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978-0-521-81626-7 - The Cambridge Companion to Science Fiction

Edited by Edward James and Farah Mendlesohn

Excerpt

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Introduction: reading science fiction

The Cambridge Companion to Science Fiction is intended to provide readers with an introduction to the genre and to its study. To this end, we have divided this book into three parts: an historical overview of the field which discusses the major authors and editors, the people and market forces which have shaped the literary structures of the field; a section on critical approaches to science fiction (sf); and finally a collection of essays exploring some of the issues and concerns which have been considered by both critics and writers to be intrinsic to the genre. The first language of all of the contributors is English, and the book concentrates almost entirely on the English-language sf that has, for the last century, dominated the field.

The structure we have adopted makes a number of assumptions: it assumes that you, the reader, know what sf is, and that everyone who has contributed to this book shares the same criteria. This second statement is the more contentious. Science fiction is less a genre – a body of writing from which one can expect certain plot elements and specific tropes – than an ongoing discussion. Its texts are mutually referential, may be written by those active in criticism (something we have tried to reflect) and have often been generated from the same fan base which supports the market. The reader's expectations of sf are governed less by what happens than how that happening is described, and by the critical tools with which the reader is expected to approach the text. Yet the critical tools are themselves contentious: sf is a battleground between different groups of fans, and different groups of critics. When this book is reviewed, some will object to the number of thematic essays we have included, and others will object to the assertion, contained in a number of essays, that sf emerges in the twentieth century, preferring to include within the definition texts written in the nineteenth or earlier centuries. These objections emerge from the very nature of the beast that is sf: a mode of writing which has seemed to exist at variance from the standards and demands of both the literary establishment and the mass market (because, whatever else it is, sf literature is not *popular*, even while 'sci-fi' movies pack the cinemas).

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Alongside these issues is the absence of any specific textual analysis in this book. Because sf is a discussion, a collection of essays on ‘representative’ texts would in many ways have been unrepresentative: too much sf is written as an argument with the universe to allow some of the best works to be filleted from their context, and this is evidenced by the extent to which certain names crop up repeatedly in the essays. Only where a specific canon of texts has emerged around a particular theme or mode have our contributors been able to offer sustained textual analysis.

But the case can be made that the best way to understand what sf *is*, is to map our theories on to an exemplar text, a text that demonstrates the theories from which many of the critics contributing to this book proceed. Rather than make sweeping statements about the nature of sf based primarily on the classics – ideas which might be challenged by the most recent contributions to the field, and which would rapidly reveal that most sf texts only perform perhaps two-thirds of the theoretical demands which we impose on sf – we shall begin this *Companion* by examining those ideas which structure sf as demonstrated in a very specific text by one of the best contemporary authors: Greg Egan’s *Schild’s Ladder* (2002).¹ This hard sf space opera is curiously susceptible to such mapping. It contains within it the very history of the genre, the ideas which underpin the critical discourse. Let us start with the one idea that most often baffles colleagues in genre criticism: that sf is a discussion or a mode, and not a genre.

If sf were a genre, we would know the rough outline of every book that we picked up. If it were a mystery, we would know that there was ‘something to be found out’; if a romance, that two people would meet, make conflict and fall in love; if horror, that there would be an intrusion of the unnatural into the world that would eventually be tamed or destroyed. But Egan’s *Schild’s Ladder* offers all three of these outlines. Cass, a scientist, wants to find out whether the mathematical equations named after Sarumpaet hold true; Tchicaya, many years later, is driven to find out what is on the other side of the disruptive border that Cass’s disastrous experiment has created. If this is not enough to match the book with the mystery genre, it becomes imperative two-thirds of the way in to discover who has sabotaged *Rindler*, the investigative space station, and the novel is instantly recognizable as a ‘thriller’. The border itself offers horror: will our protagonists succeed in holding back the new universe before it devours Earth? This is an sf novel, not a film, so there is not necessarily the happy resolution demanded by Hollywood: authors such as Stephen Baxter and John Barnes have become notorious for killing off the human race. And finally there is the romance between Tchicaya and Mariama: childhood sweethearts, separated for almost seven hundred years, their romance would be at the heart of many

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novels. But this is sf, and as I shall show later, romance means something very different in sf.

Having demonstrated that sf is quite happy to extract its plot structures from any available genre, and thus each individual book could potentially be identified with one of these genres rather than with sf, we need to consider whether sf does ‘own’ a narrative. It is rarely considered in these terms, but if sf does have an immediately recognizable narrative it is centred on what has been termed the ‘sense of wonder’.

The sense of wonder is the emotional heart of sf. David Nye has described this reaction as the appreciation of the sublime whether natural, such as the rings of Saturn, or technological: a space station or rocket ship (see Gwyneth Jones, chapter 11 in this volume).² For the first fifteen years of the development of genre sf (from the mid-1920s), it *was* the basic narrative of most fiction in the US magazines, as the titles – *Amazing*, *Astounding*, *Thrilling Wonder* – suggest. The earliest sf relied on the creation of a new invention, or an arrival in a new place. For the readers of this material this was enough; one could stand and stare at the flying city, or gasp at the audacity of the super-weapon. The tone was primarily descriptive, the protagonist unfamiliar with his/her surroundings describing to the reader, or auditing a lecture on our behalf. Almost all stories ended either in universal peace or with the destruction of invention and inventor because the writers either lacked the skill to go beyond the idea and employed the explosion as the sf equivalent of ‘I woke up and it was all a dream’, perhaps in order to avoid any sense of *consequence*; John Clute has argued that the secret is that

‘Doc’ Smith and his peers – and A. E. Van Vogt, who walked alone – may have loved the task of conceiving futures, but, at the same time, each of these sf writers manifestly displayed a very deep distrust and fear of anything that hinted at any of the unfolding ‘real’ futures that have refilled the water holes of our infancy with mutagens. The Lensmen series is escapist, as much good fiction is; and we love it for that, but it does not escape 1930, it escapes the future.³

The result was a sense of wonder combined with presentism. But this core sense of wonder continues to power sf. The first thirty-five pages of *Schild’s Ladder* are self-contained: a classic short story, emulating the achievements of early sf, and exemplifying the fundamental role of the sense of wonder in the construction of what we mean by sf. For the sake of a theorem Cass has her mind sent 370 light years from Earth and embodied in a form 2mm high. The plot is deceptively simple: Cass seeks the help of aliens to test a proof of Sarumpaet’s mathematical theory in the safety of deep space. Older and wiser than we, they counsel caution and break the experiment down into fifteen

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smaller experiments. When they finally permit the entire experiment to be enacted, it still goes wrong and the resulting ‘explosion’ begins to swallow the universe. And the ‘short-story’ ends. In the tradition of that early genre sf we have the sense of wonder (the possibilities of maths); the wise aliens (although in this case they are post-humans); the show of hubris; and the cold equations of the universe, the traditional sf substitute for divine punishment, halting human ingenuity in its tracks. Small points of wonder – the size to which Cass is reduced, the body which can live on light, the space station itself – punctuate the text, ensuring that we cannot become blasé.

But there are reasons I have suggested that *Schild's Ladder* is an exemplar text. Science fiction has not remained static. As Nye argues, the sense of wonder is itself a fragile thing, made more difficult to achieve by familiarity, and although for a while bigger, better and more complicated inventions and icons may supply this, the visceral response is vulnerable to ennui. *Schild's Ladder* is fascinating because it precisely maps the development from the sense of wonder to other literary structures that, building on the sense of wonder, become the mode of sf. The first of these is what Istvan Csicsery-Ronay has described as ‘the grotesque’⁴ but which we can think of as ‘consequences’. The sense of wonder allowed one to admire the aesthetics of the mushroom cloud; the sense of the grotesque led the writer and reader to consider the fall-out. Science fiction began to shift to the consideration of consequences in the late 1930s thanks in part to the editors F. Orlin Tremaine and John W. Campbell (see chapters 2 and 6 in this volume), and this shift is marked in *Schild's Ladder* in the opening sections of the second part. The thought experiment, the ‘what if?’ (which Darko Suvin calls the novum),⁵ is crucial to all sf, and has led to the most popular alternative interpretation of ‘sf’: speculative fiction. It is here that sf most departs from contemporary literature, because in sf ‘the idea’ is the hero.

Schild's Ladder begins with a thought experiment made literal, the testing of Sarumpaet's theory; the main driver appears to be the consequences of that experiment. But throughout the novel we also have the thought experiment made metaphor: physics becomes the crowbar with which we break open the universe, the code to preserve intellect and character, in themselves a matter of sublime beauty. One character, himself ‘mere’ digitisation made flesh, describes how “‘When I was ten years old, all I gave my sweetheart was a pair of projections that turned the group of rotations in four dimensions into principal bundles over the three-sphere’” (p. 97). (She loved them.) All of these descend from an apparently secondary ‘what if’, about the nature of personality – what are the consequences of freeing ourselves from corporeality? This is actually much more challenging than the initial experiment which threatened to destroy the universe. This kind of structure is the classic

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double bluff of sf: setting up one thought experiment within another, to force the reader to look out of the corner of his/her eye at the context of the adventure, mystery or romance. Although the driver of many an sf novel depends on a specific scientific problem, the structure and forms of the genre/mode are much more embedded in this contextual issue, because while that first thought experiment may provide the sense of the sublime, it is the combination of the hidden 'what ifs' and the initial thought experiment that create what Darko Suvin has called cognitive estrangement; 'the cognitive nucleus of the plot codetermines the fictional estrangement itself'.⁶

Cognitive estrangement is tied inextricably to the encoded nature of sf: to style, lexical invention and embedding. Cognitive estrangement is the sense that something in the fictive world is dissonant with the reader's experienced world. On a superficial level this difference may be achieved by shifts of time, place and technological scenery. But if that is all that is done, the resultant fiction is didactic and overly descriptive. The technique common in early sf is known contemptuously as the 'info-dump': a character lectures a captive audience about something they could be expected to know but which we do not. It is a very difficult thing to avoid, and at the moment of conceptual breakthrough⁷ when the critical insight is won, and the world is revealed as bigger or different than one thought, it can be the only tool a writer has to convey information. Even Egan cannot resist this in *Schild's Ladder*. When the Sarumpaet theory is finally overturned, Egan is forced to allow one character a two-page public lecture (pp. 88–9), mitigated by allowing the point-of-view protagonist to be slightly less familiar with the material than others in the audience, by couching this didacticism as a plea for 'forbearance' on behalf of the new theory, and by allowing the point of view to assume that others in the audience are irritated. It is a cheat, but a clever one.

To be really effective, sf has to be subtle. Over the past seventy years the community of sf writers has developed a tool kit, the absence or recreation of which is usually the hallmark of outsider sf (fiction written by professional writers which either claims to have invented a new genre, or which vigorously denies its categorization of science fiction). The most obvious, and the one which newcomers to the genre notice immediately, is the use of language in science fiction. As Gwyneth Jones argues (chapter 11), 'the reading of a science fiction story is always an active process of translation'.

Language is not trustworthy in sf: metaphor becomes literal. 'He gave her his hand' or 'he turned on his side' raise numerous possibilities in the mind of the sf reader, involving, perhaps, detachable body-parts or implanted electronics. In addition, the sf writer may set up estrangement by the deliberate construction of new, technological metaphors such as 'The sky above the

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port was the color of television, tuned to a dead channel.’⁸ But there is still the expectation that one will read literally whatever is on the page, whether ‘he caught sight of an undigested stretch of calf, still bearing traces of the last inhabitant’s body hair and musculature’ (Egan, *Schild’s Ladder*, p. 35) or invented words such as ‘Qusp’. Their effectiveness in creating dissonance relies on the expectation that the reader will either understand what is written or will fill in the gap, creating meaning where none is provided. These two techniques are crucial to the sf project and they are cumulative. Science fiction has come to rely on the evolution of a vocabulary, of a structure and a set of shared ideas which are deeply embedded in the genre’s psyche. It is no longer necessary, for example, for authors to describe the means by which their interstellar ships are propelled across vast distances, a simple reference to ‘FTL’ (‘faster-than-light’) will collapse several pages of description. Such hand-waving is one of the hallmarks of hard sf (see Kathryn Cramer, chapter 13). Yet sf produces its own metaphor. Le Guin’s *The Dispossessed* begins: ‘There was a wall, it did not look important . . . even a child could climb it . . . an idea of a boundary. But the idea was real . . . What was inside it and what was outside it depended upon which side of it you were on.’⁹ Because we are sf readers we know that this wall is going to be both a portal into the adventure and a metaphor for narrative. In those first five lines, Le Guin generates both estrangement and story.

Egan uses the archaeology of science fiction to seed his text with meaning. It allows him to leak information into his created world. Yann, an acorporeal – a concept underpinned by what we might call the ‘legacy texts’¹⁰ of William Gibson and Vernor Vinge – can refer to ‘anachronauts [expected] to arrive at the *Rindler* any day now – preceded by a few megatons of fusion by-products – and announce that they’ve come to save the universe’ (*Schild’s Ladder*, p. 52) and while we might not get the meaning, we know we *should*. We are linked to the fusion torch-ships of Heinlein and others, can make assumptions about cryonics and are referred directly to the Terran supremacy fiction fostered by John W. Campbell in the pages of *Astounding Science Fiction*. The sf history of the universe is recapitulated in one sentence, but the anachronauts are not fully explained for another fifty pages. We must work to find steady ground.

But we are also being made fun of. The anachronauts are themselves an sf legacy, what John Clute describes in chapter 4 as ‘exudations of style, not signals of substantive shaping advocacy’. Obsessed by sex and the idea of gender conflict they have gone from planet to planet looking for the ‘central story of the future’ (chapter 4), a narrative impervious to evidence. Egan’s anachronauts recapitulate James Tiptree Jr’s assertion that those who claim to protect us frequently model the phantom aggressor on themselves

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(see Veronica Hollinger, chapter 8). Until they meet Tchicaya's father, an adolescent too confused and in love to lie, they have been made fun of by the descendants of humans who have told them the kind of stories used to fool anthropologists since the days of Margaret Mead. And the anachronauts also function as a sly dig at those critics of sf who condemn a book because it does not conform to their particular political position, a figure not confined to the political left.

In addition to using legacy texts to layer his world, Egan also creates his own embedding. Our understanding of who and what the anachronauts are is built up from small clues until the moment of breakthrough where, in the tradition of villains everywhere, they spit their motivation into the narrative. But equally, Egan estranges us from our assumptions about the primary actors in the novel, building up the sense that these people are not us. Cass, the initial protagonist, is recreated 2 mm high and 'hermetically sealed against the vacuum . . . Being hermetically sealed against the vacuum and feeding on nothing but light took some getting used to' (*Schild's Ladder*, p. 5); but the notion of body transfer is unquestioned, because in modern sf the protagonists are not strangers in their land; they are competent within their universe and have no need either to explain to us, or demand explanation for themselves.¹¹ These people have a different sense of what 'self' is; boundaries have to be continually negotiated. 'When the means existed to transform yourself instantly and effortlessly, into anything at all, the only way to maintain an identity was to draw your own boundaries. But once you lost the urge to keep on drawing them in the right place, you might as well have been born *Homo Sapiens*, with no real choices at all' (p. 6): this is a line that effortlessly drops in the most vital information, that these people are not humans. But as our cultural understanding of the body is not monolithic, neither is theirs, and there are some post-humans who prefer to hang on to their birth body, some who maintain active backups, others whose backups are there solely in the event of death and many who prefer to live mostly digitized, opting for bodies only to achieve specific interactions. Death has as many different meanings in this culture as there are modes of existence.

Neither are they gendered like humans. Building on the legacies of feminist writers, Egan has preserved gender but divorces it from the body, playing a very neat trick by blithely using names with vowel endings for both sexes, in contradiction to Western expectations. Our first hint of dissonance is at the end of the flashback sequence:

between his legs, the skin was newly red and swollen . . . Touching it was like tickling himself . . . And he could still change his mind, change his feelings. Everything was voluntary, his father had explained. Unless you loved someone

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deeply, and unless they felt the same towards you, neither of you could grow what you both needed to make love together . . . Every couple grew something different, just as every couple would have a different child. (pp. 77–8)

At this stage this sounds like nothing more than the myths parents tell their children to protect them. The final moment of revelation must wait until Tchicaya is taken to bed by Rasmah.

‘Oh, look what we made! I knew it would be beautiful. And I think I have something that would fit here, almost perfectly. And here. And maybe even . . . *here!*’

Tchicaya gritted his teeth, but he didn’t stop her moving her fingers over him, inside him. There was no more vulnerable feeling than being touched in a place that had not existed before, a place you’d never seen or touched yourself . . .

Nature had never had much imagination, but people had always found new ways to connect. (pp. 161–2)

But who they choose to connect with and why is also unstable. In the first section of the novel, Cass is destabilized because her corporeality leads her to assume that sex is the most intimate of acts, whereas Rainzi simply does not think that way. He is offering to share the universe with her. Our attention is forced to consider what we mean by ‘the opposite sex’ or as Wendy Pearson points out in chapter 10, ‘queer’. If both ‘sexes’ come with the same equipment and the same potential to penetrate and be penetrated, and gender has become more about corporeality and acorporeality than male and female, it is perfectly possible to argue that the whole discourse of humanity has been queered in *Schild’s Ladder*.

These are very different creatures from ourselves, yet this is never explicitly spelled out. As James Gunn points out (Foreword), it is the layering, embedding and shorthand endemic to sf that rescues the genre from didacticism. But this is not a mere negative: this essential technique (not unique to sf, but very much more conscious in the genre than elsewhere) shifts the real narrative of sf in directions unfamiliar to readers of the contemporary novel. In avoidance of didacticism Egan moves his fictional world to centre stage. No novelist in mainstream fiction would expect description to stand in for characterization, but sf, in making cognitive estrangement storyable,¹² insists that the world be treated as character (see chapters 10 and 11 in this volume). And here we turn to another characteristic of sf. Much of early sf mistook weirdness for landscape, but some authors have successfully elevated place to the level of character. This can be done in a straightforward manner: in both Murray Leinster’s ‘The Lonely Planet’¹³ and Judith Moffett’s *Pennterra* (1987) the planets turn out to be alive. But

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more fundamental is the way in which a planet becomes intrinsically interesting, its story vital to the way in which the occupants live their lives: Le Guin's *The Left Hand of Darkness* (1969) and *The Dispossessed* (1974) link political systems to landscape as does Kim Stanley Robinson's Mars trilogy (see chapter 16 in this volume). Brian Aldiss's Helliconia trilogy is the masterpiece in this trend: the individuals who live through the seasons on Helliconia merely occupy the ecological niches of story, and the protagonist is the planet. In *Schild's Ladder* we must wait a long time for this element of sf. The space station, fascinating though it is, does not capture the imagination. It is the other side, the Bright, the alter-vacuum with its drifting vendeks and airflowers, which engages the senses of both readers and protagonists, and from its discovery, the nature of the book shifts dramatically and again in ways which underscore the difference between sf and the mainstream.

The Bright is discovered by Tchicaya and Mariama when they are trapped in a space capsule together, and Mariama's Qusp (her recorded personality) is embedded in Tchicaya's kidney. Science fiction likes its romance visceral. It is not possible to get closer to someone than to ride inside their body, but sf also likes the ambiguous and the ethereal – without bodies there cannot be sex and sf remains one of the few genres in which intimate relations are marginal. *Schild's Ladder* is no exception. Sex is used to indicate the differences between the forms of human which now exist. Yann cannot take sex seriously; its neural rewards are too unsubtle. Sex does function as a signifier of friendship and community, but it is not where the romance lies. Tchicaya and Mariama are attracted not to each other but to the glories of the cosmos, to the real romance at the heart of any sf, the romance of the universe. For sf is perhaps the last real bastion of Romantic fiction: sf protagonists fall in love with the macrocosm. Where mainstream fiction writes of the intricacies of inter-human relationships, the discourse of sf is about our relationship to the world and the universe. The great events (wars, moon landings, famines) or the great ideas (evolution, alien contact, immortality) are foregrounded. In *Schild's Ladder*, Tchicaya and Mariama are not conducting their affair against the shaping force of a great discovery: they are conducting their discovery of the universe against the unwelcome distraction of unresolved emotions. It is this reversal of romance, the insistence that romance is *out there* rather than internal, that frequently results in non-sf critics judging sf deficient in characterization and emotion. At the very point of the novel where one might expect our protagonists to fall into each other's arms, they decide not to bother. 'Nothing could have lived up to four thousand years of waiting. Except perhaps an original theorem' (p. 246) or 'The seed for a universe, lying in the gutter' (p. 248).

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Yet entwined with the wonder is a note of alienation. This is a cold romanticism in which we are forever excluded from our object of love, and alienation is as much a part of sf as is the joy of discovery. The alienation at the heart of sf is most evident in the sense of the uncaring universe exemplified in hard sf by the concept of the ‘cold equations’ (to use the title of Tom Godwin’s sf story), those fixed rules that decide whether we live or die, irrespective of whether we love – the universe is a harsh mistress. *Schild’s Ladder* depends on the chill that emanates from the scientific superstructure of the text: Tchicaya and Mariama may fall in love with the Bright, but it is not sentient and like any ecology, will kill them if they do not adapt.

But sf also values alienation as the central element of character. Sf of the 1940s through the 1960s overused the idea of the alienated, isolated individual as genius – there is little question that it reflected the angst of generations of bookish adolescents – and although the conceit is much diminished in sf, the trope retains its power: isolation and alienation are as much a factor in *Schild’s Ladder* as they are in that classic of sf angst, Van Vogt’s *Slan* (1940). Tchicaya and Mariama have both succumbed to the idea that ‘different’ is the same as superior. In their own adolescence, their self-absorption, their conviction that their own lives were at the centre of the universal narratives, led them to hide the discovery of alien life. As adults they meet unreconstructed *homo sapiens* who, having extended that distorted self-narrative into an ideology, themselves demonstrate willingness to destroy that which is other. One legacy of Marxism, feminism and postmodernism (see chapters 7, 8, 9) has been the ability to tell new stories, to inscribe the other into the picture of the world. Part of Egan’s achievement in *Schild’s Ladder* is to make the new world’s voice powerful. The universe, its equations still chilly, corrects the anachronists rather forcibly. We learn again that it is the idea that is plot and character here, and it can survive the death of any of the protagonists.

Science fiction is part of a polysemic discourse. Texts are vulnerable to a multiplicity of interpretations, each of which produces a different landscape of sf, as reflected in the numerous academic and ‘fan’ canons which have emerged over the past eight decades. As critics are increasingly drawn from communities of fans, even the once hard divisions between the ‘fan’ canon (Heinlein, Asimov, Clarke) and the ‘academic’ canon (Dick, Le Guin, Ballard) blur. Each of our contributors would draw Egan’s book differently. It can be read as a space opera, as hard sf, through and with an eye to biological speculation. Helen Merrick and Wendy Pearson might pick up on the attempts Egan has made to go beyond the heterosexual imperative, while maintaining a binary structure for social relations. The radical shift in perception results in a configuration of sexuality not susceptible to our