Science Fiction Film and Industrial Design

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TABLE OF CONTENTS

LIST of ILLUSTRATIONS

PREFACE

Science fiction and Industrial design are, I believe, to the forefront of modern life because of the nature of the ideas discussed in each futurism. They are and should try to explore and advance man's horizons both mentally and physically, bringing new ideas and influences to bear, each using different approaches. Design advances the immediate environment, that is the micro environment of the home or office as opposed to the micro environment of Architecture. Besides enhancing luxury goods, industrial design improves and often revolutionises utility objects, i.e. tools or objects that one takes for granted because of traditional use. Industrial design is concerned with giving greater quality to ordinary everyday life by creating more aerthdbic and functional artistic objects. In these terms industrial design is broadensy our perspectives from the bottom up, through bottle openers, seats, lights, door handles and taps.

Science fiction film on the other hand is basically about entertainment. It is an escapism. A chance for people to forget the monotony of everyday life. However, it offers good opportunity for a generation of new ideas. Science fiction film of its nature is different, it can act as a conscience for society, as educater, as illustrater and entertainer. Science fiction film

is the Avant Garde for the masses as it can reach large numbers of the population with new ideas and influences. On a consious level it may not provoke much thought other than the immediate, but on the unconsious level it may cause its viewers too recall things in other circumstances. This area is known as unconsious motivation. In Roland Barthes book The Hidden Persuaders a lot of space devoted to "Motivatioanal Research". This is in order to discover what causes people to buy one product over another even though they have almost the same performance and what creates "brand loyalty" in consumers.

Perhaps people associate modernity with what they see in science fiction imagery. I believe that industrial design and the design used in science fiction film is related and this can be seen through the influence that each has had on the other. However, it is more difficult to determine which one came first. Both diciplines are origional in approach or maybe it is just that they are conglomerations of hundreds of influences from all that has gone before. Does science fiction film use present day conventions of science fiction and design in order to familiarise the audience with itself?, or does it purpoely set out to alieniate and shock its audience? One way of looking at this is, that a director is trying to disregard present day conventions. This reasoning can equally be applied to industrial

design. However if both disciplines propagate strangeness then, because of their impact on society they can together unrole the future more quickly.

This dissertation is in two parts. The first part discusses the similiarity of designs which have been influenced by both science fiction and industrial design. It also examines the view that: science fiction film is only fantasy and escapism.

In the second part of the paper I have taken films of the last ten years which have used industrial designers as prop and set designers. This fact can be seen in the production of these films and creates the illusion which I believe is of interest to us. If we examine these films prehaps a logical convention for science fiction design can be seen which could then be applied to industrial design in order to give greater modernity or futurism to products of all industrial design.

INTRODUCTION

From the dawn of history the beliefs of peoples as diverse as the Egyptians and the Red Indians are reflected in their creations. In turn these artefacts range from the religious artwork through the construction and embellishment of housing both public and private, to their daily utensils, clothing and tools including weapons.. Todays research has made clear much of the beliefs and mythology and indeed technology of ancient peoples precisely from their images and symbols. So we can see a process at work which is relevant to our inquiry and can point to action and reaction of a predictable nature.

We can say that the interface between the real and the imaginary world is found in art and craft work both old and new. This dissertation will trys to show the relationship between industrial design and science fiction film, so that interface will be made more apparent, but first let us regress a little. A major by product of the earlier industrial revolution was a looking back into history. We had the Gothic revival, then the Greek revival and even the Egyptian revival in building, household goods and all the interest generated by these new influences. With the discovery of steam power, electricity, metalwork, new chemistry, mars production and an

array of tenhniques never before possible, a whole world of ideas lay open to writers and novelists from which was born science and fiction.

SCIENCE FICTION.

Jules Verne brought us on voyages under the sea, in the first submarines. The perfection of the telescope brought space near us as never before and gave us images of new planets and speculation as to their lives and possibilities. Then came cameras and the invention of moving pictures. The stage was set for the creation of a whole world of make-believe which had the waiting millions hungry for more. The stimulus for a new industry vast in its scope, finances and ingenuity a celluloid world was born.

It is but a short step from celluloid to plastics, servo-moters, sophisticated communication systems, remote control, the wherewithall to create a hundred odysseys, each more marvellous then the last. From the coming of the space age and all the diversity released by two world wars it is not a great stretch of the immagination to Star Wars. The age old desire of man from earliest mythologies to be free of gravity to travel at huge speeds, tp preform the extrodinary feats to explore the inner space of our planets and the infinite distances of space, now found a match in the new technologies for its

achievement. This desire to be free - even in an age like ours, where the vast proportion of mankind are not - has found it expression in the wealthier nations like never before. The mechanisation of living has brought about an even greater need to escape from routine and conformity consequent on vast technologies.

We like to think that apart from being useful, our daily artefacts have a symbolic character as well. The 19th Centuary Grecian Urn, furniture inspired by medieval castles, statuary and remniniscent pottery of Babylon, China or Rome: from the Renaissance. But this symbolism now includes reference to all that technology has made possible. For the first time we are moulding a "Design Style" based not alone on new materials and the idea of pure form, but related to the future. The future made possible by the marriage of technology and imagination. We have a "New Mythology" capable of matching imagination and the now vast resources of technology into equations of a new fairytale world of reality. This drive we can show to be real vital and significant if we examine the development of science fiction film and industrial design over the last forty years.

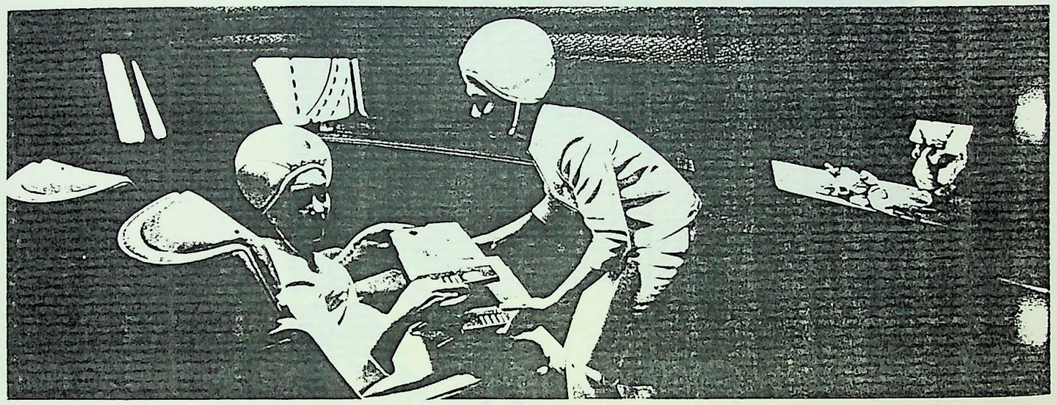
THE 1950's ONWARDS

One could say that present industrial design dictates the direction that science fiction film takes in terms of concept design because products or concepts which appear in the film must be recognisable to the audience in terms of function and present day ideas.

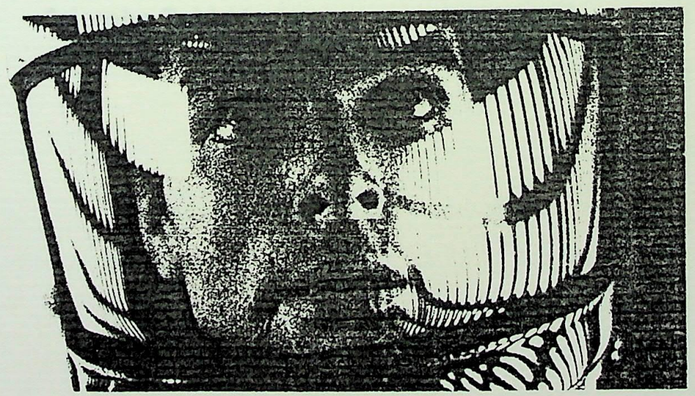
In 1969 the Amercians landed on the moon, turning space fiction into space fact. This occurance led to explicit references to space travel in the decorative arts. The attributes and acccoutrements of space travel were silver, transparent and visible. The space ships were silver, so were the suits in which at least science fiction here made their odesseys. Their helmets and windows from which they peered out at the universe were transparent and space itself, through which they hurled, night and day, at the mercy of man's technology was invisible / transparent and invisible are adjectives which describe perspex (arcylic, plastic, polymer) very well. It is one of the most versatile materials to be produced this century. It was invented or discovered during the war and was used primarily for cockpits in planes as it didn't shatter completely when hit. It did not gain widespread use until the ninteen sixties. With the whole space age movement perspex was adopted by the design world as one of the key components in

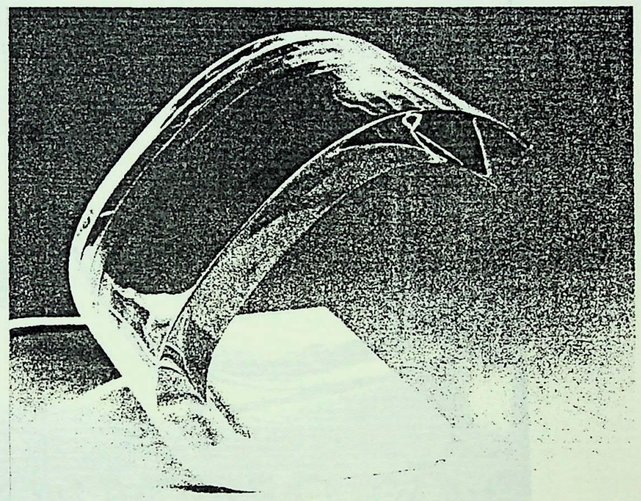
modern design. By its qualities it could give the illusion of weightlessness, anti-gravity, invisibility. Very soon tables, chairs and desks began to take off, for example Joe Colombo's Light for Oluce 19 or David Colwell's perspex desk 19 (see Fig. 2). The other qualities of perspex were it's ability to take on any shape, it could be bent, made into flat sheet, machined and injection moulded. It was available material. Plastics created the sharp shiny wet look of the sixties and were being used in all applications from toilet covers to eating utensils. It became an accepted material: a big change from the old heavy bakelite hairdryers and records. Plastics could give a highly finished look, straight from the mould without futher machining or finishing. This made it cheap and easy to produce in large qualities. It could be cleaned, was durable and light. It was soon associated with cleanliness and hygiene, where stainless steel left off plastics took over.

The clean hygiene plastic look is something that also appeared in the film 2001. It was full of sterile environments as was THX 1138 with gleaming white surfaces or huge never ending planes of white. This clean environment is something the modern housewife longs for, or so we are told. If we look at some chairs designed in the sixties we can see this kind of idea carried through. The Easy Chair by Peter Moyte from 1968 made from heat-formed sheet aerylic fixed to a chrome

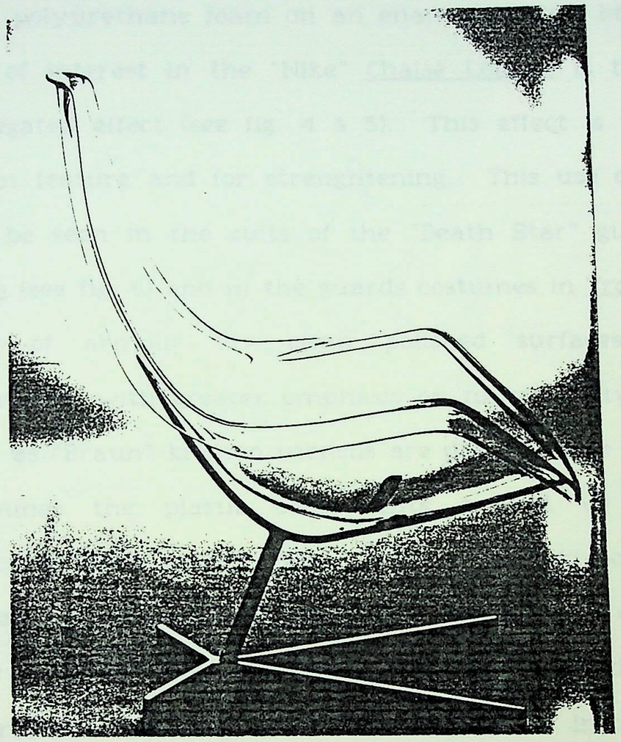


1 2001 - A Space Odyssey Stanley Kubrick 1968





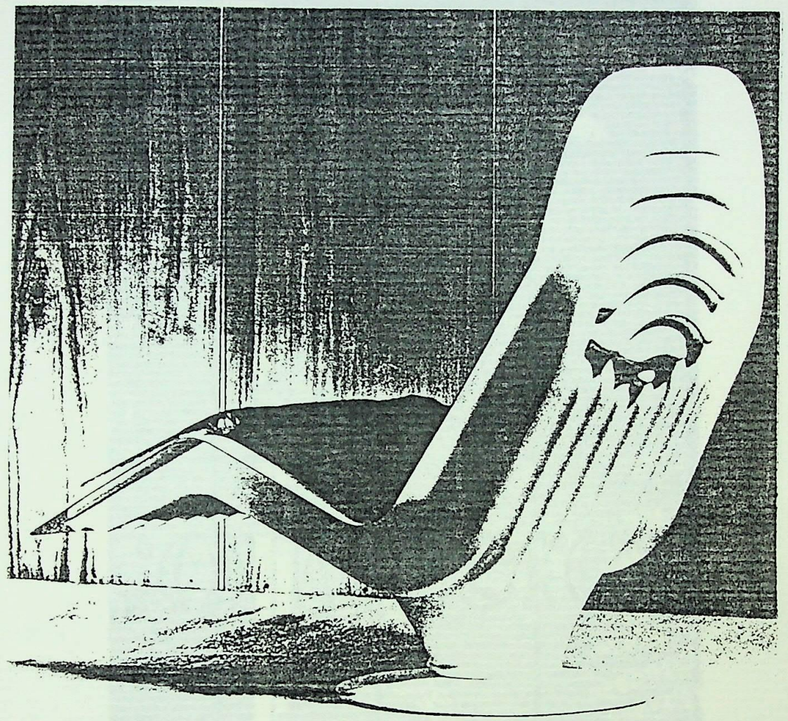
2	Colombo Table Lamp	Joe Colomb	1962



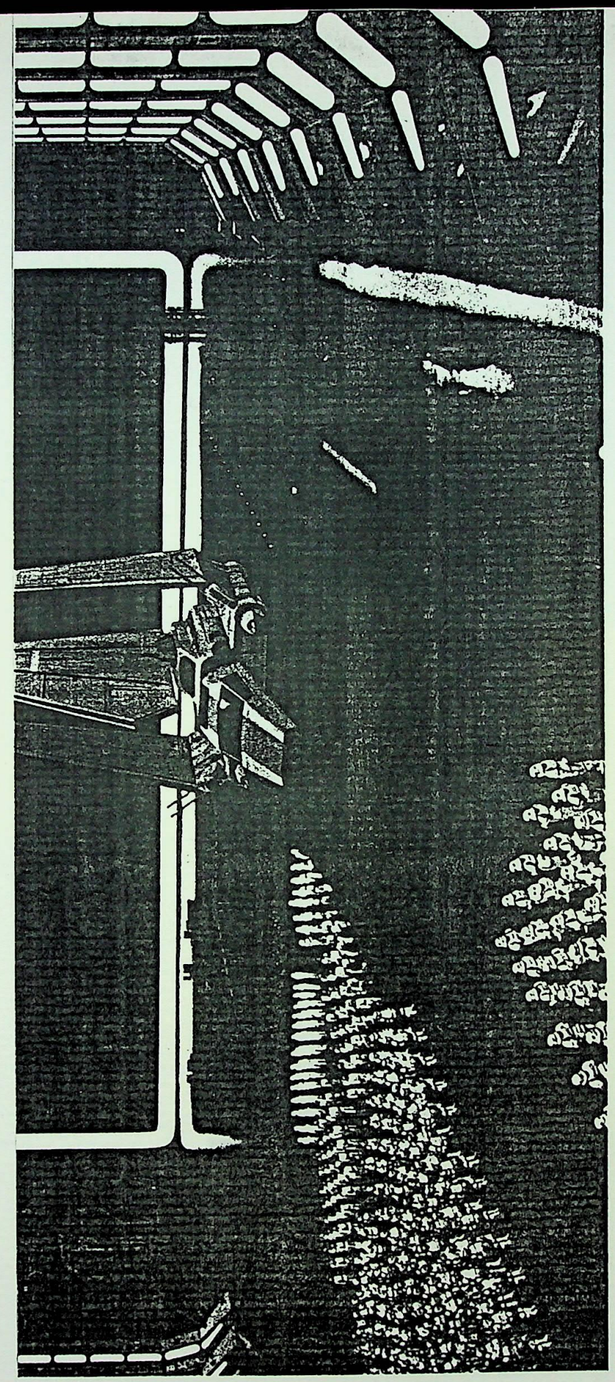
3 Easy Chair Peter Hoyte 1964

frame or the "Nike" Chaise Longue designed by Richard Neagle and E. Szego of 1968. This is a vacuum formed ABS base filled with polyurethane foam on an enamelled steel base. What is also of interest in the "Nike" Chaise Longue is the ribbed or corregated effect (see fig. 4 & 5). This effect is used as both design feature and for strenghtening. This use of plastic can also be seen in the suits of the "Death Star" guards in Star Wars (see fig. 6) and in the guards costumes in Tron 1982. Both suits of armour are clean polished surfaces with little decoration, with greater emphasis on functionality in the sane way as "Braun" kitchen utensils are designed (see fig. 8). If one examines the plastic components around us these same principles often apply. Take for example a ski boot, (see fig. 9) one of the most advanced human items in terms of ergonomics; they look completely futuristic. They are highly designed pieces of precision moulding, with adjustments for instep, ankle and toe positioning. Again we see the ribbed effect much later in Enrico D'Alto's dentist chair, the Samba 1982 (see fig. 10).

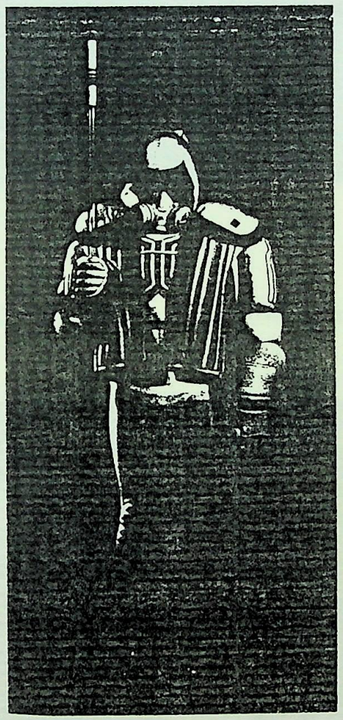
The link between plastics and their design with science fiction is best explained or seen through the work done by Raymond Lowey for N.A.S.A. in 1969. The project on which he worked was Skylab and lasted six years. He and a team of designers were set the task of designing living and working quarters for astronauts while they were in space (see fig. 11 &



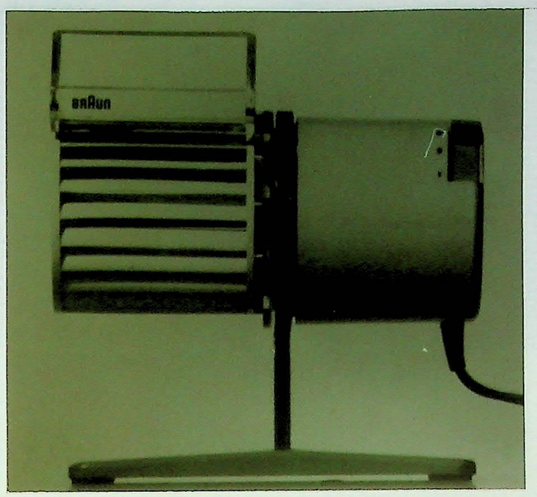
4 Chaise Longue Richard Neagle and E. Szepo 1968



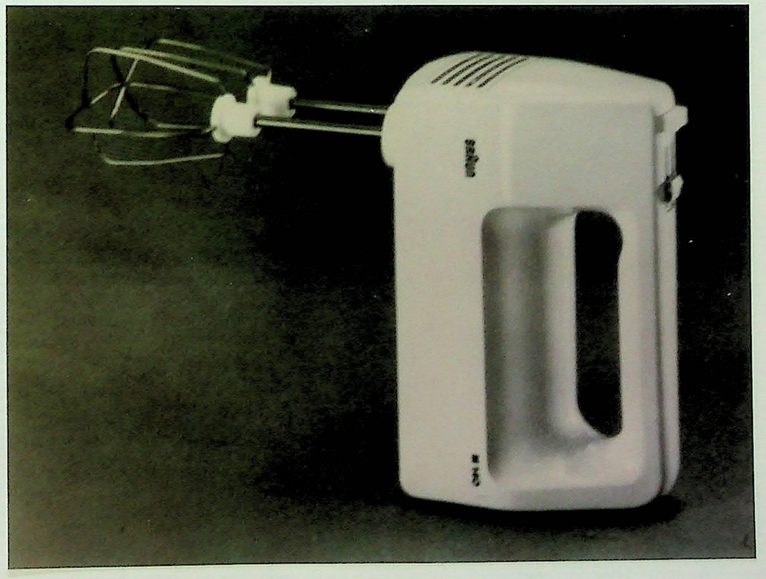
5 Star Wars 14 George Lucas 1977



6 Tron Walt Disney 1979



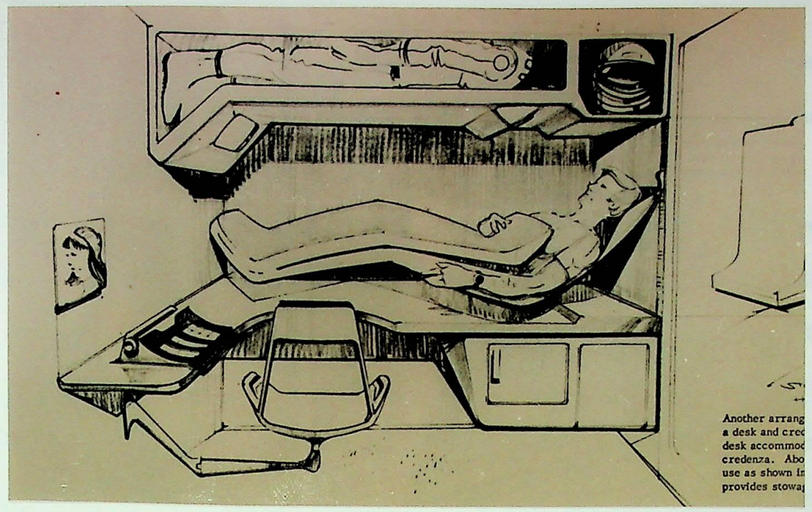
7 Braun Tangential Fan Dieter Rams 1966



8 Braun Mixer Dieter Rams 1967

9 Viking Skiboots Roberto Ostinet 1981

10 Samba Dentist's Chair Enrico D'Alto 1982



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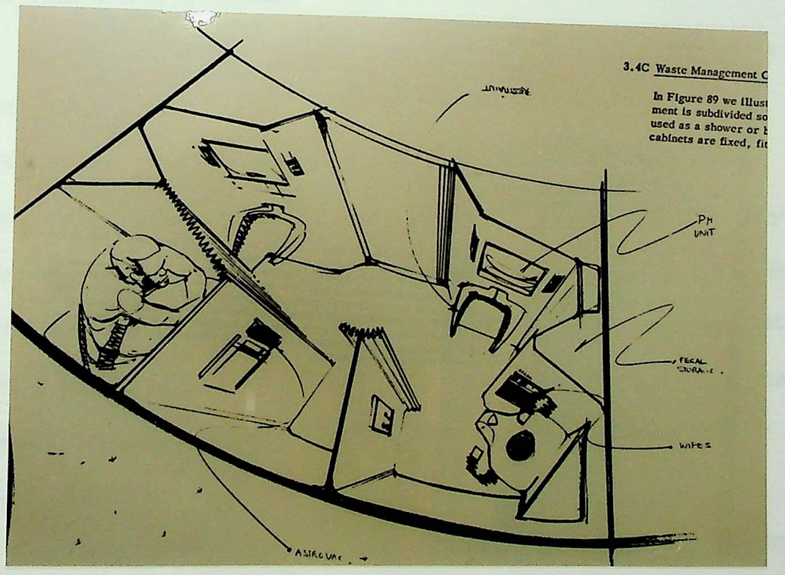
11 SkyLab Raymond Loewy 1969



3.4C Waste Management C

In Figure 89 we illust
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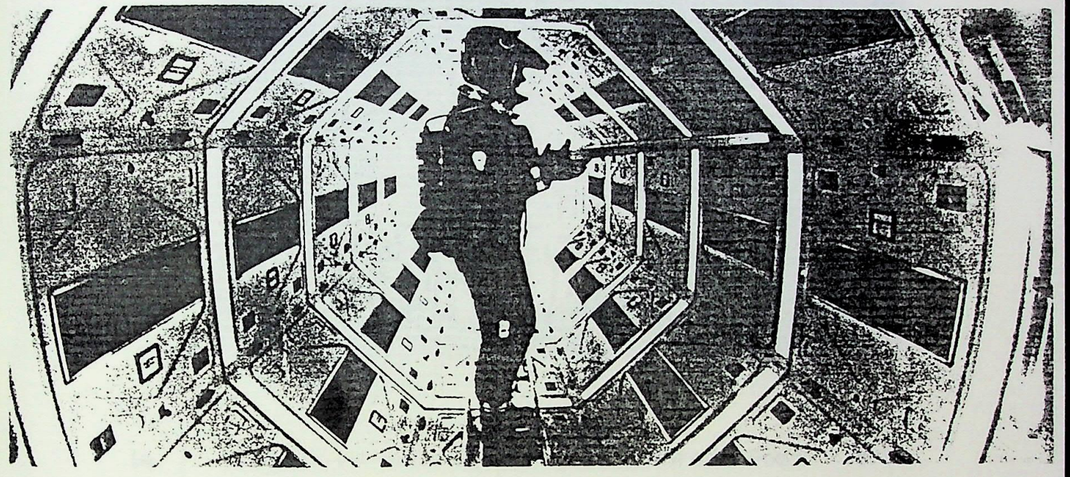
cabinets are fixed, fit

12 SkyLab Raymond Loewy 1969

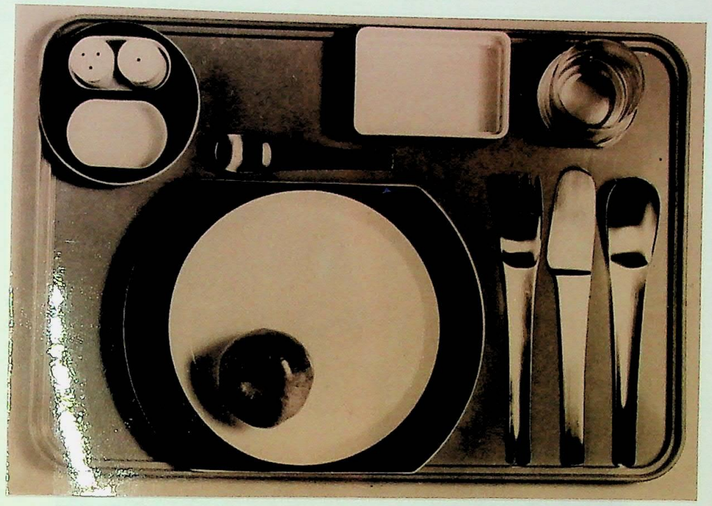
12). There were many essential factors involved in the design but hygiene and compactness were crucial. Hygiene because of the problems of space sickness (which was accompanied by vomiting) and cleaning of surfaces and compactness because of the limitations of the size of the unit which could be launched into space. Lowey wanted polished surfaces which were flush with each other so that they could be easily cleaned and so that one could not be injured by sharp protruding corners or edges. The materials had to be light but strong. Plastics were an obvious choice. This type of organisation, colour, texture are apparent in "2001" in the control deck of the Nostromo (see fig. 14). Thus we can see the crossover between the film world and the real world in design.

Silver was another dominant colour in science fiction and design during the nineteen fifties and sixties. There was widespread use of chrome in Amercian car design of the nineteen fifties (see fig 15) but which died out with the styling change in the nineteen sixties. With the swinging fashion of the nineteen sixties there was a re-emergence of silver, clothes, shoes, handbags and hats were made of materials which had a metalic appearence. Andy Warhol had a craze for silver and would dress in tinfoil when going to parties.

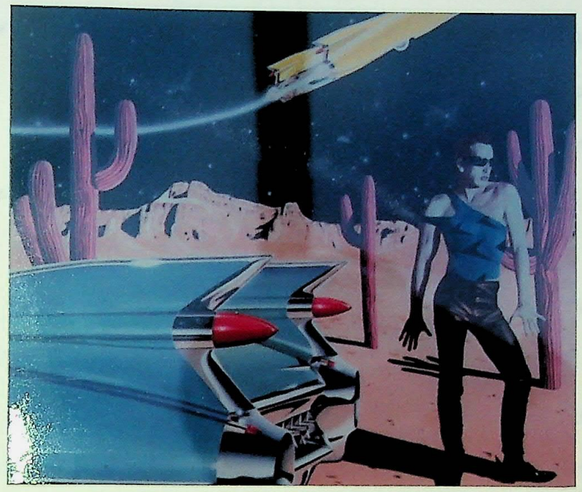
However silver was superseded as the science fiction colour when the "Mercury" space program 1959 - 1963, which



2001 - A Space Odyssey Stanley Kubrick 1968



14 Alitalia 1st class set Ambrosio Pozzi 1973



15 American 1950's cars

was silver, was replaced by the "Apollo 7" program 1964 -1972 which was white. From this time on white became the dominant colour for space imagery and still is today. The most recent programme by N.A.S.A. is the "Space Shuttle" which is white. This change may have been due to the feeling that silver was a mere hostile colour than white which is mere neutral. Again this can be seen in THX 1138 but also in "Woody Allen's" film Sleeper (1973). Here Allen finds himself in the future with all kinds of futuristic gadgets. From a design point of view it is interesting in that we are given a glimse of futurist industrial design for example the "organisation which us a sexual experience unit not unlike the compact shower unit designed by Fabio Lenci in 1972 Aquarius (see fig. 16). Here we see a one piece injection moulding, which is compact in order to save space. Perhaps the same reasoning has been used in this design as was used for Lowry's "Skylab".

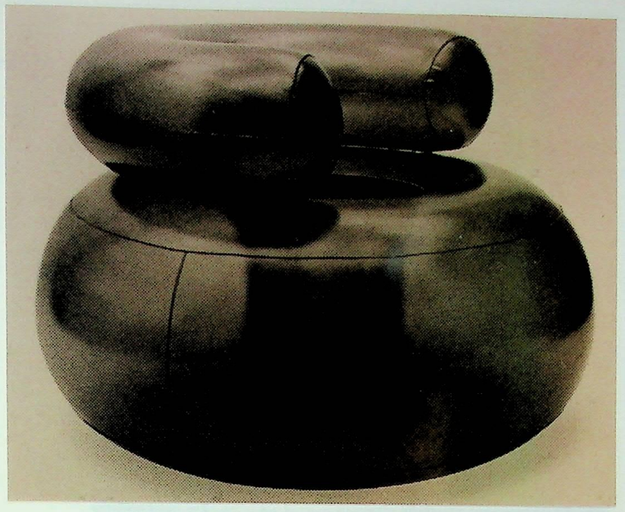
In these films we are dealing with the hardware aspect of science fiction. Hardware as discussed before this means guns, ships etc. but an other essential quality of it is rigidity, it is unyeilding, hard, macho material. In contrast to this is "software" and this is best seen in Barbarella (1967). This film has a completely different view of the future in terms of design. It was one of the great touchstones of the nineteen sixties foe the more psychedelic people. In the article "Triumph

16 Tevco Shower Unit Fabio Lenci 1984

of software" Banham places the film within the context of radical pop architecture. "If we needed the concept of a furlined spaceship (and we did even if we didn't know it)we have it now. Barbarella is about responsive environments of one sort or another. Responsive environments in the sense of not being rigid and unyeilding: an ambience of carved pliable, conditions breathing adapatable surfaces. Fur is exactly such a surface. The whole vision is - significally, I suspect one in which hardware is fallible, and software (animate or otherwise) usually wins". Barbarella explores these and other aspects of inflatables in depth and at lenght.

Inflatable plastics became very popular within the whole "pop art" movement. For example the inflatable clear plastic chair by Verner Panton in 1964 (see fig. 17). In the same year Gunner Anderson designed a urethane foam chair (See fig. 18). It has the software feel to it of the inflatable but is one step beyond, bordering on the alien. We can see the influences of this software movies on design in the "Jety" armchair of 1978 by the Italian designer Mario Scherchenbauer (see fig. 19). Software in film and design was using the same bases as the user friendly products of today.

With the landing of Apollo 1 on the Moon, science fiction which been residing in a purely fantasyworld, would have to pull up its socks and start to design space ships and



17 Inflatable plastic chair Verner Panton 1984

18 Urethane Foam Chair Gunnar Andersson 1984

19 Jety Fur Chair Mario Scherchenbauer 1969

equipment similar or at least related to already existing technology.

CHAPTER 1

In a broad sense, the theme of Science Fiction film has always been escapism. It relates back to the idea of the "road west", when people from all over the world, Europe in particular, began emigrating to America in the late nineteenth century and in the war years in an effort to escape their troubles and destruction. They moved west in search of new land and new frontiers; having arrived at the geographical limits, San Francisco and Los Angeles, they needed other quests. With the arrival of 'fifties cars and styling such expectations were fulfilled, new imagery was introduced, rockets, flying machines, luxury and status. Everybody wanted to have a part.

It was only a short step from this to space. J.F. Kennedy initiated the dream of an American on the moon, inspired to a great extent by the Russians with Sputnik. The first man on the moon was going to be an American; nobody liked the idea of sleeping under a "Red" moon. With this people became acquainted with the idea of travelling through space, visiting Mars, "to go where no man has gone before." (1)

This then was the reality of space fiction in the nineteen fifties, but long before then science fiction writers had been envisaging voyages to strange planets and meetings with strange beings. H.G. Wells, in his story The Time Machine (1895), tried to predict what the future would be like in thousands of

years. There were writers who also predicted the future but much closer to our own times, Aldous Huxley's Brave New World (1932) or George Orwell's Nineteen Eighty Four (1949). These men painted a grim picture of what the future would hold; an anti-utopian world of fear and repression, not unlike that of Philip K. Dicks book Do Androids Dream of Electric Sheep?, renamed Bladerunner, (1981). Both it, and Nineteen Eighty Four were made into movies, however, they differ in philosophic content, as well as from a futuristic conceptualist viewpoint, but, they are both Science-Fiction.

I believe that Bladerunner is one of the most exciting science-fiction films from the point of view of design and a vision of the future. All the sets, machines, props, and costumes were designed specifically for the film by a number of different designers. For this reason it is of great interest to us to see how these designs were conceived. In order to find the roots one must consult the original texts.

It may seem that all fantasy is alike, however, I think that when dealing with Science-Fiction we are dealing with something more than just strange places, people and objects, we are looking at our future. This isn't like Sinbad the Sailor or Robinson Crusoe, but what we see before us is a whole new world in which the themes might be similar but the environment is new and fascinating.

Science fiction may suffer from historicism but it is not historic. It is pushing back the frontiers of the modern world; it is exposing us to strangeness in every aspect; it is the avant-garde for the masses.

Alien (1981) is a good example of this kind of Science fiction film. It tries to address feminist ideas on role reversal in so far as the leading role is played by a woman, Sigourney Weaver as Ridley, the heroine. The second film Aliens (1986) carries on this theme, but now in terms of womanhood and the fight between two females for the possession of a child. This is in tune with the current theme of the "baby boom" in Hollywood at present. But this is science fiction, space age, with rockets, lasers, huge intergalactic spaceships. Here we have the opportunity to explore new ideas and new concepts, to be tested on a wide cross-section of society, young and old. How better to test the reaction to a new product or concept, than through a film in which it has been a key component?

Film is a very powerful medium for influencing or exploiting an audience it can reach a huge majority of the public carrying messages which are or can be coded. In recent years there have been a number of films on the Vietnam War which have had a profound influence on public opinion. People suspend their belief, in film as well as television and radio, which perhaps shows their openness to new ideas. A good

example of this was when War of the Worlds, H.G. Wells' novel was first broadcast in America and which gave rise to widespread hysteria.

Such views are not however totally fantastic or alien in their approach. Realism is a key factor. It is sometimes ignored in order to prevent alienation of the audience. In the case of science fiction, the material which is shown must be familiar to the audience or tangible through prior knowledge of the medium. For example, the belief that other creatures could exist in the universe besides human beings, or that Robots can speak.

However, rockets still boom and lasers whizz in space where there is no atmospheric medium to carry sounds. As the publicity caption for Alien ran: "In space no one can hear you scream".

These effects are included to dramatize, in order to heighten the excitement and involve the audience to a greater extent. The reverse can also be true; for example 2001, A Space Odyssey (1968), had ninety-nine minutes of silence, while the only signal was visual. This tended to give an eerie feeling to the film, as did the shot where the hostess travels through one hundred and eighty degrees in order to get to another deck. People, however, need familiar signposts in either case; themes such as good versus evil, or hero and damsel in distress. I

myself admire these films for their "hardware". By hardware I mean the gadgetry of space, the ships, cars, guns, planes, etc., which propel the viewer into the future.

CHAPTER 2:

The Nineteen fifties is a good starting point for such a future. In the years that followed World War Two people became familiar with flying and rockets. During this period space imagery began to appear along with streamlining in everyday life. This too was the beginning of the "Cold War" and the era of the 'Super Powers'. 'Fifties film, in particular science fiction film, mirrored many of the fears that people had about such things as world domination and invasion. Such films as It came from Outer Space and Invasion of the Body Snatchers, acted as allegories to illustrate the conflicts in the world, the threat of communism, "the red under the bed", or McCarthyism. These films acted, perhaps in an indirect way, as propaganda for the U.S. Government to enable them to justify the massive amounts of money put into arms production, as part of the "Arms Race", initiated by J.F. Kennedy. In the nineteen-sixties a new attitude began to take root. The direction changed from allegorical to critical. This was the "hippy" period of love and peace. It was a time for social comment, a revision of ideals. This movement culminated in films like THX 1138, by George Lucas (1969), Kubricks 2001 (1969), and Barbarella (1967).

In 2001 we have the answer to the question "Who will

win World War 3?" We are flown to a space station by Pan-Am airlines (or is it Space-lines?) arriving at the Hilton, where communications are handled by The Bell Company - It's the Multinationals!

George Lucas' film deals with the degradations of humans to a semi-Robotic state where everything is provided for, sex is illegal and hygiene and minimalistic function are deities.

In stark contrast to this film is Barbarella. Dr. R. Banham places it as the first post-hardware S.F. movie of any consequence. (2) This film is about responsive environments and inflatables. It has none of the hardware associated with technology, it is a statement against it, disposing of the crackle - finish metal, knobs and switches.

Perhaps the most significant movie of the 'seventies was Star Wars by George Lucas (1977). It was the biggest box office hit ever, not only in the "sci-fi" category, but across the board. It is strange to see such a film come from an era in film which is considered "junk". Perhaps the reason for this is the fact that films from this era deal with entertainment for entertainment's sake, rather than for any other end. The feelings of well-being, progression and expansion were dominant in the 'seventies; they were boom years and so this is mirrored in the cinema. In Banham's article "Summa Galactica" he

processes that Star Wars appealed, through it's simple and archetypal plot, to a vast cross-section of society, and captured the public imagination by sticking to and updating well-known and loved literary and dramatic conventions, thus deliberately locating itself right in the centre of Pop Culture. (3)

Predicting the future plays a large part in both media and design. The timing of the launch of a product or film on the market can be critical to it's success. It's reception is preceedded by months of research; (in fact it is six years before a car is launched, from drawing board to production.) One of the most famous examples of miscalculation in terms of styling and launch time is the Ford "Edsel" of 1958. It arrived at a time when white walled tyres, chromes, etc., were coming to an end, and economy was becoming a greater concern. The Ford Edsel was a disaster - only 40,000 cars were sold in comparison to one and a half million of other models. Roy Brown was it's designer and after his mistake he was sent away from Detroit to work in England where he was more successful with the Ford Cortina.

In hindsight we can see the penalty for misinterpretation of the market, or of public opinion. With the state world wide communications at present the rate of change of the market or public opinion has speeded up considerably, to a pace where fashions change from year to year. I believe that design

is very much dependant on fashions; that in reality the industrial designer is designing to sell as a first priority, and if he can incorporate ergonomics and a greater aesthetic into the product for the same price, well and good. In order to sell well the designer must be 'with it' and if this means using the current colour scheme, which is "in" this year, then use it. If design is dependant on fashion, then fashion is dependant on communications, such as television, the press, radio and film. Television is probably the strongest and most influential medium, because it has the greatest access to people. It can therefore be the best tool for creating new ideas or fashions. However, despite it's accessibility it is a passive medium, unlike cinema or the press. Cinema is an active medium causing it's audience to react, either positively or negatively.

I believe that there is a relationship between industrial design and science fiction film in that industrial design is involved in creating new ideas or concepts for a society using existing technologies to produce the product, whereas science fictional design or conceptualisation is involved in creating ideas or concepts for a society which does not exist, using technologies which also do not exist. Both fields are fantastic, but one is restricted. However, the use of concept design in film can have an influence over it's audience, in such a way as to make them more aware of present design or to create a new demand,

which can be reflected in current design trends.

CHAPTER 3

Science Fiction Film Of The Last 10 Years

I think it's worth while looking at Science Fiction and the role that design has played in creating atmosphere. To my know-ledge there is not a book to be found which discusses industrial design in Film however there is one on architecture Silver Dreams and one on costume design Hollywood and History. Perhaps the reason for this is the size of such an undertaking or simply the difficulty in obtaining the information, not much literature is available but from looking at the films and following the designers a clearer picture can be seen.

In tackling such a subject as this one must limit the field and I propose to look at those films which have been made roughly in the last decade - between 1977 and 1987. I think that these films can be broken into two groups, those which rely on environmental design and those who rely on concept design to create the illusion. To do this is to generalise greatly but it is easier to plot. In both cases fiction is used and suspended disbelief is a necessity. Into the first catagory we can place films like Aliens (1986), THX 1138 (1969), Tron (1979) and the second catagory Bladerunner (1981), Star Wars (1977), Dune and 2001 (1969). An important factor in each of these last two

films is the industrial design used, whether it is of the past, present or future, but also is the fact that industrial designers were employed in the set design and product design. Among them Syd Mead, Jim Burns and G. Geiger. Syd Mead has, apart from his industrial design work, worked as part of the production design teams on such films as Star Trek, Alien, 2010, Tron and Bladerunner. After training at the Art Centre College of Design, Pasadena, Californis, Meads diverse career has included industrial design work with

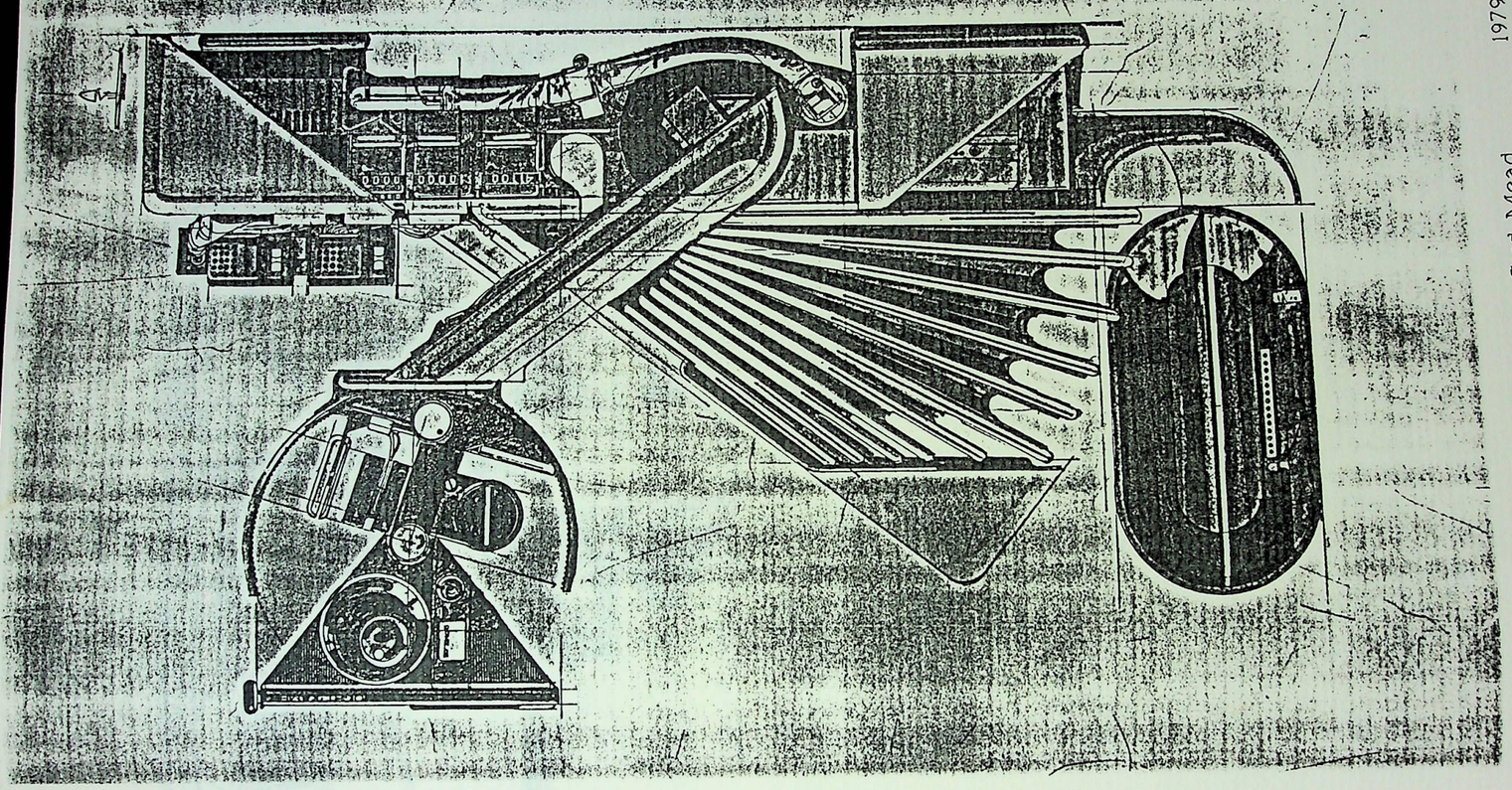
B.M.W., Chrysler, Honda, Philips, Singer and Volvo collaborated with Raymond Lowry, Giorgetto Guigiaro and Film Director Ridley Scott and assignments to design luxury yachts, private jets and flashy cars. Mead continues to operate a small design office in Los Angeles, where he is responsible for virtually all the drawings his firm produces. Meads works are striking expressions of an array of possible futures amd each is loaded with exceptional credibility. Meads work gives the illusion that all that is needed to assemble such a place or machine is a team of craftsmen to build it. His drawings combine industrial design-like functionality with extra-terrtesteral vision. This ability to strike a balance between the familiar and the fantastic is at the core of Meads Art. Meads designs for films, especially for Bladerunner have been described by some critics as pessimistic, with anti-utopian over-tones. But Mead's bleak

grim urban settings, worked into the movie by matte printing suited the dehumanized, deststemized future called for in the script. (5) Mead says "creating the designs for Bladerunner was a challenging process of creating an alternate reality".

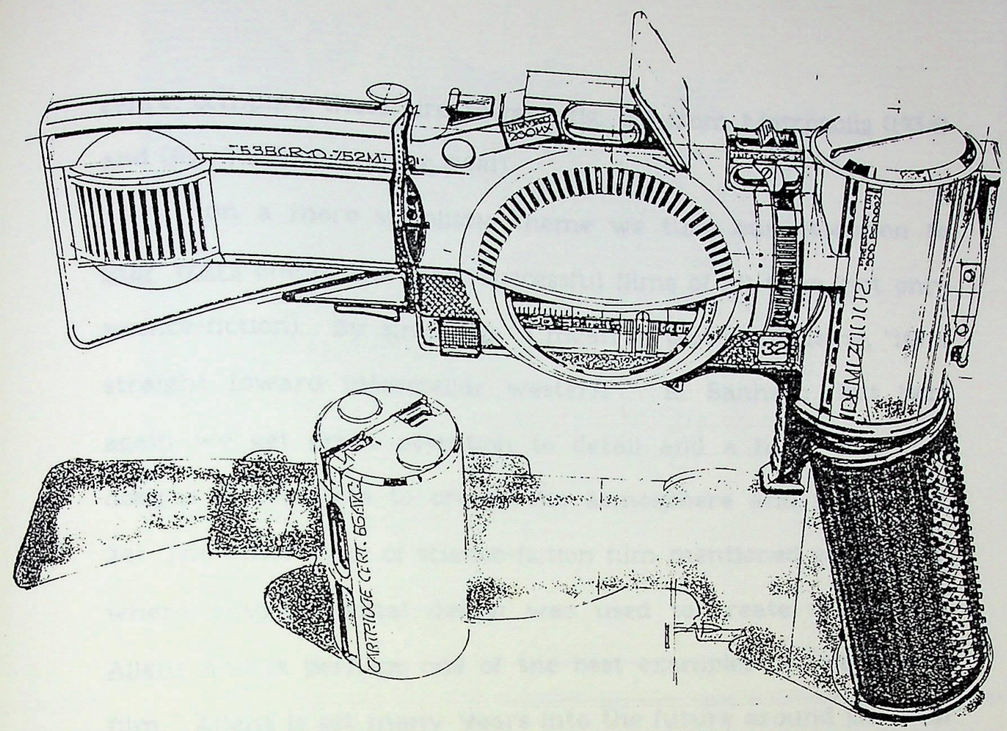
The importance of such a film is that designers were and are being used in film production, a field which is relativatly untapped at present. I think that such design work has been carried out with integrity. Mead doesn't offer us any mumjo jumbo design, instead a clear well developed formal design. With this in mind one can look upon science fiction film though (not all of it) as informative, and educational and thus not in the junk catagory. We'll see later how certain motifs can be recoginised as running throughout Science-Fiction and its implications.

After vehicles and street set designs Meads next task was to design all the hardware accessories needed to create the highly detailed world of Bladerunner. The Veright -Kamph machine (fig 20) a portable device used to detect replicant response patterns, was visualised as having the same delicate menace as a tarantula sitting on an executive desk. Deckard's gun design (fig. 21) ended up as a proposal for a telephone handset. (6)

These designs and attention to detail are among the factors which place Bladerunner in the classic science-fiction film



20 Voight-Kamp machine 43 Syd Mead 1979

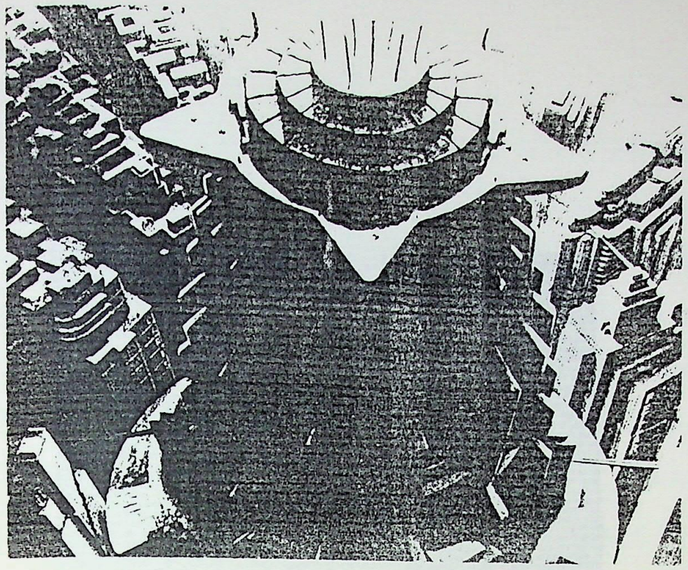


21	Deckard's Gun	Syd Mead	1979

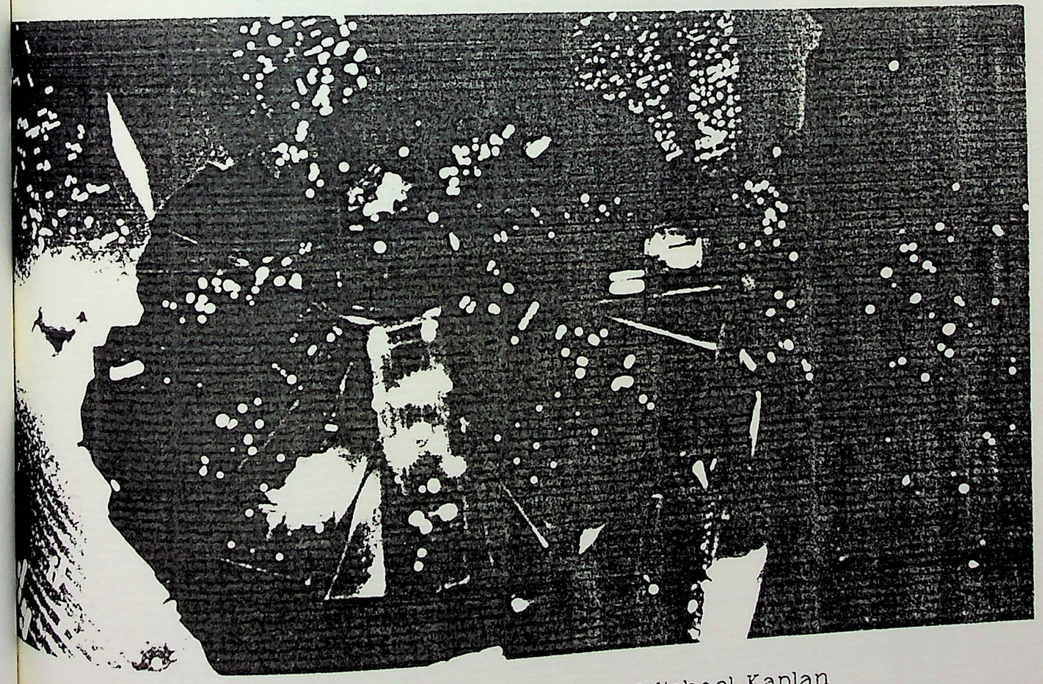
genre, compare these tire towers (fig. 22) from Metropolis (1934) and (fig. 23) Bladerunner (1981).

On a more simplistic theme we turn our attention to Star Wars one of the most successful films of all time (not only science-fiction). By simplistic I mean in plot and theme, "its a straight foward interstellar western". R. Banham. But here again we get great attention to detail and a huge varity of designs which help to create the atmosphere and ilusion (fig. 24). The other type of science-fiction film mentioned earlier was where environmental design was used to create the illusion Aliens and is perhaps one of the best examples of this kind of film. Aliens is set many years into the future around the year 3000 AD where humans have colonised outer space. Sigourney Weaver as Ridley plays the part of a consultant eye witness to some mysterious happenings on a new world "colony" where cummunications have been cut. This film is "high-tech" guerilla warfare in a steel maze (8). As the title suggests the whole film revolves around the alien which has to be destroyed and for half of the film our vision of science fiction in its more common forms is absent except for the presence of the alien.

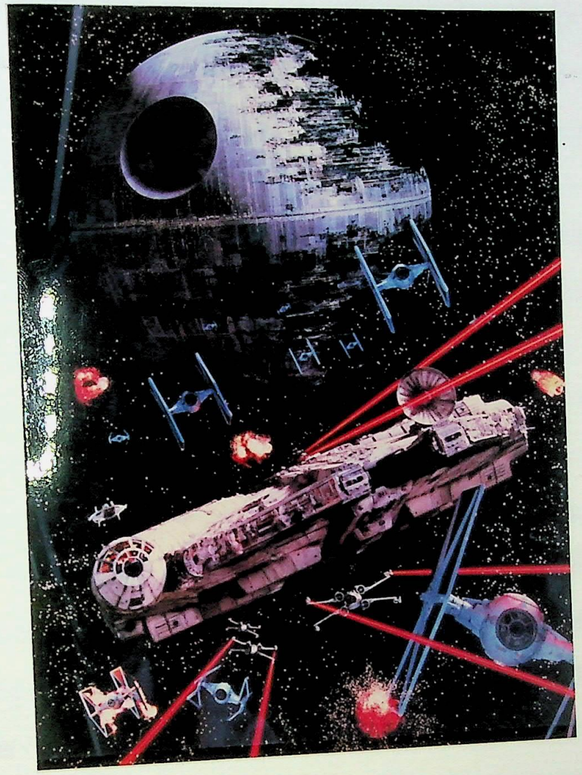
What differentiates this film from Bladerunner or Starwars in design terms is the fact that many of the industrial design pieces are taken from existing state of the art technology; for example, the guns, the body armour - (american



22 Metropolis Tower Fritz Lang 1927



23 Bladerunner Tower Michael Kaplan



24 Star Wars George Lucas 1977

football protection) the armoured personal carrier (a bridge car used by engineers to check the structure of the bridge hence too low profile) the human forklift (an adaptation of an already existing design which has no legs) then inside the colony station are an Archimedes anglepoise light a microwave oven and a fruit juice blender by Beach Hamilton. So then how can we be deluded by such ciommon place objects? I think that it is the environment that makes the difference. Lighting is the key to the environmental atmosphere, we are in a smokey, cloudy room with low ceilings and glass partitions, overhead there are two spot lights which are the only light source in the room. Things become obscured and our amaginations take off. This does not distract from the film in any way and one must be constantly awake to spot such things among the more futuristic pieces for example the deep sleep capsules or the alien holding tubes.

What is interesting about this film and the role of industrial design in it, is why or how can everyday objects stand against deep sleep capsules etc. and why or how people see the huge difference of intent? By this I mean how can a designer produce a product for today which is also suitable for tomorrow but which fits into both worlds without stretching the imagination. What is it that makes the anglepoise dateless? Is it a design flaw that the designer made when choosing his

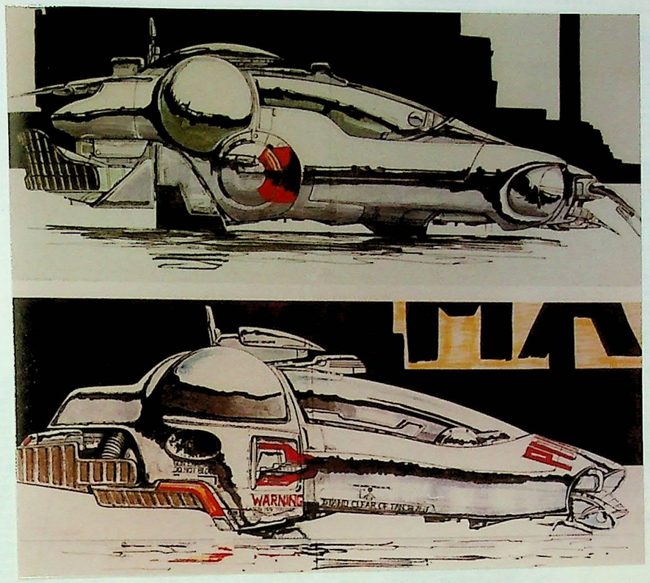
market or is it a recommendation? I believe that the industrial designer should be at the cutting edge of society. Therefore he is trying to anticipate the future through his designs and should be commended for this. But his designs must be in context with present day living conditions and standards, so how then can he reconcile the design of a product which is equally suitable in two different environments? The answer may lie in the fact that science-fiction deals with the familiar presented in a different way or style.

One wonders if science-fiction is more than just escapism or entertainment for its own sake? I think not, at least from a design point of view. When looking at science-fiction one can begin to identify certain tangible "motifs" which recur over and over again. Motifs which are used in order to convey the feeling of the future as commonly accepted by the people "en masse". I believe that there are certain codewhich are followed in the science-fiction which have evolved through the years and which are now synonymous with science-fiction. If these can be identified by the designers they can be used in order to propel a product into the future, to make it look state of the art, modern efficient, hygienic, much like the rocket and plane theme of the 1950's cars in America.

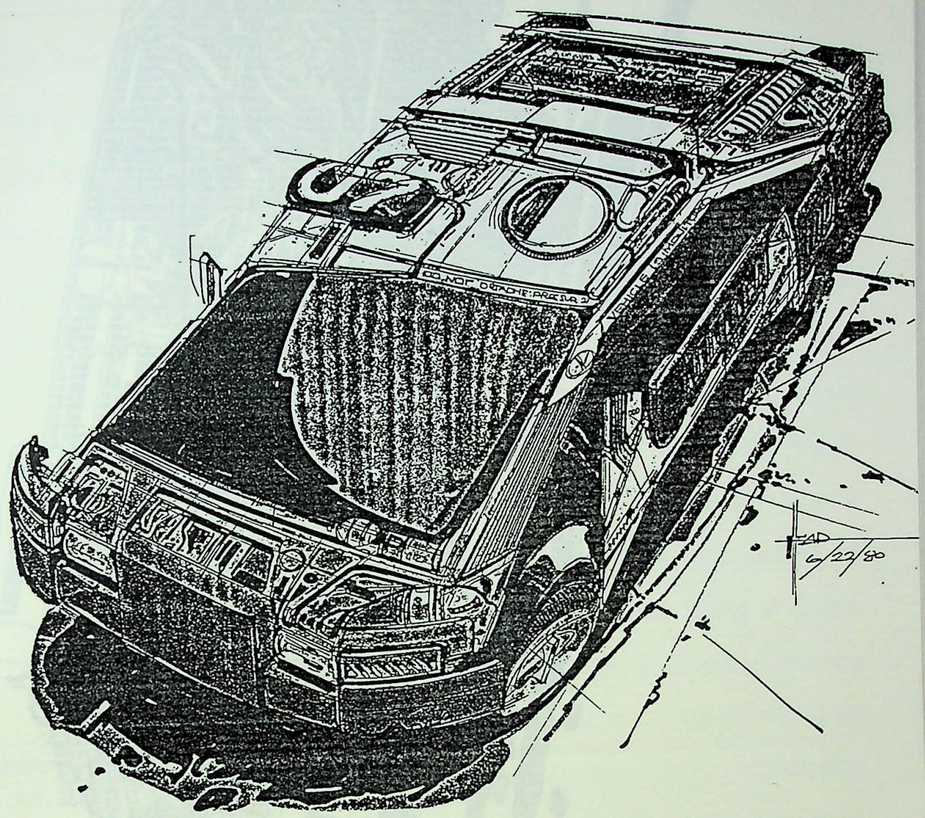
Such motifs accur in graphics, form, function and colour. The manner in which these are carried out varies from

design to design but each has certain characteristics which remain the same. ie. Large characters for lettering which are slightly faded or scraped, done in a bright or strong colour forms which are evolved from a combination of smaller pieces fitted together with tubes and rockets resulting in a piece which looks like it has been made from a number of scraped vehicles. And functional aspects whose functions is not very apparent but are semi-recognisable.

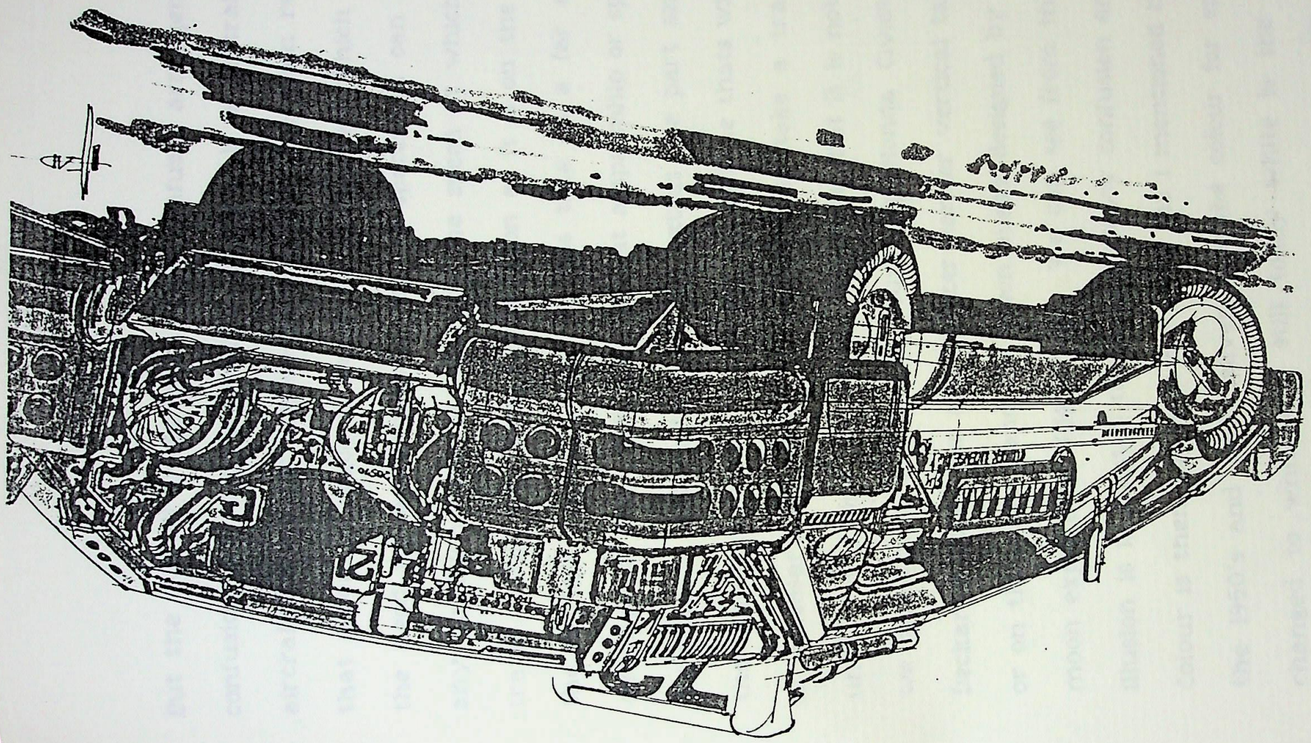
The first area I would like to look at is the form of the pieces in Bladerunner. The police car "The Spinner" which was designed as a flying car with internal lifting turbines in order to retain the same recognizable shape regardless of whether the vehicle was flying or sitting on the ground. (fig 25) The shape evolved from a wedge to a curved profile suggesting downward thrust. Retractable wheels were added for street use. The over all shape is aerodynamic with rounded edges, air intake vents and exhausts. There is an organic feel about it because of its moulded free forms almost like an alien creature which slides slowly along with pincers and nasal passages at its front, which is like a mouth. It has spheres and domes with highly reflective surfaces for greater vision when travelling at speed. On to a basic shape are placed large bumbers, at the back exhausts, tubes for ventilating the vehicle turrets on top, antenne, beak like protrusions for braking at speed when flying.



Concept sketches of Spinner Jim Burns 1980



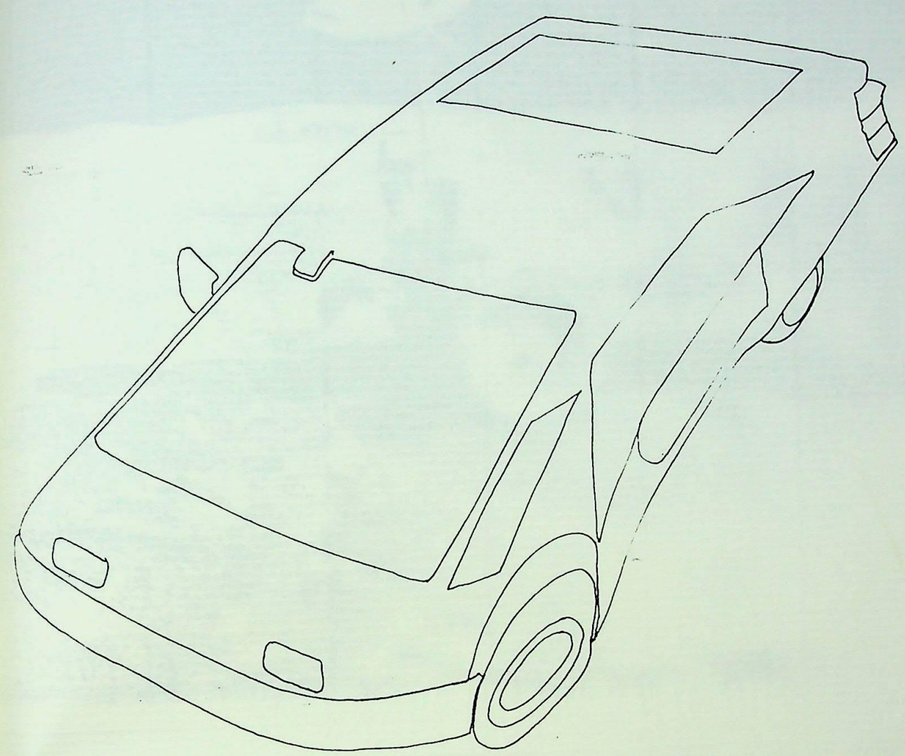
25 Spinner Syd Mead 1979

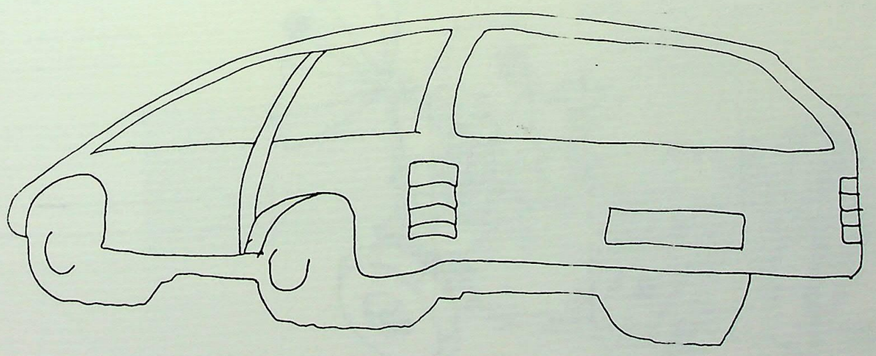


Spinner

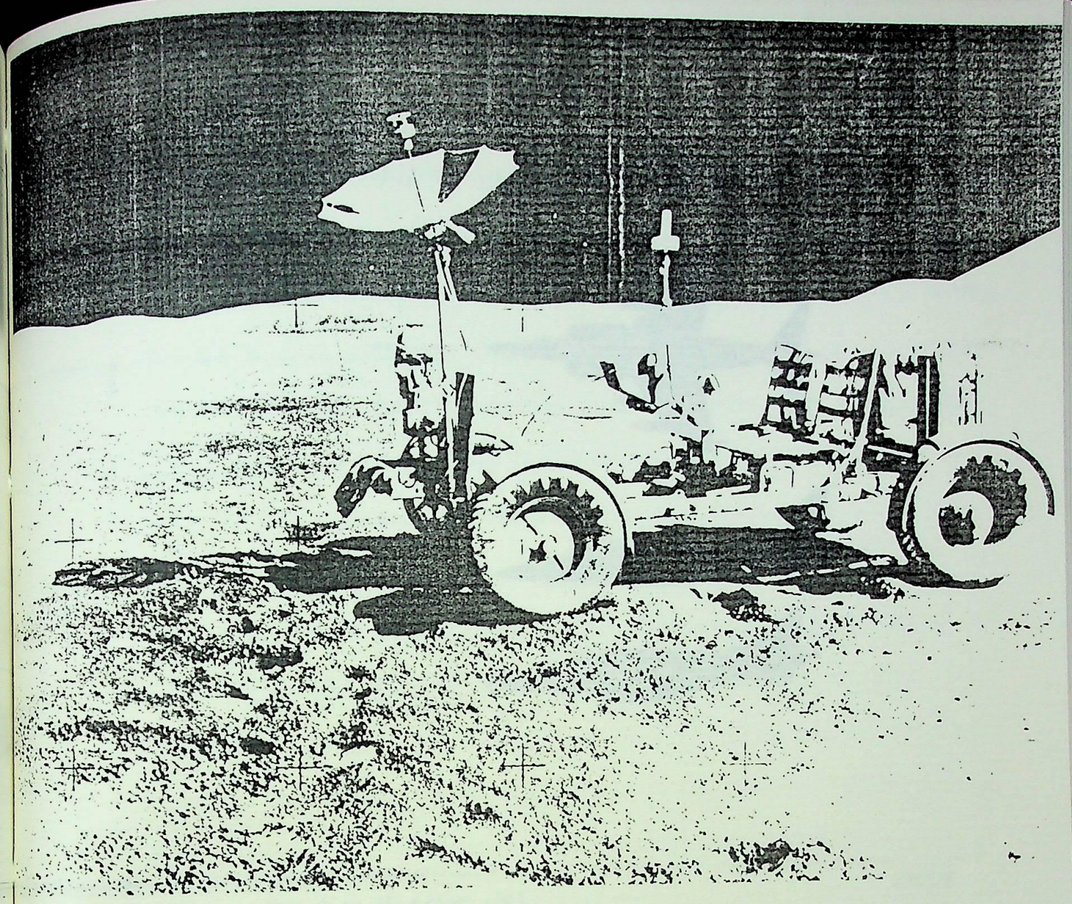
Syd Mead 1979

But the overall shape looks like a confused arrangement. This confusion and conglomeration of pieces is a central theme in aircraft design for science-fiction films, the main reason being that when in space there is no atmosphere which disposes of the need for aerodynamics and so spaceships can be built in any direction without affecting the speed at which they can travel. This also leads to confusion as it is on the side or on the bottom meaning that objects take on a far more three dimentional feel. When we look at a spaceship or space vehicle we tend to believe that all the extras are part and parcel of the functionality of the vehicle, we assume thats what is there is necessary, however, if we were to take a tracing of the under lying form (fig 26) we could see that it is not so alien as we thought. Prehaps a souped-up Honda Civic? Compare Deckard's police car and Hawker-harrier vertical take-off plane or on the other hand the moon buggy designed by N.A.S.A. for moon exploration (fig. 27-28). We can see from this that the illusion is is created through intricacy confusion and intricary. Colour is then the next big area. As I mentioned before during the 1950's and 1960's silver was the colour for space, it then changed to white and still today white is the predominant colour or at least different shades of white. The reasons for N.A.S.A. using white are purely cosmetic and now due to expense this is being disposed of in preference for origional



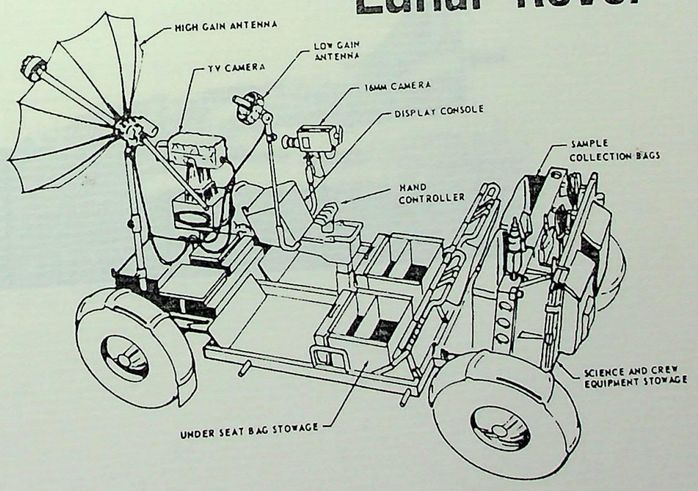


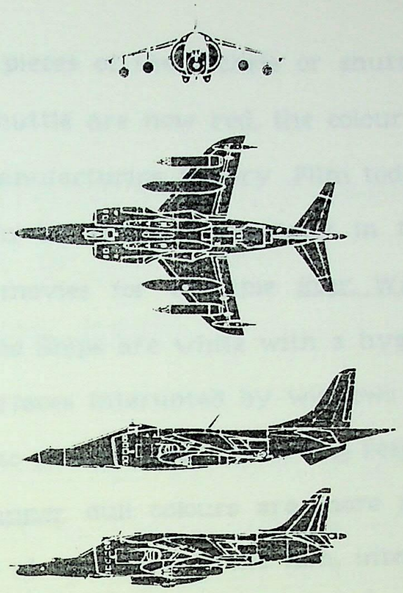
26 Tracing of Spinner Syd Mead 1979



27 Moon Buggy, Apollo 15 N.A.S.A. 1971

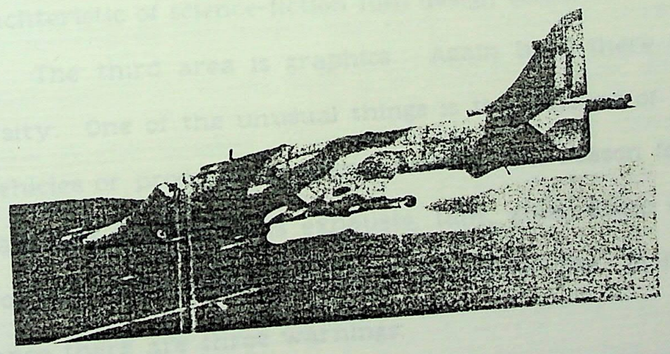
Lunar Rover





1960s

28 Hawker Harrier Jet



colours of the different pieces of the rockets or shuttles. The booster rockets in the shuttle are now red, the colour of them when they leave the manufacturing factory .Film today seems to follow the lead given by N.A.S.A. especially in the more popular science-fiction movies for example Star Wars, Star Trek, 2001 and 2010. The Ships are white with a hygienic feel with highly polished surfaces interupted by windows or lights. The use of white tends to give an eerie, unnerving response. In both Alien and Bladerunner dull colours are more prevalent, this is prehaps because of the mood of the film, intense, anti-utopian, horrific. This mood is carried through by products used in the films which are rather drab, unclear functionality for example in the armour, guns and vehicles used.It is difficult to pin down the colour theme but I think it is correct to assume for the most part, hygiene and safety are dominent charachteristic of science-fiction film design colour.

The third area is graphics. Again here there is much diversity. One of the unusual things is the amount of lettering on vehicles or products in science-fiction. One reason for this is the amount of dangerous exhausts, fans, guns, doors etc.. On one of the concept sketches by J. Burns for the "Spinner" for instance there are three warnings:

I) "GUN EXHAUST DO NOT BLOCK"

II) "WARNING:
GUN MAY TRAVERSE WITHOUT WARNING"

III) "STAND CLEAR OF FAN BLAST"
"H/C VANE KEEP CLEAR"

The lettering is all in block and seems to be flaking off here and there. Warning signs are in red as today but the messages are jargon, helping to create the illusion. The signs lend complexity to the machine, demonstrating that it is a high-tech piece of engineering and should be used with care, but also it creates the feeling of hostility much like that of a surgeons scapel.

The reason for such big lettering is for identification when passing at 700 miles per hour. Like the cross on the German planes in World War II or Amercian flags painted on the side of the shuttle. This can been seen to a lesser degree today on machinary or even kettles, iron and heaters.

"DO NOT COVER"

But the difference is that today these graphics are concealed with the exeption of the brand name/logo, whereas in science-fiction these are incorporated into the design and made a feature of it.

CHAPTER 4

Science Fiction Design Method and Conclusion

One area of science fiction film or design which has not yet been addressed is the philosophy, inspiration or influences which have been adopted in order to create the designs for the different films. In an area of film as big as this which creates a multitude of designs for each film, each with a different emphasis, it is difficult to agree on one particular method of design. There is a similiarity between science-fiction film and industrial design consultancy work in this respect. A designer may adopt a superficial styling technique in order to personalise his work and make it immediately recognisable but is this a legitmate philosophy or merely cosmetics?

When a designer is given a brief he must approach it with an open mind and not let other influences or preconceptions influence his judgement, lest those influences be inaccurate for example, that all hammer handles need to be straight or that all cars need four wheels. In this way every new design would be different, however two factors restrict this, one is historisism the other truisms. By truisms I mean certain broad rules which can be applied to a new design which will limit the creativity or make the designer more ingenious. For example British Standards or ergonomics. On the other

hand one might always try to use geometric shapes or the like, however by doing this one is returning to the origional problem of applyng preconceptions, preconceptions which may not suit the particular application. To say that there is one philosophy of design which is correct is a sweeping generalisation, because of the diversity of approach to design. The Greeks used the Golden Section whereas Dieter Rams of Braun propagated the idea of form and function where the aesthetics and object represent the function. The fact that two designers adapt different philosophies is not a problem, what is important is that they adopt them and personalise them to suit their own individual style.

However it is a little more difficult to apply these same systems to science-fiction design as it is dealing with a fictional world where one can create objects using new or unheard of materials and alien processes for those materials. These fictional designis differ from Visionary Architecture in that Visionary Architecture is concerned with architecture for the future, an architecture which is trying to predict as accurately as possible the human needs in that time. While creating, these architects don't let their imaginations run wild, they must predict the future in terms of today using statistics to forecast. I believe that there is a difference between science fictional design and "Visionary Architecture". Science fiction

design does not attempt to design in terms of today. In this way we get greater flights of fantasy in science-fiction film design.

If science-fiction design has no set method or philosophy of design can one say that it is not an intellectual exercise but merely a process for making highly expert illustrations. Industrial design has two main systems of thought, the philosophy of aesthetics and the philosophy of function, industrial design is the union of both these systems, the unity of classical and romantical thought and through this union a quality object is made. I believe that science-fiction design makes use of only one system, that of aesthetics, it concerns itself with image and not performance, so therefore it is incomplete in its approach. Earlier I pointed out some of the comventions of science-fiction design with regards to form, functions and graphics, but these can be reproduced by anyone. As mentioned before film can be used for allegorical or critical comment thus, as a medium it has its intellectual qualities but the design in such films is only a part of the whole piece. If isolated as an entity it looses its purpose. To look upon it as a dicipline I believe is incorrect because it does not involve creating for an effect rather than an effect and a use. In order to fully understand the idea of effect only we must address the brief for a science-fiction design. In Bladerunner I noticed that

the descriptions of such things as Deckard's gun or car were very short and inprecise eg. "Laser tube". In designing the gun the designer was given free rein over the final appearence, no other restraints were placed on the designer except that he make it suit the scene "Retro deco". He was working from imagination alone without recourse to material limitation, market requirments etc. This exercise doesn't require great intellectual energy as it would if designing in reality where in the solving of problems other than styling the practical demands are often complex. It appears to me that what is aimed for is effects rather than concrete realities..

So as not to debase science-fiction completely I would like to say that primarily it is entertainment; if it achieves this then we can not critisise any futher. But for me it is more than that. I believe it is a valuable visual library on industrial design through film, as it uses a lot of design conventions through which Design can be enchanced and I think as such is a very positive influence.

CONCLUSION

Each epoch and historical period saw itself as looking back on the tradition of a previous one growing, replacing, perfecting, modifying and decaying, to create again under some new stimulus; often an invasion bringing new technology and the novelty of the new repeating the earlier cycle. So we can look back at Greek civilisation, say in pottery - extending from 1200 BC - 100 BC, being continued by Rome from 400 BC - 500 AD. This process is taken up again in an archaic form by early medieval man, perfecting and culminating in the great Gothic style of 1100 - 1500 AD. Again we see a return to Greek roots in the Renaissance and onwards to the early 19th century. Then came a break, a discontinuity as all society was thrown into the melting pot by the vast and unheard of energies released by the first Industrial Revolution. Now one can see objects in clay and most especially in metal - which echoed every available style - ransacking the past - which was emerging ever more clearly as historical research and ease of travel grew. The early 20th century saw all of this translated into new and even cheaper materials - all based on mass production techniques - utilising the new pre-plastic materials such as Bakelite, wood laminate and the sucessor to Stucco, (glue and plaster) as well as natural fibres moulded into any shape. (The

art world at large was affected in the same way giving us every conceivable style - while the true interests of painting, sculpture and architecture were neglected. The pioneers in these fields Monet, Picasso, Brancussi and Le Corbusier forged new ways of continuing the creative threads of history. Similarily the manufacture of everyday objects came in for revaluation. Only in the last twenty years have the public been educated to the value and beauty of this thinking begun in the 1890's, having been satiated by the excesses of the 19th century commercialism. However it is the pioneers of design who have been coupled to the avantgarde in the scientific world who both create the climate of change and in their turn are stimulated by the imagination of the creative few, be they artists or pure scientists.

This radical change has placed at mankind's disposal unheard of control over materials and the chemistry of matter. What was hitherto a slowly evolving world seen in decades, and being static as it were - now responds to changes by the moment: Static becomes Dynamic. Speed, automated systems, functions reduced to the minimum - with the advent of macro and micro proportions and the computer. For the first time one can have a visualisation of proposed real world creations which take into account heat, shrinkage, aerodynamics, stress, configuration, bonding (laminating) finish, multiple adaptability

and cost - in fractions of real-time. State of the art has become the new phrase for new reality, much of this (as much as 3500 processes) made has been made possible by the oil industry. The thoughts and images of the highly trained multiskilled technicians and designers can now be worked out in advance to multiple specificiations and with miminal cost in materials and time. This free flow process has telescoped time and brought our age, the 20th century, to its full developement with the major difference that we can both look back and forward without impediments to our vision. Mankind is poised to conquer the Universe and express this in the tangible symbolism of modern design. All the forces of the past have been brought to bear or on a small point, a laser beam of intensity of possibilty not ever realised before.

NOTES

1. STAR TREK 1900 - 1908

2. BANHAM, REYNER

   DESIGN BY CHOICE P. 134

3. BANHAM, REYNER

   DESIGN BY CHOICE P. 137

4. BANHAM, REYNER

   DESIGN BY CHOICE P. 133 - 134

5. HOLT, STEVEN

   "SYD MEAD", I.D. 86 P. 36

6. MEAD, SYD

   OBLAGON P. 78

7. STICK, PHILIP

   ALIEN

   Film and Filming August 1978 P. 29

8. HORN, RICHARD

   FIFTIES STYLE P. 182

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