National College of Art and Design,

Faculty of Design, Department of Visual Communication,

The Modern Prometheus:

An Examination of the
Role and Representations of Technology in Film.

by Eoin Stephens

Submitted to the Faculty of History of Art and Design and Complementary
Studies in Candidacy for the Degree of Bachelor of Design, 1995

Acknowledgements

I wish to express my gratitude to the following for their invaluable assistance, Tony Fitzmaurice, Paul McBride, Daniel Cullen and Carmel Stephens and Jason Delahunty

Contents

List of Plates

Introduction

Prometheus and the Myth of Technophobia

The purpose of this thesis is to present an examination of the role of technology in film. This involves a study of both representations of technology in film and a study of the role of technology in the film-making process and in society in general.

"The Modern Prometheus" is the subtitle which Mary Shelley gave to her novel *Frankenstein*. That book is generally considered the precursor to all science fiction, and though it is not my intention to discuss technology only in terms of that genre, the story of Prometheus is relevant to this thesis in so far as it addresses concerns which are strong enough to be retold in every generation. It could be said then that the myth occupies an important place in the collective unconscious. It is fundamentally a creation myth but more specifically it is a story about immortality, power and crucially about artificial creation and reproduction. In my analysis I will demonstrate how Prometheus reflects certain fantasies which manifest themselves again and again in modern myths. Today film-making is the the most powerful form of myth-making and it is in film therefore that I intend to examine the myth of "The Modern Prometheus".

Prometheus was a Titan who is credited with the creation of man, a feat he achieved by shaping a figure in the likeness of the gods from clay and water, and with the help of Athene, animating it. Whereas his brother Atlas was renowned for his enormous physical strength, Prometheus, we are told, " was indeed the wisest of his race and Athene... taught him architecture, astronomy, mathematics, navigation, medicine, metallurgy and other useful arts"(Graves,1980, p.144).As his creator Prometheus was always looking out for the interests of man-to whom he passed on his knowledge. This favouritism often brought him into conflict with Zeus who grew increasingly jealous of the power of mortal man. Finally when Prometheus defied Zeus's orders to withhold fire from man he was punished terribly. The link between this myth and the story of *Frankenstein* is I think self-evident; *Frankenstein* also created an intelligent being in the likeness of man and for his audacity in usurping the

creative right of God was punished severely. Also the link between the novel *Frankenstein* and representations of technology in film (including countless screen adaptations of the book) is well established. For these reasons alone I would feel justified in borrowing Mary Shelley's phrase, "The Modern Prometheus" as an appropriate title. However the more I read of Prometheus, the more convinced I became of its relevance beyond the context of *Frankenstein*. For instance, Zeus had Prometheus punished for giving fire to man, but Zeus also punished man by creating the first woman, Pandora. The story of Pandora is more familiar than that of Prometheus; she was the foolish woman who by opening a certain box, through her curiosity, set free the evils of Old Age, Labour, Sickness, Insanity, Vice and Passion. This acts as a striking precedent to Andreas Huyssen's persuasive reading of *Metropolis* in which he demonstrates how fear of technology out of control is in the film projected onto the image of woman and equated with the fear of female sexuality out of control (Huyssen, 1986 ,p.66-81). This idea is developed by Claudia Springer most convincingly in her reading of *Eve of Destruction*(Springer, 1991, p.305) and by Margaret Tarratt in her examination of *The Incredible Shrinking Man, Bride of Frankenstein* and *Forbidden Planet* among others (Tarratt, 1986, p.258-276). While *Frankenstein* does not link fears of technology with fears of female sexuality as explicitly as *Metropolis* or *Eve of Destruction* the link is still there. The history of the monster's creation and of its subsequent violent rampage is paralleled with the progress of Frankenstein's wedding plans while nothing frightens him quite so much as the monster's proclamation, " I will be with you on your wedding night "(Shelley, 1994,p.179).This fear of sexuality in *Frankenstein* is developed by Tarratt who observes the ambiguity of the statement by Frankenstein's wife in *Bride of Frankenstein*: "We are not meant to know such things, it is the work of the Devil"(Tarratt, 1986, p.270). She is talking about her husband's scientific work , but the subtext is clearly sexual.

If Prometheus is read as it was by Mary Shelley as a parable on the dangers of technology, then the very existence of the story poses some interesting questions about the nature of the human fear of technology. When one considers that most critical writing on technology is based on a post-industrial revolution experience (both

Springer and Huyssen pinpoint the early nineteenth century as the scene of the first anti-technology literature: consider *Frankenstein* [1815]). Nor is Prometheus the only example: one of the central myths of the Judaic/Christian mythology is that of Adam and Eve who were cast from Paradise for eating the fruit of 'The Tree of Knowledge' and as with the story of Pandora, the woman is demonised and punished more than the man. Elsewhere in The Old Testament, there is the story of The Tower of Babel, another instance where mortal man defied God in an attempt to achieve immortality (by using technology and not religious faith to take them to heaven). Just as Mary Shelley alluded to the Prometheus myth in *Frankenstein*, so Fritz Lang used the motif of The Tower of Babel as a metaphor for the hi-tech city in *Metropolis*. (Again in Greek mythology there is the tragic story of Daedalus and Icarus who attempted to escape their island prison by making artificial wings of feathers bound with wax. Icarus , the story goes, dies when he soars too high, the wax melts and he plunges to the sea).

Considering such historical precedents to more recent representations of technology in cinema and literature, one must question the relevance and importance of much critical writing which is predicated on the supposition that these recent anti-technology fictions are indicative of a time of social upheaval: H. Bruce Franklin argues that "the most profound crisis in human history" was being reflected in film " with images of catastrophe in all shapes"(Franklin, 1990, p.19). One could argue that if stories warning of the evil potential of technology have been around for thousands of years then the current plethora of such stories-mainly in the genre of science fiction-represent nothing new and therefore do not represent a sociological problem which warrants attention. But this would be inaccurate for a number of reasons. Firstly, the sheer bulk of contemporary fiction which deals with questions and fears of technology far outweighs the import of these four disparate and arbitrary examples chosen from mythology. Secondly, the story of Prometheus and those from the Bible should be explained metaphysically; they were developed for a religiously minded public for whom the idea of challenging God's power was not a question of method (technological as opposed to magical, Satanic, or alchemical) used but of

motive (greed, avarice, lust etc.). Thirdly in the case of Pandora, questions of knowledge, power and material pleasure have a sexual symbolism in mythology. With Adam and Eve, for example, I would suggest that tasting the fruit of the Tree of Knowledge is symbolic of the act of sexual intercourse. (having tasted that fruit they become aware of eachother's sexual difference and realise for the first time that they are naked).

While ancient myths such as the story of Prometheus are precedents to contemporary technological discourses, it is clear that the past two hundred years have seen an enormous growth in the fascination with technology and the fear of its potential in parallel to a changing world which has become ever more reliant on technology. In the course of this thesis I shall explore the different forms representations of technology have taken in response to the institution of new technologies in society.

In my first chapter I will explore the essential difference between early representations of Industrial Revolution technology, and the change which occurred with the establishment of mass production in the Fordist sense, during the early twentieth century, a change which was symptomised by a movement from concerns of technology's effect on the individual (*Dr. Jeckyl and Mr. Hyde*) to technology's effect on the masses, just as Fordism "stood for the mass rather than the individual" (Wollen, 1989,p.15).

Chapter two will deal with recent responses to new technologies where "there has arisen a cultural crisis of visibility and control over a new electronically defined reality" (Bukatman, 1993, p.2). Such films as *The Conversation* and *Videodrome* which deal with the ambiguity of image and sound represent a sign of the deepening sense of alienation and loss of individualism, first heralded by the technologies of mass-production. The fact that technology is now less visible or comprehensible than before serves to heighten this sense of alienation. Scott Bukatman makes a relevant allusion to Freud's suggestion that there have three ego-smashing moments for humanity:

> the Copernican revolution which displaced the Earth from its central position in the universe; Darwin's theories which robbed man of his 'peculiar

> position of having been specially created', and relegated him to a descent from the animal world; and Freud's own contribution which demonstrated that the subject is "not even master of his own house'(Bukatman,1993, p.8)

Bukatman quotes Freud with reference to an idea of Bruce Mazlish that a fourth ego-smashing revelation awaits humanity: that will be the realisation that humans are no more than machines and machines will soon be more than human.

The loss of a sense of control,individualism and importance (however illusory those ideas were to begin with) which these rude shocks represent to humanity are symptomised in our culture's endemic fear of technology, a fear which also manifested itself in the anxiety expressed towards the mass-media, or culture industry as early as the nineteen thirties. It is this state of mind which I intend to examine in depth in chapter one and two.

Chapter three is about the naturalisation of technology in film and society. While our science-fiction culture specialises in demonising technologies in favour of conservative values, as exemplified by David Bell's statement,"Technology governs change in human affairs while culture guards continuity" (Bukatman, 1993, p.3) another element is at work naturalising certain forms of technology in favour of others, so that they become an invisible part of our culture. In his essay, "Making Culture into Nature" , Michael Stern demonstrates how arbitrary a term is "special effects" that it is one which serves to foreground certain forms of technology (spaceships, time-machines, teleporters etc.) signifying them as special, while institutionalising other forms of technology (handguns, cars, jets, tanks, corporate structures etc.) thus signifying them as natural, while also distracting attention from the artifice of the film-making process by suggesting that "special effects" represent the only artifice in the process (Stern, 1990, p.6). It is this naturalisation of technology which I will be examining in chapter three.

In chapter four I will consider how as Jung says, belief in this world and in the power of man has despite assurances to the contrary become a practical and for the time being, irrefragable truth (Jung,1953, p.22). Our secular and material world with its faith in Western analytical reason, when faced with a crisis which previously might have manifested itself in the religious visions of Lourdes or Fatima, today has no recourse but to create what Jung describes as " The Modern Myth of Seeing

Things in the Sky". Hence we have UFO sightings and numerous films which transform Christian myths into modern parables for the coming of a Messiah. This can be seen in such films as *ET, The Last Star Fighter* and *Terminator 1 and* 2.

Chapter 1

Fordism, the Machine Age and Film

> Every Roman was surrounded by slaves. The slave and his psychology flooded ancient Italy, and every Roman became inwardly, and of course unwittingly, a slave. Because living constantly in the atmosphere of slaves, he became infected through the unconscious with their psychology. No one can shield himself from such an influence- C.G.Jung (McLuhan, 1964, p.21)

The metaphor of slave and master is one which has often been used to describe the relationship between humans and technology; it is also fairly common to find the roles depicted as reversible. In the novel *Frankenstein*, for instance, the creator and master becomes the slave at first figuratively- the monster/slave comes to dominate his life to the exclusion of all else-and later literally when he is forced to do his creation's bidding by making him a mate. The quote from Jung is relevant in this context but more so in the context of this chapter because it refers not to individual but to mass psychology. Peter Wollen in his article "Cinema Americanism and the Robot", documents the development of the ethic of mass-production and its resulting alienating effect on mass psychology; his conclusions are analogous to Jung's theory of slavery's effect on the Roman psyche.

By deconstructing the physical process necessary to the manufacture of a car and allocating each worker one monotonous sequence, devoid of meaning in itself, the worker became both alienated and a part of the greater machine; in effect a slave to the machine. This revolution in the workplace resulted in a widening of the gap between management and employers: because the workers were now devoid of skills they were effectively robbed of dignity and a position from which to bargain for their rights. Though this may sound like a situation possible only in a capitalist economy, "In the Soviet Union too, socialism became identified with planning and industrialisation on a Fordist model" (Wollen, 1989,p.12).

The response to this Fordist rationality in film was contradictory. On the one hand there were films such as Chaplin's *Modern Times* which criticised the dehumanising nature of assembly line production in no uncertain terms. On the other

hand Fritz Lang's *Metropolis* which superficially espouses the cause of the workers (consider the vivid image of the machine consuming the workers [Fig.1]), is ultimately ambiguous. The film ends with a sentimental reconciliation of management and workers but there is no resolution of the fundamental problems caused by Fordist production methods. As Huyssen argues: to read the film in terms of class struggle would be to miss the point. Similarly its imagery is anti-technology and simultaneously a Futurist celebration of the machine cult of the nineteen twenties[Figs.2,3]. In *Metropolis* fear of technology out of control is equated with fear of female sexuality out of control; though in this respect it is unclear which idea is a metaphor for the other.

Perhaps the film's most relevant idea in terms of technology is its device of locating the scene of early twentieth century technological anguish in the hi-tech city, the metropolis of the title. *Metropolis* is the consummate ultra-modern city, a machine for living in, as inhuman, untiring and relentless as the machines in the factory. Whereas anxieties about killer robots or psychotic computers only have so much resonance with the public imagination, the motif of the city as technology encompasses the entire range of modern anxiety. If one broadens one's vision of technology beyond the realm of pistons, cogs and wheels and makes the connection as Wollen does between Fordism and the writing of Frederick Taylor,

> Taylor's principles of Scientific Management ..heralded a new epoch when the worker would become as predictable, regulated and effective as the machine itself(Wollen, 1989, p.2)

then the city with its mechanical regularity and inhuman scale becomes the machine-Moloch which Freder imagined feeding on the masses in *Metropolis.*

Countless films have either directly or indirectly dealt with the idea of the modern city's inhuman nature. In the 'twenties Harold Lloyd literally wrestled with the elements of the city, its skyscrapers, construction sites and traffic. One of the most memorable images of silent comedy must be that of Lloyd hanging for dear life from a giant clock on the side of an office block (*Safety Last*)-an image which is no less evocative of the terror of the individual in the modern world than that of Freder, in *Metropolis*, wrestling with the arms of another giant clock[Figs.4,5].

More recently, in Martin Scorsese's comedy *After Hours*, the inspiration for

The Monster in the Machine

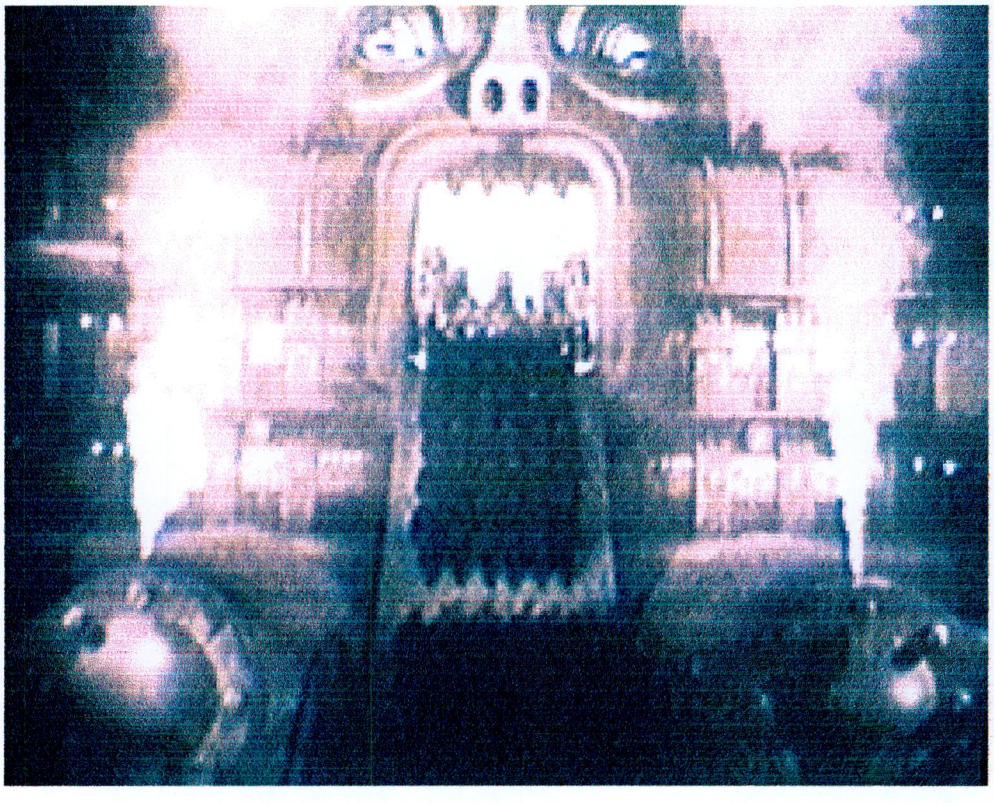

Fig.1: The monstrous nature of machinery is expressed explicitly in the scene from *Metropolis*. The machine which consumes the workers appears to be female, an idea which is in keeping with the politics of the film.

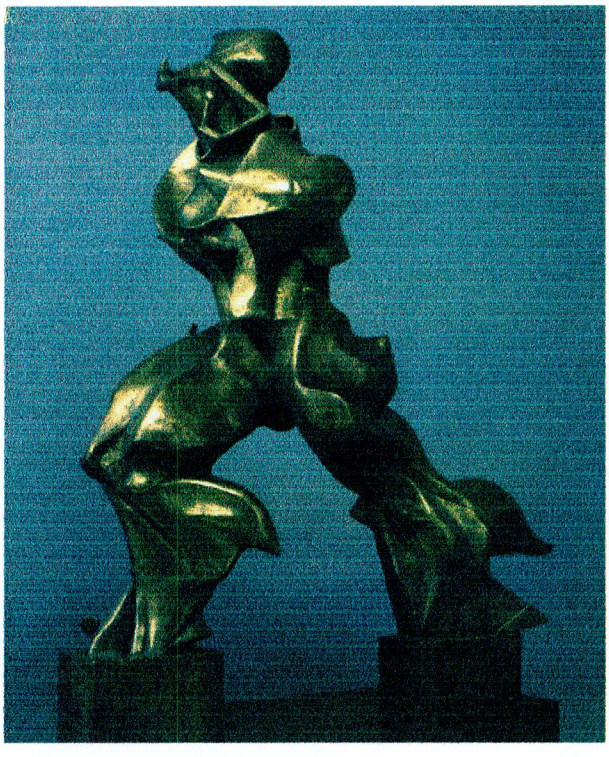

Fig.2: *Unique Forms of continuity in Space*(1913)The Italian Futurist Umberto Boccioni used imagery similar to Fritz Lang in this Futurist sculpture.

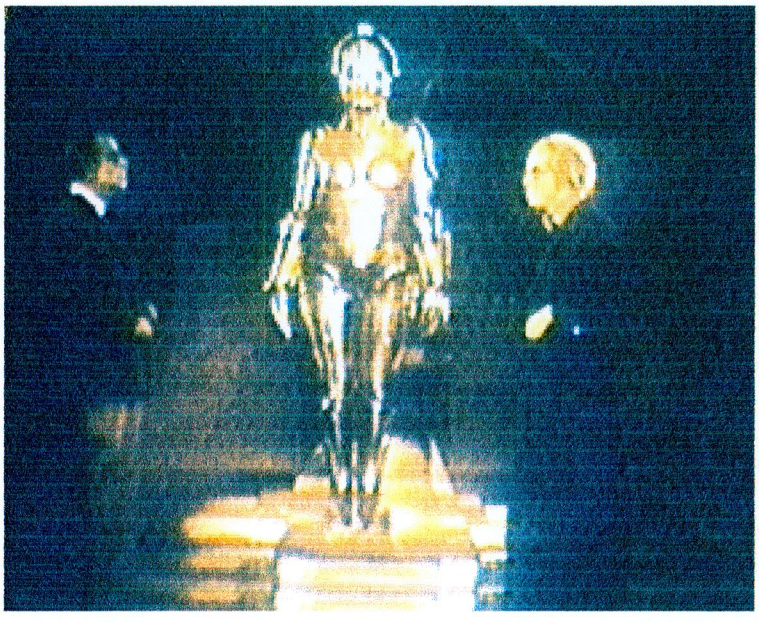

Fig.3: Futurist fantasies are embodied in the form of the robot Futura in *Metropolis*

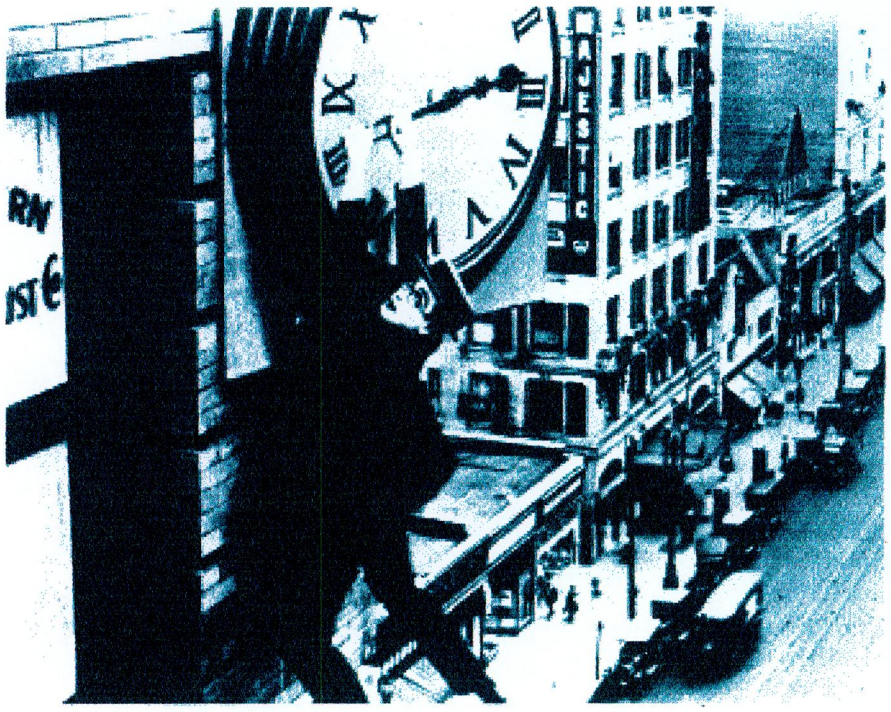

Fig.4: Harold Lloyd finds the pace of life in the modern city as oppressive as Freder in *Metropolis* (*Safety Last,* 1923).

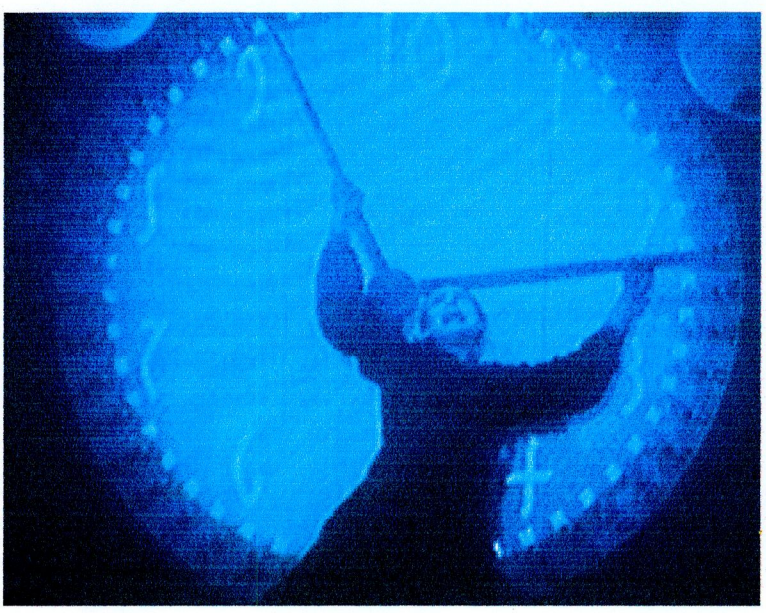

Fig.5: Freder struggling with another clock in Fritz Lang's *Metropolis*(1926)

Lang's *Metropolis*, New York, is the setting for another individual's nightmarish experiences in the hi-tech city. Griffin Dunne like Lloyd plays an ordinary guy, his ordinariness central to the theme of the film as it highlights the alienating effect of the city which denies individuality in favour of conformity. The city represents,

> the mechanical as opposed to the spontaneous , the regulated as opposed to the free, an equaliser as opposed to a promoter of individual distinction (Ryan/Kellner, 1990, p.58)

Ryan and Kellner suggest that technology has been represented in recent American film as ontologically evil in order to suggest that the institutions and way of life which technology destroys are ontologically good. The values of liberty (as opposed to equality) and individualism are threatened by technology which represents equality, social order and democratic levelling. Liberty and individualism are of course very American values as is testified by generations of Westerns, so it is not surprising to sees traces of xenophobia in recent anti-technological American films, for example Joel Schumacher 's *Falling Down*.

Falling Down, American Individualism and the Modern Metropolis

Falling Down shares similar characteristics with Lloyd's *Safety Last* and Scorsese's *After Hours*, though its intentions are more overtly political than either of those. The film's 'tag-line'," the story of an ordinary man at war with the everyday world"is reminiscent of the plight of Dunne's character in *After Hours* and Lloyd in *Safety Last* while this belligerence is typical of the film's sensationalist politics. The loneliness and isolation associated with the modern metropolis (this time, Los Angeles) is quite explicit in *Falling Down*. Like Dunne, Michael Douglas's relationships are all failures: he is unamicably divorced (he is barred from coming near his ex-wife and daughter) and his mother with whom he lives is not even aware that he has lost his job (to a computer, he says) six months past. Every morning he continues the pretence of going to work, donning shirt and tie and joining the commuter traffic of Los Angeles. Douglas's character is known as D-Fens for most of the film, the name reminiscent of THX1138- the central character in George Lucas's eponymous science fiction film: both men were no more than numbers in a hi-tech society. D-Fens' first act of rebellion in *Falling Down* is to abandon his small Japanese car in the middle of a

traffic jam, thus he sets himself apart from the rest of society and embarks on a violent journey home - to his estranged wife and family. Once he has taken the step towards individualism and is set apart from the other commuters (who berate his madness), Douglas's character assumes an heroic aura, which represents the fundamental contradiction in the film. D-Fens is ultimately shown to be psychotic and violent-he is pitted against the kind and passive detective played by Robert Duvall, yet the film is clearly a celebration of the rugged American individual, hero of countless Westerns. His statement, "I'm just standing up for my rights as a consumer" following his violent attack on a Korean owned corner shop is merely a suburban reworking of the Western hero 's often violent defence of his land. Like the traditional Hollywood hero, Douglas is depicted as somehow invulnerable. When he is assaulted by knife-wielding thugs, he dispatches them with effortless efficiency; later when he is attacked with an assortment of automatic weapons, he barely flinches- it is as though the strength of individualism transcends the threat of mere bullets. The name D-Fens, Douglas's self-consciously wooden performance, his military haircut and the army surplus which he is wearing in the second half of the film all evoke associations with fascism, associations which, as I will suggest in chapter four, are not uncommon in films which express an anti-technology viewpoint.

D-Fens reserves some of his violent anger for the proprietor of a Korean corner shop. This scene in the film incurred the wrath of many Asian and left-wing critics who condemned it as blatantly racist. These critics may not have noticed the more general but less explicit racism or xenophobia which has made a recent appearance in American film. This is particularly evident in the representation of the Japanese in America who are represented not as poor immigrants but as neo-colonials intent on buying up every American business. The phenomenon of 'Jap-bashing' in American film is a result of the American fear of losing their economic power to a wholly un-American way of life-one which represents individualism subordinated to the good of the many, those qualities which Ryan and Kellner describe as the antithesis of liberty and equality. The success of the Japanese economy and the fears it evokes are manifested in such films as *Blade Runner*-where Coca Cola and other products are sold in Japanese, *Black Rain* which teams a tough maverick American cop (Douglas

again) with the uniformity of the Japanese police and *Rising Sun* (which I will talk about in more detail in chapter three), where a Japanese firm attempt to obstruct the investigation of a murder which has taken place in their American Headquarters (One might even include *Die hard*, also set in a Japanese office block in Los Angeles; it is also concerned with ideas of tough American individualism overcoming the advanced technology of foreign 'bad guys'. That the criminals in *Die Hard* are Northern Europeans rather than Japanese only suggests the existence of an American fear of European economic success, similar to that of Japan's).

Star Wars, Jurassic Park: Escapism and Nostalgia in a Depression Era

While xenophobia in recent American films may not seem to be particularly relevant to the subject of technology in cinema I would suggest that the relevance lies in its relation to the economic situation which it reflects. Since the Industrial Revolution it has become apparent that the state of a nation's economy is directly related to the development and availability of new technology. Therefore the current trend in American film is to link fear of technology with a fear of those foreign powers which now seem to have the edge economically. The threat which technology represents, therefore, is even more acute than before because it comes from without, and, as the Cold War and the UFO phenomenon of the fifties demonstrated, popular imagination is more willing to believe in the truth of an external rather than internal threat.

If as I have suggested the general economic trend over the past thirty years has been a negative one, and in Hollywood this has been even more evident (as a result of the growth in new technologies: television, video, computer games), one might expect a bleaker, more apocalyptic vision of the world to be prevalent than, say, during the fifties. The experience of the Great Depression would however suggest other wise; it was after all during the early nineteen thirties that Hollywood produced its most optimistic and escapist entertainments (consider Frank Capra's *Lady for a Day* for instance). Over the past thirty years the equivalent escapist films have been equally successful: think of the phenomenally successful careers of George Lucas and Steven Spielberg. This is even more relevant when one considers the genre

of films which these directors have found to be so popular. Starting with Lucas's *Star Wars* trilogy in the seventies, then Spielberg's *Close Encounters* and *ET* up to the enormous success of *Jurassic Park,* the most successful popular entertainments of the past twenty years have been cheerfully optimistic science fiction films. This is in stark contrast to Franklin's contention that the vast majority of science fiction cinema between 1970 and 1982 betrays an unprecedented deep and disturbing pessimism. So which of these views is correct? While Franklin does not ignore the successes of *Star Wars* and *ET,* he differentiates between such pessimistic post-apocalyptic visions of the future (in such films as *The Omega Man* and *Planet of the Apes*) and the naive optimism of *Star Wars* by categorising the first as contemporary science fiction and the latter as a nostalgic reworking of thirties comic book science fiction.

One of the most important cultural phenomena of the nineteen thirties in the US was the success of first the newspaper comic strip then the comic-book and the success more specifically of the science fiction genre . Among the most successful of the first 'serious' comic strips was *Buck Rogers* , this was later superseded in popularity by *Flash Gordon*. Both were escapist fantasies about space travel and utopian futures occasionally threatened by evil empires. Similarly in American film Franklin notes the optimistic Utopian futures in *Just Imagine* (1930) and*Things to Come* (1936). In other successful comic books of the time there were such hi-tech gadgets as Dick Tracy's Television Wristwatch and Batman's Utility Belt . Clearly in the nineteen thirties technology had not yet been ascribed an ontological value of either good or evil, it was usually in the hands of the "good", and as such was representative of the American technological superiority at the time .

One can relate this optimism of the thirties to the success of the Lucas and Spielberg formula by noting Frederic Jameson's thoughts on postmodernism and pastiche where he makes the comparison between *Star Wars* and those comics of the thirties:

> *Star Wars* , far from being a parody of such now dead forms, satisfies a deep (might I even say repressed) longing to experience them again... the adult public is able to gratify a deeper and more properly nostalgic desire to return to that older period and to live its strange old aesthetic artifacts through once again (Jameson,p.116)

Such films as *Star Wars* and *ET* are therefore essentially retroactive and do not reflect current fears of technology,though they may exploit the most advanced technology in their use of special effects. *Jurassic Park,* for instance, is essentially a monster movie in the style of *KingKong* (1933). It is, like *Frankenstein,* a timeless morality tale rather than an exploration of the specific issues of contemporary technology.

Chapter 2

The Information Age and the Threat of Electronic Technology

> Its expansive computer facilities comprise some of the most complex and sophisticated machinery in the world; NSA's technology could at any time be turned around on the American people... the capacity is there to make tyranny total- Senator Church on the National Security Agency (Munnelly, 1987,p.71-72)

In his book "Who's bugging You", Brendan Munnelly documents the enormous growth in the electronic surveillance industry over the past thirty years. The National Security Agency, he points out, receives a bigger budget than even the CIA. This growth is as a result of the increasing economic importance of information. Just as mechanisation was at the heart of the economy of the 'Machine Age' so information is the commodity of the 'Information Age'. This phenomenon is dependent upon the corresponding development of electronic technology, technologies such as the Internet, which allows computers to talk to eachother instantly across the globe, sophisticated bugging and scrambling devices and even the humble mobile phone are changing the patterns of work and recreation, offering, like all new technologies, great hopes and fears alike. The potential for greater democracy as a result of access to huge amounts of information is liberatory; however the invisibility and immateriality of electronic technologies induces paranoia: a fear of what cannot be seen:

> no longer has information any tangible, kinetic analogue in the world of the senses, or in the imaginations of writers of fiction. Gone are the great arrays of vacuum tubes, the thousands of toggles that the heroes of science fiction would flick almost faster than the eye couldsee, as they dodged 'space torpedoes', outflanked alien 'battle lines' steered through asteroid 'storms' ,gone more importantly is any sustained sense of autonomy in space and time of gross visible individual human actions. And if actions are now invisible then our fates are likewise beyond our grasp- John Clute (Bukatman,1993, p.1-2)

Bruce Mazlish's theory that after the Copernican, Darwinian and Freudian revolutions there remains the coming realisation that there is no fundamental difference between man and machine, is even more relevant in the Information Age than

before. Of course the idea of creating artificial life equal to human life is as old as the *Frankenstein* story and its many clones; today however it is not any longer a question of creating a humanoid which concerns science, it is the notion of exploring the compatibility of human and machine. With virtual reality technologies scientists are already toying with the possibility of entering 'cyberspace' (a cyberpunk word for the intangible arena where computers talk and interact with eachother), leaving one's body ('meat' to cyberpunks) and existing as pure consciousness. This idea is something of an inversion of the *Frankenstein* myth since it involves not the restoration of life to an inanimate body but the liberation of the consciousness from the shackles of the body.

Videodrome and the End of the Subject

In David Cronenburg's *Videodrome* the central character, Renn, interfaces or merges with technology in such a visceral way that his body becomes an organic VCR: the central concern in *Videodrome* is one of control, or loss of it- it is one which operates at all levels of the narrative. Renn's business is pornography- he is a program controller and he demonstrates a taste for something 'tough,' something that will 'break through'. This preference for sado-masochistic sex is reflected in his relationship with Nikki Brand, his lover, who adopts a passive role, though she is clearly in control, introducing him to the pleasures of S&M. Later in the story Renn attempts to track down the source of an illegal broadcast with the help of his assistant only to discover that he is being lead to the source by a mysterious organisation which wishes to manipulate him-his own assistant, it turns out is manipulating him. Having been exposed to this illegal broadcast, Renn's reality begins to disintegrate into a series of hallucinations. If Renn's hallucinations are frightening for him they are disturbing for us too as a result of the way in which Cronenburg allows the distinction between reality, or signified reality, to blur for the audience as well as the character. As Bukatman points out,

> Cronenburg does not then mythologise the cinematic signifier as 'real' with the hallucination. When Renn pops a videotape into his machine, Cronenburg inserts a blip of video distortion over the entire visual field this infects the viewer with an analogous experience of dissolution and

decayed boundaries(Bukatman, 1993, p.91)

That his body is penetrated so explicitly is not gratuitous-one of the decayed boundaries Bukatman refers to is that of the disappearing borders between the body and technology. In the 'Machine Age' individuality was threatened by the fact that Fordist and Taylorist principles resulted in the homogenisation of identity. In the 'Information Age', it is not the distinction between individual humans which is disappearing but the distinction between human and machine. In an era when reality is no longer defined in physical terms, the borders which traditionally denoted the difference between human and technology are obsolete.*Videodrome* explores how electronic technology both empowers the human by offering the possibility of immortality (Brian O' Blivion, one of the main characters has been dead for some time and yet he lives on through recordings on video) and how technology destroys the traditional definition of the human by blurring the distinction between body and machine. O'Blivion, for example seems to live and interact with other humans (he even appears on a chat show [Fig.6]) and yet he exists only as a series of recordings on video. What *Videodrome* also does is to contradict usual conventions of science fiction by using imagery which is lo-tech and cheap. The purpose of this device is to deny the viewer the escapist fantasy that science fiction offers. That is the fantasy that the discourse of the film is escapist and bears no relation to reality. In *Videodrome* the cheap sets, effects, and technology ground the film in the banality of everyday life. O'Blivion 'lives' on on thousands of hours of ordinary VHS tape. Though the film uses some conventions of science fiction, the issues it addresses are contemporary. While it is not unique in this way, by avoiding the gloss and 'artifice' characteristic to the genre it does acquire a more contemporary relevance.

During the sixties and seventies, after the assasinations of the the Kennedys and Martin Luther King, after Vietnam and the Watergate scandal, the American faith in democracy and government began to wain. This was reflected in numerous films of the period- *All the Presidents Men, The Parallax View, The Conversation, Capricorn One* and more obliquely in the plethora of apocalyptic science fiction films of the period. What these films symptomised was a growing uncertainty over who in

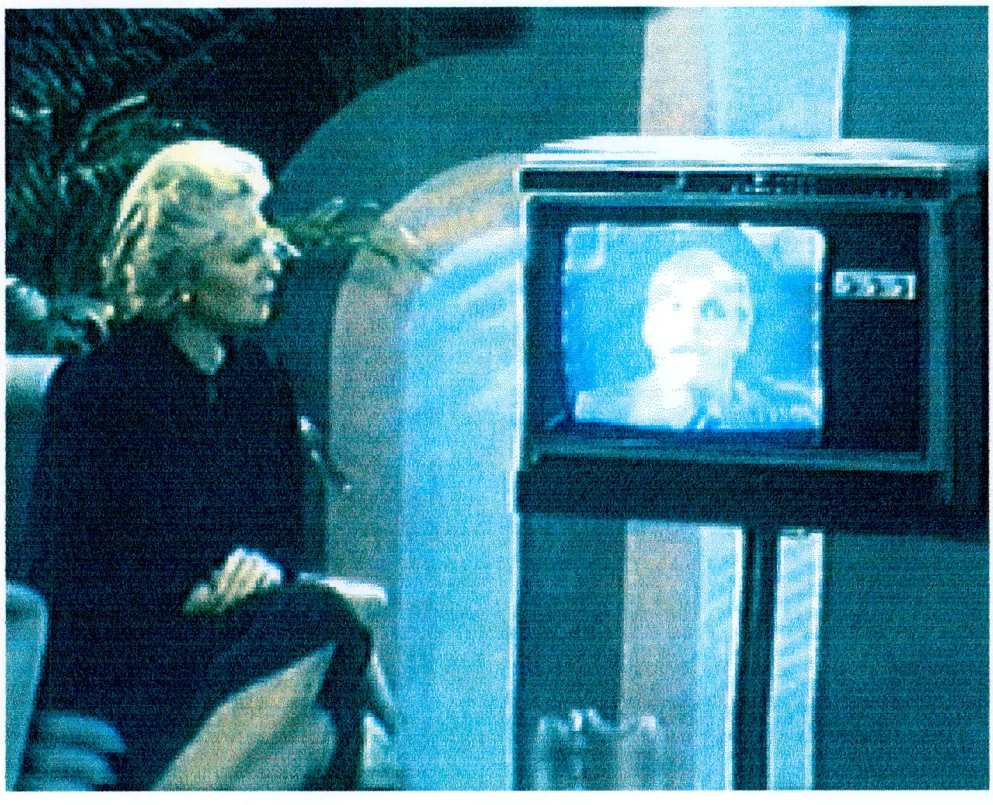

Fig.6: Brian O'Blivion refuses to appear on television, "except *on* television", as he does in this scene from *Videodrome*. The fact that he exists as a recording does not seem to prevent him from having a coherent conversation with the chat-show host.

fact was in control; these days it is almost a cliché to talk of mysterious multi-national capitalist organisations running things from behind the scenes, but that does not make the disappearance of democracy any less frightening. Like the emerging technologies the powers behind government were represented as increasingly invisible. For example Robert Duvall's character in *The Conversation* is known only as the 'director', while the Parallax corporation in *The Parallax View* takes its name from the optical phenomenon of an object's appearance being distorted depending on the point of view from which it is seen. In these films as in *Videodrome* the electronic technology is in the hands of these secret powers and is used to manipulate the actions of individuals while controlling the perceptions of the masses. That technology became a tool of government was a result of the Space Age as Walter MacDougall demonstrates,

> What began as an extraordinary government initiative to reassure the world that individualism, free enterprise and limited government were still superior came in [NASA administrator's James E.] Webb's view to be a revolution from above . NASA's destiny was to serve as prototype for reallocation of national power for social and political goals: (Bukatman, 1993, p.3)

While technology, its use and abuse is secondary to *The Parallax View* (explicit in one scene where the protagonist Joe Frady is indoctrinated into the organisation by viewing a bizarre, disturbing video montage of image and type in order to test his psychological suitability as an assasin), it is central to *The Conversation* and *Capricorn One*. The latter film is of the "heroic quest" (Barker,92, p.24) model of conspiracy thriller-it is essentially optimistic. The heroes are of the clean cut all-American variety, three astronauts who think they are about to embark on the first manned mission to Mars. On the way to their spacecraft they are abducted by government agents (from an unspecified government agency) and effectively kidnapped while their spacecraft leaves without them. They are then taken to a remote desert studio where they simulate the Mars landing, which is then broadcast on TV. Things go wrong when the spacecraft explodes on its way back to Earth and the astronauts realise they are as good as dead unless they can escape. At the end of the film one of them does make his way home where the media are able to report his survival and presumably break the scandal to the public. The film succeeds in illustrating differences between

truth and perception: television is responsible for both making the false mission to Mars look credible, and, as an organ of free speech publicising a conspiracy by showing the surviving astronaut on TV. It stops short of a more detailed examination of questions of truth versus perception as they might relate to the film-making process preferring to take the more facile formula of the heroic quest, with its neat closure and reassuring return to normality.

The Conversation and the Ambiguity of the Image

This is not the case with *The Conversation*. Harry Caul, the protagonist, is described by his colleagues as the best in the business; his business is electronic surveillance . His job, which entails watching and listening to other people's private conversations, makes him extremely paranoid. The film is concerned with the innate ambiguity of the recorded experience- in Harry's case electronic sound recording. The film opens with Harry and colleagues attempting to record a conversation between a young couple in a crowded public square. The electronic filtering which intersperses snatches of speech draws attention to the mediated nature of the recording while the banality of the actual conversation begs the question whether any meaning can be garnered from it. In this respect the audience and Stanley, Harry's assistant, who wonders who would want to listen to such a boring conversation, are at odds with Harry who believes that through a careful reconstruction of the recordings, the truth will become apparent, " just like a film editor cutting together different shots into a single scene" (Barker, 92,p.25). As Harry procceeds to reconstruct the snippets of conversation his sympathies are aroused: the professional detachment which had prompted him to say " I don't care what they're talking about" disappears as he, like us, becomes interested in their 'story'. Just as Cronenburg uses editing and sound effects to involve the audience of *Videodrome* in the disintegration of reality experienced by Renn, so too does Coppolla involve the audience in the subjectivity of Harry Caul's analysis of the conversation. Significantly Coppolla's filming of the conversation in the square is as mediated and blurred as the sound recording . From the celebrated opening long shot there is precious little concrete information on the screen. Telephoto lenses ensure that characters wander in and out of focus, disap-

pear behind trees and are obscured by passers-by. These devices draw attention to the manipulative nature of both Harry's recordings and the language of film. Having had his sympathy evoked by the recordings, Harry eventually becomes convinced that his client is planning to kill the young couple and he attempts to intervene, against his principles. He fails to prevent a murder only to discover that it was the young couple who had all along planned to kill their boss. The snippet of conversation which he had misinterpreted was, " he'd kill *us* if he got the chance ", Harry's interpretation of which was," he'd *kill* us if he got the chance ". This twist of expectations is as much a surprise to the audience as it is to Harry. The audience knows as little about the couple as Harry does, and yet both make assumptions based on the flimsy evidence of the recordings and prejudice-the young couple are more sympathetic than the 'director', whose environment is cold and mercenary while he himself seems unpleasant. In his dream it is to the young woman and not to the 'director' that Harry choses to talk intimately of his childhood. Ultimately both Harry and the audience are shown to be victims of the manipulative power and ambiguity created by technology.

Chapter 3

Making Effects Special and Language Natural

> How many people would think of writing itself as a technology? Yet writing is tool using, a kind of knife and fork of the mind (Barlas, 1994, p. 10)

Early film-makers such as George Melies were very quick to recognise the potential for illusion which their new medium offered. Melies himself started out as a magician, so it was no great step to become a master of cinematic illusion (Rhode, 1976, p.33).

Since then the term special effects has become as much a popular catch phrase as 'Western', 'Horror', or 'director': each phrase conjures up expectations of certain stylistic and visual formalities. Yet just as the generic borders of Westerns and Horrors can become blurred, so too, perhaps even more so, the definition of special effects is at best ambiguous, at worst a distortion. Michael Stern goes some way in giving the popular definition of special effects,

> In science fiction film the special effects which its consumers way of seeing- foregrounds as special- are ones that enact the possibility, delights and terrors of glamourous new technologies: space flights, death rays, matter trans mitters, cloning living on the moon, or at the bottom of the Pacific, socialis ing or fighting with aliens, being raped by a computer and so on (Stern, 1989, p.69).

Stern goes on to demonstrate that using the term special effects serves both to naturalise other forms of technology (those which are not considered special) while simultaneously naturalising other aspects of the film-making process. He notes the praise received by Stanley Kubrick's *2001: A Space Odyssey* for its use of special effects- spaceships, weightlessness etc. while the costumes and makeup used to create the monkey sequence, were ignored. Why? because the technology used for that sequence, however convincing, was not new- it dated back at least as far as *King Kong* in 1933. In other words we have accepted the technology of the monkey costume as natural. While the technology used to create the special effects in *King Kong* may have been stunning at the time, today it is not only natural but nostalgic. Spielberg's *Jurassic Park*, the technological marvel of the nineties, nostalgically

recalled the image of the great wooden gates which once imprisoned the mighty Kong. Similarly Coppola's recent reworking of the *Dracula* story deliberately returned to the 'old-fashioned' special effects of matte painting, mirrors and models, purely for stylistic reasons: to recreate the look of old black and white Horrors such as *Nosferatu* . If one was ever in any doubt how quickly technologies were being naturalised in film and society, one need only think of 'bluescreen'-the marvellous device which allowed Superman to appear in the sky above New York, a few years later it was being used by weather-forecasters to appear over the clouds and rain that make up our weather. And the pace of change is quickening : 'morphing', the technical jaw -dropper of *Terminator 2,* months later was appearing in countless pop-music videos and advertisements.

One cannot deny that special effects are used as much as star-attractions or the promise of sex and violence to lure the consumer into the cinema. As fast as new technologies are being developed in film, they are being institutionalised in television and advertising- thus their specialness is lost. Melies as a magician would probably not have approved but magazines and television programs tell us tell us often before the film is in the cinemas how the trick was done. One can rent the 'making of' ones favourite blockbuster science fiction blockbuster in many video rental shops. Of course spectators have always wanted to know how a trick was done, but why is it today that the magicians want to tell their secrets?

It is part of the naturalisation process . The fact is that technology offers such possibilities that the creations of George Lucas's Industrial light and Magic- the corporation responsible for the research and development of a large percentage of new special effects-have transcended their former role as special effects and become a part of the almost invisible language of film. In the 'Electronic Age' image manipulation technology offers film makers virtually unlimited opportunity for 'realistic' effects- a development which is likely, I would suggest, to change the nature of films completely. If Harry Caul in *The Conversation* was deceived by a simple snippet of conversation then by the logic of believing half of what one sees and none of what one hears, image manipulation offers film-makers virtually unlimited opportunity to manipulate the perceptions of the spectator. The technology first publicised in James

Cameron's *The Abyss* for traditional science fiction purposes has since gained currency most recently and most interestingly in Robert Zemeckis's *Forrest Gump*. Here it was used not for traditional science fiction purposes but to film possible situations which would have been impossible to film otherwise: for example the scenes where Tom Hanks talks to President Lyndon Johnson or plays world class table tennis. The use of such technology in the film is symptomatic of two things. Firstly it shows that computer manipulation is becoming so commonplace as to be used in a fairly discreet and limited way (the sequence represents only seconds of the film). Secondly, and more importantly, this use of technology does not fit into Stern's definition of special effects since it is not used to simulate a science fictional scenario. This type of image manipulation is already on its way to becoming an invisible part of the film-making process, one to which we will soon pay no more attention than we do to editing or incidental music. Indeed the real question is not one of noticing this technology in film, it is more a question of knowing it's there in the first place. In *Forrest Gump* the sequences where Tom Hanks "meets" two American presidents or appears to be playing superb table tennis are to the audience unreal because we know that the presidents in question could not have appeared in the same film as Hanks, while the table tennis seems beyond the abilities of an actor; elsewhere in the film the distinction is not so clear: if it were not for the film's publicity not many people would be aware that the scene in which Hanks attends an anti-war demonstration in Washington used computer technology to increase the apparent size of the crowd. In his essay, "The End of the Word is Nigh" Chris Barlas describes how since the time of Guttenburg's printing press, the language of literacy has become so commonplace as to seem natural. Though the cinema is one fifth the age of that invention, its language, its artifice has also become natural. If the technology of image manipulation is to become a part of that language, with the acceptance of its unrivalled ability to look real, one has to wonder what the implications of the naturalisation of that technology might be.

JFK and *Rising Sun*:Image Manipulation in Recent Film

When a new representational technology becomes so natural, so common-

place, its abuse is rarely considered. *The Conversation* went some way to hint at the deceptive power of electronic recording. Would it be paranoid to worry that the paranoia exemplified by seventies conspiracy films is absent from films today? Is there no one addressing these issues? As Alan Barker has pointed out, it is unfortunate that in the case of Oliver Stone's *JFK,* this nineties conspiracy thriller " displays a remarkable naivity about cinemas ability to present the truth"(Barker, 1992, p. 25). If there is a widespread feeling that technology possesses the ability to distort the truth, then Stone displays an equally stalwart belief in the ability of technology to reconstruct the truth- a belief shared by Harry Caul in *The Conversation*. It would be unfair to dismiss this point of view out of hand; after all, the use of technology to reconstruct the truth is the business of forensic science, a science elevated to the status of truth in the courtroom, though as recent miscarriages of justice have shown, the truth of that evidence is also contestable. The problem therefore is not with the idea of reconstruction, the problem arises when one attempts, as Stone does in *JFK* , to prove one's case with intrinsically flawed evidence. It is unfortunate for Stone that he chooses to use the notorious Zapruder home-movie as proof of a conspiracy while opening the film with a scene showing the alleged doctoring of a photograph which was used to convict Oswald. He is on the one hand highlighting the essential untrustworthiness of the image while using another as a piece of evidence to advance a personal argument.

Rising Sun features a similar belief in the power of image manipulation technology, though it ultimately demonstrates the ambiguity of the recorded image. The film is interesting because of its attitude to recent developments in computer aided image manipulation. Briefly, the plot concerns the murder of a young woman in the boardroom of a Japanese firm in Los Angeles. Like the rest of the office block the boardroom is thoroughly monitored by surveillance cameras (an executive tells the police that surveillance encourages productivity among the workers). Naturally then the investigating police demand recordings of the night's events, a demand which is not met until enough time has elapsed in which to alter the tapes- so as to incriminate the wrong man. When the tapes are forthcoming the police become convinced of their falsity and have them examined by a Japanese computer expert (the technology

is firmly in the hands of the Japanese in this film). She draws attention to various alterations after first showing an incredulous police officer (Wesley Snipes) how convincingly video can be altered. In this respect the film does show how recordings can be used to twist the truth. Indeed in another scene the police wrongly believe a suspect to be dead because his car is seen to explode and a charred body is removed from it; he turns up later to prove that one cannot believe all one sees.

In the context of of the naturalisation of technology, *Rising Sun* is relevant in its handling of the scene where Wesley Snipes is shown just how well images can be altered. The scene is like an excerpt from *Movie Magic , How Do They Do That?* or a similar TV magazine: the otherwise morose tone of the film is lifted briefly as the computer expert blithely shows how the face of Snipes's character can be grafted onto that of Sean Connery's. The mood is more *TVAM* than *Rising Sun* and the scene satisfies that popular fascination with new technologies, consequently serving to deny them their mystery and naturalise them.

Chapter 4

Terminator: The Medium is the Messiah

The myth of backward races mistaking individuals from technically advanced civilisations for gods is at least as old as the story of the Aztecs welcome of Cortez and his men, whose arrival in Mexico coincided with the prophesied return of a god. It is the theme of Joseph's Conrad's *Heart of Darkness* and of *The Man who would be King*; it is also the story behind Coppola's *Apocalypse Now*. Even more prevelant in film is the reversal of that myth: the fantasy of an advanced alien race coming to Earth and acting as a Messiah. These are the films examined by Hugh Ruppersburg's essay, "The Alien Messiah" in which he names a litany of films dating from the 'fifties in which this scenario is played out. Included are such films as *The Last Starfighter, Close Encounters of the Third Kind, Star Wars, ET* and the *Terminator* films. Ruppersburg draws attention to these films' bald plundering of myths from the tradition of Christianity, Judaism and others and concludes that,

> Ultimately they reflect reactionary, defeatist attitudes in their makers and their audiences. If they do not reject science and technology,they at least ignore it . If they regard the future with hope and wonder, they simultaneously discourage the hope that humankind will be more capable in the future of handling the problems that face it today.
> (Ruppersburg, 1989,p.37)

While I accept Ruppersburg's conclusions, he fails to answer questions which he himself raises. He makes a valid comparison between the biblical epics *King of Kings* and *The Robe* and *Close Encounters of the Third Kind* and *ET,* but fails to explain why film-makers today choose to address such concerns through the conventions of science fiction.

In a slightly different context,these questions are answered by Carl Jung in his book, "Flying Saucers: A Modern Myth of Seeing Things in the Sky". Though Jung is generous enough not to dismiss the possibility of beings from another world hovering in our skies, he suggests that,

> In the threatening situation of the world today, when people are beginning to see everything is at stake, the projection creating fantasy soars beyond

> the realm of earthly organisations and powers into the heavens, into interstellar space, where the rulers of human fate, the gods, once had their abode in the planets (Jung, p.14)

Writing in the fifties Jung was commenting on the contemporary phenomenon of UFO sightings. Curiously the first of Ruppersburg's examples, *The Day the Earth Stood Still,* dates from 1951 and explicitly reflects many of the fears and hopes which Jung suggests are at the heart of the phenomenon. Most importantly for my argument, Jung explains why these apparitions appear in the form in which they do. The term 'flying saucer' has become quite common in describing their appearance, "what as a rule is seen as a body of round shape, disc-like or spherical" (Jung, 1978, p.19). He goes on to explain the circle's symbolic importance to most cultures as "something round, complete, perfect ... on an antique level therefore the UFOs could easily be conceived of as gods"(Jung,1978, p.21). Finally Jung explains the technological nature of these visions in the following terms:

> It is characteristic of our time that the archetype, in contrast to its previous manifestations should now take the form of an object, a technological construction in order to avoid the odiousness of mythological personification. Anything that looks technological goes down without difficulty with modern man (Jung, p.22)

The connection between UFOs and Rossenburg's observations of the Alien Messiah is self-evident: whereas the literal interpretations of biblical myths lose relevance in the secular world of today, the device of post-dating these myths to a contemporary or futuristic setting (where technology assumes the mystery of the metaphysical), gives them credibility with a modern audience which obviously yearns for external meaning and salvation. It is not surprising then as Rossenburg notes that these Alien Messiahs actively seek out those whose lives have lost meaning. This is the case in *Close Encounters of the Third Kind* where various lost and unhappy individuals are the first to learn of a coming alien visit to Earth, while a friendless boy, distressed at the breakup of his parents' marriage, is befriended by a benign alien creature in *ET.* In the *Terminator* films, which rework Christian mythology most literally, the human to whom the supernatural being reveals himself, Sarah Connor, is a lonely woman stuck in a dead-end job, whose boyfriend ignores her.

If we have, as Jung suggests, lost our ability to think in metaphysical terms,

substituting it with the technological, then we have succeeded in both naturalising he technological while retaining that distrust of it which characterised the mood of *Frankenstein* at the beginning of the Industrial Revolution. *The Terminator* films illustrate both these points clearly.The first *Terminator* made in 1984, works on many levels. It is a straightforward morality tale of the *Frankenstein* variety: sometime in the future humans develop an artificial intelligence which becomes too powerful and, as we learn in the sequel, provokes a nuclear war in an attempt to wipe out humanity. The message on this level is nothing new: technology can run dangerously out of control and threaten to destroy mankind. On another level the film acts as an exemplary Alien Messiah parable with a specifically Christian ethos. John Connor, the leader of the humans in the future is the figure of God the Father, Kyle Reese his messenger represents the Spirit, sent to the past to announce the coming of the Christ (John Connor again) and impregnating Sarah Connor, the Mother of God in the process. It is a virgin birth since Reese does not really exist in the past. Thirdly, the film is *Metropolis*-like a celebration of hardware, of big guns, huge factories and the industrial landscape (also both films demonstrate a contradiction between their celebratory and negative attitudes towards to technology). *The Terminator* represents the apotheosis of Claudia Springer's description of the fascist soldier male in film. Schwarzenegger's character is literally a machine, one whose sole purpose is to kill humans; this he carries out with excessive force using the biggest and most destructive means available (a feature which has become the director, James Cameron's trademark). *Terminator 2 : Judgement Day* features the same characteristics of the original though these are expressed on a grander scale. The biblical references are reinforced (as the title suggests), the Messiah has been born, the pattern of the Christian myth even more obvious, again there is the incarnation of the spirit, this time in the shape of Arnold Schwarzenegger's benign Terminator, and the threat of the end of the world is emphasised in the guise of a forthcoming nuclear holocaust. The film's delight in massive destruction is given more scope by its enormous budget and features the same celebration of the industrial landscape which characterised the first film. Where *Terminator 2* elaborates most on the original is in its personification of the evil side of technology, the T1000. One of the movie's major selling points

was the stunning computer generated technology which made the T1000 possible. Like the first "Model T", which was basically an armoured skeleton covered with flesh, the latter was described as 'liquid metal', the computer technology giving him the apparent ability to change shape. In this respect, as Scott Bukatman points out, "electronic technology becomes a new site of anxiety" (Buk., 1993, p.304) Just as electronic technology in *Videodrome* and *The Conversation* proved so deceptive and reflected a world of decaying boundaries and loss of control and of identity, the T1000 with his ability to transform into a mechanical object or another person, to change his voice and appearance, is the embodiment of the frightening nature of electronic technology. On another level and with reference to Springer's ideas about cyborgs and the fascist soldier male, the T1000 is the personification of a fear of female sexuality in so much as he is played by an actor (Robert Patrick) whose lean, clean shaven look is slightly androgynous on its own and veritably effeminate beside Schwarzenegger. Springer and Bukatman both stress the importance of "the masculine aversion to the soft, the liquid and the gooey"(Buk,p.303), features which the T1000 definitely exhibits. The association between fears of female sexuality and fears of electronic technology are not unprecedented; in *Videodrome* for example, the horror of becoming an organic VCR is manifested in Renn by the appearance of a gaping vaginal slit in his stomach[Figs.7,8]. So is this association any more than an updating of Huyssen's study of *Metropolis* in which he observed how male fears of female sexuality were displaced onto fears of Industrial technology? Or is it more relevant, even more appropriate than the projection and displacement which Huyssen observes in *Metropolis*? Huyssen's study of the role of the robot in *Metropolis* came to the conclusion that,

> Woman, nature, machine all had become a mesh of significations which all had one thing in common; otherness.By their very existence they raised fears and threatened male authority and control (Huy,1986,p.70)

Up to the beginning of the Industrial Revolution, humanoid automata (popular in the late eighteenth century) had demonstrated no gender imbalance, but as technology became more powerful and more frightening as that Revolution progressed, humanoids in literature were generally female. As in *Metropolis* this constituted a process of projection and displacement: fears of technology were being displaced

" the soft, the liquid and the gooey"

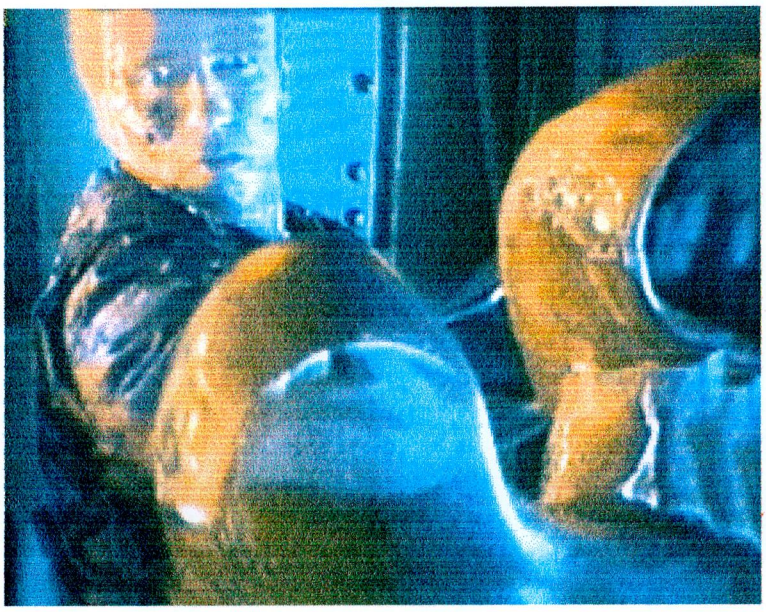

Fig.7:The male cyborg wears an expression of horror as he is confronted by the "liquid metal" Terminator in *Terminator 2*

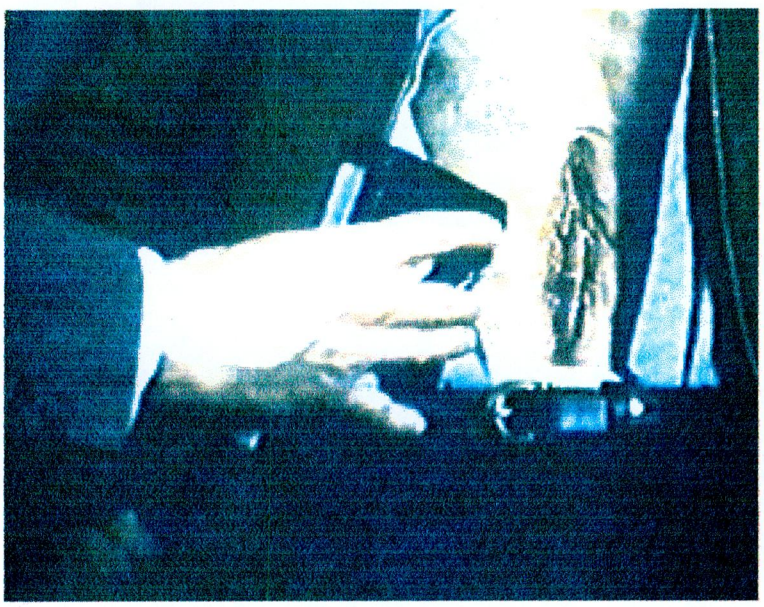

Fig.8: In *Videodrome* female sexuality is also associated with electronic technology

Fig.9: Leather, sunglasses, muscles and motorbikes are the armour which "protects" the mechanical cyborg in *Terminator* 2.

Fig.10: In *Robocop* 2 medieval-type armour and motorbikes are the defenses used by the male cyborg. The armour greatly exaggerates the shape of the male body.

onto fears of female sexuality (Huy, 1986, p.70). This begs the question, why Arnold Schwarzenegger was so appropriate for the role of the Terminator, a role which like that of the female robot in *Metropolis* was symbolic of technology out of control. The film *Eve of Destruction* demonstrates how the technology/femininity analogy retains its relevance in contemporary film, yet is undeniable that Schwarzenegger's casting is both effective and appropriate. How then does one reconcile these two seemingly contradictory images of technology out of control? This question cannot be answered without having recourse to Klaus Theweleit's study of the fascist soldier male.

There are two different types of cyborg in film, which I will tentatively call the exo-cyborg and the endo-cyborg. The first is apotheosised by the *Terminator*, the T100 of the first film; he is the insecure face of masculinity who, according to Thewileitt, in order to preserve a sense of self must armour himself against the outside world. His armour is external: in the case of the Terminator it is the muscular physique of Schwarzenegger, and as the film progresses ,the gradual exposure of his metal frame which serve as extensions of his armour. In *Robocop* the exo-skeleton of the cyborg is even tougher- it is an exaggerated physique of metallic armour, which only exposes part of his face[Figs.9,10]. This body armour applies not just to cyborgs (it was originally applied to the Freikorps in Nazi Germany), it is evident in the new costume of *Batman*, and even in the dress, haircut and militaristic pose of D-Fens in *Falling Down*. The unifying factor which relates these characters to technology is their celebration of the mechanical age, an age which Bukatman suggests is on its way out, " the patriarchal system with its brutal violence... is indeed on the way out, even if as a last gasp, it has rallied its forces of muscular cyborg soldiers" (Bukatman, 1993, p.307)

Whereas the exo-cyborg is identifiable by his external armour the endo-cyborg by contrast shows no signs of difference: the T1000 is deceptively able to change shape and live among humans, the cyborgs in *Blade Runner* cannot be differentiated from humans, even the false Maria from *Metropolis* assumes the role and appearance of a human being. Though Maria predates the electronic Age, she becomes an electronic rather than a mechanical construction: as the metal machine in Rotwang's laboratory she is subservient, as the false-Maria she disappears only to

reappear as a deceptive uncontrollable monster .

The conflict between these two incarnations of the cyborg is played out in the climactic scene of *Terminator* 2, where the 'good' mechanical Terminator defeats the 'evil' electronic Terminator. The meaning of this battle is explained by Bukatman who notes that,

> By doing battle with the fluid and even effeminate, digitized form of the T1000... the mechanical Terminator expunges the nightmare of industrial obsolescence (notice that each term metaphorises the other).The climactic battle takes place in a steel foundry" (Bukatman, 1993, p.306)

The battle won by the mechanical Terminator is a victory of the mechanical over the electronic, of visible, subservient technology over the invisible and uncontrollable.

The problem with the *Terminator* films is their inability to come to terms with genuine concerns about technology in an intelligent manner. Instead (and this is particularly disturbing with respect to the second film, where very new questions of electronic technology are at issue) the films resort to exploiting the conventions of mythology, where quasi-Christian stories are played out at the expense of more pertinent concerns about technology. Where the film does address technological issues it demonstrates an ambiguity similar to that of *Metropolis*: if one accepts that the T1000 is simultaneously an incarnation of the horror of electronic technology and that of female sexuality, it is, like *Metropolis*, impossible to tell whether the first is a metaphor for the second, or vice- versa. In *Metropolis*, this was the problem with the representation of the false Maria, a problem which remained unresolved while both films sought to cover up their inadequacy by ending on a cheerfully optimistic, if irrelevant, note.

Conclusion

Since the beginning of the Industrial Revolution technology has gone through several stages. The first was the Steam Age which came to an end at the beginning of the Machine Age. This was followed by the Nuclear Age and then the Information Age. Each Age has been reflected in film and literature in ways which reflect the features which represented both the worst fears and greatest dreams heralded by each technology. In the Steam Age, which predated film, novels such as *Frankenstein* and *Dr.Jeckyl and Mr. Hyde* dealt with the moral issues which the technological future seemed to bring into question. With the implementation of Fordist and Taylorist ideas at the beginning of the twentieth century, first in the workplace and then in society in general, technology became a visible and influential part of society. This was reflected in the first films to deal with questions of technology outside the genre of science fiction: these are some of the films which I have examined in chapter one. It would be inaccurate to suggest that either the Machine or Nuclear Age have ended. It is for this reason that such films as *Falling Down* and *After Hours* can be included in the same category as *Modern Times* and *Metropolis.* Similarly, though the Steam Age is over in so much as steam engines exist today as relics in museums, those concerns which writers like Mary Shelley and Robert Louis Stevenson expressed towards technology are as relevant today as ever (this alone would explain why *Frankenstein* is one of the most enduring stories of the past two hundred years) since they deal not with specific technologies but with questions of responsibility, power and immortality.

In the 'Electronic Age' new questions provoked by the appearance of electronic technologies provoked responses in such films as *Videodrome* and *The Conversation*. These films both drew attention to the obfuscating nature of representational technology. The Information Age has resulted in a fundamental change in attitudes to technology. Just as the borders between high and mass-culture are being transgressed in postmodern culture, so too electronic technologies seem to suggest that the borders between human and technological are also disappearing. Paul O' Brien observes the growing proliferation of prosthetic devices such as contact lenses

and dentures and the increase in cosmetic surgery which prolongs youth and may eventually offer eternal life while noting that these devices blur the distinctions between human and machine (O'Brien, 199?, p.?). In chapter four I discussed how the technological nature of our world results in our inability to think in metaphysical terms except in the context of technology. Thus ancient myths are retold in terms of technology rather than theology.The importance of the phenomenon of the "Alien Messiah" is not that we can only think in technological terms rather its importance lies in the fact that the promise of technology was, as the myth of Prometheus suggested, the achievement of immortality and the creation of life *without* God. However, just as Zeus once punished Prometheus for attempting to challenge his power, so today in films such as *The Terminator* and *Jurassic Park* some higher force punishes humanity for attempting to achieve immortaity through technology. This is unfortunate for two reasons: firstly it means that our myths continue to ascribe ontological values to ideas such as nature and technology. These stories' consistent validation of nature over technology offers no hope in technology's power to change the world for the better or, since technology is merely an extension of human will, in humankind's power to change the world for the better. Secondly, the consistent reworking of the Prometheus myth serves as a validation of "nature", or rather a conservative ideology of the natural. *Jurassic Park* is a perfect example of this. The premise of the film is that genetic engineering enables scientists to bring dinosaurs back to life using DNA from dinosaur remains. The resulting havoc caused by the dinosaurs leads to the ruin of the scientist involved, forcing him to condemn his work. This is as close an interpretation of the story of *Frankenstein* as any. What is significant in the film is the association made between animating dinosaurs and unnatural reproduction. A sub-plot involves a married couple's eventual decision to start a family, a decision which is prompted by their escape from the jaws of the dinosaurs. Also the film tells us that the dinosaurs do not become dangerous until they begin to unnaturally change sex (a result of their cross-fertilisation with frogs). The film celebrates family values and natural reproduction while equating the dangers of unnatural creation of life with the dangers of salivating dinosaurs and "deviant" sexuality.

The problems of language and meaning which I discussed in chapter three

are central to the problems of representations of technology. Just as special effects make a distinction between certain forms of technology, so too are the terms nature and technology are contrasted as ontologically distinct. The value of technology therefore is measured against the 'ideal' of nature, an ideal which is as illusory and artificial as technology itself (in the current debate over euthanasia, the anti-euthanasia lobby will condemn the activity as unnatural while ignoring the fact that advances in medical technologies which prolong life are the cause of the situation).

The legacy of the Machine Age was to so radically change the environment that this distinction between technology and nature was easy to make. Electronic technology on the other hand, being less visible, has already begun to question this distinction, a development which will force people to reassess those assumptions which have been made about the relationship between human and machine.

Bibliography

BARKER, Alan, *Cries and Whispers*, Sight and Sound, Vol.1, February,1992, p.24-25

BARLAS, Chris, *The End ofthe Word is Nigh*, The Sunday Times, Culture, December 4th, 1994, Section 10 ,p.8-11

BUKATMAN, Scott, *Terminal Identity*, Durham and London, Duke University Press, 1993

FRANKLIN, H. Bruce, *Visions of theFuture in Science Fiction Films from 1970 to* 1982,p.19-31 (

KUHN, Annette, *Alien Zone*, London and New York, Verso, 1990

1990)

HUYSSEN, Andreas, *After the Great Divide*, Basingstoke and London,

The Macmillan Press, 1986

GRANT, Barry Keith (ed.), *Film Genre Reader*, Austin, University of Texas Press, 1986

GRAVES, Robert, Greek Mythology, London, Cassell, London,1980

JAMSON, Frederic, *The Anti-Aesthetic, Essays on Postmodern Culture*, Seattle, Bay Press, 1983

JUNG, C.G., *Flying Saucers: A Modern Myth of Seeing Things in the Sky*, Princeton, Princeton University Press, 1978

MALTIN, Leonard, *Movie and Video Guide 1993*, Harmondsworth, Signet Books, 1993

MCLUHAN, *Understanding Media*, London, Routledge and Kegan Paul Ltd. 1964

MUNNELLY Brendan, *Who's Bugging You?* , Cork and Dublin, The Mercier Press, 1987

O'BRIEN, Paul, *Metal and Meat: The Human in the Age of age of non-Biological Reproduction*, Circa No. 65, August 1993

RUPPERSBURG, Hugh, *The Alien Messiah*, p.32-39 (KUHN, Annette, *Alien Zone*, London and New York, Verso, 1990)

RYAN, Michael and KELLNER, Douglas, *Technophobia*, p.58-6 (KUHN, Annette, *Alien Zone*, London and New York, Verso, 1990)

SHELLEY, Mary, *Frankenstein, or the Modern Prometheus*, Wordsworth classics, 1994

SPRINGER, Claudia, *The Pleasure of the Interface*, Screen, 32:3, Autumn, 1991, p. 303-323

STERN, Michael, *Making Culture into Nature*, p.66-72 (KUHN, Annette, *Alien Zone*, London and New York, Verso, 1990)

THEWELEIT, Klaus, *Male Fantasies, vol2*, Cambridge, Polity Press, 1989

WOLLEN, Peter, *Cinema, Americanism, The Robot*, New Formations, no. 8, Summer, 1989, p.7-34