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Marxist theory and science fiction

Marxism, science fiction and utopia

Marxist theory has played an important role in sf criticism, especially in the last third of the past century. Since the 1960s, many of the most sophisticated studies of sf have been either explicitly Marxist in orientation or influenced by Marxist concepts adopted by feminism, race-criticism, queer theory and cultural studies. Although relatively few critics and writers in the genre have been avowed adherents of Marxism, sf and the closely related genre of utopian fiction have deep affinities with Marxist thought in particular, and socialist thought in general. In its simplest terms, sf and utopian fiction have been concerned with imagining progressive alternatives to the status quo, often implying critiques of contemporary conditions or possible future outcomes of current social trends. Science fiction, in particular, imagines change in terms of the whole human species,[1] and these changes are often the results of scientific discoveries and inventions that are applied by human beings to their own social evolution. These are also the concerns of the Marxist utopian and social imagination.

Marx's system combined a sophisticated critique of the capitalist economic system, a conception of history as the dialectical process of human self-construction, and a vision of a universally just and democratic way of life in the future as the goal of human history. Although Marxism's role as a political practice and prophetic mode has weakened with the collapse of the Soviet bloc and the ascendancy of multinational capitalism, many of its key concepts have been adopted by other critical social movements and branches of scholarship. Race-critical and feminist thought has borrowed the Marxist historical model, substituting people of colour and women for the working class as emphasized historical agents. It frequently models racism and sexism on bourgeois ideology, as racial hegemony and patriarchy are modelled on the capitalist mode of production. Thus marginalized humanity acts like the proletariat in a model of progressive coming-to-consciousness and revelation

of the contradictions between ideology and its practice. Cultural studies have employed fundamental Marxian concepts to trace the dialectical relations of social groups to entrenched power and to each other through the medium of culture.[2]

From its earliest forms, utopian fiction has depicted imaginary just and rational societies established in opposition to exploitative worldly ones. Marx was famously reluctant to describe the utopian society that would succeed the successful proletarian revolution, describing it only in the vaguest terms in the conclusion of the *Communist Manifesto*. Nonetheless he affirmed its importance as an historical goal. Marx also valued technology as a vital tool of human liberation. He believed that in a just world technological innovations were the guarantors of human freedom from toil, just as they were also the means of mass enslavement in an exploitative order. These ideas were forged in Marxist thought into a story of social and technological liberation that had clear affinities with the basic stories of sf.

Utopian socialist thinking was one of the strongest formative influences on sf of the late nineteenth century, especially in the English-speaking world and Russia. The most important figures in the development of Anglophone sf in the thirty years between the mid 1880s and the beginning of the First World War – Edward Bellamy, William Morris, H. G. Wells and Jack London – were all socialists. Although of these only London was avowedly Marxist, all shared the notion that scientific and utopian romance were allied with the social reform of amoral laissez-faire capitalism. In the West, Wells's influence was greater than Marx's in this context. His utopian writings – in works such as *A Modern Utopia* (1905), *The World Set Free* (1914) and *Men Like Gods* (1923) – enjoyed great international popularity, and his favoured model of a technocratic world-state run by enlightened scientists and engineers dominated much of social thought on the Left before the 1930s.

One would expect Marxism to have influenced conceptions of sf in the Soviet Union, as Marxism-Leninism was the official state philosophy. Utopian sf was an important genre of political fantasy among radicals before 1917, and among the populace at large in the first years of the Revolution. Beginning in the early 1920s, however, Soviet writers were discouraged from writing utopian fantasy that might raise popular expectations and imply criticism of present conditions. The discouragement became active suppression with Stalin's 'doctrine of near limits'. Writers were to concentrate on heroicizing the tasks of the present. Science fiction and utopian fiction, it was claimed, no longer had a role in a socialist society. As a consequence, no serious sf, let alone criticism and theory, was published in the USSR until after the death of Stalin in 1953.[3]

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In the late 1950s, grand-scale socialist-utopian sf began to be written again, inspired by Ivan Yefremov's ground-breaking *Andromeda* (1959). A boom of inventive sf followed in the so-called 'thaw' period of the late 1950s and early 1960s, best represented by the work of the Strugatsky brothers. Both Yefremov and the Strugatskys were criticized for deviating from the Party's prescriptions – Yefremov for abandoning the image of 'Socialist Man' and depicting his heroes as quasi-divine, the Strugatskys for depicting characters insufficiently heroic to represent Socialist Man.[4] As reaction intensified during the 1970s and 1980s, Soviet sf writers became increasingly critical, and were often forced to publish in samizdat (privately duplicated underground publications). There was no taste for defending critical sf in Marxist language. Under these conditions, no serious theory of sf was framed in Marxist terms.

In the USA, where sf developed through the pulps into a powerful form of popular literature, socialist ideas had little influence after the First World War. Wells remained the most powerful model in the genre, but American sf writers took from him primarily the justification for a technocratic elite. The model protagonist of US sf was not the socialist scientist working for the scientific reorganization of humanity, but the polymathic engineer-adventurer-entrepreneur embodied in the figure of the individual genius-inventor, Edison.[5] After the Russian Revolution, the community of sf writers became increasingly not only anti-communist, but anti-socialist as well. With the Second World War and its aftermath, anti-communism so pervaded American life that Marxist thought became anathema. A few writers persevered by writing anti-capitalist satires, such as Frederik Pohl and Cyril Kornbluth and the socialist Mack Reynolds, but most sf writers (many of whom, like the Futurians, had Leftist sympathies in the 1930s) had become anti-socialists, and their sf depicted laissez-faire capitalism and individualism as the natural order of the future. Science fiction films gained a new form of popularity by allegorizing McCarthyite hysteria. The word 'utopian' became associated in the popular mind with Soviet communism, and sf of the immediate postwar period was dominated by anti-utopian themes.

This anti-radical and anti-utopian climate changed dramatically in the 1960s. Inspired by the civil-rights struggle and the sudden independence of many of the European colonies, and supported by unprecedented affluence and technological development in the capitalist democracies, an international contestatory culture set itself in opposition to the institutions and policies of the bourgeois state. The movement had an enormous diversity of goals, but they shared two characteristics relevant in this context: a respect for Marxist ideas and what Italo Calvino called 'a utopian charge',[6] a powerful, unformed desire to rid the world of poverty, racism, sexual repression and

economic exploitation – sins that Marxist thought had convincingly theorized as endemic and necessary aspects of bourgeois state-capitalism. This conjunction had a inspirational effect on the genre of sf, as well. Intellectuals and students initiated a mass-project of imagining alternatives to the bipolar, irrationally militarized world order of the Cold War. A multitude of alternative intentional communities were attempted, and cultural life was increasingly marked by criticisms of the status quo from imaginary standpoints where the problems of the present were resolved, even if uncertainly. Science fiction became one of the privileged instruments of this current of thought. Works such as Frank Herbert's *Dune* (1965), Robert Heinlein's *Stranger in a Strange Land* (1961), Kurt Vonnegut's *Cat's Cradle* (1963) and *Sirens of Titan* (1959) enjoyed immense popularity unprecedented for works of sf.

The utopian charge was released in many forms: philosophical anarchism, Left Nietzscheanism, a proto-Green movement, psychedelic libertarianism and perhaps most influential of all, the conflation of the Marxist critique of oppression with the Freudian analysis of repression, the so-called Freudo-Marxism most visibly promulgated by Herbert Marcuse. This constellation had two, uneasily allied aspects. On the one hand, there was the New Left's emphasis on utopian critique and liberation from commodification; on the other, an anti-colonial, revolutionary, quasi-Leninist politics of national, ethnic and class resistance. The former emphasized critical consciousness of culture, the latter class-consciousness as a prerequisite for violent resistance and revolution. The two overlapped primarily in their critique of capitalism.

With time, the popular desire to imagine alternatives and to formulate imaginative critiques became narrowly limited to cultural theory. The hopeful student uprisings throughout the world in 1968 did not seriously affect the structure of the capitalist state – nor indeed, in the case of the Prague Spring, the communist state. In Europe and the US, extremist movements acted out a violent politics of despair in the name of Leninist revolution, turning people increasingly towards the protections of increasingly repressive governments. In Britain, where Marxist thought had remained grounded in trade-union activism, Marxist cultural theory developed within the context of the practical sociology of class cultures, with little recourse to utopian theory. Consequently, no body of Marxist sf theory emerged there (despite the occasional interest in sf shown by Raymond Williams, one of the guiding theorists of materialist cultural studies).[7]

New Marxist criticism in the USA

In the USA, by contrast, there was an explosion of interest in sf, not only by Left academics and students, but in mass culture as well. A new style of

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artistically ambitious and politically sophisticated sf took shape, exemplified by the work of Philip K. Dick, Joanna Russ, Ursula K. Le Guin and Samuel R. Delany. The preconditions for the crystallization of a radical sf theory were in place.

In the mid 1970s Marxist theorists of sf found themselves in a dilemma. On the one hand, sf was generally held by educated readers (including most Marxist theorists) to be artistically negligible; moreover, because the vast bulk of sf was written for mass entertainment, it manifestly eschewed social criticism and supported the dominant ideology of bourgeois individualism. This was especially true in the USA, where most sf was produced and consumed. For some Marxist critics, sf was a particularly egregious example of ideological complicity with established capitalist interests. The work of H. Bruce Franklin in the USA, in particular, focused on this aspect of the genre. Franklin's biography of Robert A. Heinlein (1980) identified the notoriously individualistic author with US imperialism in the ongoing Vietnam War. In later essays and the book *War Stars* (1988), Franklin argued more persuasively, if not more subtly, that sf had been a major inspiration, indeed an imaginative engine, for the development of super-weapons of mass destruction, and thus bore a tremendous weight of historical guilt. In these and similar works on sf and the Vietnam War, Franklin set out to illuminate the insidious ideological force of an apparently harmless form of entertainment with the urgency and anger of a insurrectionist critic.[8]

The main developments of sf theory, however, went along a different path. In 1973, Darko Suvin and R. D. Mullen founded *Science-Fiction Studies*, which was to become the primary venue for neo-Marxist criticism of sf. The journal did not profess a single direction and published important sf scholarship by many non-Marxist writers (Mullen himself was not a Marxist), yet it became the home for a group of Marxist theorist-critics who agreed on certain premises and extended each other's ideas. In addition to Suvin, they included Fredric Jameson, Peter Fitting, Tom Moylan, Marc Angenot and Carl Freedman. Although it would be misleading to speak of a *Science-Fiction Studies* 'school', most of these writers relied on, and elaborated, the concept of the 'critical utopia' (as it was to be eventually named by Moylan) as the central core of the sf imagination.

The 'critical utopia' derives from certain ideas important in the tradition of Hegelian Marxism, represented in the works of T. W. Adorno, Walter Benjamin, Ernst Bloch, Antonio Gramsci and Raymond Williams, and certain works of Georg Lukács that analysed culture as an aspect of class-domination in order to construct a disciplined resisting consciousness. This direction had, in a sense, abandoned one of the cherished premises of Marxism: the belief in an imminent emancipatory revolution by the working

class. After the success of the Nazis, Soviet communism and state capitalism in manipulating the masses, these thinkers reconceived utopia to signify an emancipatory mode of thought that keeps alive the hope for social justice and equality. Articulated most fully by Bloch, this utopia is simultaneously a wish-dream of a happy and enlightened social life, and a tool with which to identify and attack the ideological obstacles to achieving utopia.

In his book *Metamorphoses of Science Fiction* (1979), Suvin introduced a number of ideas that remain central in sf criticism: cognitive estrangement, the novum and sf's genetic link with utopia. In the notion of cognitive estrangement, Suvin conflated two distinct, but related, ideas of estrangement from earlier literary theory: *ostranenie* (de-familiarization) from the Russian Formalists, and Berthold Brecht's *Verfremdungseffekt* (alienation effect). The Formalists had claimed that art always makes the receiver aware of reality in an intensely fresh way, by subverting and 'roughening' the habitual responses one develops in the routines of everyday existence. Brecht had adapted the Formalists' idea to theatre, proposing that estrangement should be an explicitly political act, which draws the audience's attention to the fact that the spectacle they are witnessing is an illusion, stimulating the crowd to become aware of their situation as passive receivers, an awareness they might then extend to reflection about their similar situation in the manipulated illusion-world of bourgeois domination.

Suvin argued that an sf text presents aspects of a reader's empirical reality 'made strange' through a new perspective 'implying a new set of norms'.[9] This recasting of the familiar has a 'cognitive' purpose, that is, the recognition of reality it evokes from the reader is a gain in rational understanding of the social conditions of existence. Science-fictional estrangement works like scientific modelling: the familiar (that is, naturalized) situation is either rationally extrapolated to reveal its hidden norms and premises (as for example, the fantastic evolutionary projection of the Victorian class system into Morlocks and Eloi in *The Time Machine*, 1895), or it is analogically displaced on to something unfamiliar in which the invisible (because too-familiar) elements are seen freshly as alien phenomena (as in *The War of the Worlds*, 1898, in which British imperialism is displaced on to invading Martians). The specific difference between sf and other estranging genres, such as fantasy, is that sf's displacements must be logically consistent and methodical; in fact, they must be scientific to the extent that they imitate, reinforce and illuminate the process of scientific cognition.

Even more influential in sf theory than cognitive estrangement is Suvin's concept of the novum. The novum is the historical innovation or novelty in an sf text from which the most important distinctions between the world of

the tale from the world of the reader stem. It is, by definition, rational, as opposed to the supernatural intrusions of marvellous tales, ghost stories, high fantasy and other genres of the fantastic. In practice, the novum appears as an invention or a discovery around which the characters and setting organize themselves in a cogent, historically plausible way. The novum is a product of material processes; it produces effects that can be logically derived from the novum's causes, in the material and social worlds; and it is plausible in terms of historical logic, whether it be in the history of technoscience or other social institutions.

Suvin adopts the concept of the novum from the work of Ernst Bloch, for whom the term refers to those concrete innovations in lived history that awaken human collective consciousness out of a static present to awareness that history can be changed. The novum thus inspires hope for positive historical transformations. The value of such a philosophy of future orientation for an understanding of sf should be obvious, for sf as a genre depends on its readers' unquenchable desire to imagine more or less plausible transformations of the quotidian, whether those transformations lead to greater freedom, to technological despotism, a linguistically unimaginable transcendence or even merely a different everyday world.

The novum and cognitive estrangement together characterize a mode of thinking that is not only science fictional, but also utopian, as the term is used by Bloch. Together they critique empirical reality and imagine an alternative to it. For this reason Suvin argues that true sf is genetically linked to the genre of literary utopia. Bloch argued that all manifestations of culture, even artistically worthless escapist formulas, include some utopian aspect, if only because they deny conditions as they are and activate wishes to make life manageable and pleasurable. This combination of critical denial and wish-fulfilment is particularly active in sf, since it is concerned with the wishing into being of imaginary worlds constructed on ostensibly rational principles.

Carl Freedman, in *Critical Theory and Science Fiction* (2000), a work very much in the Suvinian mold, has pointed out that Suvin's strictures would lead to the exclusion from the ranks of sf of most works generally viewed as sf but with little 'cognitive' value (such as *Star Wars* (1977) and *E.T.* (1982), for example). 'Science fiction' is consequently both a descriptive and an evaluative term for Suvin: bad sf is not sf. Suvin's criteria for judging the aesthetic worth of sf similarly have less to do with the terms of art than with terms of knowledge of social truth. Freedman suggests that Suvin's category can be made valid by thinking of sf not in terms of real cognition, but as a 'cognition effect' – a rhetorical construction that evokes the sense of true

cognition. Freedman notes that the knowledge one gains in a work of sf is often entirely imaginary, although it may be based on solid scientific principles. In other respects, Freedman's conception of sf recapitulates that of Suvin: sf implies critical utopias even when it does not construct them explicitly in the narrative. Freedman goes even further in suggesting that this critical utopian function characterizes all of critical theory after Kant, but most particularly Marxist theory. Science fiction in this sense is the genre whose essence is critical utopian imagining, and thus even nonfictional critical theory might be considered a form of sf, thereby extending the conception of sf and science-fictionality beyond the boundaries of literary genre to encompass philosophical theory.

Most of the critical work of the Marxist scholars associated with *Science-Fiction Studies*, and later also *Utopian Studies*, was devoted to two practical purposes. The first was to identify recent works of sf that could model the dual function of critical utopias, that is, to criticize the status quo and to offer hopeful alternatives, thereby alerting readers to potentially subversive works, and cultivating radical inspiration. Certain works and writers clearly fit the requirements well, since they had helped inspire the idea of a critical utopia in sf in the first place. Foremost among these were Le Guin's *The Dispossessed* (1974), Russ's *The Female Man* (1975), Delany's *Triton* (1976) and Marge Piercy's *Woman on the Edge of Time* (1976). These novels estranged not only the empirical reality, but the concept of utopia itself, in Moylan's words 'rejecting it as blueprint while preserving it as dream'.[10] The second goal was to identify and elaborate the critical-utopian content in those complex sf texts that reveal the irremovable contradictions of bourgeois ideology while they strive to contain and resolve them. The model here was Philip K. Dick, who was the subject of more Marxist analyses than any other sf writer and inspired some of the finest textual criticism by Marxist critics. In Dick they saw a writer who, although averse to all forms of political theory, reflected the paranoia, insecurity and mundane chaos that were the true social conditions of his society. Arguably, these works constitute a canon of the superior texts and writers of the age against which others should be measured. In his book *Demand the Impossible* (1986), Moylan bestows this status on the four works listed above. In a later book, *Scraps of the Untainted Sky* (2000), he expanded the canon to include 'critical dystopias', works whose dark image of society stems from a thwarted utopian desire. It is too soon to know whether these works – Kim Stanley Robinson's Orange Country trilogy (*The Wild Shore*, 1984, *The Gold Coast*, 1986 and *Pacific Edge*, 1990), Octavia Butler's Parable books (*Parable of the Sower*, 1993, *Parable of the Talents*, 1998), and Marge Piercy's *He, She and It* (1991;

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UK, *Body of Glass*) – will be accepted as a canon similar to that of critical utopias.

Jameson: unimaginable futures

A different path was taken by Fredric Jameson, perhaps the most sophisticated and influential Marxist cultural theorist in the Anglophone world. He approached sf in terms of the problematics of 'generic discontinuities', world-reduction and spatialization that would later be transformed into themes in his writings on postmodernism. For Jameson, sf was interesting less as a source of critical utopias, than as a space to analyse the aesthetic problems of form, genre, character and setting through which contemporary science fiction worked out ideologically fundamental problems of the late-modern world view. As is characteristic of the oblique approach of all of Jameson's work, he singled out eccentric and emphatically non-canonical texts – works that cannot be identified with utopian, let alone Marxist thought: Brian Aldiss's *Non-Stop* (USA: *Starship*) (1958), Le Guin's *The Left Hand of Darkness* (1969) (rather than the 'canonical' *The Dispossessed*), Dick's *Dr Bloodmoney* (1965) (rather than *Ubik*) and Vonda McIntyre's *The Exile Waiting* (1975).

Jameson's work in the 1980s departed from the mainline of utopian Marxist sf criticism. The latter strove to assert the positive, enlightening and hope-giving potential of sf as the bearer of historical consciousness in the dark age of totalitarian capitalism. Jameson, by contrast, concentrated on the concept of negative totality, which, in his usage, came to stand as the dialectical opposite of utopia. In this sense, totality is the concept of the total system of capitalist relations to which the world is subject. In his most influential essay in sf theory, 'Progress versus Utopia' (1982),[11] Jameson argued that science fictions are fantastic displacements of the present's ideological contradictions into the future; at best, major reflective works of sf can make us aware that we are unable to imagine any utopian transformations. 'Progress versus Utopia' presages Jameson's well-known concept, articulated in *Postmodernism, The Cultural Logic of Late Capitalism* (1991), of the need for, and the extreme difficulty of, 'cognitive mapping' of the totality of hegemonic supranational capitalism.[12]

Jameson's interest in using sf to help make such a cognitive map has continued, in his use of Dick and J. G. Ballard to represent the breakdown of modernist space–time in *Postmodernism*, and in more hopeful recent essays on the Mars trilogy of Kim Stanley Robinson, one of the few sf writers who treats Marxist and utopian ideas as having vitality in the future.

Postmodernism and cyborg socialism

The critical utopian current of Marxist sf theory has been criticized for being narrow, if deep.[13] Restrictive in its normative conception of the genre, it has tended to look for ideal types and exemplars, which acquire canonical status. Because most sf is ideologically and aesthetically compromised, the utopian Marxist theorists have avoided dealing with the virtues of many of the works that have had the greatest mass appeal. Their construction of the genre has been, de facto, from the top down. They have, arguably, abdicated saying much about sf as a cultural institution, or about the hybrids and mutants that might arise out of the actually existing genre. Contemporary Marxist sf theory from the European tradition can be accused of paying insufficient attention to the ways technoscientific innovations have transformed social life globally – to their potential to transform the means of production, and with them world models, cultural values and human bodies. Jameson has taken on the challenge, after a fashion, in his work on postmodernism and Third World cinema, but his interest in this area is primarily in the effect of technology on art, drawing conclusions about world-currents through elite artefacts. Quick to view technosocial changes in terms of negative totality, Jameson rarely treats the phenomena that occupy the attention of sf readers, sf writers and the multitudes of people who think science-fictionally – that is, of being rapidly and chaotically immersed in new technologies that lead to new kinds of knowledge and new possibilities of social evolution.

The distance of this line of theory from feminism is striking. Although their critical canon includes a few feminist works (mainly by Piercy and Russ), critical utopian theorists have shown relatively little interest in feminist theory, which has actually become a science fiction-like enterprise in some of its manifestations. Feminist thought, in turn, has increasingly turned away from the Marxist analytic to which it once owed its progressive historical model. An important exception is Donna Haraway, whose profoundly influential reconceptualization of the cyborg fuses the sf imagination, historical materialism and feminism. For Haraway, contemporary technoscience has decisively promoted the breakdown of categories previously thought to be natural and inviolable – such as those between the genders, between animals and humans and between humans and machines. As identities are broken down and dispersed, the network of connections, created originally as a tool for the extension of capitalist domination, has ironically created a new form of social being, the cyborg. The cyborg in Haraway's usage is obliquely modelled on the proletariat and on women under patriarchy; it is an exploited class of beings that is capable of a form of class-consciousness, and hence

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subversive of and eventually capable of wresting control over the technoscientific network.

Haraway's world-picture is explicitly derived from sf, from which she wrested the notion of the cyborg and transformed it into the positive agent of historical transformation. In her audacious vision 'the boundary between science fiction and social reality is an optical illusion'.[14] She has used her model for powerful readings of the works of Octavia Butler, Joanna Russ and other feminist sf writers.[15] Haraway's work is in many ways more intimately connected than that of the critical utopians with the technoscientific languages that pervade postmodern culture, and that have become the currency for sf writers. Moreover, as a theory of political networks, cyborg theory also implies forms of activism – and this activism often envisions itself in terms of the 'ironic myths' of sf. At the same time it must be said that Haraway, too, has shown little interest in sf as a cultural practice, restricting herself to texts that speak to cyborg feminism.

It is telling that neither of the two most important directions of Marxist sf theory refers to the other's work. Marxist sf theory may thus be at a point when it can no longer claim to be adequate for a radically fluid postmodern reality, or at the threshold of a synthetic view that will be useful for 'mapping' the social metamorphoses of cyborg science and the efflorescence of sf that attends it.

NOTES

1. James Gunn, Introduction, in Gunn, ed., *The Road to Science Fiction. Volume 6: Around the World* (Clarkston, GA: Borealis, 1998), p. 17.
2. Cf. Cary Nelson, *et al.*, 'Cultural Studies: An Introduction', in Lawrence Grossberg *et al.*, eds. *Cultural Studies* (New York: Routledge, 1992), pp. 5ff.
3. See Leonid Heller, *De la science-fiction soviétique* (Geneva: L'Age d'homme, 1979), pp. 52ff.
4. *Ibid.*, pp. 66–9, 78.
5. On the Edisonade, see Brooks Landon, *Science Fiction after 1900* (New York: Twayne, 1997), pp. 42–9.
6. Italo Calvino, *The Uses of Literature* (New York: Harcourt, 1982), p. 247.
7. Williams's previously unreprinted essay of 1956, 'Science Fiction', appears online at http://www.depauw.edu/sfs/documents/williams.htmessays. His 'Utopia and Science Fiction' appeared in *Science-Fiction Studies* 5:3 (November 1978), pp. 203–14.
8. H. Bruce Franklin, 'Star Trek in the Vietnam Era', *Science-Fiction Studies* 21:1 (March 1994) and 'The Vietnam War as American SF and Fantasy', *Science-Fiction Studies* 17:3 (November 1990).
9. Darko Suvin, *Metamorphoses of Science Fiction* (New Haven, CT: Yale University Press, 1979), p. 6.
10. Tom Moylan, *Demand the Impossible* (London: Methuen, 1986), p. 61.

11. *Science-Fiction Studies* 9:2 (July 1982), pp. 147–58.
12. My discussion of Jameson's cognitive mapping owes much to Tom Moylan's *Scraps of the Untainted Sky* (Boulder, CO: Westview, 2000), pp. 56–62.
13. Cf. Patrick Parrinder, 'Revisiting Suvin's Poetics of Science Fiction', in Parrinder, ed., *Learning from Other Worlds* (Liverpool: Liverpool University Press, 2000), pp. 36–50.
14. Donna Haraway, *Simians, Cyborgs, and Women* (New York: Routledge, 1991), p. 148.
15. Haraway discusses the sf basis of her cyborg in 'A Cyborg Manifesto' reprinted in *ibid.*, pp. 176–81.