – grossly and immensely fat' (p. 33). But in addition to being coded as repulsive because *racially* and *physically* different from the heroic 'norm' established by Paul, the Baron is also negatively portrayed as *sexually* different. This amounts to a crudely worked-through homophobia. A few pages after presiding over the deaths of Yueh and Piter with utter cold-bloodedness, and after consigning Arrakis to, as he thinks, sixty years of tyranny, Harkonnen is explicitly compared to the Devil, or at least the Beast of Revelation: 'Leto suddenly recalled a thing Gurney Halleck had once said, seeing a picture of the Baron: *And I stood upon the sand of the sea and saw a beast rise out of the sea ... and upon his hands the name of blasphemy*' (p. 213). And at the end of the same chapter, apparently as a means of climactically reinforcing just how repulsive and despicable the Baron is, we discover not only that he is homosexual but that he has lustful designs upon Paul Atreides himself:

> 'I'll be in my sleeping chambers,' the Baron said. 'Bring me that young fellow we bought on Gamont, the one with the lovely eyes. Drug him well. I don't feel like wrestling.'
>
> 'Yes, m'Lord.'
>
> The Baron turned away ... *Yes*, he thought. *The one with the lovely eyes, the one who looks so much like the young Paul Atreides.*
>
> (Herbert, *Dune* (1965): 219)

This may have been less obviously objectionable in the 1960s; today it strikes an odd note. Why should the fact that Harkonnen is gay or that he finds Paul attractive – Paul is certainly presented as being attractive – be in itself a reason to detest him? The point reflects uneasily, I think, on just how old fashioned a novel *Dune* is, how unquestioned its moral

schema and therefore its prejudices are. We are given a world of few, if any, moral ambiguities; right is clear cut and wrong signals its presence by being repulsive or effeminate or, indeed, both. Otherness, or 'the alien', is in the first instance represented through the perspective of a tribal culture based on the medieval Bedouin, for whom any person or thing from outside the tribe was to be treated with suspicion and even hatred. This might be thought fatally to compromise the novel's ability to represent the alien. The characters we encounter are, if anything, rather two dimensional, rather ordinary, familiar to us from countless other novels.

But there is one crucial novum in *Dune* which steps outside the restrictive binary of 'good versus evil' in which much of the rest of the novel is trapped: the giant sandworms, the enormous serpent-like alien creatures that are crucial to the ecology of the planet. And here, I think, Herbert does something very clever. He is able to throw the alien into relief against a background of familiarity and therefore make the otherness all the more striking, all the more powerful. This is why the giant sandworms stand out so powerfully in the imagination of the readers of *Dune*.

The sandworms live beneath the surface of the sands of the desert, non-sentient but drawn to the pockets of the drug 'Spice', and to any regular sound made on the surface. Most of the inhabitants of the planet fear these monstrous, alien beasts; but it is a sign of his religious destiny that Paul is able to see past this shallow response. The worm is connected with Paul's acceptance by the Fremen, because he must learn to ride one as they do to become truly one of the tribe. As he faces this test, the otherness of the beast becomes beauty: '*Come up you lovely monster*, he thought. *Up. You hear me calling*' (p. 463). The enormous worms are segmented, and a rider can compel them to stay on the surface of the desert by prising back the edge of one of these segments with a grappling hook; rather than get sand under its skin, the worm will carry the rider over the surface of the desert. Once he succeeds in mounting the worm, Paul revels in his power:

> He felt exultant, like an emperor surveying the world. He suppressed a sudden urge to cavort there, to turn the worm, to show off his mastery of this creature.
>
> (Herbert, *Dune* (1965): 464)

This may be poorly written ('cavort' is an especially ugly touch), but it does at least dramatise the symbolic pertinence of this novum. At the book's climax, the Fremen army ride into battle, and victory, on the backs of the sandworms; Paul turns his empire from dream to reality. In other words, we understand what epistemological riddle the worms stand for, what they stand for symbolically. They represent Power, the power to devour and terrify. They represent man's power over nature in that they are ridden by men; they represent the power of the army as they carry the Fremen troops to victory; and most important of all for the universe Herbert has created, they represent political power on the grand scale, because they are specifically implicated in the creation of Spice, the drug on which all political power rests.

It is the sandworms that dominate *Dune*. They are the most potent and the most memorable of Herbert's inventions in the novel, the thing readers carry away with them. And it seems clear to me that the reason for this is that it is in the figure of the sandworms that Herbert found his most powerful and least flawed embodiment of alterity. The worms are utterly different from us, or from anything we know; and that they are located in a world that is familiar enough from cultural representations of medieval Arabia only serves to highlight the beautiful strangeness of the beasts. They embody alienness in themselves, as well as carrying with them the connotation of the strangeness of the desert landscape that Herbert evokes so well. And more than this, as I have been arguing, they encode the operation of power as itself strange, *not* as natural or ordinary but as outlandish. It is this level of signification that renders *Dune* an effective novel, I think, that underlies all the cruder ethical binarism of good versus evil that otherwise lumpishly separates and condemns alterity in the text. There is, in other words, enough genuine encounter with difference in this novel, particularly the striking sandworms and the intriguing Spice, to carry the text beyond its otherwise disfiguring condemnations of racial, physical and sexual difference. And as a novel it can put together an oblique and suggestive coding of the operation of power as the revaluation of all value, the encounter with otherness.

The mysticism of *Dune* coalesces around gender distinctions. A mystical sect that is exclusively female, the Bene Gesserit Sisterhood, has been operating a breeding policy for thousands of years, hoping to produce a

specific individual with tremendous powers of insight into the future and the past. Although this mystic spirituality is something they reserve for women, it seems that this Messiah-figure, called in the novel the Kwisatch Haderach, can only be a man. In other words, potent though the female purchase on these mystical abilities is, there is something a woman lacks that this man has, something that will empower him to do things that a woman cannot do. On a symbolic level, it seems clear that there is some transcendental signifier being alluded to here. As the novel progresses, and it becomes apparent that Paul is indeed the Kwisatch Haderach, his triumphant power-symbolic experience on the unavoidably phallic sandworms takes on the connotations of a particular discourse of gender. This in turn connects the symbolism of this novel to lived experience. Its symbolic nova open up fertile avenues of interpretation that work into the discourses of power and masculinity. The limitations of the novel's ethical schema can be seen in this light as a critique of the narrowness of masculine, phallic power, the anxieties it expresses about male homosexuality being nothing more than the inherent contradictions of the masculinist ideology. SF, according to Peter Lev in *The Cyborg Handbook*, is 'a privileged vehicle for the presentation of ideology. Because it is less concerned than other genres with the surface structure of social reality, science fiction can pay more attention to the deep structures of what is and what ought to be' (Gray *et al.* 1995: 30). *Dune* is a good example of this.

2

THE HISTORY OF SF

Where does science fiction begin? Read the critics of the genre and you can take your pick of possible starting points, for the identification of the point of origin for SF is as fiercely contested a business as defining the form. Different critics have their own favourite jumping-off points. Some go back no further than a hundred years, to H. G. Wells and Jules Verne, giving SF as a genre a youthfulness to fit its supposedly juvenile, forward-fixated profile. Others insist on searching out 'fantastic' or 'science-fictional' elements in literature as ancient as literature is itself. There are journeys to the Moon or heroic protagonists seeking out new worlds and strange new civilisations in the oldest epics of human culture, from the ancient Sumerian *Epic of Gilgamesh* (written perhaps in 2000 BC) onwards. This presents us with two broad approaches to the question of origins, and the difference between these two approaches focuses different ways of understanding the nature of SF. Stress the relative youth of the mode and you are arguing that SF is a specific artistic response to a very particular set of historical and cultural phenomena; more specifically, you are suggesting that SF could only have arisen in a culture experiencing the Industrial Revolution, or one undergoing the metaphysical anxieties of what nineteenth-century philosopher Friedrich Nietzsche called 'the Death of God'. Stress the antiquity of SF, on the other hand, and you are arguing instead that SF is a common factor across a wide range of different histories and cultures, that it speaks to