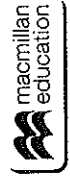


Science Fiction

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SF: as Jenny Wolmark stated in *Aliens and Others* (1993), 'the notion of a united, integrated self is made as problematic in science fiction as it is in more explicitly postmodern texts' (Wolmark, 1994, p. 22). For all the critical caveats about Cyberpunk's 'revolution', that remains its potential power. As we will see in the next chapter, the representation of the body and the subject, particularly in relation to technology, has been central in critical work on SF cinema.

CHAPTER EIGHT

Science Fiction Cinema

Once upon a time, SF film was the 'B-movies'. Low in budget, weak in script, with limited actors, on the bottom half of a double-bill or drive-in movie, SF film was a genre that lacked 'cultural capital', a sense of innate cultural value. Unlike the Western, the musical or film noir, it had no major star attached to it, and critically, no major director or auteur was seen to work with its motifs and tropes. While the latter may still be argued, SF has become not only mainstream in Hollywood film production, but one of the predominant genres. Later in this chapter, we will consider the critical renegotiation of SF cinema – under-regarded even compared to its literary sister – in the 1970s and 1980s, and where the formerly derided elements of the SF film's pleasures – spectacle, special effects, the visual 'ride' – are now given direct critical attention. While much of this is due to the growing importance of SF in the popular cinematic consciousness, it also follows from a revision of film history and historiography itself, which was inaugurated by the work of Tom Gunning.

Early cinema and science fiction

In a series of widely influential articles and book chapters, Gunning proposed a major shift in the understanding and appreciation of cinematic history. As this history had been written, Gunning suggested, the relations between 'early' cinema and the development of what would become 'Hollywood Continuity Style', the codification of narrative cinematic grammar that we take as 'natural' today, were misrepresented. Early cinema was seen as 'primitive', a mode of cinema that had yet to develop the editing and visual techniques of properly developed cinema. At the core of this misunderstanding and misrepresentation, suggested Gunning, was a division of cinema's 'birth' between the representation of 'actuality' – derived from the methods of the Lumière brothers – and the illusionistic properties of 'non-actuality' cinema

identified with Georges Méliès, film-maker and conjuror. This led, in standard cinema history, to two distinct filmic modes: that of documentary, of direct mimesis; and that of narrative, of the immersive illusion of narrative cinema. Gunning resists this characterisation:

■ even within non-actuality filming – what was sometimes referred to as the ‘Georges Méliès tradition’ – the role narrative plays is quite different than in traditional narrative film. ... Whatever differences one might find between Lumière and Méliès, they should not represent the opposition between narrative and non-narrative film-making ... Rather, one can unite them in a conception that sees cinema less as a way of telling stories than as a way of presenting a series of views to an audience, fascinating because of their illusory power ... and exoticism. (Gunning, 1986, p. 64) □

Gunning argues that the assumed continuity between Méliès's films and later ‘narrative’ cinema is disrupted by the centrality of the technology itself, its ‘ability to *show* something’ (p. 64): ‘the cinema itself was an attraction’ (Gunning, 1986, p. 65). Often exhibited among the various entertainments of vaudeville, a crucial element of *both* actuality and non-actuality forms of early cinema was spectacle, ‘a series of displays, of magical attractions’ (Gunning, 1986, p. 65). So, not only should one not assume a connection between Méliès's form of illusionistic spectacle and later narrative cinema, spectacle and exhibitionism was a crucial element of cinema *as* an attraction, the contract it promoted with its audience.

That contract was also theorised by Gunning as ‘soliciting a highly conscious awareness of the film image engaging the viewer's curiosity’ (Gunning, 1995, p. 121). While engaging with what was being shown on screen, then, even the early cinematic spectator was involved in a kind of double game in which the very technologies of spectacle were part of the experience of ‘astonishment’: the ‘wow’ was partly in wondering ‘how did they do that?’ This double engagement is repeated, Gunning argues, in cinema's roots in the ‘phantasmagoria’, the late eighteenth-century magic-lantern shows which purported to show ghosts of the dead and other visual astonishments. He suggests that the phantasmagoria operated as a proto-cinematic visual entertainment that ‘involved the supernatural by projecting images of spirits of the dead in highly stage-managed eerie surroundings’ (p. 103). He insists that spectators could feel the thrill of ‘seeing ghosts’ while at the same time understanding that these effects were produced by technological means. In a passage that echoes Adam Roberts's distinction between a Protestant/Enlightenment science fiction (as product of secular rationality) and Catholic fantasy and mystery, Gunning

suggests that the power of the phantasmagoria derived from *both* ‘magic’ and science, an

■ interaction between a Renaissance preoccupation with the magical power of image (typified by Giulio Camillo's and Giordano Bruno's theatres of memory) and a secular discovery of the processes of light and vision. (Gunning, 2000, p. 102) □

Cinema's spectacular *and* illusionistic/narrative properties mean that the divide Roberts articulates for SF (between Protestant and Catholic world-views, between reason and magic) does not obtain in quite the same way for cinema. Indeed, SF cinema inherits early cinema's investment in spectacle, in offering the spectator the (conscious) pleasures of visual imaging technologies themselves, while at the same time constructing immersive narrative ‘worlds’ for the viewer to follow. Contemporary SF cinema's emphasis on spectacle and special effects is not some kind of technological ‘perversion’ of the proper narrative basis of film; instead, it returns cinema to its foundational ground, its conditions of first existence. As Gunning himself wrote in ‘The Cinema of Attraction’ in 1986, ‘recent spectacle cinema has re-affirmed its roots in stimulus and carnival rides, in what might be called the Spielberg–Lucas cinema of effects’ (Gunning, 1986, p. 70). We will return to the critical issue of spectacle and effects later in this chapter, and also the proximity of SF to horror and Gothic that might be expected from the inheritance of the phantasmagoria.

In the ‘silent’ period of cinema, Walter Benjamin and Siegfried Kracauer began to investigate film both as an emblem of popular or ‘mass’ culture, and as the product (and reproducer on-screen) of a Fordist–Taylorist mode of ‘mechanical’ (re-)production. Benjamin, in the famous essay ‘The Work of Art in the Age of Mechanical Reproduction’ (1936), discusses cinema in terms of the concept of ‘shock’ that he diagnosed as central to modernity (derived in part from his reading of Baudelaire), and in particular how the human body in slapstick comedy engages with a world of technology: Chaplin in the factory of *Modern Times* (1936). Kracauer, however, according to another critic of early cinema, Miriam Bratu Hansen, while he ‘occasionally deplores the “machinelike” quality of modern existence, begins to be fascinated by new entertainment forms that turn the “fusion of people and things” into a creative principle’ (Hansen, 1995, p. 370). When writing about the spectacle of dancers, suggests Hansen, ‘Kracauer's pleasure in precision does not rest on an aesthetics of technology but on the social and sexual configurations this aesthetics may yield’ (Hansen, 1995, p. 371).

Cinema's imaging capabilities, to offer the *pleasures* of mechanical precision and ordered presentation while at the same time offering a

critique of the industrial machine, can be found in a key SF film from the end of the 'silent' period, Fritz Lang's *Metropolis* (1929). A film full of images that would become deeply influential on transnational cinematic SF – from the creation of 'robot Maria' to the vast cityscapes and vertically hierarchised societies – *Metropolis* is both an inheritor of the German mode of filmic Expressionism and a revision of some of its emphases (which, in *The Cabinet of Dr. Caligari* (1919) or *Nosferatu* (1922), tend towards the Gothic and uncanny). Lotte Eisner, in *The Haunted Screen* (1969), a classic account of German Expressionist cinema, argues that the 'geometrical stylization [of *Metropolis* is] the last vestige of the Expressionist aesthetic' (Eisner, 1969, p. 229). This 'stylization' Eisner proposes as a peculiarly German mode of representation, with the result in *Metropolis* that 'the human element is stylized into a mechanical element' (Eisner, 1969, p. 229). Eisner reads the depiction of the *space* of the city, and in particular the movement of the crowds of workers within it, as a staging *and* critique of technological/mechanic modernity within the frame of a dystopian narrative: 'the inhabitants of the underground town are more like automations than the robot created by the inventor, Rotwang' (Eisner, 1969, p. 226). The crowds

■ deploy in an echelon movement, as practiced by the Expressionist choruses, moving in several rectangular or rhomboidal divisions ... The procession of the Moloch's victims moves with this same mechanical perfection; the great façade of the machine room is transformed into the face of a devouring god. (Eisner, 1969, p. 226) □

Where Kracauer seemed drawn to the potential reconfigurations of sexual and social formations through the aesthetics of machine precision, Eisner sees regimentation, ordered movement, precision as totalisation. In a later and deeply influential work, Kracauer himself diagnosed a deeply problematic freight at work in the Expressionist cinema of Weimar Germany: that the films of the period manifested the latent fantasies and anxieties of the people of the Weimar Republic, a fear of chaos and a desire for order. In the malevolent figures of Caligari and Rotwang, Kracauer saw the presentiments of Hitler.

Often discussed in relation to *Metropolis* is the 1936 Korda/Menzies film *Things to Come*, based on a book by H. G. Wells, and with Wells's strong involvement in the production. Though *Metropolis* is a dystopia and *Things to Come* a utopia, they do share characteristics, including the austere dictator figures of Fredersen and Oswald Cabal, and the rousing of the masses by a figure 'out of step' with utopia: robot Maria or Theotocopulos the sculptor. As Christine Cornea has noted, both *Metropolis* and *Things to Come* represent 'rather different versions of a

socialist ideal', with the towering blocks of the city denoting 'the fruits of a literal programme of rebuilding [symbolising] social construction and reconstruction' (Cornea, 2007, p. 19). The legacy to science fiction cinema is in each film's retrospective vision of the city, and as we will see later in this chapter, critics have often noted the relations between the future city of *Metropolis* and that of *Blade Runner*. If there are distinctions between the vertically hierarchical space of *Metropolis*, with its emphasis on *class*, and the 'postmodern' space of *Blade Runner*, a disordered and hybrid space, then there are also clear affinities.

The Everytown of *Things to Come* is, perhaps, one of the images William Gibson had in mind when he wrote 'The Gernsback Continuum' (see Chapters 1 and 7), with its imagination of the totalitarian freight of the towering crystalline whiteness of utopian Tucson. Quickly overtaken by the war *Things to Come* itself predicted, as Christine Cornea notes, 'there were very few science fiction feature films produced in America during the 1930s and 1940s' (Cornea, 2007, p. 21). Instead, much SF was drawn directly from the universe of the pulps, via radio serials, into the 'cinema serials ... low-budget films aimed at a young audience': Flash Gordon and Buck Rogers (Cornea, 2007, p. 20). The 'raygun Gothic' of Flash Gordon, characterised by 'technological innovation ... a fast pace, easily recognizable and colourful characters and regular "cliff hangers" to tempt children back into the cinema', perhaps in part colours the popular reputation of cinematic SF even to this day, as trashy, ephemeral and juvenile (Cornea, 2007, p. 21). While this has certainly changed, as I noted above, and there have been deliberate 'revolutions' against the technocratic emphases of 1930s SF (particularly in Cyberpunk: see Chapter 7), SF remained the province of the B-movie in the 1950s.

Science fiction cinema: three critics

In this section, we will consider three single-author studies of SF film to analyse how each treats genre definition, history and key ideas and issues. These three are Vivian C. Sobchack's *The Limits of Infinity* (1980); J. P. Telotte's *Science Fiction Film* (2000); and Christine Cornea's *Science Fiction Cinema* (2007). We will begin with Sobchack.

The subtitle of Sobchack's *The Limits of Infinity* is *The American Science Fiction Film 1950–75*, which at once places it in terms of period and national cinemas: unlike Telotte or Cornea, Sobchack brackets off pre-Second-World-War cinema entirely, and focuses wholly on US film, whereas Cornea insists upon the transnational forms of the genre. In narrowing the generic and temporal focus, Sobchack is able to bring to

bear a detailed analysis of a range of SF films under a number of different chapter headings: the 'Limits of the Genre'; the 'Look of Science Fiction' (which considers iconography of the spaceship, the robot, and the alien or alienated humans); and 'the Sounds of Science Fiction', an intriguing chapter which considers sound, music, speech and language. The focus in *The Limits of Infinity* is largely informal: when republished in 1987, with an additional chapter, as *Screening Space*, the added material reveals a considerable shift in focus. We will return to *Screening Space* later in this chapter.

In the opening chapter of *The Limits of Infinity*, Sobchack considers the formal properties in SF cinema. As we have already seen, the proximity of SF cinema to horror is critically well established, and Sobchack notes this in some detail. Although there are 'frequent cases of congruence' between SF and horror, Sobchack attempts to distinguish the genres by what she calls the 'sphere of exploration, their emphasis' (Sobchack, 1980, p. 29). She continues:

■ The horror film is primarily concerned with the individual in conflict with society or with the extension of himself, the SF film with society and its institutions in conflict with each other or with some alien other. ... Both genres deal with chaos, with the disruption of order, but the horror film deals with moral chaos, the disruption of natural order (assumed to be God's order), and the threat to the harmony of hearth and home; the SF film, on the other hand, is concerned with the social chaos, the disruption of social order (man-made), and the threat to the harmony of civilized society going about its business. (Sobchack, 1980, pp. 29–30) □

Sobchack is careful, however, not to assume a generic homogeneity. 'The SF films which followed *Destination Moon* (1950) and *The Thing* (1951) have continued to display dual and opposing attitudes towards science, logic, and order' (Sobchack, 1980, p. 24). Whether SF is 'anti-science' or not is a recurrent concern, but Sobchack clearly wants to emphasise the cultural and political circumstances that create the SF films of the 1950s and 1960s, and in particular the versions of the monstrous (the 'Creature') as valences of nuclear anxiety. These films, Sobchack considers, are all shadowed by 'the Bomb'. Towards the end of her first chapter, Sobchack introduces a three-way means of evaluating SF and horror film: 'magic, science and religion': 'it seems not enough to say that the horror film is about magic and religion and that SF is about science. What is important is to recognize that both genres involve *interaction* between magic, science and religion and the only thing that really separates the genres is the dominant emphasis given to either the sacred or the profane' (Sobchack, 1980, p. 58). Once again, we find echoes of the distinction Adam Roberts made between

Protestant and Catholic, rational and mysterious, science fictional and fantasy modes.

In offering an analysis of the shared matter between SF and horror film, Sobchack is concerned, however, not to collapse the genres into one. J. P. Telotte, in *Science Fiction Film* (2000), gets round the problem of generic definition by returning to Tzvetan Todorov (see Chapter 1). Although Telotte allows that 'the form [of SF cinema] seems to bulk into the realm of horror' (Telotte, 2000, p. 5), and emphasises 'shared characteristics' and even 'forthright' borrowing between the genres, he attempts to efface the problem of the porous generic boundary by asserting that SF is a form of Todorovian fantasy. Telotte even avoids systematic generic definition of SF cinema, by asserting the idea of a 'supertext':

■ [the] supertext of science fiction ... is that large body of all the films and their similar characteristics that we might reasonably or customarily link to the genre. (Telotte, 2000, p. 10) □

As a collocation of similar texts, then, the genre is perhaps more easily understood in terms of the broadest possible definition of what SF might be. However, Telotte goes on to develop the Todorov scheme of marvelous-fantastic-uncanny in relation to different kinds of SF narrative.

Telotte begins by suggesting that SF film can be broadly categorised into 'three component narrative fields':

1. Encounters with alien beings and other worlds (or other times).
2. The possibility of changes in society and culture, wrought by our science.
3. Technological alterations in and substitute versions of the self. (Telotte, 2000, p. 12).

Telotte then maps these three 'narrative fields' onto Todorov's three categories. 'Encounters with the alien' is an extension of the 'marvellous', where events have a 'supernatural' (inexplicable in terms of contemporary science) rationalisation. The 'technologies and the self' category are the Todorovian uncanny, a destabilising of cultural assumptions about the subject and the body. Lastly, the 'possibilities of changes' narrative, which Telotte aligns with utopia and dystopia, becomes the Todorovian 'fantastic', characterised by a 'hesitation' between explanations. This is, in SF, a 'hesitation in our ability to explain [the] effects' of science and technology, an open-endedness in relation to the future.

This is an ingenious reworking of Todorov, although the association of the 'hesitation' of the fantastic with fictions about the future is perhaps something of a stretch. To add weight to his theoretical scheme,

Telotte uses three large chapters in the second half of his book to consider a diagnostic film for each category in turn. The full scheme is:

'Encounters with the alien' →	Marvellous →	<i>Close Encounters</i>
'Possibility of changes' →	Fantastic →	<i>THX 1138</i>
'Technology and the self' →	Uncanny →	<i>RoboCop</i>

The choice of the three case studies reveals Telotte's American focus (the book was published in a series on 'Genres in American film'), as does his assumptions about audience when he writes of Cold War SF:

■ we find films that play upon our cultural fears of communist infiltration and of a cataclysmic world war; that emphasize the need for watchfulness and preparation against alien subversion of all types. (Telotte, 2000, p. 97) □

Non-American readers might notice the rather casual use of 'our' in this quotation. This is not to say, however, that Telotte's critical writing lacks acuity. Between the theoretical section and the 'case-study' chapters lies a (short) chronology of SF cinema, under the following headings: Early SF; 'Machine Age'; Serials; 'Springtime for Caliban'; Post-2001; SF and gender; Anime; Special Effects. The careful reader might note a shift from chronological into thematic headings, and the short analysis of the impact of Japanese anime does at least nod to wider cultural frames, if not directly to SF as a transnational genre. The section called 'Springtime for Caliban' – taken from a line by John Baxter – is on Cold War SF, where Telotte moves from formal and generic considerations to suggestions about the cultural specificities of that period's SF. Early Cold War SF, Telotte writes, 'could prove an important vehicle for articulating cultural anxieties and for commenting in a serious way on these concerns' (Telotte, 2000, p. 96). Telotte also notes the 'measure of reassurance' offered to viewers of 'alien invasion' films in the sense that human beings cope with the crisis and trauma, albeit accompanied by 'a humbling reflection of the fragile nature of our civilization and even of our own species' (Telotte, 2000, p. 98). Like Sobchack, Telotte emphasises the influence of the culture of Cold War anxiety and paranoia, as well as the shadow of 'the Bomb', on 1950s SF film.

I will pause here to quickly consider two texts that are cited by all three books, before moving on to Cornea's *Science Fiction Cinema*. In particular, Susan Sontag's essay 'The Imagination of Disaster' (1965) is a crucial touchstone for *contemporaneous* critical analysis of these Cold War films: the other is Peter Biskind's book on cinema in the 1950s, *Seeing is Believing* (2001). Both appear in Telotte's short, but very useful, survey

of SF film criticism, under five headings: humanist criticism (or genre history); ideological criticism; psychological criticism; feminism; and postmodernism. Sontag's essay appears in Telotte's first category, but the essay clearly extends beyond the frame of analysis of the B-movies Sontag considers to relate the 'extremity' of the Cold War situation. The p. 44) she diagnoses in the 'extremity' of the Cold War situation. The essay opens with a characterisation (or caricature) of several B-movie scenarios, some suited to higher-budget Technicolor production, others to black-and-white, and at first this appears to be a cataloguing of the aesthetic deficiencies of the genre, SF as a version of kitsch. Just as Sontag notes that the B-movies' deficiencies are at once 'hilarious' and 'in deadly earnest' (p. 42), the essay moves from a rather ironic and comic appraisal of formulaic narrative to a more serious consideration of the *cultural* meaning of these spectacles of destruction. She famously declares:

■ Science fiction films are not about science. They are about disaster, which is one of the oldest subjects of art. In science fiction films, disaster is rarely viewed intensively; it is always extensive. If you will, it is a matter of scale. But the scale ... does raise the matter to a different level. (Sontag, 1965, p. 44) □

Sontag proposes that these films are the means by which to think the 'unthinkable' – which is to say, the possibility of imminent global destruction in the age of Mutually Assured Destruction. The films function as a form of 'collective nightmare', but one which is problematic because they inculcate a 'dispassionate view of destruction' (Sontag, 1965, p. 44); ideologically, they perform the function of drawing the viewer into a 'circle of complicity' (Sontag, 1965, p. 42) with the prevailing political and ethical conventions. Despite the 'griminess' of many productions, Sontag suggests a doubleness at work, particularly in relation to the 'more fascinating ... theme of dehumanization' in the films:

■ On the one hand, [SF films] deplore [depersonalisation] as the ultimate horror. On the other hand, certain characteristics of the dehumanized invaders, modulated and disguised ... are precisely traits of the saviour-scientists. (Sontag, 1965, p. 48) □

The complicity of these films with the ideological frameworks of the Cold War, while at the same time expressing anxiety about them, is, for Sontag, ultimately problematic. As a 'popular mythology' to deal with immanent destruction, depersonalisation, fear of the other, Sontag suggests that the films are an 'emblem of an *inadequate response*' to 'the most profound dilemmas of the contemporary situation'; the real interest of

the films is that, in their own deficiencies, they reflect 'the inadequacy of most people's response to the unassimilable terrors that infect their consciousness' (Sontag, 1965, p. 48). Sontag's suggestion, however, that there is 'absolutely no social criticism' (Sontag, 1965, p. 48) at work in these films would not find favour with the approach of many writers on Cold War film, from Peter Biskind's *Seeing is Believing* (2001, originally published in 1983) to David Seed's *American Science Fiction and the Cold War: Literature and Film* (1999).

Returning to Christine Cornea, the connections between her method and approach to SF film and that of Telotte immediately become apparent. Like Telotte, Cornea attempts to draw a generic frame around SF film – as with SF literature, a task that is repeatedly declared to be impossible – through recourse to Todorov. Cornea attempts to differentiate her approach from Telotte by criticising his reliance upon 'SF as fantasy', but she does not give full weight to Telotte's imaginative and detailed working-out of Todorov's marvellous-fantastic-uncanny scheme. That being said, there are marked differences in approach at work here; like Telotte, Cornea also affirms her debt to Rosemary Jackson's extension of Todorov in *Fantasy: The Literature of Subversion* (see Chapter 1), but in this case it signals Cornea's determination to move beyond formal or topological concerns into the historical and cultural factors that form and deform the genre:

■ I am not approaching the genre as though it were anchored beyond history or transhistorical in nature. On the contrary, my efforts are compelled by an eagerness to understand the formation and reformation of this widely recognised genre over time and the specific ways in which science fiction has engaged with the reality of a contemporaneous world. (Cornea, 2007, p. 11) □

Cornea could well have cited Suvin as well as Todorov here: the conception of SF ('engaged with reality') is close to estrangement. Placing her own method in relation to Todorov and Telotte, Cornea claims 'a special place for science fiction', *between fantasy and reality*:

■ I would therefore contend that rather than drawing science fiction under the heading of 'fantasy film' it is more accurately situated between 'fantasy genres' like the musical and the horror film and those genres that more fully conform to whatever style of realism is current and most dominant at the time of their release. (Cornea, 2007, p. 6) □

Cornea here interestingly conflates genre (SF, horror, musical) with mode or 'style' (fantasy against 'realism') of representation, in order to place SF as an interstitial genre.

In the course of the book, however, Cornea deploys a range of critical analyses to bring to light crucial aspects of SF cinema, including chapters on masculinity in 1980s SF, 'gender blending' and the feminine subject, generic performative styles, and the technology of cinema. The emphasis on *gender* is particularly effective, for Cornea's analysis of the Cold War SF films considered by Sobchack and Telotte deliberately moves away from the centrality of 'the Bomb' and visions of destruction, and instead effectively articulates a series of readings of key films – including *The Day the Earth Stood Still* (1951) and *Forbidden Planet* (1956) – in terms of patriarchal authority, in relations between fathers and sons, and fathers and daughters, respectively. This focus opens up SF cinema of the period in a new way, but also moves Cornea's text – quite properly – into the regions of what Telotte characterises as 'Ideological Criticism', diagnosing cultural and political formations that produce key SF texts.

This shift from 'formal' to 'ideological' modes of analysis finds its most interesting and revealing manifestation in the change in Vivian Sobchack's method of analysis between *The Limits of Infinity* (1980) and its revision, *Screening Space* (1987). As noted above, although the majority of the text is reprinted without alteration, the appending of a significant new chapter, called 'Postfuturism', signals a radical change in method and discourse. In short, the influence of Fredric Jameson's 1984 essay 'Postmodernism, or, the Cultural Logic of Late Capitalism' is everywhere in 'Postfuturism'. As we move towards a consideration of the centrality of concepts related to postmodernity in the critical texts surrounding *Alien* (1979) and *Blade Runner* (1982), Sobchack's 'Postfuturism' is a diagnostic transition text which I would like to take a little time to unpack.

The change in language and critical method can be seen from the very beginning of the chapter, and even in the very conception of SF as a genre. Sobchack writes:

■ SF has always taken as its distinctive generic task the cognitive mapping of poetic figurations of social relations as they are constituted and changed by new technological modes of 'being-in-the-world'. (Sobchack, 1987, pp. 224–5) □

The phrase 'cognitive mapping' – meaning the subject's ability to orient themselves in relation to time, space, the world – is taken directly from Jameson's 'Postmodernism' essay, where Jameson diagnoses a radical dislocation of the subject in both time and space, produced by the conditions of 'late capitalism', that is characterised as a form of 'schizophrenia'. Jameson's Marxist inheritance has a clear influence on Sobchack's realignment of what is understood as SF's purpose: the

interaction of technology with 'social relations' shifts the ground of analysis directly towards ideology and SF's production in material culture. Jameson's emphasis on time and space – and the incapacity to conceive of it in its totality – is taken up by Sobchack to structure the new chapter: there are subsections on 'the deflation of space', 'the collapse and conflation of time' and 'Embracing the Alien, Erasing Alienation'. This leads to some highly perceptive diagnoses of 1970s SF film, such as Sobchack's argument that 'in the SF films released between 1968 and 1977 ... space became semantically inscribed as inescapably domestic and crowded. Time lost its urgency' (Sobchack, 1987, p. 226). After 1977 (*Star Wars* and *Close Encounters*), 'space and time seemed to expand again, their experience and representation becoming what can only be called "youthful"' (Sobchack, 1987, p. 226).

In getting to grips with the expanded field of SF film production post-*Star Wars*, Sobchack derives two further terms from Jameson, both diagnostic of postmodernism: 'nostalgia' and 'pastiche'. Sobchack argues that 'mainstream' SF films are particularly prey to Jameson's idea of 'nostalgia', a cultural form of representation of the past which seeks to relive or re-create it but without the perspectives of history. Connected to this is the idea of 'pastiche', what Jameson calls 'blank parody', an appropriation of past styles without the distance or irony implied in 'parody'. Where mainstream SF is a kind of nostalgia film, for Sobchack, 'marginal SF' – lower-budget, often produced outside the Hollywood system – is 'pastiche', appropriating past styles in a kind of energetic mélange. What this leads to is a sense that 'SF film has ... reflexively embraced its own former status as "schlock" and "kitsch"' (Sobchack, 1987, p. 249), from *Flash Gordon* (1980) to *Buckaroo Banzai* (1984). The shift to a Jamesonian paradigm engages a much more directly critical judgement of SF films, analysing them as productions of a particular mode of economic and cultural production; no longer understood as a *formal* genre with a self-contained history, SF becomes (as in Jameson's own work) deeply implicated in contemporary culture's 'political unconscious'.

Alien zones

This shift into much more theory-driven modes of analysis is reflected in the critical material produced from the middle of the 1980s through to the end of the century, which was largely organised around two highly important films, *Alien* (1979) and *Blade Runner* (1982). Both were directed by Ridley Scott, but criticism of both was liable to reflect the terms of debates about postmodernity – 'ruptures' in time-space,

revisions of the subject, a focus on the body and on the city, issues of class and ethnicity – which tended to circumvent older modes of critical discourse such as auteurism in film studies, or formal aspects of genre history. Crucial to this mode of SF film criticism were two collections, both edited by Annette Kuhn, published at either end of the 1990s: *Alien Zone* (1992) and *Alien Zone II* (1999). The first of these is one of the most important collections of essays on film genre: it mainly reprints articles published in the previous ten years, often in shortened or excerpted form. There are classic essays by Sobchack ('The Virginity of Astronauts'), Constance Penley ('Time Travel, Primal Scene and the Critical Dystopia') and Scott Bukatman ('Who Programs You?'), as well as versions of two of Barbara Creed's most incisive and well-known essays on *Alien*, which we will return to shortly. *Alien* and *Blade Runner* are the focus of the majority of the essays, and it is with Giuliana Bruno's 'Ramble City', on *Blade Runner*, that we start.

Bruno's essay draws upon Jameson's 'Postmodernism' study and the work of Jean Baudrillard (see Chapter 7 for a more detailed look at the relation between Baudrillard and SF). From Jameson, Bruno takes the concepts of 'pastiche' and 'schizophrenia', as discussed above, as well as a focus on space, and in particular architecture, as symptomatic of a postmodern and post-industrial complex. Bruno's architectural focus is revealed by her definition of pastiche as 'an aesthetic of quotations pushed to the limit; it is an incorporation of forms, an imitation of dead styles deprived of any satirical impulse' (Bruno, 1992, p. 184). Bruno seems here to be referring to *Blade Runner*'s particular *mise-en-scène*, designed by the futurologist Syd Mead and effects supervisor Doug Trumbull, that was known as 'retrofitting': the bolting-on of industrial detritus onto back-lot sets from several periods (as well as the famous Bradbury Buildings in Los Angeles) to achieve a hybrid and 'used' future city. Bruno goes on to suggest that 'it is in the architectural layout of *Blade Runner* that pastiche is most dramatically visible and where the connection of postmodernism to postindustrialism is most evident' (Bruno, 1992, p. 184).

The spatial fabric of *Blade Runner* – an 'imaginary geography' [quoting] from real cities, postcards, advertising, movies' (Bruno, 1992, p. 186) – is not only an index of postmodernism or postindustrial conditions; it also produces a 'schizophrenic' temporality in those that live there. Bruno writes:

■ The postmodern aesthetic of *Blade Runner* is the result of recycling, fusion of levels, discontinuous signifiers, explosion of boundaries, and erosion. The disconnected temporality of the replicants and the pastiche city are all an effect of a postmodern, postindustrial condition: wearing out, waste. (Bruno, 1992, p. 185) □

The 'replicants' Bruno refers to here are artificial beings that the Blade Runner, Deckard (Harrison Ford), hunts throughout the movie. Where Donna Haraway theorised the 'cyborg' in terms of a radical subjectivity (see Chapter 7), Bruno uses Baudrillard's concept of the 'simulation' to characterise these (non-)human subjects.

■ Replicants are perfect simulacra – a convergence of genetics and linguistics Baudrillard describes the simulacrum as an 'operational double, a ... perfect descriptive machine which provides all the signs of the real' It would be difficult to find a better definition of the nature and function of the replicants and their capacity of simulation. (Bruno, 1992, p. 188) □

Just as Jameson's work opens up the discourse of *space* (and temporality) in the analysis of SF, so Baudrillard's theories of simulation and simulacra provide a useful model for considering the production of artificial beings, robots, AI, and narratives in which the 'real' is under question or erasure. By the time of *The Matrix* (1999), which for a short period assumed the kind of critical importance enjoyed by *Blade Runner*, Baudrillard was quoted inside the film itself – Neo holds a copy of *Simulations and Simulacra* near the beginning of the film. As we saw in Chapter 7, Işvan Csicsery-Ronay diagnosed a 'science fictionalization of theory' in Baudrillard's work; here, we can assert that the intersection of postmodern theory and SF was productive both creatively and critically.

By the time of the publication of *Alien Zone II* in 1999, *space* as a crucial discourse for SF film studies, developed by Sobchack, Bruno and others like Scott Bukatman, had become a dominant critical paradigm. Indeed, the subtitle of *Alien Zone II* is 'the spaces of science-fiction cinema'. The collection considers different forms of space – cultural, urban, corporeal/bodily, the sensorial space of photographic effects – and includes essays by Sobchack ('Cities on the Edge of Time'), Janet Staiger ('Future Noir') and Will Brooker ('Internet Fandom and the Continuing Narratives of *Star Wars*, *Blade Runner* and *Alien*'). *Alien Zone II* is an excellent collection of essays, taking the temperature of contemporary debates relating to SF cinema, and the breadth of its focus in comparison to *Alien Zone* – including fandom, digital media, and special effects, as well as such 'traditional' *topoi* as city spaces and identity/gender – indicates a different critical landscape. One of the essays, by Catherine Constable, however, directly extends the mode of analysis – and a focus on the *Alien* films – that was developed by Barbara Creed in a series of essays in the late 1980s, and which were deeply influential on SF film criticism. In focusing on *Alien*, Creed also returned to the connection between SF and horror that we have seen throughout this chapter.

Barbara Creed uses the theories of Julia Kristeva to constitute what Creed calls the 'monstrous-feminine'. Kristeva, in *Powers of Horror* (1982), argues that, in patriarchal society, abjection works as a means of separating the centre from the margin, the human from the non-human. This process of marginalisation is focused on the female body, and has been articulated historically in terms of pagan rite, societal taboo and religious 'abominations' such as sexual immorality and perversion; decay and death; human sacrifice; murder; the corpse; bodily wastes; food; and incest. Abjection is about the construction of boundaries. The *abject*, the excluded, helps define the boundaries of the *subject*, the central. The subject is complete, masculine, in possession of the phallus; the abject is incomplete, feminine, defined by *lack* of the phallus. Creed takes Kristeva's 'conception of the monstrous-feminine, of what it is about woman that is shocking, terrifying, abject', and applies this to film analysis:

■ In *Powers of Horror*, Kristeva argues that the constitution of acceptable forms of subjectivity and sociality demands the expulsion of those things defined as improper and unclean. Whatever is expelled is constituted as an abject, that which 'disturbs identity, system, order' A crucial aspect of the abject, however, is that it can never be fully removed or set apart from the subject or society; the abject both threatens and beckons. The abject constitutes the other side of seemingly stable subjectivity. ... Kristeva distinguishes between three main forms of abjection; these are constituted in relation to food, bodily wastes, and sexual difference. (Creed, 1993, p. 121) □

Creed suggests that horror films are full of images of abjection, and watching them 'signifies a desire not only for a perverse pleasure (confronting sickening, horrific images ...) but also a desire, having taken pleasure in perversity, to throw up, throw out, eject the abject (from the safety of the spectator's seat)' (Creed, 1986, p. 46). Essentially, Creed argues that representations of monstrous femininity in horror, particularly in terms of motherhood, stage the need to repress it. The abject is shown in order for it to be ejected, rejected: a replaying of the Oedipal trauma, where subjectivity is constituted through a rejection of the mother and acceptance of the authority of the Father. 'The horror film explores the attraction of the abject feminized body through its graphic representation as monstrous in the horror film they assume characteristics usually identified with the female body: they experience a blood cycle, change shape, bleed, give birth, become penetrable, are castrated.' (Creed, 1993, pp. 122, 118).

Creed argues that *Alien* restages the Oedipal trauma over and over again: 'The first birth-scene occurs in *Alien* at the beginning, where the

camera/ spectator explores the inner space of the mother-ship whose life support system is a computer aptly named "Mother" (Creed, 1986, p. 53); 'three of the crew enter the body of the unknown spaceship through a 'vaginal' opening: the ship is shaped like a horseshoe, its curved sides like two long legs apart at the entrance' (Creed, 1986, p. 54). Kane, played by John Hurt, transgresses and 'is violated in an act of phallic penetration – by the father or the phallic mother? Kane himself is guilty of the strongest transgression; he actually peers into the egg/womb in order to investigate its mysteries' (Creed, 1986, p. 55).

The power and inciseness of Creed's readings of *Alien* – and other film texts – in terms of gender and monstrosity have, in part, cemented the place of the film series at the centre of SF cinema studies. Stephen Mulhall's *On Film* (2001), for instance, uses all four of the *Alien* tetralogy, in separate chapters, to discuss philosophical questions of what constitutes the human. Similarly, *Blade Runner* has produced a large body of critical writing, including two major collections, Judith B. Kerman's *Retrofitting Blade Runner* (1991) and Will Brooker's *The Blade Runner Experience* (2005). Scott Bukatman, whose own contribution to the *Blade Runner* debates includes a *BFI Modern Classic* essay on the film (1997), is one of only two critics to be included in both *Alien Zone* and *Alien Zone II* (the other is Vivian Sobchack). The difference between his two contributions is marked. The first, 'Who Programs You? The Science Fiction of the Spectacle', takes its reference points from William Burroughs, Marshall McLuhan and Baudrillard in considering David Cronenberg's *Videodrome* (1982); the second, 'The Artificial Infinite: On Special Effects and the Sublime, draws upon the history of visual culture and optical devices – *trompe l'oeil*, panoramas, early cinema, contemporary attractions – to situate a reading of cinematic special effects. Drawing upon Gunning and Hansen's work, Bukatman suggests that 'science fiction participates in the presentational mode through the prevalence of optical effects that in fact re-integrate the virtual space of the spectacle with the physical space of the cinema' (Bukatman, 1999, p. 254). He situates special effects in the long history of the Sublime, connecting the genre to much wider aesthetic and cultural histories.

What the emphasis on special effects does is to recuperate one of the most critically neglected, yet characteristic, elements of SF cinema, which is its investment in visual spectacle. In part, this focus reflects a wider sense in film studies of engaging with the 'cinema of the spectacle' and in particular the modes of contemporary 'blockbuster' films, as in Geoff King's *Spectacular Narratives* (2000), although the spectacular mode can be traced back through several other genres (including the musical and the epic). Bukatman's book *Matters of Gravity* (2003) collects

'The Artificial Infinite' and several other of his important essays considering special effects, and is part of a mode of SF film criticism that has opened up issues of spectacle and the pleasures of SF as a popular cinema. These include Geoff King and Tania Krzywinska's *Science Fiction Cinema: From Outerspace to Cyberspace* (2000), which has a long chapter on *Star Wars Episode I: The Phantom Menace*; Roz Kaveney's *From Alien to The Matrix* (2005); and Will Brooker's excellent BFI Film Classics book *Star Wars* (2009), which manages to recuperate the *Star Wars* prequel trilogy in a critically fascinating way.

An early precursor of the focus on effects and spectacle is Brooks Landon's *The Aesthetics of Ambivalence* (1992). In the chapter of the same name Landon discusses the *functions* of spectacle sequences inside film, and proposes 'that many of the special effects sequences that have become so important to these films actually stop rather than advance the narrative' (Landon, 1992, p. 69). This 'interruptive spectacle of special effects ... present[s] a kind of counter-narrative purely in terms of special effects', where the image-track 'exists in ambivalent relationship to the film's plot – or story-based narrative' (Landon, 1992, p. 69). Landon proposes that the 'rhythm' of the effects sequence can be considered as the 'real' structure of the film. As we have seen previously in this chapter, Landon draws SF spectacle into a longer history of cinematic 'trickery', and particularly connects contemporary SF to Gunning's 'cinema of attractions'. Another crucial critical touchstone with regard to filmic trickery is the theory of 'trucage' proposed by Christian Metz; Landon's use of Metz's ideas is critical, and suggests that in a period of CGI (computer-generated imagery) the distinction between 'trickery' and 'reality' may have disappeared. However, in a special edition of the British film journal *Screen* in 1999, Metz's work was identified as a key means by which to frame a reading of special effects and SF cinema. Sean Cubitt's introductory essay begins: 'If, as Metz constantly reminds us, cinema is itself a special effect; cinema and, for some years now, television have sought to replicate that sense of awe that once surrounded them at the times of their invention; and if there is a common intuition among reviewers, critics and scholars that something has changed in the nature of cinema ... then in the field of special effects we are dealing with a history which is also contemporary' (Cubitt, 1999, p. 123). In 'CGI Effects in Science-fiction Cinema 1989–95', Melanie Pierson draws upon Landon's work to argue that 'effects-driven, science fiction films were popular with audiences in the early-to-mid 1990s because they offered viewers the opportunity to participate in a popular cultural event that put the display of the digital artefact ... at the centre of the entertainment experience' (Pierson, 1999, p. 158). Pierson concentrates on the *technological* aspects of the cinematic experience, but draws

upon Landon's understanding of the 'interruptive' function of effects sequences. She writes:

■ What becomes important in the counter-narrative represented by this 'show-stopping' special effects imagery is not the power of special effects to represent the other-worldly technologies of future societies but the power of special effects to present the awesome imaging capabilities of special-effects technologies themselves. (Pierson, 1999, p. 165) □

Pierson marks this as part of a wider cultural phenomenon, a 'popular, techno-futurist aesthetic that foregrounds the synthetic properties of electronic imagery' (p. 158). However, she also notes a tension in the use of CGI imagery:

■ Pulled, on the one hand, towards photographic realism and, on the other, towards a synthetic hyperrealism, the computer-generated imagery in this cinema exhibits an aesthetic that plays across the two poles. (p.172) □

This echoes what Landon explores (and what gives him the title of his book) in terms of 'ambivalence': not only that SF cinema 'combines both narrative and spectacle, offers the pleasures of both art and trash, appeals to both the intellect and the emotions'; but also that there is a 'larger generic ambivalence as SF film is pulled between the antithetical poles of documentary realism and pure fantasy' (Landon, 1992, pp.64, 62). The centrality of special effects to SF cinema produces a kind of ambiguity in terms of the formal organisation of the film itself.

What contemporary critics of SF cinema seem to agree upon is that, first, there is a specific use of special effects technologies in recent SF film (post-*Star Wars*, but more markedly in the time of CGI, the 1990s and after) which marks it out as a mode of cinema that offers itself as a spectacle, a 'cinema of attractions', although this can be understood as a return to a form of cinema that is as old as the technology itself (and which is in a tradition of visual spectacles that become increasingly prominent in modern culture); secondly, that the use of these technologies produces an inherent self-reflexivity; and thirdly, that this self-reflexivity or self-consciousness about the status of the images produces a tension between the construction of an immersive and seamless 'real' (through CGI, for instance, in Lucas's second *Star Wars* trilogy) and the necessary visibility of these visual artefacts as *unreal* (designed, constructed, as spectacle).

Genre hybridity after the millennium

As we have seen in this chapter, the focus of SF criticism has changed over time. Just as critics have argued that SF film must be understood in

terms of its circumstances of cultural production, we should understand the 'history' of SF film criticism in the same way. Attempts to grasp the formal and generic properties of the SF film have given way to ideological criticism, to issues to do with representations of gender, to the post-modern debate, to concerns with popular culture, spectacle and effects. Often, however, the most sophisticated criticism will synthesise several of these foci to draw out new readings of the genre.

The resurrection of zombie movies, driven by the success of *28 Days Later* (2002) and *28 Weeks Later* (2006), has been reflected in SF film criticism's increasing concern with issues of biology: death and disease, vectors of transmission, genetics, epidemics, and the field of 'bio-politics'. The concern with bodies in space, the focus of Linda Mizejewski's illuminating article 'Action Bodies in Futurist Spaces' in *Alien Zone II*, has become a concern with the exclusion and abjection of *different* bodies, the organisation of space to maintain or reinforce difference, or the monstrous as a spectacle of ethnic or class difference (the zombie rather than Creed's monstrous-feminine alien). In articles such as Lauro and Embry's 'Zombie Manifesto' (2008), the zombie becomes the 'anti-subject', a means by which to interrogate constructions of the subject at a time of globalised capitalism and the 'War on Terror'. The 9/11 events have certainly cast a long shadow over SF film, and much bio-political criticism has focused upon the regulatory systems that organise life both in terms of the body and in terms of the population. Jackie Stacey's *The Cinematic Life of the Gene* (2010) is exemplary in this regard, offering detailed and sophisticated readings of film texts (including much SF) to explore the ways in which genetics has been represented on-screen, with a densely argued investigation of cinema's connection to wider cultural and political debates.

As we have discovered throughout the chapter, SF film's proximity to horror has been the source of occasional critical anxiety (particularly with regard to genre definitions). The centrality of the biological or genetic imaginary to much contemporary SF film has created a productive hybridisation, and produced critical work that examines these 'borderland' texts (such as zombie films) in terms of SF, horror or the Gothic without undue prevarication about generic categorisation. With the development of industrial 'convergence' between television and cinema since 2000, and the production of effects-driven SF television series such as *Battlestar Galactica* (2004–9) or the BBC's 'rebooted' *Doctor Who* (2005 to the present), SF television has also become the focus of recent critical scrutiny, as the foundation of the *Journal of Science Fiction Film and Television* in 2008 attests. SF film is now perhaps less indebted to literary SF than it was in past decades, but it is still a form that relies upon intertextuality and hybridity, not only across genres, but also within SF cinema itself, particularly in

the phenomenon of the 'remake'. Just as Christine Cornea in *Science Fiction Cinema* stressed the *transnational* forms of SF cinema (rather than a strictly American or Anglo-American tradition or conception), the *trans-generic* forms of contemporary cinema, and its relation to television, literature, video games and comic books, are likely to prove fruitful for years to come.

CONCLUSION

Science Fiction as a World Literature

As we saw in the Introduction, the formation of a genre is dependent as much on exclusions as it is upon inclusions or claims for particular inheritances. In creating a 'history' of SF, or even in defining the genre, some attempt has to be made at what has become known as 'border policing', deciding upon what is and is not 'really' SF, or part of an SF tradition. As Roger Luckhurst wrote in 'The Many Deaths of Science Fiction' (1995), 'revolutions' inside the genre, assumptions about SF's 'death' and its need for renewal, can be seen retrospectively as a series of sub-generic tributaries that are eventually subsumed into the main generic river: the New Wave, or Cyberpunk, for instance. Literary history, a genre's retrospect, tends to smooth out the conflictual or dialectical nature of the genre's development, as though all writers were in some sort of negotiation with the whole body of 'science fiction', a version of T. S. Eliot's famous essay 'Tradition and the Individual Talent' (1919). Traditions, however, are *constructed* rather than organic entities, and from a particular vantage point. If we extend the sense of John Clute's suggestion, that 'First SF' and the 'conversation' among texts and writers has come to an end and has been replaced by a contemporary Babel (a sense shared in the structure of many of the histories of SF, where chronology gives way to thematic dispersal), then writing a history of the genre, or a Reader's Guide to its criticism, can only be a partial, if not impossible task.

SF, however, is fertile *because* it is protean. John Rieder, writing in *Science Fiction Studies* in 2010, proposed five elements to consider with regard to genre and history, the first three of which are as follows:

1. SF is historical and mutable;
2. SF has no essence, no single unifying characteristic, and no point of origin;
3. SF is not a set of texts, but rather a way of using texts and of drawing relationships among them. (Rieder, 2010, p. 193)

- Suvín, Darko, ed. (1975) 'The Science Fiction of Ursula K. Le Guin', special issues of *Science Fiction Studies* 7:2/3 (November). Available at <http://www.depauw.edu/sfs/covers/cov7.htm>
- Suvín, Darko (1992) 'On Gibson and Cyberpunk SF' in Larry McCaffery (ed.) *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Science Fiction* (Durham, NC: Duke University Press), pp. 349–65
- Theweleit, Klaus (1987), *Male Fantasies*, Vol. I: *Women, Floods, Bodies, History*, trans. S. Conway, E. Carter and C. Turner (Cambridge: Polity)
- Theweleit, Klaus (1989), *Male Fantasies*, Vol. II: *Male Bodies: Psychoanalyzing the White Terror*, trans. S. Conway, E. Carter and C. Turner (Cambridge: Polity)
- Tomas, Michael (1992) 'Old Rituals for New Space: *Rites de Passage* and William Gibson's Cultural Model of Cyberspace' in Michael Benedikt (ed.) *Cyberspace: First Steps* (Cambridge MA and London: MIT Press), pp. 31–48
- Vint, Sherryll (2007) *Bodies of Tomorrow: Technology, Subjectivity, Science Fiction* (Toronto: University of Toronto Press)
- Vint, Sherryll (2010) 'Afterword: The World Gibson Made' in S. Vint and G.J. Murphy (eds) *Beyond Cyberpunk: New Critical Perspectives* (London and New York: Routledge), pp. 228–33
- Wolmark, Jenny (1994) *Aliens and Others: Science Fiction, Feminism and Postmodernism* (Iowa City: Iowa University Press)
- SCIENCE FICTION CINEMA**
- Benjamin, Walter (1999) 'The Work of Art in the Age of Mechanical Reproduction' in *Illuminations*, ed. H. Arendt, trans. Harry Zorn (London: Pimlico), pp. 211–44
- Biskind, Peter (2001) *Seeing is Believing, or, How Hollywood Taught Us to Stop Worrying and Love the Fifties* (London: Bloomsbury)
- Bould, Mark (2012) *Science Fiction* (Routledge Film Guidebooks) (London: Routledge)
- Brooker, Will (ed.) (2005) *The Blade Runner Experience: The Legacy of a Science Fiction Classic* (London: Wallflower)
- Brooker, Will (2009) *Star Wars* (London: BFI/Palgrave Macmillan)
- Bruno, Giuliana (1992), 'Ramble City: Postmodernism and *Blade Runner*' in A. Kuhn (ed.) *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema* (London: Verso), pp. 183–92
- Bukatman, Scott (1992) 'Who Programs You? The Science Fiction of the Spectacle' in A. Kuhn (ed.) *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema* (London: Verso), pp. 196–213
- Bukatman, Scott (1997) *Blade Runner* (London: BFI)
- Bukatman, Scott (1999) 'The Artificial Infinite: On Special Effects and the Sublime' in Annette Kuhn (ed.) *Alien Zone II: The Spaces of Science Fiction* (London: Verso), pp. 249–75
- Bukatman, Scott (2003) *Matters of Gravity: Special Effects and Supermen in the 20th Century* (Durham NC and London)
- Cornea, Christine (2007) *Science Fiction Cinema: Between Fantasy and Reality* (Edinburgh: Edinburgh University Press)
- Creed, Barbara (1986) 'Horror and the Monstrous-Feminine: An Imaginary Abjection', *Screen* 27:1 (Jan.–Feb.), 44–70
- Creed, Barbara (1993) 'Dark Desires: Male Masochism in the Horror Film' in Stephen Cohan and Ina Rae Hark (eds) *Screening the Male: Exploring Masculinities in Hollywood Cinema* (London and New York: Routledge), pp. 118–33
- Cubitt, Sean (1999) 'Introduction: Le réel, c'est l'impossible: The Sublime Time of Special Effects', *Screen* 40:2 (Summer), 123–30
- Eisner, Lotte (1969) *The Haunted Screen: Expressionism in the German Cinema and the Influence of Max Reinhardt* (Berkeley: University of California Press)
- Frayling, Christopher (1995) *Things to Come* (London: BFI)
- Gunning, Tom (1986) 'The Cinema of Attractions', *Wide Angle* 8:3/4, 65–70.
- Gunning, Tom (1995) 'An Aesthetic of Astonishment: Early Film and the Incredible Spectator' in L. Williams (ed.) *Viewing Positions: Ways of Seeing Film* (Rutgers University Press, 1995), pp. 114–33
- Gunning, Tom (2000) '"Animated Pictures": Tales of Cinema's Forgotten Future, after 100 Years of Film' in Christine Gledhill and Linda Williams (eds), *Reinventing Film Studies* (London: Arnold, 2000), pp. 316–31.
- Hansen, Minam Bratu (1995) 'America, Paris, the Alps: Kracauer (and Benjamin) on Cinema and Modernity' in Leo Charnay and Vanessa R. Schwartz (eds) *Cinema and the Invention of Modern Life* (Berkeley and London: University of California Press), pp. 362–402.
- Hunter, I.Q. (ed.) (1999) *British Science Fiction Cinema* (London: Routledge)
- Kerman, Judith P. (ed.) (1991) *Retrofitting Blade Runner: Issues in Ridley Scott's Blade Runner and Philip K. Dick's Do Androids Dream of Electric Sheep?* (Bowling Green, OH: Bowling Green University Popular Press)
- Kaveney, Roz (2005) *From Alien to the Matrix: Reading Science Fiction Film* (London: I.B. Tauris)
- King, Geoff (2000) *Spectacular Narratives: Hollywood in the Age of the Blockbuster* (London: I.B. Tauris)
- King, Geoff and Tanya Krzywinska (2000) *Science Fiction Cinema: From Outerspace to Cyberspace* (London: Wallflower)
- Kuhn, Annette (ed.) (1992) *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema* (London: Verso)
- Kuhn, Annette (ed.) (1999) *Alien Zone II: The Spaces of Science Fiction* (London: Verso)
- London, Brooks (1992) *The Aesthetics of Ambivalence: Rethinking Science Fiction Film in the Age of Electronic Reproduction* (Westport, CT and London: Greenwood)
- Mez, Christian (1977) 'Truance and the Film', *Critical Inquiry* 3:4, 657–75
- Mizejewski, Linda (1999) 'Action Bodies in Futurist Spaces: Bodybuilder Stardom as Special Effect' in Annette Kuhn (ed.) *Alien Zone II: The Spaces of Science Fiction* (London: Verso), pp. 152–72
- Mulhall, Stephen (2001) *On Film*, 2nd edn (London: Routledge)
- Pierson, Melanie (1999) 'CGI Effects in Hollywood Science-Fiction Cinema 1989–95: The Wonder Years', *Screen* 40:2 (Summer), 158–76
- Sardar, Ziauddin and Sean Cubitt (eds) (2002) *Aliens R Us: The Other in Science Fiction Cinema* (London: Pluto)
- Sobchack, Vivian (1992) 'The Virginity of Astronauts: Sex and the Science Fiction Film' in A. Kuhn (ed.) *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema* (London: Verso), pp. 103–15
- Sobchack, Vivian C. (1980) *The Limits of Infinity: The American Science Fiction Film 1950–1975* (South Brunswick, NJ and New York: A.S. Barnes)
- Sobchack, Vivian C. (1987) *Screening Space: The American Science Fiction Film* (New Brunswick, NJ and London: Rutgers University Press)
- Sontag, Susan (1965) 'The Imagination of Disaster', *Commentary* (October), 42–8
- Stacey, Jackie (2010) *The Cinematic Life of the Gene* (Durham and London: Duke University Press)
- Tasker, Yvonne (1993) *Spectacular Bodies: Gender, Genre and the Action Cinema* (London and New York: Routledge)
- Telotte, J.P. (2000) *Science Fiction Film* (Cambridge: Cambridge University Press)

SELECTED INTERNET RESOURCES

- Arctivity, <http://arctivity.rutgers.edu/>
- Ballardian, <http://www.ballardian.com/>
- Daughters of Prometheus, <http://daughtersofprometheus.wordpress.com/>