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SCIENCE FICTION FILM AS CRITICAL DYSTOPIA

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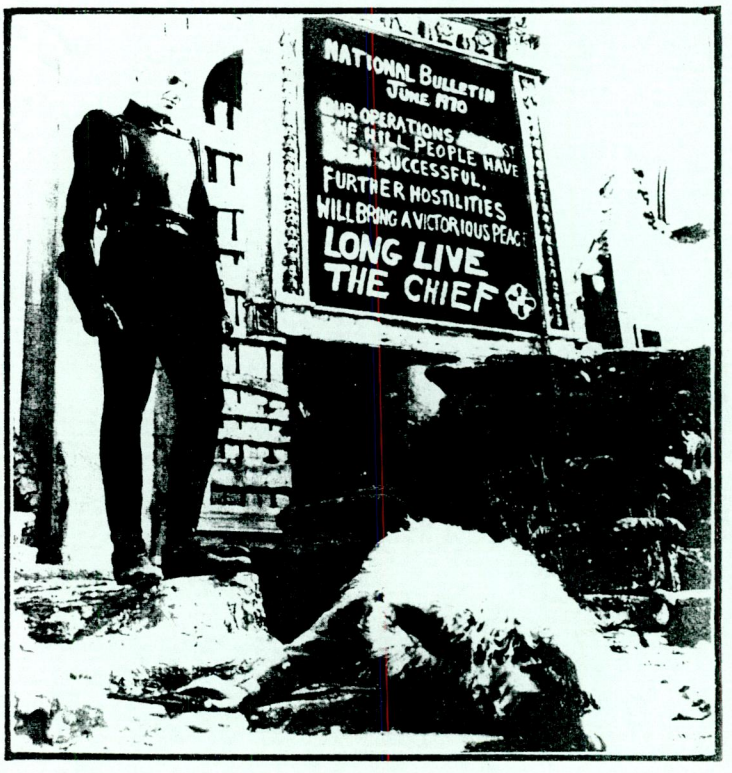


INTRODUCTION: The role of science fiction film in society.

The medium of film often acts as a mirror on reality, it's images echoing the trends and concerns of life at a particular moment in time. It attempts to reflect what is around us in a way that provokes a response, one that, perhaps, leads to further thought on the subject it attempts to broach. In this regard, film can become a barometer for the human condition.

"Few things reveal so sharply as science fiction the wishes, hopes, fears, inner stresses and tensions of an era, or define it's limitations with such exactness." (Kuhn, 1990, p.15)

These assured words refer to literary science fiction, yet are very relevant to it's cinematic counterpart. They appear to delineate an important analytical role for the genre in a way that, at first glance, seems somewhat paradoxical. Since the mid-twentieth century, the genre has suffered critical neglect. It was regarded by many as having little of value to offer the viewer, save that of relatively harmless entertainment. As early as 1926, however, and again during the 1960s and 1980s, a number of films reveal a pattern of themes that closely parallel contemporary social concerns. They seem to reflect many of these concerns as products of a society, whose quest for knowledge and civilisation has had a number of important ramifications, both for itself and the world in which it lives. As to why the science fiction cinema in particular should be given the role of cultural oracle, manifests itself in the nature of the issues most prevalent in society during these years.

The development of technology by mankind has changed not only the world's natural environment, but also the way society itself lives.

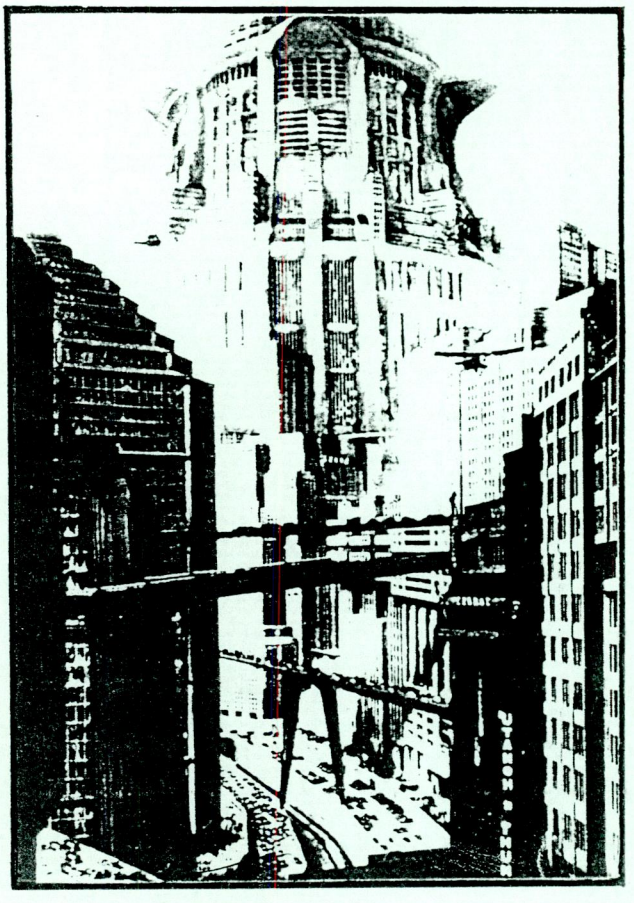
"Man can modify, more drastically than any bird or beaver, the conditions he finds unsuitable." (Ward, 1972, p.36)

This summation of our species' unique position in the evolutionary scale is the crux of the matter. Growing elements in modern culture have expressed concern about man's use of his planetary environment. This can be seen in the themes of many science fiction films. The genre's exploration of technological progress has allowed a number of writers and directors to produce films that echo anxieties about this subject, how it has affected society and the world as a whole.

The role of the genre in modern culture appears to be somewhat prognostic and in recent times, two films in particular provide evidence for this view. The first is

Stanley Kubrick's *2001: A Space Odyssey* (1968) and the second, Ridley Scott's *Blade Runner* (1982). But the exploration begins with a brief look at technology themes in Fritz Lang's *Metropolis* (1926) and William Menize's *Things to Come* (1936), to help put in perspective society's relationship with the modern world.

The films are, however, only a part of the equation. They might act as translators of social anxieties, but only those responsible for the production of the technology society uses have the ability to respond to the question of a harmonisation of their products with the natural environment. The design profession is often the source from which the compass of science fiction plots it's course. How have they helped to direct it ? The concluding part of this examination will concern itself with the development of environmentally conscious design, focusing in particular on transport research, as the motif of private car in *Blade Runner* is given an interesting twist as regards it's function in that future society. The automobile today is intrinsically linked with the designer's quest to create a cleaner environment and in this case becomes a symbol, as it were, for recent attention on attuning technology with the natural world.



Different types of imaginary worlds can be detected in science fiction films from different periods. The narratives of each are indicative of the distinct concerns and problems of the society in which each film was produced. In effect, the film relates a story that contains a substantial level of relevance for the viewer. What then does Fritz Lang's futuristic fable *Metropolis* reveal about the world?

The film's title encapsulates the theme of the piece. Lang's city is a centrepoint, both in economic and social terms, but to such an extent that those who live there have been dehumanised by the demands placed on them by the machines. In this regard, both the indolent upper classes and the oppressed workers are equal. In the effort to attain their privileged position, the city's rulers have forfeited that which makes them human ; their concern for their fellow man. Lang relates, in a series of dreamlike sequences, the story of the Tower of Babel, as a visual metaphor for the situation in *Metropolis*.

It tells of a civilisation's desire to build a tower, one "whose summit will touch the skies". It is a tribute to the creator of the world and mankind himself. The story reveals the planner's dependence on their people to carry out their vision and their lack of interest in those who toil on their behalf. As the legions of naked workers raise their shaven heads towards the sky, they cry out in protest, suddenly surging towards the tower. Tearing it to the ground, they leave a pile of broken masonry in their wake. The biblical tale parallels the desires of the upper classes in the future city. They regard the machine as the symbol of their civilisation and hold it in godlike reverence, with the common man falling victim to this belief.

The Metropolis is layered into two parts to illustrate this situation. The upper city is bathed in sunlight, with gardens interspersed amongst the towering buildings in order to cater for the ruling classes. Below this sanitised surface lie the cavernous machine- rooms of the city, the source of it's energy and life. Here, however, the environment is dark and forbidding, where the arduous task of maintaining these devices is forced on the inhabitants of this underground city. As with the upper classes, these people have also been deprived of their humanity. They act as mechanically as the machines they must tend, forced to build what life they can around these appliances.

In one of the film's most telling sequences, the viewer sees the Pater Noster machine at work. This title comes from the novel of *Metropolis* by Lang's wife, Thea von Harbou. As with the Tower of Babel, this device is a symbol of the

film's theme. In appearance, it is a generator of some kind, with it's operators' frantic motions indicating it's important role.

"In the middle of the room crouched the Pater Noster machine. It was like Ganesha, the god with the elephant's head. It shone with oil. It had gleaming limbs . . . ." (Lang, 1989,)

In a fantasy sequence, the character Greder witnesses the transformation. Amid a cloud of steam, the machine changes into the gaping mouth of the god, the revolving crankshafts and cogwheels forming his teeth as a line of warriors hurl the workers into the fiery heart of the mechanism. What is seen here is a synthesis of the *Metropolis* fable. In von Harbou's book, this deity is the Hindu god of prophesy. In the film, it is identified as Moloch, an old testament semitic deity to whom parents sacrificed their children. Though classed as science fiction, the film makes no use of scientific conjecture. All the imagery, including the city itself, is a fantasy construct designed to appear as a metaphrase for the manner in which technology regulates mankind's life.

"This simplification of a highly complex problem is difficult to take seriously, and therefore one of the film's major flaws". (Lang, 1989)

This analysis of the film by writer Paul Jensen makes an interesting point on the way Lang tells the story of *Metropolis*. He puts it down to what he describes as the director's romantic-expressionistic faith. The name of the generating machine would appear to be evidence of this. Pater Noster seems to be a reference to the repetitious nature of the work the operators in the underground city must endure. It becomes a focal point for Lang's message to society on the negative effects of an over dependence on technology.

The allegorical nature of this approach demands the use of technological symbols, rather than, as might be the case with a contemporary film, an attempt to portray a realistic image of a future society and it's machines. The city is an example of this by virtue of it's form. It is the year 2000, yet the method by which Metropolis obtains it's power suggests that technology has not kept pace with the dreams of it's planners. An extensive use of slave labour keeps the heart of the city pumping : surely this is an approach no longer required by a people capable of devising a city on this scale ? The answer is once more to be found in symbolism. Class division between the upper and lower strata of modern society is what interests Lang here. He explores how contemporary commercial systems utilise their human elements, diving them into a minority controlling class and those

who labour in a host of unskilled and often dispensable positions, as technology develops.

In perhaps one of the most enduring images of twentieth century cinema, additional evidence of the use of iconography can be detected in the transformation scene. Here, the human heroine, Maria, is linked up to her immobile robotic double. Her life essence is transferred to the machine, which proceeds to seduce the working classes with false promises, under the guidance of it's master. The large pentagram symbol behind the robot in the laboratory functions like a sign, dissuading the viewer from any attempt to find scientific plausibility in these scenes. It is a representation of black magic and is but one link in a chain of imagery that appears to reinforce Lang's intention of the film to act as a contemporary morality play. The heroine's absorption into the robot is a key image. Here Lang explores elements of a social technophobia. The robot's sexualised and unrestrained actions following it's linking with Maria are, again, a representation of human irrationality pitched against the extreme rationality of technology and in scenes such as the dancing sequence, human sexuality is given to the robot as a vehicle for this battle. Social anxiety about technology is projected by this 'sexualisation' of the machine.

Lang's vision follows the rapid technological growth of nations such as the United States after the Industrial Revolution of the previous century. Indeed, it is recorded that on observing the skyline of the city of New York, Lang received his inspiration for his city of the future. During the decade of the 1920s, the machine was still relatively new to many human environments and, as personified by the robotic Maria, was greeted with a mixture of fear and fascination. *Metropolis* is of it's time, an individual's representation of the anxiety of a people undergoing substantial change in order to accommodate a new and permanent aspect of their lives : technology.

Things to Come by William Menizes is an interesting development of issues found in *Metropolis*. Following a terrible global war, much of the earth is in ruins. Humanity has been reduced to a tribal level once again, struggling to survive both plague and petty conflict. The appearance of a strange aircraft over an isolated settlement of humans brings a man who is a physical representation of modernity. He heralds the existance of a group of scientists determined to re-establish civili-

sation with the aid of technology. They hope for a new and better world under the benevolent gaze of science.

Contrary to *Metropolis*, this film appears to be an affirmation of the benefits of a technological age. The opening of the New York World Fair in 1939 provided a timely backdrop for the film, paralleling the general mood of society towards new technology. It was one of curiosity and fascination. Mankind had begun to interact with the machine on an increasingly domestic level, revealing a gradual acceptance of it. Only a decade before, the machine was still very much an alien idea in many areas of human life. *Things to Come* was developed as an exposition of the future, one of the first attempts to accurately portray the possibilities of tomorrow.

"The film has been praised for it's 'choreography of matter' and it's concern with consistent design - virtues shared with those of 2001 : A Space Odyssey (1968)" (Gunn, 1988 , p.463)

Here, the film's technical excellence is praised. It is notable in it's ranking by many science fiction writers as a film that deals effectively with ideas and by others as a 'shabby pamphleteering'. These conflicting views appear to stem from the complexity of the issue the film attempts to deal with : man's technological society. Sociological critic Theodor Adorno describes contemporary society in the following way : He suggests that man lives in a world trapped in a matrix of bureaucracy, administration and technocracy, declaring the individual to be a thing of the past. He identifies an age of 'concentrated capital', with extensive planning and a trivialising mass culture producing a 'standardised' individual, a person who is rigid in thought and blindly accepting of conventional social values. This categorisation of humanity is a negative by-product of the technological age and is a motivational issue in *Metropolis*.

Scepticism about a machine environment on the part of many in society was a point accepted and indeed explored in *Things to Come*, much to it's credit. It remained, however, no less daunted in it's mission to promote the scientific age. The film's closing scene is perhaps one of it's most memorable as Cabal, played by Raymond Massey, exhorts humanity to continue to explore and understand.

"It is this or that - all the universe or nothing. Which shall it be, Passworthy ? Which shall it be ?"

Things to Come illustrates a shift of public attitude towards an acceptance of the

technological age and replicates attempts by scientific circles at the time to illustrate the boundless possibilities open to the human race. It is commendably progressive in it's acceptance of a genuine fear in many to allow technology into their lives and depicts public attempts to prevent a manned mission to the moon as a symbol of what we must overcome. The film regards technology as an aid to a more humane society, curing war, disease and famine. This somewhat simplistic pacifism is perhaps a weak link in it's thesis, but it still takes issue with the point made earlier by Theodor Adorno on technology's homogenising effect on mankind. This is the most interesting contrast between *Metropolis* and *Things to Come* : the former functions like a mirror of society's anxiety towards the technological era. *Things to Come*, however, appears to be an example of a film that is not content to represent ideas and emotions : it is trying to influence them.

"The basic premises of reflectionist criticism are that the 'real world' pre-exists and determines representation, and that representation portrays the real world in unmediated fashion. However, other views exist about representation and the real. Views that representations may have effects of their own, can themselves impinge upon the realm of the social". (Khun, 1990, p. 53)

This view is speaking of the potential ideological effects of the science fiction film on the world we live in . The role *Things to Come* seems to have carved for itself appears to include a need to educate society. The narrative is almost documentary in style. Characters ask questions that appear to carry the sentiments of actual society, and receive answers. During the film, Theotocopulos, played by Cedric Hardwicke, calls plaintively for an end to the scientific age, asking what is the good of all this progress onward and onward ? By the end of the film, however, he receives a reply, a moralistic speech on the need for man to look at technology as a challenge, a means to a greater end, the attainment of socially progressive knowledge.

Metropolis and *Things to Come* illustrate a development in public attitude to technology. Fears of a dehumanisation of society are explored in Lang's work. In *Things to Come*, these are focused on and an attempt is made to actually allay those fears. Technology is to become a permanent part of man's existence and this film tries to affirm it's overall benefits to him. It does not regard the machine as a danger to humanity, rather an extension of man's possibilities. This appears to parallel a convergence of opinion in society on the opportunities new technology appeared to offer.

The 1930s was a period when some were beginning to dream of such possibilities as an actual exploration of space. Technological oracles such as the 1933 Chicago World Exposition and the 1939 New York World Fair displayed a myriad of machines, each regarded as a welcome improvement in the quality of human life. Designers such as Buckminster Fuller professed homes to be in themselves 'dwelling machines' to serve the family, 'omni-medium' transport to function on land, sea or air and communications systems to transform the world into a global village. The period in which *Things to Come* came from, as with *Metropolis*, appears to have dictated it's stance on the role of technology in the contemporary world. This development in public opinion is interesting and the question it poses with regard to the next phase of this relationship may be addressed through an analysis of one of the most celebrated films in the science fiction genre.

The 1960s, heralded a most turbulent period in the history of human society. Technological development had delivered mankind a series of awesome gifts. Just as when radium was discovered in 1903, it's formidable descendant, nuclear energy, was in the public arena. It's practical applications were under scrutiny and the subject of many fears. Nations now possessed the capability to destroy the world as a result of conflict and the military expansion of the earth's most powerful countries did little to allay social anxieties.

The United States was embroiled in the Vietnam War and cohesion amongst America's eclectic population was breaking down, with race riots erupting in many major cities. The crystalline vision of the future projected during the era of *Things to Come* had frosted with the passage of time. Technological development had continued unabated, but with an increased mixture of suspicion and fascination by the public.

It was also the epoch of the Space Age, an era that had an interesting relevance to the people of America. It evoked the historic role the country's first settlements had played in the birth of their nation, reviving the spirit of the frontier. The dark environment of space seemed to hold out a strand of hope amid the turmoil of social upheaval, or perhaps, just to escape. However construed, it was a much needed common interest in a society that had become so polarised on many other issues. The key to it's realisation was technology and this provided the science fiction genre with a new audience :

"Science fiction was now a central organ of Anglo-American imagination, pumping it's content into many cultural forms". (Khun, 1990, p. 19)

One of the most important films of the decade was Stanley Kubrick's *2001 : A Space Odyssey.* It tells the story of mankind's development over time under the watchful eye of an extraterrestrial artifact. The film is rich in symbolism and reflects the complex period from which it comes with an appropriately challenging theme.

Kubrick appears to have required the film to operate in two ways. The first was that of giving the piece a visual authority different from previous science fiction films. The genre had until then been to a certain extent it's own stumbling block. It's imagination flew in many different directions and with such speed, that it had given itself little time to dress itself properly. The imagery on cinema screens was often a combination of concepts that had become somewhat clichéd. In designing

the film, Kubrick decided to take his cue from sources other than contemporary science fiction cinema.

He began his quest by hiring special effects technician Douglas Trumbull, after viewing his work in the cinema short *To the Moon and Beyond.* Trumbull had begun his film career with a short subject called *Lifeline in Space* commissioned by the U.S. Air Force. He was widely regarded as the best in the industry and had developed revolutionary new techniques in portraying the complex visual world of space on screen.

"The biggest problem with special effects today, particularly in dealing with science fiction, is not to project the future, but to avoid reflecting the present". Gunn, 1988, p.470)

Trumbull's maxim met with favour from Kubrick who approved of a depiction of the *2001* environment as a visual experience for the viewer. In a move relatively unique to the genre, they relied on extensive scientific data from a variety of sources involved in the field of space research, to extrapolate an extremely convincing space environment. Shooting with the cast took about four-and-a-half months. An additional year-and-a-half was needed to complete 205 separate special effects shots. Trumbull helped to create a number of notable technical breakthroughs.

The quality of the model spacecraft and hardware was excellent, with many items being just a foot or two in height or length. This allowed easier studio handling, whilst permitting impressive close-up sequences. Detailed matte shots enabled the superimposing of live action scenes onto the blacked out windows of the spacecraft, giving an increased sense of reality to the piece. Actors are often seen moving about inside their machines during the film and these unique designs were key elements in Kubrick's attention to detail and quest for technical accuracy. These achievements were in themselves sufficient for the film to merit critical acclaim. Audiences worldwide were introduced to something they had not seen before. The depiction of an environment alien to their experience nonetheless seemed to them to be 'real' and in this way the film was an inspirational encounter for many.

This was but one element of the film, however, and it overshadowed a complex and apparently obscure narrative. Kubrick seems to have foreseen this situation

and used the film's visuals as a blotter to draw the attentions of those who regarded the narrative as somewhat inscrutable.

"The narrative structure refuses to explain itself through conventional means. Actions and events are not immediately motivated, while transitions are startling and minimal. There is little dialogue, and much of what exists is banal".

(Kolker, 1980,)

This view speaks of how the audience is required to decode the film's messages from a series of symbolic imagery and thus plays an active role in watching the piece. Kubrick himself described the film as a 'non verbal experience' and this in itself relates most interestingly to it's theme. Shot during the social unrest of the 1960s, the film is a contemporary synthesis of mankind's technological and environmental neurosis. It explores, in the light of then recent developments, those themes taken up in both *Metropolis* and *Things to Come*. The film is divided into three parts and opens with a section called *The Dawn of Man.*

A group of humanity's early ancestors struggle to survive in a desolate environment. With the arrival of an enigmatic black monolith they appear to develop primitive tools that, in effect, help to secure their future as the world's dominant race. The first simian to touch the surface of the monolith is later to become the originator of man's first weapon. The film immediately launches into it's reflection, positioning the monolith in it's first tactical theme move. As with Cabal, in *Things to Come*, this featureless black stone is a technological calling card. It appears to reveal humanity's relationship with two distinct environments and a transfer of existence from one to the other. Man leaves a world he has no control over and enters one where he can determine shape and form, an apparent symbol of the technological age.

This sets the scene for the film, with mankind seen as floating in a dichotomy between a world dictated by the force of nature and that which is the product of human endeavour. What is interesting is Kubrick's apparent belief that man is uncomfortable in both. This is where the parallel with *Things to Come* ends and indicates a society that now finds itself at odds with the technological environment it has created.

The new technology hailed by society at that time has now pervaded itself into every aspect of modern man, who now lives in a world that is a designed space. It

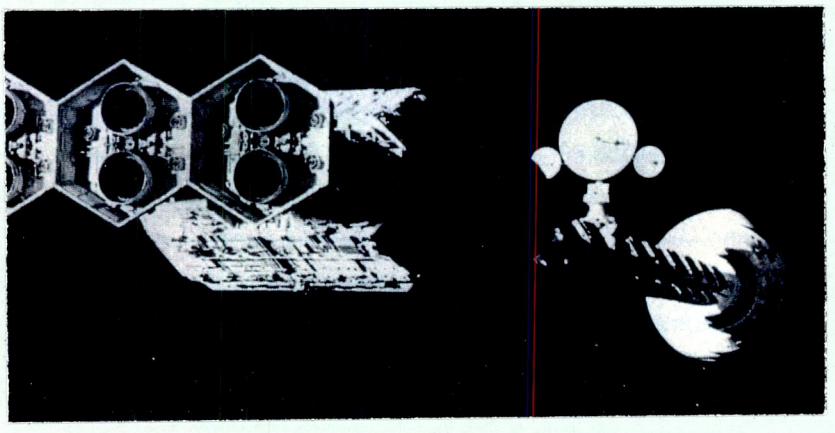
regulates his entertainment and communication and it is this structuring of society around the machine that concerns Kubrick in the film.

"It is, on an important level, a film about design - about size, texture and light, about the ways that objects within a cinematic space are delineated, ordered, shaped and coloured and about how human figures interact with those objects". (Kolker, 1980,)

Kubrick is exploring the narcissistic relationship we have developed with technology. Indeed, the film's attention to technical detail appears to be indicative of Kubrick's own fascination with this subject and is something which most of us are also captivated by. What concerns him is putting this attraction into perspective in the context of contemporary society and the direction it seems to be headed in. Technology in the film takes on a narrative role. The human characters become pawns to it's form, with the zero-gravity experienced in the film becoming perhaps one of the most powerful examples of how Kubrick visually isolates them from their technological world. In yet another tactical move, the astronauts are given little of interest to say. They are not the centre of attention, it is instead focused on the clinical environments they live in. Kubrick seems to use our own inherent fascination with the machine to show how we have, perhaps, lost something of ourselves. He tells the story through the film's use of machinery. The transition between *The Dawn of Man* and the first space scenes functions allegorically showing the aggressive ape's transformation into the machine-regulated human being. As has been seen earlier in sociological critic Adorno's comment on man in the machine age, this 'standardisation' of the individual is a negative effect of our technological culture.

The technological world is given form in many ways in the film, with the most notable being the astronauts' environment, *Discovery*. The spacecraft appears to be an allegorical extension of the human mind's affiliation with the machine. The spherical command section tapers off into a spine-like tube, connected to a powerful rocket motor, creating a form that has been identified as a representation of the central nervous system in man. This is no doubt a matter of opinion, but the designer's use of basic shapes such as the sphere, cylinder and cube does break with the preferred trend in the genre at that time for streamlined, bird-like machines, that flew rather than floated. By virtue of these new forms, Kubrick appears to have made any inherent symbolism more readily apparent. Set against the blackness of the void, the craft imparts a simple grace with it's cabin light set

in a thin dark strip providing a window on the universe for the astronauts. This harbour of life is the world as far as *Discovery's* human occupants are concerned.



The *Discovery* sequences are the third and final part in the film following the mid-section in which we are introduced to modern man. The spacecraft is dispatched on a mission to the planet Jupiter, which has been identified as the destination of a series of signals sent from an alien artifact uncovered on the moon ; another black monolith. The *Discovery's* true mission is to locate the Jovian receiver of these signals, a fact known only to the ship's computer system, the HAL 9000. The monolith discovery has been shrouded in secrecy due to the potential anxiety such an event could cause society and so the astronauts have initially been told their mission is simply a pioneering voyage to the first of the outer planets. HAL, an acronym for Heuristically programmed ALgorithmic computer, is the most memorable technological concept in the film, in many ways the central character.

The computer is the *Discovery's* caretaker and his thematic role in the film is also of importance. As guardian of the mission's true nature he has been programmed to ensure it's success. When a minor error loses him the confidence of the crew, he begins to read this as a problematic reservation to the mission and the situation rapidly deteriorates. Finally, HAL sees the astronauts as a threat and one by one begins to kill them off.

Astronaut Poole is killed by a workpod under HAL's control whilst outside the *Discovery* replacing a communications device. Three hibernating crew members are then dispatched by the computer whilst astronaut Bowman attempts to recover Poole's body. This somewhat unique murder event is viewed entirely through a

series of graphic read-outs. A flashing screen reads 'computer malfunction' and ends with 'life functions terminated'. These death scenes are key elements in the film's theme and appear to act as one of the most powerful attempts on Kubrick's part to show how man has come to regard even himself as indistinguishable from any object in his technological environment.

"Kubrick's men are on the outside like the buttons and 'read-outs' of their machines, which is to say they are not outside at all, but perfectly integrated into corporate technology, part of the circuitry. Everything except, finally, the machine itself, works in harmony. It is not humanity out in space, it is Pan Am, Conrad Hilton, I.T.T., computers and their men and women". *(Kolker, 1980,)*

This assimilation of man and the machine is a concept Kubrick illustrates by backgrounding the human characters. He does this to such an extent that their sanitised deaths cause little reaction on the viewers' part. HAL's demise at the hands of Bowman, however, is given an ironic twist by the director. As the astronaut deactivates HAL's logic circuits, the computer is the first entity in the film to make an emotional statement. He says to Bowman ;

"I'm afraid, Dave. My mind is going. I can feel it . . . there is no question about it. I can feel it . . . I'm afraid".

HAL's acronym was explained by Kubrick himself as an attempt to explore the concept of a computer that learned by experience. It has access to more information than the individual human and as time goes by, it's makers no longer understand it. They become unable to know how it 'thinks'. The line between biological and machine intelligence is then a precious thing to the human, the delicate strand of difference. Kubrick subverts this difference in the film to illustrate the assimilation of society and technology. HAL has killed four people, but his expression of fear is something the viewer can understand, to a certain extent identifying with it. This identification with a machine, rather than human beings, is the film's final reflection of humanity's homogenisation by it's technological culture.

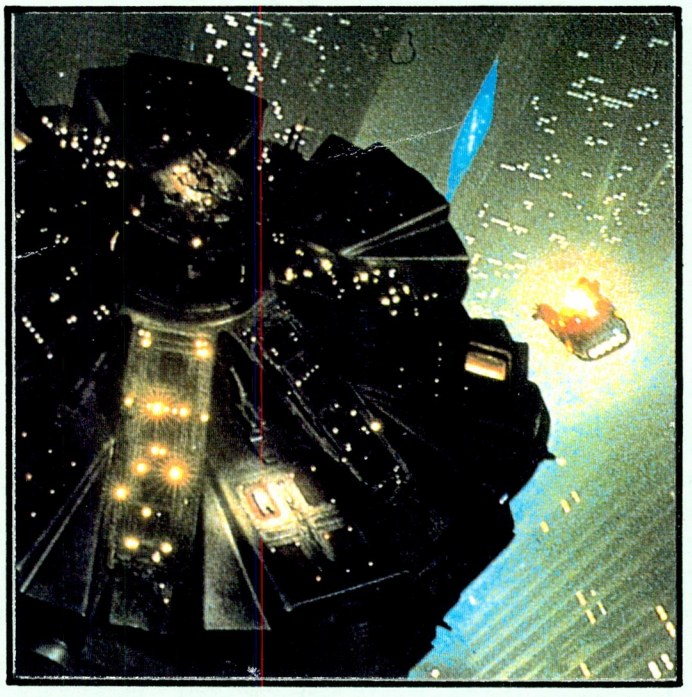
Throughout the film, the human aspect is a restrained one. The characters are colour-coded, as part of the white minimalist facade of technology. In the space-station, Dr. Floyd's identity is verified by a machine and upon entering the station, he is part of a world delineated by the machine. Humans sit on red chairs and walk in a circular motion around the giant station. On board the *Discovery*, astronaut Poole jogs around a gravity ring in the spacecraft, punching the air in

front of him. Man's environment, or technosphere, dictates the motion of his existence. In the final scenes of the film, the machine forces the remaining human character to desperate measures in order to survive.

Having hastily left the *Discovery* in a workpod in order to reach Poole's spinning body, Bowman forgets to put on his helmet. On his return, HAL refuses him entry to the spacecraft. Bowman is subsequently forced to leave the pod as quickly as he can and get in through an emergency hatch. This action subjects him briefly, but none-the-less dangerously, to the vacuum of space. He locates another helmet and subsequently deactivates HAL. When Bowman finally goes to his meeting with the monolith, he is transformed into what Kubrick called a 'starchild', the next phase of human development. *2001* is a powerful reflection of contemporary social concern on technology and throughout the narrative, shows how humanity is controlled, or regulated, by it's machine environment. The concept of Bowman's transformation into the 'starchild' is the film's final symbol. As such, it appears to reverse the idea of the child as a new beginning into a form of warning.

When Bowman enters the stargate through the monolith he is subjected to a terrifying and awe-inspiring experience as he is plunged into the unknown. In effect, he is forced to surrender to forces beyond his control. Suddenly, he finds himself in a Louis XVI period chamber, an artificial construction lit from below it's floor. As such, the room is a representation of dehumanisation, essentially a homogenising of society. Beginning with his final moments aboard the *Discovery*, Bowman is forced to react to events set in motion by external elements ; the computer and the monolith. What appears to concern Kubrick here is man's apparent seduction by the technological world. The image of the 'starchild' orbiting the earth as the film concludes is a powerful summary of the crossroads our society has come to. Mankind's future is depicted in the film as one where he must make decisions about how his technosphere is to function. *2001* has recognised a problem in the brave new world envisaged by T*hings to Come*. It reflects a difficulty in our relationship with technology and acts as a reminder to us to affirm our humanity.

In itself, Kubrick's work is an interesting irony. *2001's* revolutionary use of cinema technology is employed to produce a cautionary note on technology itself and is, perhaps, a final symbol of man's double-edged relationship with the machine.



CHAPTER THREE: World Vision: *Blade Runner.*

Things to Come and *2001* respectively extol and warn of the effects of technology on mankind and appear to reflect contemporary society's concern for the way in which the machine has, to a great extent, altered man's social and working life. They continue the theme first explored by *Metropolis* and chart our relationship with the machine from the early days of it's introduction, up to it's present state.

Beginning in the 1970s and continuing throughout the 1980s, however, a new social problem is seen to arise. Man continued to regard technology with a mixture of fear and fascination, but the equation had now expanded to include the natural world.

By the 1980s, the city of the future popularised in the 1930s by *Things to Come*, appeared to be more remote than ever. Many of the world's major urban centres reflected two sides of a society in continued turmoil. Technological and social inequality had conspired to darken the urban way of life, taking away colour and vitality. Increased mechanisation had deprived many people of employment, inducing a chain reaction all along the social system. An upsurge in urban unrest and violent crime in recent times has revealed the negative consequences of this situation.

Our cities are now business centres and increasingly machine orientated. They produce vast quantities of pollutants as a by-product of their daily routine and have forced social settlement to their perimeters. The global ecosphere has undergone change as a consequ*ence* of their existence, signifying a serious problem for the planet. How technology has influenced the quality of our own lives, as was the the theme in Kubrick's 2001, has now been put in a larger perspective by a need, in modern times, to re-direct our attention and action to pressing environmental concerns. When released in 1982, the film *Blade Runner* was not a very successful piece in financial terms, but has since found a new audience receptive to it's atmospheric and relevant vision of the future.

(Bilson, 1993, p 78)

"... class separation, the growing gulf between rich and poor, the population explosion".

Director Ridley Scott's comments on the film refer to some of the problems facing contemporary society and mirror, in part, issues explored in the 1920s by *Metropolis*. Extensive planetary pollution and population crisis, as a result of

rapid industrial development, become the back drop of Scott's dystopian future world. He projects images of a degenerated metropolis, on extension of current civic development and it's apparent disregard for environmental impact. As with *2001, Blade Runner's* world is to a larger extent a parallel of that which is experienced as reality by it's audience.

It is the year 2019 and the setting is a large American city. The film tells the story of a group of sophisticated androids, known as 'replicants'. They return to Earth from a frontier colony in space, seeking a longer life-span from the organisation who created them ; the Tyrell genetics corporation. They have been given four years of life, due to what their creators describe as a 'dangerous unpredictability' upon developing their own emotions. In effect, they become human, but without a history of self or the respect of human society. Rick Deckard, a member of a special police unit known as the blade runners, formed to track down and destroy rogue replicants, is given the task of dealing with these particular machines. Replicants are looked down on by society as nothing more than labour-saving devices, and are given a host of menial and dangerous work to do by their human masters. In this regard, the film follows closely the technological theme in Kubrick's *2001*, but with an interesting twist. Here, the human character falls in love with a replicant and in the process of pursuing those he seeks, begins to see their actions as comparable to his own humanity. The machine is introduced to us in a more pervasive social role, one so blurred as to appear indistinguishable from humanity itself. The concept is a fascinating one, coming from a writer known for his paranoid visions of future social orders. Philip K. Dick's ideas, however, add a powerful element to the question of technology's role in our society today.

Blade Runner's opening sequences are among it's most powerful. The panoramic view of the smog-shrouded city is punctuated by flaring smoke stacks and sleek flying craft weaving between the towering headquarters of the city's industrialists. Much of the imagery is derived from German expressionist films including *Metropolis*. The imposing structure used by the city's police is itself a striking replica of one of the major buildings in Lang's film. The contrast between the two films is of more than visual interest. Lang's theme of technological dominance and human nature has found a modern outlet in *Blade Runner,* coupled with an additional environmental concern.

As in *Metropolis*, the city in Scott's film operates on two levels. Above a crucible of decay, the capitalist ruling classes live in buildings styled on the grand temples of the Mayans. In contrast, those for whom life on a colony world is beyond their means struggle to survive amid a shanty town of pollution and crime.

The film was released amid a surge of public interest in computers and high technology industry and it reflects this in it's exploration of the socio-economic structure. The dehumanising effect of this structure and it's emphasis on the machine-like efficiency of it's human elements is embodied in the struggle of the replicants. Deckard's replicant lover, Rachael, is not aware that she is not human and is kept ignorant of this fact by what her creator, Tyrell, describes as 'commerce'. He recites the company motto;'more human than human'. Deckard himself often parallels the replicants in his duty to the state. He must carry out his function as a blade runner in a competent and emotionless manner, in yet another representation by Scott of the human condition in the world today.

"There is amongst us something that is a bi-pedal humanoid, morphologically identical to the human being but which is not human . . . within our species is a bifurcation, a dichotomy between the truly human and that which mimics the truly human". (Khun, 1990, p. 45)

The words of writer Philip K. Dick illustrate how *Blade Runner* expands on the theme of *2001*. The film's most notable contribution to the issue of the technological world, is that of what it actually means to be human in such an environment. The film is concerned, in many respects, with the industrial exploitation of what has become human capital. The replicant characters, particularly Rachael, are a fascinating vehicle for what the film identifies as mankind's assimilation into a global technosphere. An artificial environment so complete that all his physical and mental needs have been identified, categorised and controlled by a matrix of service and product industries. Through man's dependence on this system he has developed at odds with the rest of the global environment. As with the replicants of *Blade Runner*, he is not comfortable with his identification with technology and alienation from nature.

In the film's final conflict between Deckard and the leading replicant, Roy Batty, the android becomes a mirror in which Deckard sees what his society claims to be the central ingredients of humanity. Batty displays a spectrum of emotion, from rage at his partner, Pris's, death, to compassion for Deckard himself, when he cor-

ners the blade runner. Throughout the film, the human characters are forced by the conditions they find themselves in to renounce their emotions (in effect, their humanity) in order to survive in their technological environment. The androids, by contrast, are determined to possess that which their master's take for granted.

In its original form, the film's conclusion breaks with its sober assessment of mankind's predicament and is at odds with the film's previous tone. The wish, on society's part, for a symbiosis between man and machine is personified in the flight of Deckard and Rachael into the forest. But the closed ending is so unrealistic in the light of conditions as explained to us in the opening scenes, that it's message is rendered ineffective. To counter this narrative fault, Scott re-released the film in 1992 devoid of this section. The resulting open ending concludes when Deckard leaves his apartment with Rachael. This more suggestive closing hints powerfully at society's need to close the gap between nature and technology, not to sit and dream.

What makes *Blade Runners* theme unique is contained within the film's setting. The city is a bleak extrapolation of current civic development in much of the modern world. Extensive planetary pollution and the effects of a global war have forced many of the Earth's human population to leave for a new life in space. The world's animal and plant life have been all but destroyed, forcing society to construct replicant creatures as domestic pets.

Concern for the natural environment is an issue that contemporary society has been forced to develop in recent years. To all practical extent, every inhabitable part of the Earth has been settled by man. In 1990, the world's urban population stood at around 3000 million people, with the total settlement pattern numbering around 5000 million. Over the sweep of time, twentieth century society alone will have removed most of the planet's exhaustible resources. Indeed, man's voracious appetite for fuel and metals has impoverished many of the world's mineral sources. Industrial and transport pollution has contributed heavily to severe ozone depletion in parts of the global atmosphere. The sheer scale of the problem has inevitably led to an anxiety on society's part as to it's future security in a world whose resources are now known to be finite. Our cities are, perhaps, society's only visual proof of the powerful impact our technosphere has had on the natural world. In *Blade Runner*, this issue is given attention in the form of it's sprawling

metropolis.

The *Blade Runner* environment is somewhat double-edged. Primarily it serves as a dramatic backdrop for the struggle between the replicants and their pursuer. In this fashion, the city has a dark, but distinct, aesthetic quality. But when Deckard is taken into the streets of the metropolis in the course of his duty, the gap between it's aesthetic attraction and the squalid reality it holds for the majority of it's eclectic population is striking. To an extent, Scott has created an environment that is in many ways a homage to the futuristic aesthetics of *Metropolis* and *Things to Come*. But *Blade Runner* is, however, an attempt to realise what could happen when the world becomes home to mankind's inherent greed.

The film owes much of it's effective countenance to the work of a commercial artist / designer called Syd Mead. Before beginning his film career, Mead was already well known in American industrial design circles. His work for the Ford motor company and U.S. Steel had met with considerable acclaim. Scott became aware of his conceptual art abilities through special effects technician John Dykstra, the person responsible for much of the design work on George Lucas' *Star Wars*. On their first meeting, Mead's work greatly impressed Scott and he was subsequently hired to provide automotive designs for the *Blade Runner* project. The scope of Mead's involvement was, however, to broaden out significantly. Mead also began work on the visual appearance of the metropolis itself and consequently, a myriad of hand-held hardware and street furniture. His effective and imaginative work became the primary source of the film's distinctive visual style.

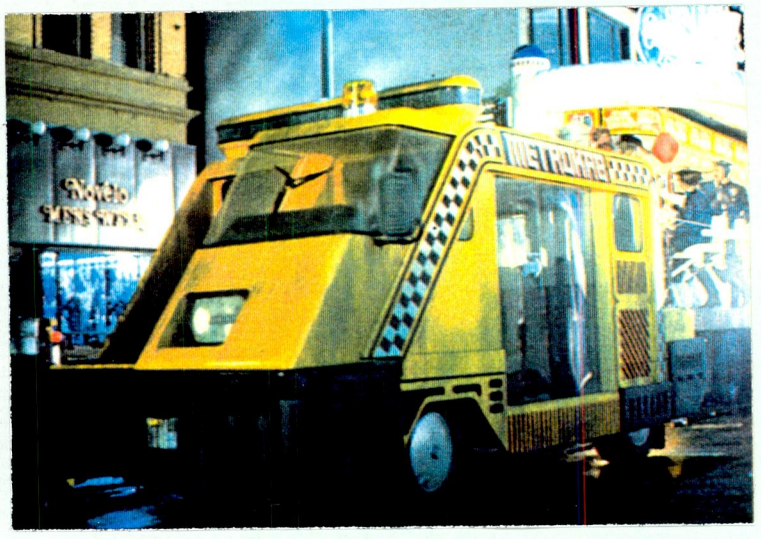
The environmental degeneration depicted in the film was as much a philosophical problem, as a design one. The super-structures of the giant buildings would require foundations and support pylons that would take up considerable space on the city's street level. Existing architecture would become unusable and fall into disrepair. As a result, this vacuum would permit a growth in criminal activity and, together with the congestion caused by limited space, would pose a serious problem. Citizens who could afford to live in the new buildings towering overhead would find it necessary to avoid the street level whenever possible.
"That sort of low crime vs. an elevated society would lead to the creation of a second level of between-building accesses for normal citizens, freeways and peo-

ple carriers looming high above the original street level. In essence, you'd have a second society built on the remains of a past one". (Naha, 1982, p.39)

Mead's concept fitted Scott's vision of the *Blade Runner* environment perfectly. The city's sheer size had swamped both it's original self and much of the environment surrounding it. The city's flying cars and ground transport are also striking creations and another product of Mead's work.

Referred to as 'Spinners', the flying cars were the production's most expensive and complicated prop. In the film, their use is limited to those who can afford them; business executives and the police department, and are described by Mead as 'enclosed lift vehicles'. The term results from the appearance of the machine. It had to look like a car and function both on the ground and in the air. A putative V.T.O.L. (vertical Take Off and Landing) system was proposed, allowing Mead to dispense with what he regarded as the stereo-typical folding wings and helicopter blades of the science fiction aircar. Two streamlined nacelles on the front of the car house it's leading wheels, with the two rear ones incorporated into a section at the back. The vehicle is *Blade Runner's* star technological attraction but, in the context of the environmental concerns voiced by the film's background settings, is not, perhaps, it's most interesting.

Many of Mead's contemporaries have identified the concept of improved public transport systems as a possible way to stem city traffic over-crowding. In *Blade Runner,* this concern is given life in the form of Mead's 'Metrokab'. The vehicle is not an integral part of the narrative and features as a background prop, but it's concept is quite interesting. Described as a public access vehicle, this compact car functions in a manner similar to conventional taxis. People enter the machine and by inserting a card, only pay for the time they use it to reach their destination. They simply leave it by the side of the road when finished with it, where it awaits it's next passengers. By owning one of these cards, the citizen does not incur the expense of running a car in a city where fuel and maintenance costs could well be high. The private car is indeed aptly named. In it's incarnation as the flying car, it appears to be a luxury product for business and government.



The *Blade Runner* environment is a sobering reminder of many of the concerns facing contemporary society today. Global pollution resulting from technological development is a central element on many of the world's national agendas. This is combined with a considerable anxiety in society as to the changes it must face as a result of increased mechanisation. From our work practices to our financial identities, technology has become the matrix in which our lives are situated. Is this a negative development ? Interestingly, Syd Mead's personal views on the subject are apparently at odds with a lot of the film's imagery. He regards technology as able to provide a number of creative solutions to man's living problems. Larger city buildings could indeed be his urban future, but Mead considers them to be multi-functional. There could well be a variety of spaces inside, ranging from parks and zoos to business centres and domestic apartments: a world away, so to speak, from what he describes as the 'artificial cliffs' that are the urban landscape's current structures. The key to his dream appears to be a visual variety. It is an augmentation of conventional cubist buildings with an almost naturally random architecture.

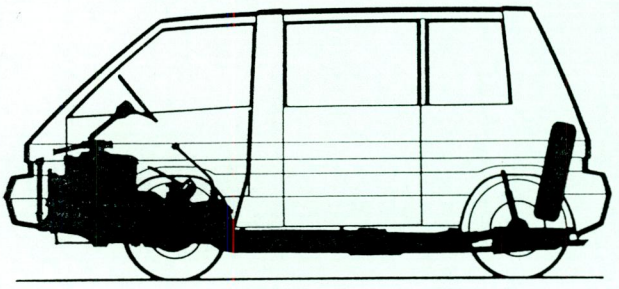
"I see the next generation of people growing up being able to contribute to that creative element. They will be much less intimidated by technology. Right now, technology is hamstrung because of the so-called flower children; the 1960s youths are now in their 30s and 40s. Right now, I believe what we're experiencing is the last wave of technology-inspired paranoia as this final remnant of the hippie generation moves into politics".

(Naha, 1982, p.61).

Mead fervently believes in society's well-being as coming from a more produc-

tive lifestyle through the development of technology. He is fascinated by organic / mechanical crossover and regards man's future as one where he will become a technologically supported natural society. Essentially, this would appear to mean one where technology is a creative aid to a more harmonious existence with the natural world. This vision, although apparently polarised with what we see in the film, is in actuality, the hoped for result expressed in the narrative. Technology is not perceived as destructive in itself, it is man's application of it. This is where Scott's work identifies a problem and encourages a solution. What Mead perhaps wrongly regards as a technological paranoia of the 1960s is a concern of wider relevance. To realise a world such as the one Mead professes, man must first realise technology's limitations as much as it's possibilities.

In *Blade Runner*, Scott depicts the replicant's role as that of a substitute for the human. This translates as a cautionary note to society on the need to affirm our humanity. As Mead suggests, we can do this by designing around both our needs and those of the planet and not as is currently the case, by a crude and destructive branding of our presence on the global environment.



One third of the human race has entered the technological age in the form of the developed world and the pressures on the Earth's resources and environment are already becoming clear. Technological development, as man has chosen to apply it, has enabled his society to provide for itself a vast range of material choice. This appears to have become the hallmark of what he identifies as a truly developed civilisation. The crux of the problem with his relationship with the planet is that the material benefits have to date seemed weighted heavily in his favour.

Much of man's technology still strongly relies on materials that are not renewable. Iron ore is perhaps the most important metal and since 1950 it's use has quadrupled. It is projected that by the year 2000, 17 billion metric tons will have been used, at which point it is believed that there will be 88 billion metric tons remaining. With 85% of what is mined used by the developed world alone, it has been calculated that by the middle of the twenty-first century, ore bodies could be exhausted. During this present century most of the world's fossil fuels will have been consumed. Once again, by the year 2000, it is expected that the first serious shortages in oil will begin to affect the largest of the industrial nations.

Inefficient processing of what is taken, results in considerable waste and pollution. The majority of the world's cities are, primarily, major industrial centres and the location of much of man's material processing. As a result, they are an impor tant contibuting factor to atmospheric pollution

With now just 7% of the Earth's land mass covered in tropical rainforest, the planet's ability to absorb this pollution is restricted Since the first space flights made by astronauts during the1960s, the pristine skies of the Earth have changed. Today vast sections of the planet are regularly covered in atmospheric pollution. Carbon dioxide concentration has doubled in the last one hundred years and every year about 4 billion tons of CO_2 are added to the skies. These are some of the most serious effects the world must endure as a result of current technological capabilities.

Concern at these effects has begun to increase and because of the nature of the issues, the film medium, in particular the science fiction genre, has been well

placed to illustrate some of these anxieties. The genre is in itself a curious expression of man's wish to see what is in store for his world. In observing reflected social concerns in a number of the genre's most notable and temporarily diverse films, it's role as an interesting social mirror is evident. How society has responded to the problems it faces, as reflected in the collective themes of these works, is the subject of this concluding piece. In particular, the focus will fall on transport research, for two distinct reasons. As the next highest pollution agent apart from industrial and energy production, the car is a serious source of environmental damage. Secondly, it's prominent narrative role in *Blade Runner* further illustrates its importance as a social symbol.

In *Blade Runner*, we see a city where the car has become a paradox. It is no longer a symbol of freedom, rather one of restriction. To Deckard, it is a hermetically sealed retreat in which he attempts to find peace from the world around him. On the streets of the metropolis, the sheer volume of private vehicles often brings the city to a standstill. In it's most technologically advanced incarnation as the aircar, the private car is well named, being operated only by those in authority and power. The parallel with our present world is striking. Extensive traffic congestion in man's major urban centres has focused the minds of many in the design community on this problem and the solutions have, to date, appeared to fall into two categories. Each one appears to be reflected by key vehicles in *Blade Runner.*

In the first case, the aircar is an apparent reflection of what the car, in its continued use as a private vehicle, might have to become. Its dramatic flying abilities are besides the point. The equation here is one of computers and wind tunnels.

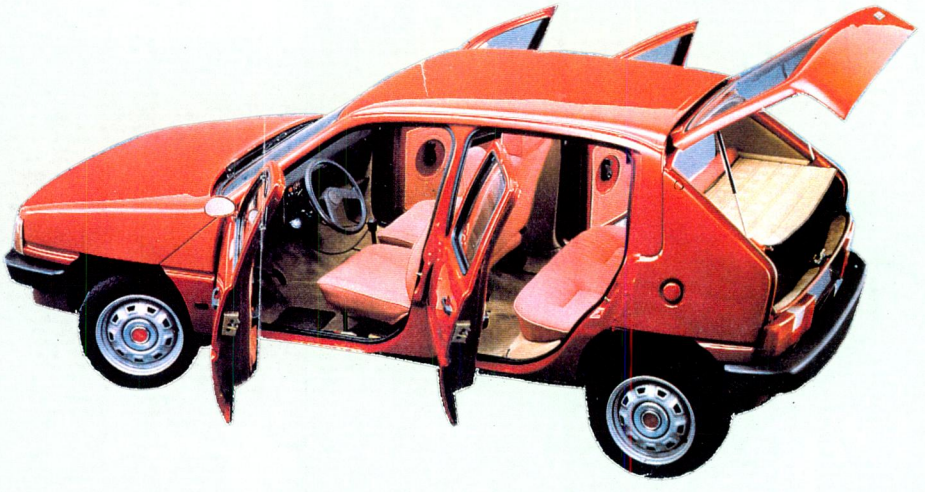
As reserves of oil grow shorter and pollution levels higher, the car in its present form has come under review in a number of ways. Manufacturers are responding to new social needs through increased research and slowly distilling the 'concept car' into a viable reality. The problem centres on efficiency and cleanliness. Simply to push air out of its way a conventional car uses 50% of it's available energy when travelling at around 55mph. This increases roughly in proportion as the vehicle accelerates. By streamlining the body of the machine, it's ability to 'cut' through the air is greatly improved. Fuel savings as a result can be as much as 10%.

During the 1930s, streamlining was first applied to the automobile in a design decision that was primarily aesthetic rather than scientific. Designers such as Buckminster Fuller, however, did make initial moves to create a more efficient vehicle based on streamlining's more scientific principles. Fuller's Dymaxion car with it's torpedo-like appearance was a concept vehicle that could well have provided inspiration for designers on *Things to Come*. It was a three-wheeled machine, with a rear engine and seating for four, but due to it's instability at speeds over 50mph, and a number of other technological problems, it remained an interesting dream.

Today designers are concerned with looking at the problem in more than one way. In order to make the car a more efficient device, computer technology has inevitably been brought to bear on the issue. Expensive micro-processors are under development to monitor the vehicle's overall performance. These complex electronics almost think for the driver, shutting down the engine when the machine is idling in heavy traffic and commanding a myriad of adjustments to keep it at peak efficiency whatever it's speed. As explored by Buckminster Fuller and popularised by Volkswagen later on with it's Beetle car, by simply rearranging components within the body of a vehicle, improved efficiency can be gained here also. An example would be an engine located in the back of a vehicle, rather than is currently the case. It is a simple exercise in weight reduction, as the need for a propeller shaft to the rear of the wheels is no longer required. This concept together with such apparently insignificant features as puncture proof plastic tyres, to eliminate the cost and weight of a spare one, forms part of a chain of thought that aims to reduce energy wastage in the modern car.

Italian car manufacturer Fiat have taken the efficiency equation one step further. The V.S.S. (Vettura Sperimentale a Sottisissteni - Experimental Sub-system Car) is a fully operational prototype which shows a revolutionary new approach to car design philosophy. It began life in the 1980s and the key to the project was to produce a car that would use a chassis common to all models and have a body made entirely from a weight-saving plastic. The basic framework of the chassis is made with conventional steel, but being usable on all versions of the vehicle, be they saloons or estates, it offers a considerable cost reduction to the factory. The plastic body panels are extremely tough and fire resistant. They possess a certain amount of elasticity, allowing minor dents to pop straight out again, and because

each panel is self-coloured, yet more substantial cost savings can be made. With a conventional steel bonnet component weighing 17kg compared to a plastic V.S.S. one at 12kg, the vehicle's efficiency advantage is clear. The special polyester resin panels reinforced by glass fibre are the key to the V.S.S.' success.



This is but an example of a movement within vehicle-manufacturing circles to re-define the social requirements of this intricate part of our modern environment. The most recent developments on this theme are in such areas as biodegradable plastics. Manufacturers such as Volkswagen have recently employed these in conjunction with metals to produce production cars that are 90% recyclable.

As regards environment cleanliness, electric motors are being seriously considered by companies such as Volvo. Their E.E.C. (Environmental Concept Car) uses a combination of this type of motor for city driving conditions, but a diesel-fuelled gas turbine for the open road. As yet, the battery weight and it's limited range between recharges is a disadvantage and prevents its unassisted use. An interesting alternative to the electrically powered car is a steam powered one and, as will be seen later on, a number of American manufacturers are considering this possibility.

All this technical innovation is based on the idea of a radical re-assessment of the environmental aspects of the private car. 65% to 80% of carbon monoxide is emitted by the automobile. A third of the hydrocarbons produced by our technos-

phere originate from transport systems. One of these is benzene, the cause of a substantial carcinogenic concern in recent times. All this has led to the need to cut down on fuel emissions and wastage in the manner we have just seen, or find alternatives to the combustion engine. This is based on the belief that the private car will remain an important feature of social life well into future and in similar numbers to those in which it exists today. Currently there are around 500 million cars on global roads, with an additional fifty million new machines added each year. Even if made environmentally-friendlier, the private car as a social concept is still a problem. In *Blade Runner* the aircar functions as a symbol for what many industrialists are seeking; a car that does not touch the earth. In the film, the vehicle is kept out of the public domain. This is, perhaps, a reflection of society's need to go much further with this issue and re-define its transport needs in a way that does not focus on the private car as a central element.

At the opening of this chapter, some of the serious effects man's society has had on the natural world were discussed. Many of the statistics given were obtained during the 1970s and 80s. They illustrate a new global awareness that in many cases was triggered by the energy crisis during the former decade. Transportation has been seen to be a major contributor to environmental damage. In addition to it's generation of carbon monoxide and hydrocarbons, it produces a quarter of the total man-made carbon dioxide. Though this is not a pollutant in itself, it becomes a serious problem when added to the Earth's natural stock, by increasing an over-absorption of heat in the atmosphere; the familiar 'greenhouse effect'.

The sheer volume of private cars on the streets of many urban centres have transformed city environments into potential health hazards, not only for the atmosphere, but for society itself. Stop and go driving conditions in contemporary cities render tools such as the catalytic converter ineffective. This device has to date been the only environmental protection device fitted to current car designs, to cut down on pollutant emissions from the combustion process. These emissions normally occur in slow moving traffic and during initial engine start-up. As the converter needs heat to work effectively, relatively cool engine temperatures on short suburban-town transits, the majority of journey types made by the private car, make it's effect negligible. All this has pointed many designers in the direction of a second approach, as reflected in the 'Metrokab' in *Blade Runner.* It appears to be a radical re-assessment of the private car's overall position in our society as

it's primary source of transport.

The concept is essentially a simple one : to make the private car a public one. In practice, the idea is extremely difficult to introduce, due to society's preference for the symbol of freedom the private car has become. Environmental concerns, however, have shown the need to consider this possibility. The idea centres on the communal sharing of vehicles in order to cut down on the extensive congestion and pollution caused by the volume of private cars currently in use around the world. The phrase 'paratransit' has been coined by the U.S. Department of Transportation to identify this concept, whose origins have resulted from American thinking on the modern urban environment. Initial paratransit models have been based on groups of people simply sharing a member's car. These 'car pool' systems have been in operation in the United States for a number of years. In recent times, research has been initiated into the designing of a low / zero pollution, purpose built vehicle, which could act as a viable urban alternative to extensive car use.

In it's current form, the taxi's somewhat limited role in the modern city is something that could be substantially developed, in order to reduce traffic difficulties and pollution. In 1976, the Museum of Modern Art in New York proposed a design project primarily for American automobile manufacturers. It was a radical re-design of the conventional taxi.

With help from the U.S. Department of Transportation's Urban Mass Transportation Administration (U.M.T.A.), a number of companies were approached and asked to present designs. One of the most interesting entries was from a company called Steam Power Systems (S.P.S.).

On receiving a contemporary brief to solve, it took a step back in time to utilise the power of steam to propel its prototype. The power system itself was a development of one the company had produced for the 1974 California Clean Car Project. First put forward as a viable modern power source by William Lear, the engine in its current form and as used by the S.P.S. taxi weighs about the same as a conventional internal combustion engine. In operation, the system is remarkably silent, due to the fact it does not rely on the explosive burning of petrol. It is also practically pollution-free.

The S.P.S. taxi's high profile cubic shape gives it a considerable advantage over current taxi types. Most existing machines are essentially private cars and this often prohibits wheelchair access, due to their low, sleek shape. The S.P.S. vehicle combines its shape advantage with a ramp and bi-fold automated doors, similar to those found on buses, to make boarding in a wheelchair a simple procedure. Primarily made from aluminium, special emphasis was given to overall weight reduction in order to improve the machine's efficiency. The S.P.S. taxi can carry up to five passengers if necessary. Being the same length as a conventional taxi, the S.P.S. machine appears to make much more effective use of available space and shape possibilities. This taxi is one of five proposed ideas, by different manufacturers, of a viable paratransit vehicle. Although many of the prototypes are now 17 years old, the concept behind a public access car, as seen in *Blade Runner*, to augment traditional public transport systems, is still looked on with favour.

Of the concept vehicles discussed so far, all remain at the prototype stage. Substantial commercial interests in the petroleum industry rely heavily on the continued use of the internal combustion engine and this would appear to provide an interesting clue as to the reluctance of many car manufacturers to introduce production versions of their more revolutionary and 'greener' vehicles. As explained in Scott's *Blade Runner*, the capitalist system is a complex entity. The domino effect of a phasing out of petrol powered transport would doubtlessly alter significantly international business circles, where companies such as Esso are some of the world's biggest commercial organisations. It would appear that regardless of environmental concerns it is currently not in capitalist interests to

realise vehicles such as those explored earlier.

French manufacturer Renault currently produce what they describe as a 'people carrier'. The revolutionary 'Espace' has seating arrangements for up to seven people and appears to bridge the gap between a commercial van and a conventional car. It seems to have provided inspiration for others in the industry, with manufacturers such as Toyota having developed their own version of this type of vehicle, calling it the 'Previa'. The Espace was first introduced in the 1980s and the resulting term 'people carrier' has become a class identification. These tall-bodied, cubic vehicles appear to echo many of the concepts and specifications that a purpose-built paratransit car would have to adhere to. Although powered by conventional means and marketed as an alternative to a family estate car, these machines do herald an interesting development in the transport industry.

In addition to this, interest in purpose-built, easy access taxis such as the 1976 concept discussed earlier is still evident today. At the 1992 Motor Show in Britain, a vehicle called the Eurotaxi met with considerable interest, in particular by Minister Nicholas Scott of the British Government's Department of Transportation. The environmental benefits in increased public transport use are recognised by European Governments, but needs support from all sections of the population if it is ever to be applied. The Eurotaxi prototype uses electric motors to propel itself and realises many of the specifications adhered to by it's American predecessor, the S.P.S. vehicle. In such important matters as wheelchair accessibility and increased passenger capability, the Eurotaxi perpetuates designers' interest in giving the taxi a more integrated role in future urban transport. Both private car pooling and increased use of taxi systems are two of the most important aspects of the paratransit concept. They are not, however, the most radical.

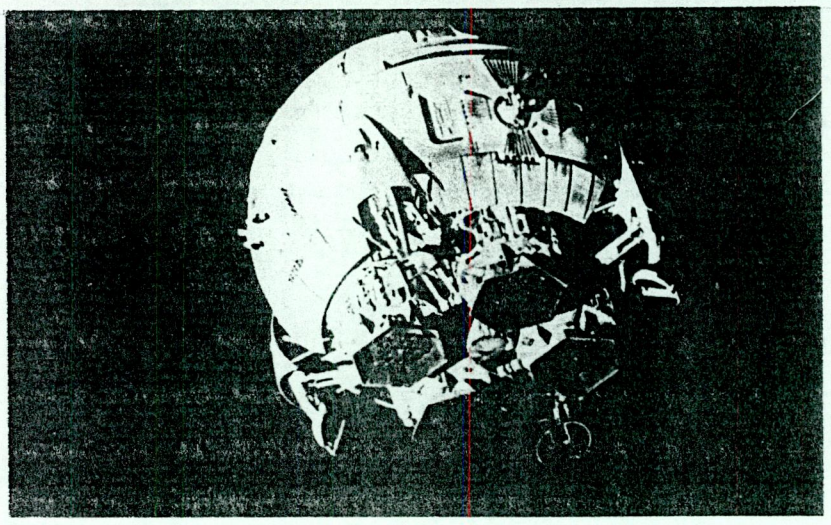
During the early 1970s in Amsterdam, a revolutionary new transport idea was introduced in an attempt to keep the city centre clear of high volumes of private cars. Known as a white car or 'Witkar', this two-seater vehicle similar to a golf cart became the basis for a system identical to the 'Metrokab' concept. The Witkar could be used by anyone who subscribed to the system. The passengers entered the compact vehicle and used their subscription key to start it up. They were then free to travel between terminal points, simply leaving the machine at a terminal when finished. These terminal racks provided recharge facilities for the

electrically powered carts and were situated around the city centre. The concept, however, officially failed after time, due to a combination of vehicle misuse and the lack of a sufficient terminal network. The Witkar concept is one of the most far reaching of the paratransit ideas and the Amsterdam idea, if taken up successfully, could well have much to offer.

In *Blade Runner*, the private car has become an instrument of the state, with it's use restricted to those in positions of power and authority. In it's incarnation as the aircar, the private car is no longer an option for the city's 'little' people. Their own dilapidated vehicles are regularly caught in a traffic web, a symbol of the city's environmental chaos, and, in effect, rendered useless. As we have seen, a central issue in both *Blade Runner* and *2001* is that of society's application of technology to a world now regarded as it's own. Through the mirror of the science fiction film, the problems our inflexible social order have had on the environment can be seen in works such as Ridley Scott's 1982 piece. As a potential symbol of our technological age, the automobile is a major element in the ecological equation.

In the first part of this chapter, technology or the aircar approach, so to speak, was explored. The environmentally friendly car is not in itself the answer to transport related pollution. It would take many years to replace existing inefficient machines with these new and initially expensive vehicles. The problems of congestion and 'car city' urban environments would still remain unanswered. Thus the question revolves around the need for less cars. By adopting some of the ideas explored under the paratransit concept, perhaps more immediate results could be gleaned. It appears to rely, however, on a radical change in public attitudes to their transport needs and the needs of the planet.

It is a process of environmental protection through a re-think of society's transport habits. Paratransit, in all its forms offers a way of reducing traffic levels in the world to ease off pressure on the global environment. It has possible applications, but relies on social commitment, and this is the source of an apparent public reluctance to experiment with it. None of the vehicle concepts reviewed under this approach have gone into active service. The dilemma facing our world is given tangible form in the automobile. The film *Blade Runner* reflects designers' response to a pressing global crisis.



The viewpoint cinema offers our society is unique to this century. Through the eye of the camera, the problems facing a particular generation are of constant interest. It's role in our world is primarily one of entertainment. Through the vehicles of theme and narrative, however, the film functions in more than one way. Films are of their time and in recent years, with a rapid development in technology and it's global application, the science fiction genre has found an interesting place within the medium to reflect these issues. The machine and it's relationship with, and use by, mankind, is often the genre's raison d' être.

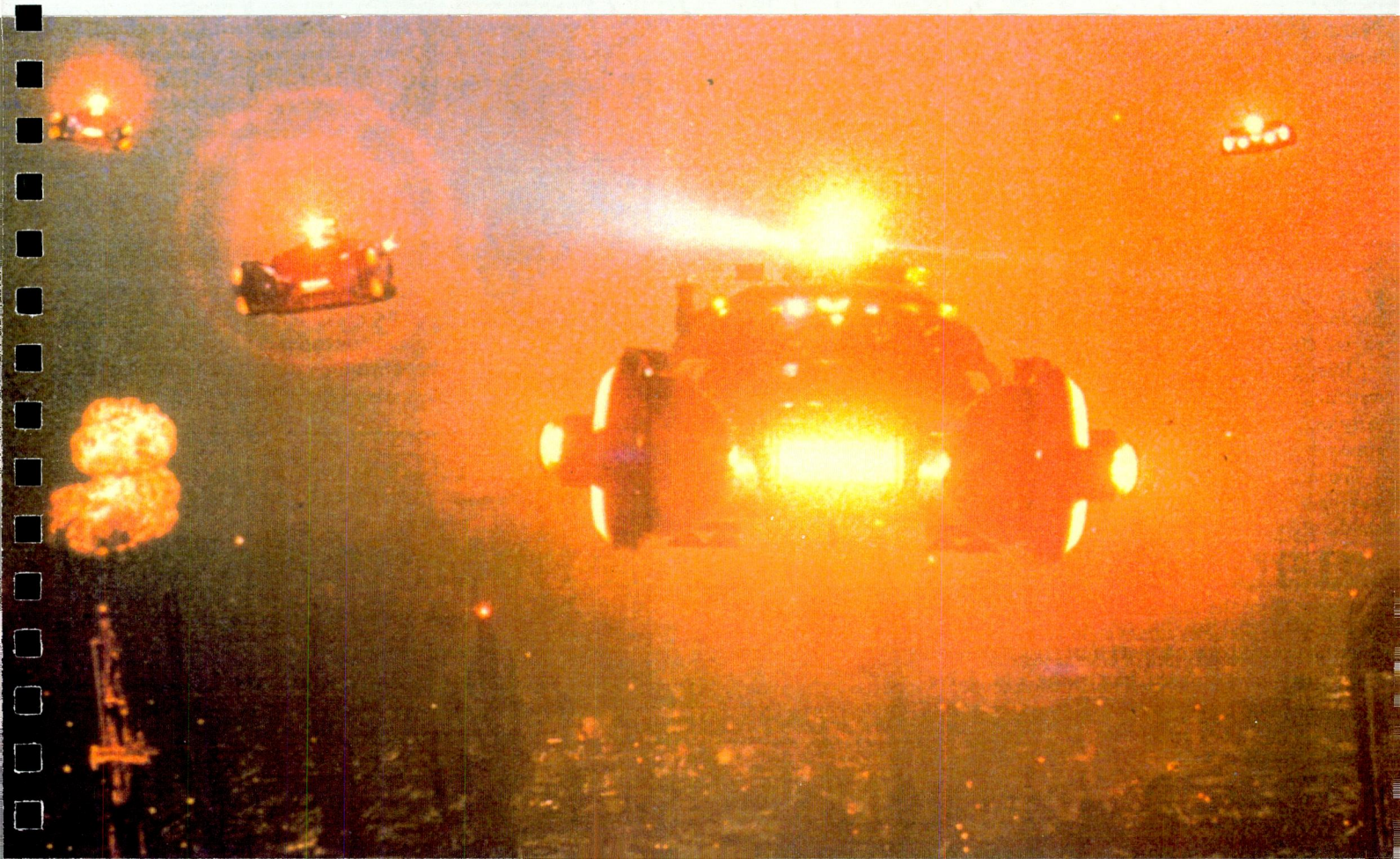
The films discussed here represent, I believe, an interesting cross-reference of themes. They appear to chart society's technological growth from the beginning of the machine age to what many regard today as the accumulated effects of that machine on the planet itself. This is not, however, entirely correct. Technology is not seen to be at fault in itself, in these films. The responsibility of cause and effect lies firmly in our own lap, as a civilisation. Man is no longer a creature of instinct. He has a number of choices open to him through a combination of his technology and forethought. These films are a reflection of society's concerns for how it has applied technology to it's daily life, and whether it's current approach is necessarily the the correct one for man himself, as in Lang's *Metropolis* and Kubrick's *2001*, or for the greater environment, as in Scott's *Blade Runner.* The answer, however, lies firmly with society itself. These films function as barometers for global conditions.

In the final chapter, the motif of the private car in *Blade Runner* forms an interesting link with actual social response to contemporary environmental concerns. Within the film lie concepts that appear to reflect quite directly, a concerned reaction to an important source of environmental damage; the urban transport system, in particular the private car.

In *Blade Runner*, the car is given a unique social position. Withheld from the masses the private car as represented by the aircar is a possession of the city's ruling classes. This aspect of the film's theme is an apparent parallel of what society has now been forced to address ; the position of private transport in a world already caught in a mire of transport related pollution, on top of that from other sources, such as industrial production. The overall state of the environment is, of course, a much wider issue, but this aspect of Scott's film does reveal how the

genre has helped to itemise, so to speak, the problem. It has helped to focus attention on aspects of the whole and has as such, been a useful conscience.

The position of the science fiction genre as an oracle for our society is something that is relatively unique to the medium. The genre is, in itself, a curious symbol of man's wish to see the future, to plan for eventualities, and wonder at possibilities. Perhaps, when it has nothing to say, it will have said everything.

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Fly page 1; Spacestation from *2001: A Space Odyssey (1968).*

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Page 15: *Discovery* from *2001: A Space Odyssey (1968).*

Page 18: Police Headquarters from *Blade Runner (1982).*

Page 25: *Metrokab* from *Blade Runner (1982).*

Page 31: V.S.S. Plastic Car.

Page 34: S.P.S. Taxi.

Page 37: Scene from *2001: A Space Odyssey (1968).*

Page 39: Aircar from *Blade Runner (1982).*

End page: Gridlock on the Golden Gate Bridge.