British Product Design Of The Sixties And The Pop Culture

Paul Stack

Industrial Design

1989

BRITISH PRODUCT DESIGN OF THE SIXTIES AND THE POP CULTURE

PAUL STACK

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE IN INDUSTRIAL DESIGN

NATIONAL COLLEGE OF ART AND DESIGN

1989

CONTENTS

LIST OF ILLUSTRATIONS

INTRODUCTION

It is the intention of this thesis to assess the pop culture of Britain in the 1960's and investigate the product design of that era.

Initially, it is necessary to document the social and economic standing of Britain in the years leading up to and including the sixties. The change of values and social ideals of the population, especially the younger generation will also be assessed. The pop culture and its sources will be discussed, with due consideration given to the youth culture and the 'teenage' explosion of the late fifties and sixties. In this, I will incorporate the sources and influences which resulted in the radically new and unconventional 'pop' or popular culture.

The aim will be to ascertain the differences apparent in popular culture fads and ephemeral trends as opposed to relatively conservative product design of that time. It is also necessary to assess furniture of the sixties, how the pop ideals influenced furniture and the preceeding items of the fifties and the Festival of Britain in 1951.

It will also be important to investigate why the product design of the so-called 'swinging sixties' remained virtually unaffected by the social upheavel and changing morals of this period. This means the examination of influencing factors on product design such as the introduction of new materials, new manufacturing methods and the growing interest in the study of human engineering or ergonomics. Similarly, the ever-changing ideas and concepts of a product designer's role in industry must be assessed as should be the improvements in design education throughout this crucial era in Britain's creative history.

THE SOCIAL AND ECONOMIC CLIMATE LEADING TO POP

A large number of factors led to the emergence of the 'pop' or popular culture in Britain in the sixties. This culture would not have evolved if it weren't for the availability of money and the all round prosperous economic climate.

The turning point in the economic history leading up to the sixties culture came in 1951 when Winston Churchill's Conservative Party topped the polls in the General Election, called only months after the 'calender' election of 1950. The Tories came into power just as most of the 'war-time-like' rationing was lifted. With their slogan to 'Set the People Free', the Conservatives promised to interfere less in people's lives without dictating what one had to eat or wear. The masses were content. They were given a free pass to 'feather their own nests' for the first time since the beginning of World War Two. Symbolically, if not materially, the consumer society had arrived in Britain.

During the fifties, Britain became a relatively affluent consumer society in which limited social mobility became a reality. Expectations and aspirations were changing drastically and the mass media - chiefly television began to radically alter the nations leisure habits and outlook. Most Britons were optimistic about the future and looked forward to a progressive age of science and technology that would bring about greater material gains. As the decade progressed, unemployment diminished and industry flourished. By 1960, Britain was as economically stable as Messrs. Churchill and Co. could possibly have hoped.

Social ideals and values leading up to the sixties also had their part to play in the shaping of that decade. There were no longer any fixed social classes. The belief that the 'aristocracy' knew best was no longer adhered to. The principle that they were moral, material and cultural

quardians for the uneducated and uncultured masses was ridiculed. More and more people were educated as a matter of course. Since 1944 and its education act, a secondary education system was set up serving all classes. Better pupils graduated to grammer schools, irrespective of social status. A meritocracy had been established. No longer were people passively accepting their lot as dictated by the authorities. Discontent and protest were common features of the daily news in the later years of the 1950's.

The well-documented 'birth' (or to be accurate, acknowledgement) of the teenager in the sixties was to be a huge factor on the culture of that period. The teenagers of 1960 and surrounding years were the first generation of the 'Post-War Baby Boom'. They were the first generation to live without the memory of the War. They had new values and ideals. Due to the economic upsurge of the 50's, they were affluent and enjoyed this affluence with a clear conscience. They rebelled against their parents' and authorities' 'specifications for life'. They refused to live in the memory of war-torn times. The late fifties/sixties teenager believed in enjoying their money with no holes barred. They wanted to be witty, irresponsible and have fun. The ensueing pop culture adopted these ideals.

The sixties culture in Britain looked to America as a reference on how to live well with money. America in the fifties was the scene of one big spending spree, when the U.S. saw the fruits of mass production ripen. The American society adopted the motto - "LIVE YOUR DREAMS AND MEET YOUR BUDGET!'. Britons envied the American lifestyle and attempted to emulate their activities. The fifties in America was an expression of outright vulgar joy in being able to live so well. Americans could afford to avoid reality, forget about financial woes and live life to the full. When the late fifties brought an economic slump Stateside, Britain was only too happy to be in a position

to take over. Television came to the fore in America in the fifties. it soon found its place in the average British home. By 1961, 75% of homes in Britain had T.V.'s compared with 6% a decade earlier. Television poured influential images into the house of every Briton. Advertising, on the whole was very important in the formation of the consumer society. Television portrayed images of bigger, better products, willing people to buy things they didn't need. Newspapers and even moreso 'Coloursupps' also had a large effect on the firm establishment of a full blown consumer society in Britain. Coloursupplements (free with newspapers) had weekly sections on 'trends' in design and showed the latest in consumer products. This all lead to the initiation of magazines such as 'Which?' and 'Shopper's Guide'. These magazines 'advised' the shoppers of the best and latest in all ranges of products.

Although the aforementioned were the reasons for the emergence of the 60's culture, there were many other factors which were to influence the different avenues of design (graphics; furniture; fashion; product). (These will be dealt with as this progresses). All these faculties were being prepared in the fifties for its turbulant successor - the 60's. the Royal College of Art was sending out into an admiring world a stream of brilliant painters, dress, textile and industrial designers as well as industrial impressarios and civilised husbands and wives whose tastes and social demands helped to prepare London for its later glories of the 'Swinging Sixties'. Those who would otherwise have been coal miners and tradesmen's apprentices were crushing into the universities, technical colleges and art schools bringing new attitudes with them which were retained more fiercely than their teachers expected.

THE MEDIA

Between 1945 and '60, the consumption patterns and life-styles of industrialised societies the world over became increasingly characterized by the role that the mass media played. The mass media had an audience on a vast scale never seen before. The effects of press, radio television and cinema entered the lives of practically every individual in the industrialized world. These provided new sources of information, created new expectations and suggested new values. The mass media, however, was not a post-war phenomenon. The press existed ever since the early days of printing, but it wasn't until the late 19th and early 20th century that it had both the technological and legal where-with-all to expand so as to be a successful form of communication. The wireless didn't come into being on a communicative scale until the late 20's. Television, although introduced to Britain in the 1930's, failed to become a popular medium until after the war.

The introduction of mass media in Britain resulted in the instigation of a mass culture. Many criticised these mediums as a source of debasing existing culture. An American social commentator stated:- The impact of radio and television along with that of the other products of the electronic age was an extremely radical one and their role in the transformation of the world into a 'global village' was irrevocable. Raymond Williams, the British cultural historian, criticized the content of T.V., considering its impact to be part of the highly undesirable upsurge of the masses against 'high' culture.

The United States were the first of the industrialized countries to accept design as part of this new found mass culture. By the late 40's and early 50's, the USA were pioneering an approach to design in which object symbolism, obsolescence and overt consumerism had the starring roles. The American products of this era were no

longer aimed at a sector of the society which consumed 'international, good design'. They were designed as fads and 'temporary objects' with a fixed product life and they rarely tried to be anything else.

In spite of many misgivings regarding the 'American Way' of this era, mass culture modelled on the US soon infiltrated Western Europe. American style mass culture rode into Britain on the crest of the mass media wave, particularly by means of advertising; popular magazines, and products designed with the primary aim being instant gratification.

The word was out and the media was only too happy to continue to spread the news of the radically new concept of mass culture.

POP AND THE YOUTH CULTURE

The youth culture in Britain in the sixties is well documented. For the youth culture and its derivative, 'pop', to be understood, one has to figure out where it all came from. The outstanding factor which made the sixties popular culture possible was money. Young people were earning acceptable wages for the first time and, as they lived at home, weren't burdened with housekeeping bills. The United States were the first to experience this upsurge in affluence for the younger generation, in the 1950's. The American manufacturers were the first to exploit this post-war potential to take teenager's money away. When the sixties came along most other industrialized nations followed suit. Stateside, the teenagers had rock'n'roll with idols such as Elvis Presley; they had the movies with their respective idols - James Dean and Marlon Brando; and of course they had their cars.

This affluence experienced in the U.S. hit Britain in the sixties. The teenagers, 'the children of the age of mass communication', were the fall out of the post war baby boom and were met by a totally unprepared conservative society. In 1959, eighty percent of teenagers were working and for the first time there was a majority of fifteen to twenty-one year olds in Britain. They could not be suppressed. They could not be ignored. They had to be catered for.

The designers, businessmen and advertisers (Terence Cornan; Mary Quant; James Galt; Ken Garland etc.) eager to harness this new market, slung together a style borrowing from a number of sources. They searched for imagery related to the youth movement, in an effort to create this new and popular culture. The result was 'Pop'. Pop was new, spontaneous and alive, an eyesore for the conservative Britons. The youth were effervescent and loud, a headache for the authorities.

The strongest hit of the design sectors were fashion and graphics, with furniture being influenced to a lesser extent. In 1949, Vogue proclaimed the influence of the youth culture: "Young was appearing as the persuasive adjective for all fashions, hairstyles and ways of life". (1)

Yes, but where did the youth find their influences? The answer was America. The first group or cult to use fashion and image as a form of communication were the 'teddy-boys' of the late fifties. (Fig.1) The source was the American movie, the screen Western and the archetypal 'bad-guy' who ironically dressed like an Edwardian gent. the 'teds' or teddy boys overshadowed this image by greasing their hair into a D.A. hairstyle (discretely abbreviated from its full title, 'Ducks Arse'). To make their image more pronounced, they cultivated sideburns, sported ornate waistcoats, bootlace ties and 'brothal-creepers' (crepe-soled shoes). The teddy boys were the first youth cult with rebellious ideals and anti-authoritarian principles. They 'hung-out' in the Americanised coffee-bars wishing themselves away from the seemingly drab world they were part of.

Other youth cults followed, such as the renowned 'mods' and 'rockers'. Always looking to America for inspiration, the Mods (Fig.2) identified with James Dean, American film star and rebel in 'Rebel Without A Cause', while the rockers associated with Marlon Brando, who portrayed a rebel biker, in 'The Wild One'. Although rival groups, the Mods and Rockers had the same objective - rebellion. The rockers or bikers (Fig.3) with long greasy hair, loose fitting leather jackets, jeans and boots generated an image of wreckless powers. Paul Williams described how - 'the ensemble of bike, noise, power, rider and clothes on the move gave a formidable expression of identity to the culture and powerfully developed many of its central values'. The mods were dedicated followers of fashion, neatly dressed, wore make-up and completely rejected

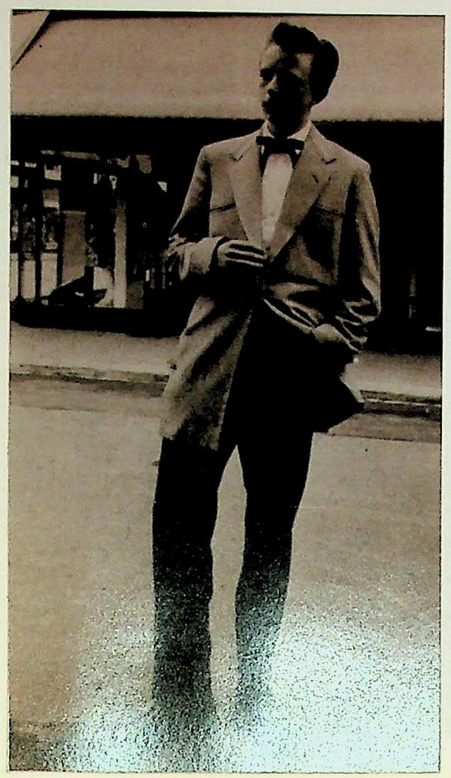

Fig. 1 Teddy-boys.

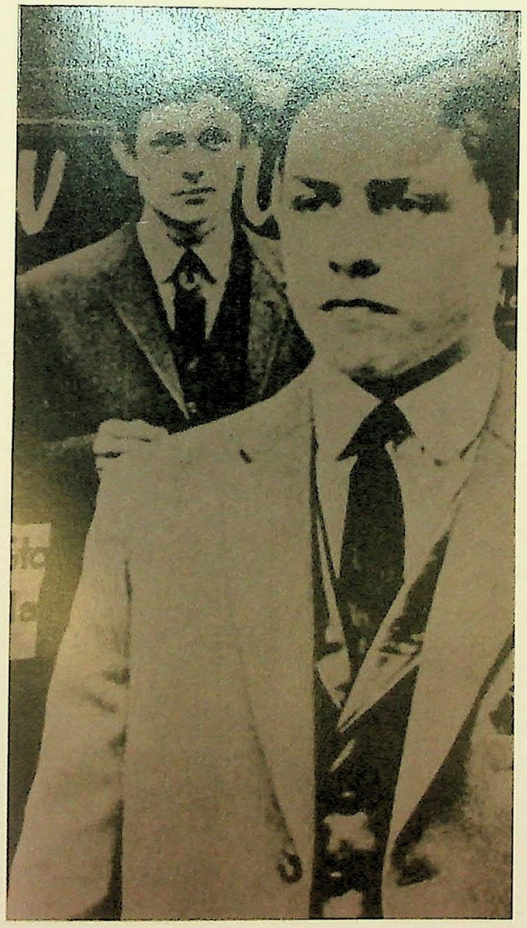

Fig.2 Mods.

Fig.3 Bikers.

anyone over 25. The message was the same throughout all teenage cults. They were restless, wanted change and desired fun and spontaneity. The pop culture did its best to grant them their wishes in the forms of fashion, furniture and design.

POP ART IN BRITAIN AND AMERICA AND THE INDEPENDANT GROUP

By all accounts, America was the dominant influence on the pop culture in Britain. Not only were the movies and their stars used as references by the teenage Britons, the American art movement of the late 1940's and 1950's 'Pop Art' also had an influence in the forming of the culture. The basic idea behind this movement was to create witty compositions which used contemporary products and lifestyles as subject matter. The pop-artists aimed to prove that their lifestyle formed a culture as did any other before them. These artists looked to everyday objects for subject matter. Jasper John's immortalised beer-cans in sculpture. Claes Oldenburg did the same with hamburgers, french fries and extinguished cigarette ends, by composing dramatically enlarged reproductions of the item in question (Fig.4). The most renowned of all American Pop-artists is the late Andy Warhol who took popular images of society for his sucject matter, printing recurring images of mundane products in effervescent colours. Warhol brought to the art galleries gaily coloured screen prints of Cambell's soup tins, Coca-cola bottles, Marilyn Monroe and Elvis Presley. (Fig.5)

The initiation of a group of artists and critics in Britain in 1952 was an important factor leading to the introduction of Pop art to Britain which became an integral part of the zany pop-culture. This organisation, known as the Independant Group, had one unifying factor. They all had a pre-occupation with popular, mass culture. The groups most prominent members were: design critic Reyner Banham, sculptor Eduardo Paolozzi (famed for his collages consisting of pop culture images), architects Peter and Alison Smithson, artists Richard Hamilton and John McHale. The group's main qualm was with the Institute of Contemporary Arts (I.C.A.) or to be more accurate with the I.C.A.'s view on design. The group felt that the I.C.A. was a microcosm of all that was wrong with the British ruling class. Richard Hamilton explained that

Fig.4 Claes Oldenburg - Hamburger.

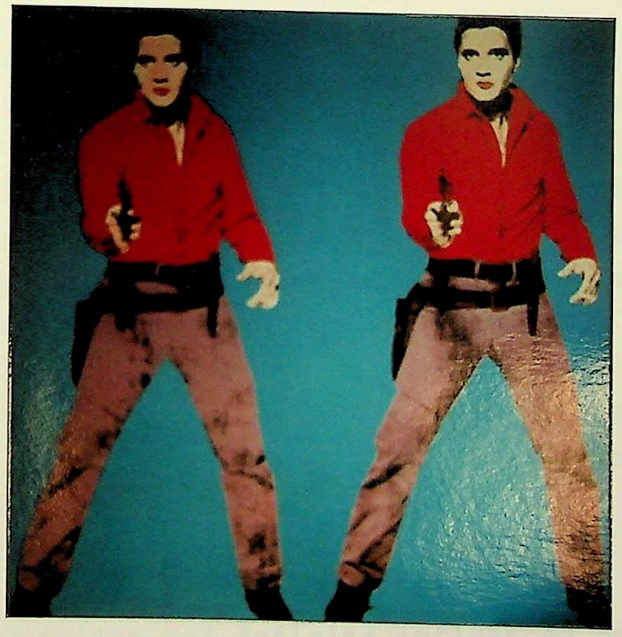

Fig.5 Andy Warhol - Elvis Presley.

the binding spirit amongst the Independant Group was a mutual distaste for the attitude of Herbert Read, President of the I.C.A. Read, modernist writer and critic was 'the British art establishment personified, (2) according to the group. In Read's estimation, 'the artist was a leader in society, aware of external truths and detached from the lower order of daily existance'. (3) The group rejected and denounced this, proclaiming daily existance as subject matter for artists.

The Independant Group proved to be greatly influential in the formation of Britain's pop culture. They looked to America, as did the youths of the sixties later on. The group perceived America as, 'the source of a new world of imagery and a new unexpected inspiration; as a romantic land with an up-to-date culture. (4) They strove to use and persuade artists to use everyday popular images as material for art compositions. John McHale returned from America with a trunk full of American images as per glossy magazines and high style advertising. Britain saw America only through these mediums.

In 1956, 'Pop-art' in Britain was said to be born with the "This is Tomorrow' exhibition. On display were items such as Richard Hamilton's collage which was a visual analysis of popular culture, titled - 'Just what is it that makes today's home so different' (Fig.6) this was a collection of material mainly from American 'glossies' which personified American popular culture. This work was undoubtedly influenced by Dadaists Jean Arp (law of chance) and Marcel Duchamp's Readymades and Surrealist Tristan Tzara. Obviously, his peer Eduardo Paolozzi also influenced Hamilton as Poalozzi kept a scrapbook of collages representing modern culture.

Dadaism and Surrealism had definite influences on pop design. Jean Arp's collages greatly influenced Paolozzi in his compositions and in turn influenced following pop artists. Marcel Duchamp's Readymades juxtaposed everyday

Fig.6 Richard Hamilton - Just What Is It That Makes Today's Home So Different.

objects. This juxtaposition was used again in the sixties pop era by people like Terence Conran. Conran juxtaposed junk-finds with good design in his Habitat stores throughout the country. Surrealism was again evident in Paolozzi's work (He met Tzara when working in Europe). One could also see Surrealist traces in the fashion of the sixties. The pop poster dress of 1967 (Fig.7) which sported body size reproductions of rock stars' heads could be linked with Rene Magritte's painting which exhibited breast eyes, belly-button nose and vulva lips. (Fig.8) Salvadore Dali, the most renowned of all surrealists also had his say in pop design. One could say the wheel came full circle when he designed his 'Mae West Lips' sofa. This was more a pop product than a surrealist statement.

Thus, the pop design culture of the sixties was a haphazard collection of styles, which changed constantly. Now that we have reached a basic understanding of the pop culture and its design, it is possible to assess the affect it had on furniture and product design, if any at all.

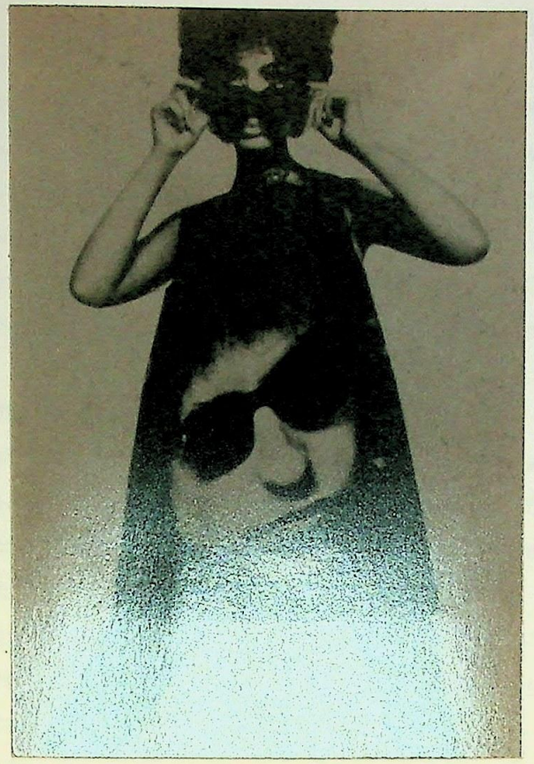

Fig.7 Pop Poster Dress.

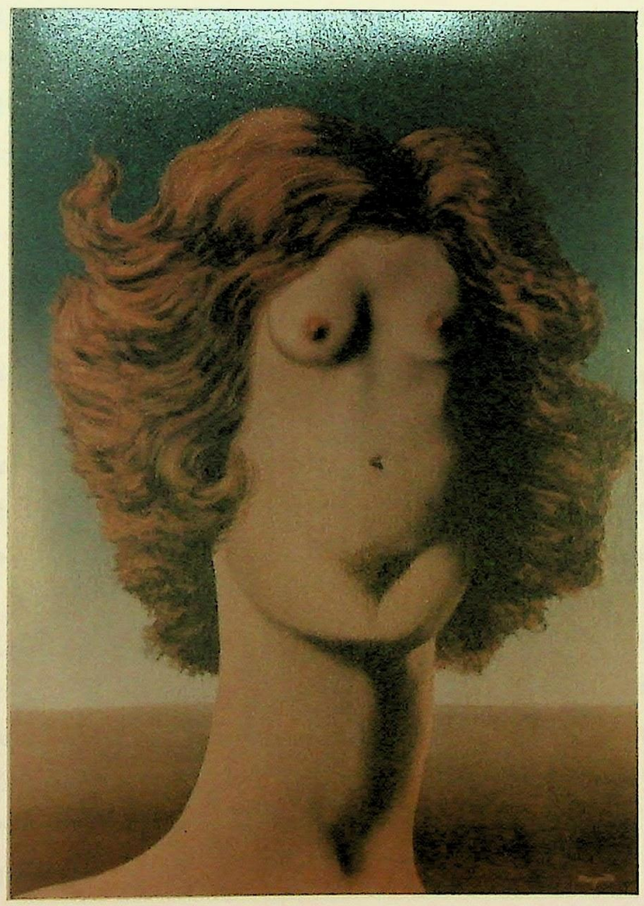

Fig.8 Rene Magritte - The Rape.

FURNITURE

Furniture design before the famous '60's was greatly influenced by 'good scandinavian design' and the Festival of Britain (and its derivatives) in 1951. Patterns were no longer used in most of the 1950 furniture. 50's furniture strived for a cool, fattened-up look while retaining a neat Bauhaus influence.

Utility furniture of the early fifties was to personify these ideals. (Fig.9) Its sensible proportions, sturdy masculinity and total lack of flashness or ostentatiousness had an obvious impact on modern British furniture which followed. The predominant manufacturers of furniture were Hille and Race Furniture. The antelope chair with bent plywood and steel rod frame, designed by Ernest Race for Race furniture in 1951 is perfectly characteristic of furniture of that period. (Fig.10) The Antelope chair with its splayed legs, ball finials and minimum decoration epitomised the all round direction of furniture design of the early 1950's. The machine cut decoration, a routed groove exposing the white birch below, is typical of that era. (Fig 11)

'The Machine Aesthetic' was taken for granted in the fifties. Furniture was designed for mass production retaining the values of modernism initiated in the 1920's. Simplicity and impersonality were standard specifications in early fifties furniture. This obviously was in some way due to the immediate post-war regulations regarding design i.e. utility guidelines. These stated the manufacture of well-designed pieces along modernist lines.

Late fifties furniture, although liberated of any previous regulations continued in the same modernist/bauhaus vein. Robin Day's Convertible bed-settee designed for Hille in 1957 and Robert Heritage's sideboard for Archie Shine Ltd, of the same year were typical of the tasteful and elegant design of the day. (Fig.12)

Fig.9 Utility Furniture

Fig.10 Ernest Race -
Antelope Chair.

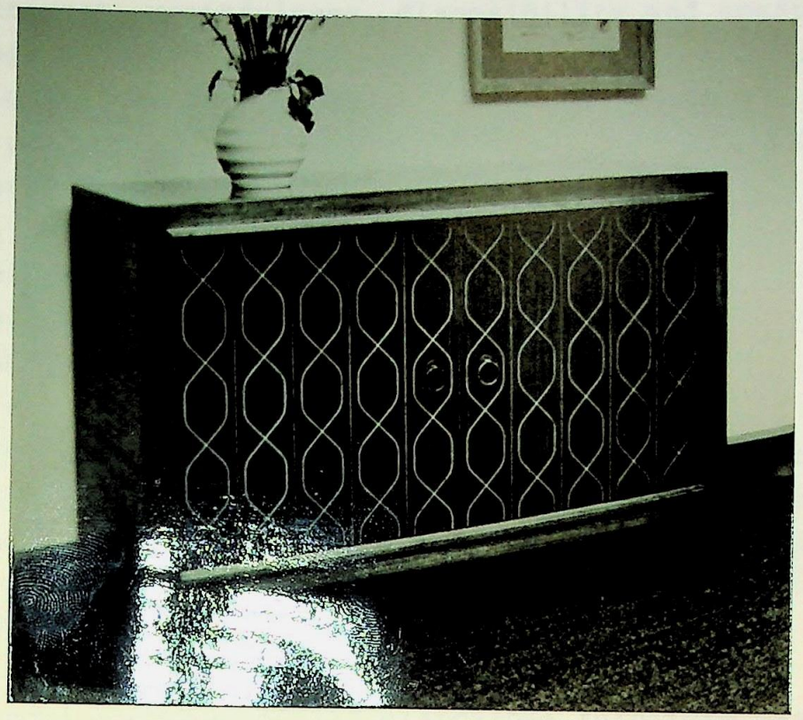

Fig.11 David Booth - Mahogany Sideboard.

Fig.12 Robert Heritage - Sideboard.

The ingredients making up the pop lifestyle were excitement, youthfulness, disposibility and constant change. In the early 60's, Max Clendenning, a furniture designer prophesised that furniture would change to suit the pop lifestyle. By 1967 furniture had changed decoratively and materially.

Furniture followed the already established aforementioned principles of pop. The application of bold and decorative graphic patterns to furniture was inevitably followed by the use of paper as a material for furniture (following the trends in fashion design). Attitudes had changed. The younger generation didn't feel comfortable living in a place laden with tudorbethan taste and Finnish furniture. the news had spread - furniture could be disposable, fashionable and fun.

The most renowned of all disposable furniture must be Peter Murdoch's effort which was ingeniously constructed from a single piece of laminated cardboard. (Fig 13) It was both washable and rigid giving a lifespan of three to six months. It is interesting to note that Peter Murdoch's chair was designed in 1964. However, conservative British manufacturers would not put it into production. it was 1968 before the public could get one. This was due to the backing of the International Paper Corporation in America, who sponsored its manufacture in Britain. The cardboard chair retailed for 30/- (£1.50).

Once the trend of disposable furniture took root, the manufacturers eventually realised the advantages or more importantly the money which could be made through disposable furniture. Production costs were low, storage space was miniscule and cardboard chairs could be turned out at a rate of one per second (an unprecedented speed in the manufacture of chairs!). The Chairs were simply stamped out of a sheet of cardboard. With the ability to apply decoration during stamping, the graphics used could be easily changed to suit the current trends on the pop scene.

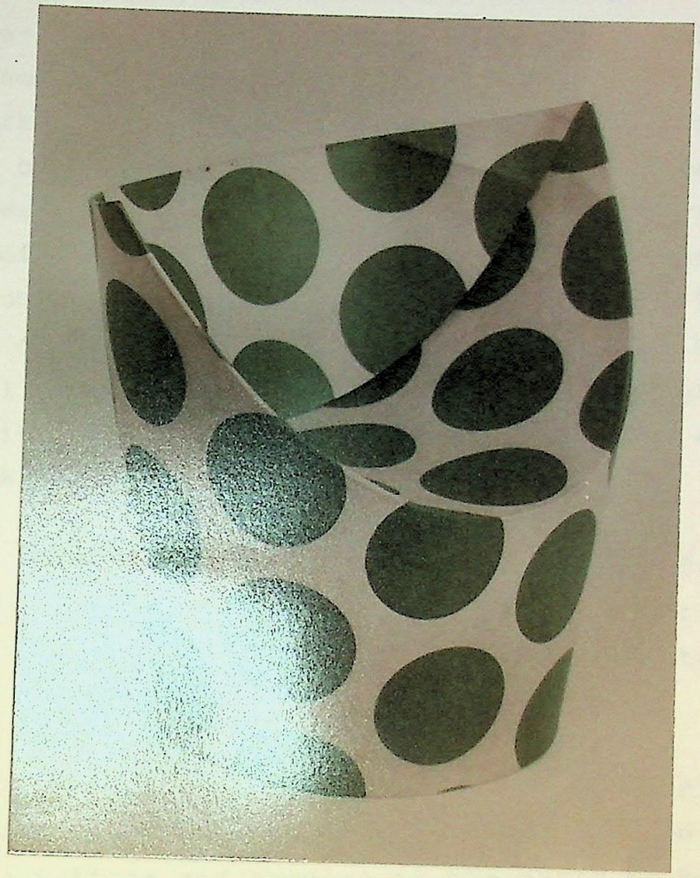

Fig.13 Peter Murdoch -
Cardboard Chair.

Race furniture were one of the first furniture manufacturers to realise the potential of disposable furniture and the almost ridiculous simplicity with which the pop market could be exploited. In 1966, their 'Tom O Tom' range of disposable furniture, designed by Bernard Holloway, went on sale (Fig.14). The Tom O Tom range consisted of fourteen inch to thirty-six inch diameter tubes of tough, washable, reinforced cardboard. These tubes were cut-away and filled with chipboard to make seats. Holloway's objective throughout the design was to create exciting furniture which could be pitched at a price so as to render them expendable.

Disposable furniture didn't reign solely as the furniture fad of the sixties. There was also the introduction of 'knockdown' furniture and Terence Conran's 'Habitat Style'.

Knockdown Furniture came as a result of a boom in public buildings (hospitals, universities, etcetera) and private enterprises (office and hotels) in the early to mid sixties. This resulted in a demand for furniture which was inexpensive, easy to manufacture, lightweight and transportable. The solution to this problem was a style of furniture termed 'Knockdown'. This type of furniture was collapsable which could stack, fold or adapt itself to a variety of uses e.g. seats, sofa, chaise longue etc. (Fig. 15). By the mid-sixties, modular was the all important word in furniture design. Furniture designers reverted back to the Bauhaus principles of standardization and used a basic module, (the brainchild of Le Corbusier and his peers) to construct their furniture. According to the 1966 Daily Mail Book of Furnishing, Decorating and Kitchen plans, modular furniture maximised floor space and gave a heightened degree of flexibility. The former was epitomised by the introduction of fitted kitchens. These were designed around standard, 'modular' units which were organized

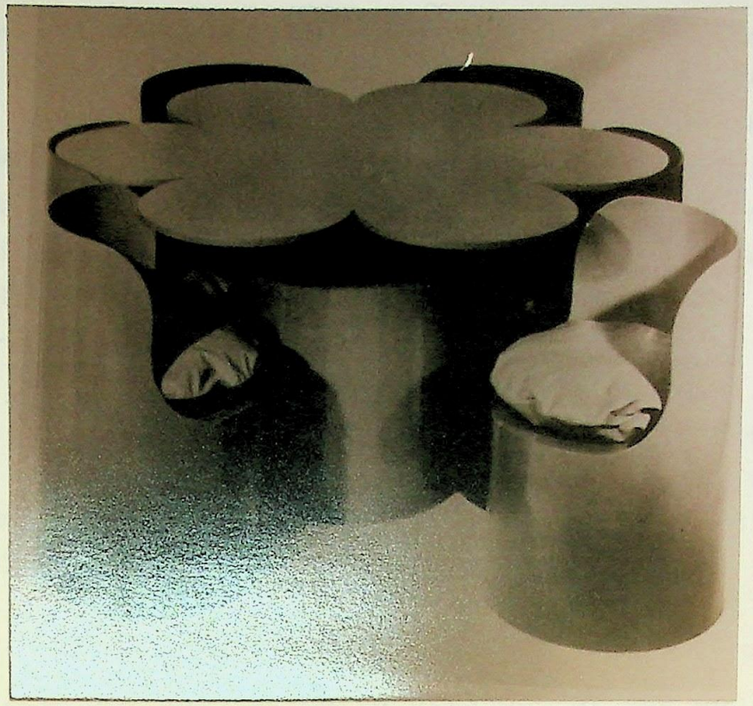

Fig.14 Bernard Holloway -
Tom O Tom Range.

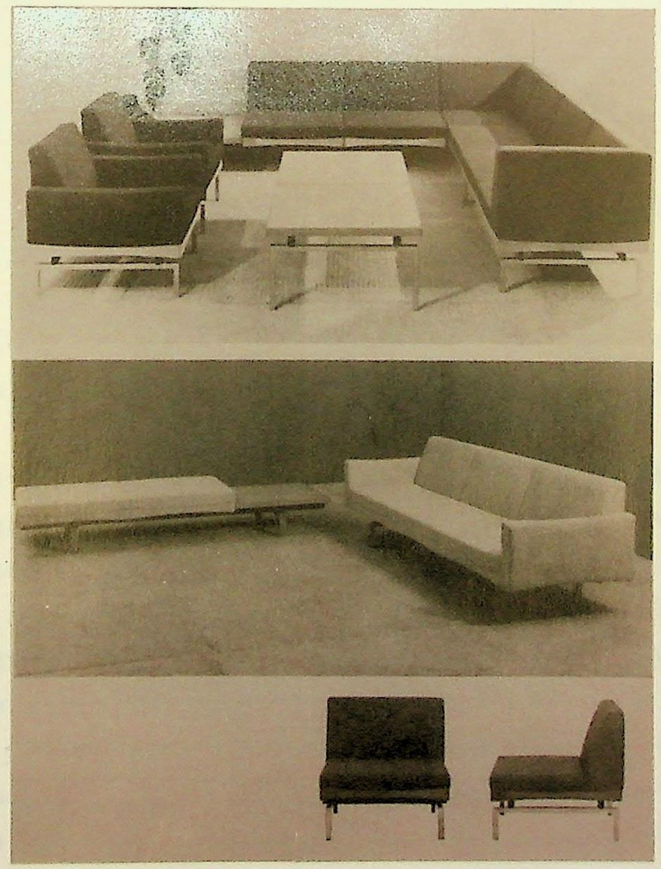

Fig.15 Knockdown, modular
furniture.

according to the housewives' needs. Fitted furniture consisted of chipboard carcasses which were purchased in flat packs to be assembled at home. This pleased the manufacturer who saved on the cost of warehousing, display and transportation. It gained momentum immediately after its inception and even today traditional cabinet furniture, kitchen fittings and seating can be bought in home-assembly flat-packs.

Race Furniture 'Flexible Chair' by Nicholas Frewing is a good example of sixties knockdown vogue. His chair was bought in a kit of parts, with no fixed joints and was easily assembled in a few minutes. (Fig. 16)

Before the take-off of knockdown furniture (described as a painless and sophisticated offshoot of the do-it-yourself philosophy), there were designers dabbling in the use of the module and flat-pack fittings. In 1963, Terence Conran's company, Conran and Co., produced and distributed their Summa Range. These were simply storage shelves which were purchased in flat-packs. Terence Conran is most renowned, however, for his chain of 'Habitat' stores.

Habitat was a company instigated as a direct result of the desires of the pop culture and the youth of the day. Habitat exploited the wants of young upwardly mobile professionals. They desired moderately cheap fashionable furniture and design displayed in a lively manner.

Habitat was set up in May 1964 by Terence Conran at 77 Fulham Road. He boasted Habitat was a swinging shop for switched on people....! Habitat sold not only furniture but also lighting equipment, toys, enamelled tinware, and kitchen utensils. The shop sold not only its own furniture but also a range of items from different styles and periods, e.g. bentwood furniture, chairs by Le Corbusier and Vico Magistretti. All these items were clearly displayed, imaginatively, in a Modernist setting.

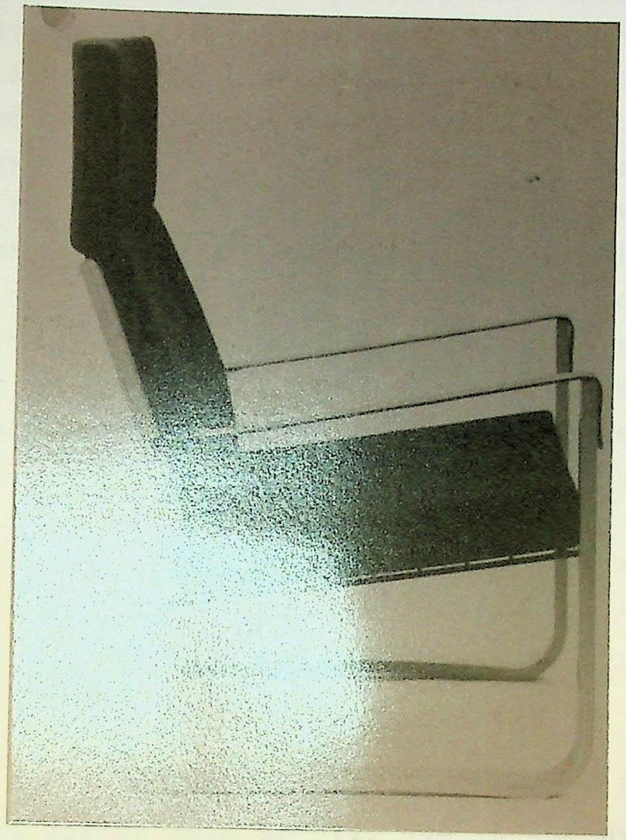

Fig.16 Nicholas Frewing -
Flexible Chair.

The Habitat style of interior decoration soon evolved. The style was 'based upon taking a few pieces of really good modern furniture and putting them in sharp juxtaposition with sharp-eyed finds from the junk shops, all set against no-nonsense backgrounds, whether of untreated brick or timber'. The style was influenced certainly by the needs of Habitat's clientele. They desired for a means whereby they could live in an environment which would echo their own desire for change and the unexpected. One could also consider the influence of the 'New Brutalism' style of architecture, introduced by Peter and Alison Smithson in 1954, which exhibited untouched interiors with little or no cosmetic treatment to walls or pipes. (Fig.17)

Habitat continued throughout the '60's as an altar to pop culture shelving all the 'in-furniture', from knockdown to disposable to the late sixties big cushion and inflatable furniture.

As with the product design of the period, innovations in furniture design were greatly due to the availability of better technology and the emergence of many new versatile materials, most of which were plastics, or polymers. Throughout the late fifties and sixties, design magazines included page after page of advertisements proclaiming these great new materials. Vinyl coated fabrics were acclaimed for their durability, washability and colour range along with their 'amazingly low prices'. There were new materials which could be used as cushions (foam or polyurethane). There were those which could be used as furniture coverings (synthetic fabrics). Also, there were plastics which could be moulded into rigid forms. The most renowned of these plastics was polypropylene, which could be moulded into seats. The most successful of these was that designed by Robin Day for the Hille Company in 1963 (Fig. 18). The chair was simply called 'Polyprop', and was the first low cost, mass produced chair which

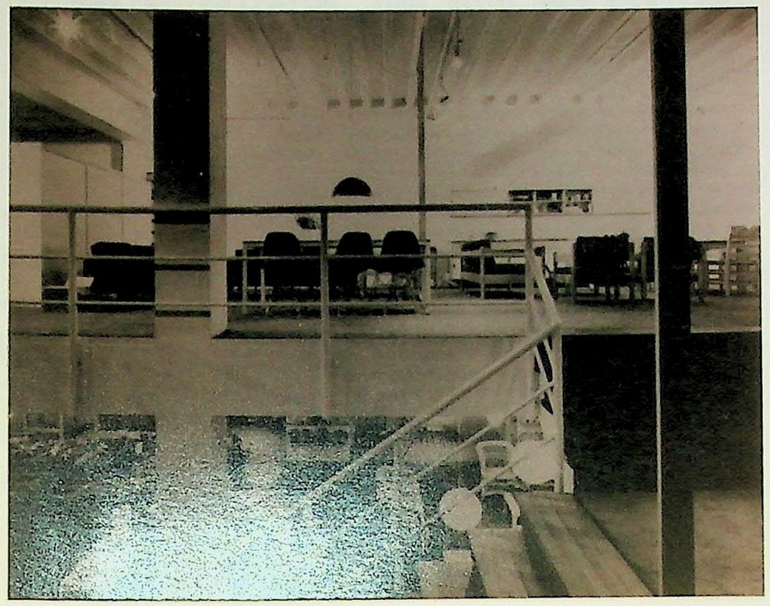

Fig.17 Habitat Interior.

Fig.18 Robin Day - Polyprop Chair.

could be moulded on a production line at high speed. By 1970, Day's 'Polyprop' had sold two million. It is still in production today.

Another popular 'new' material of the sixties was Acrylic. Although acrylic (a transparent polymer) didn't break into the mass production market on the scale with which polypropylene did, it did have its share. Acrylic sheeting was first developed in the war as a substitute to glass. For almost thirty years, it was used solely for aircraft covers, windshields, canopies and blisters. In the 1960's, ICI, who introduced acrylic to the world under the brand name 'perspex', pushed an advertising campaign for it to be used as a material for everyday design. Many acrylic-orientated designs were only for batch production. Examining products of this nature, one can sense a craftlike quality in the designs. Take for example, David Colwell's chair in smoky perspex, with a pin-spot finish on the underside (Fig.19) or the more famous perspex settee by Alan Turville of Hille. (Fig.20).

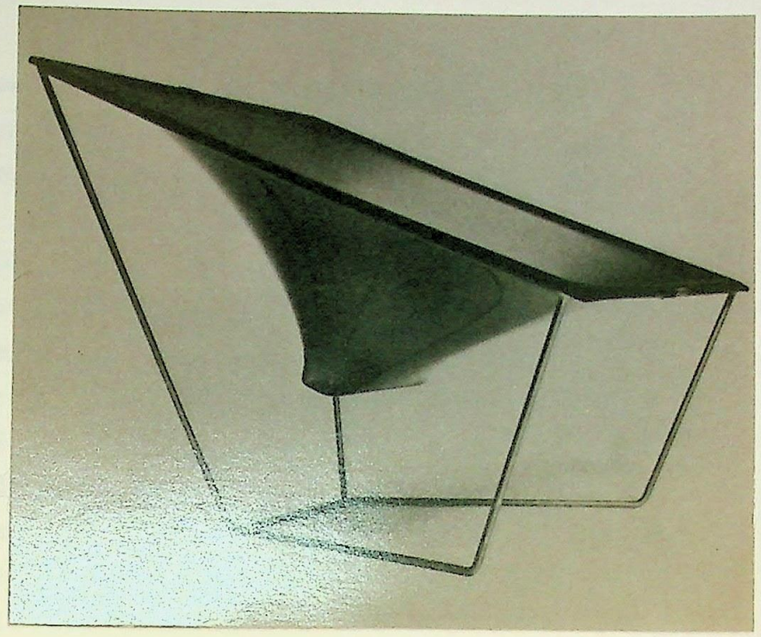

Fig.19 David Colwell - Pinspot Chair.

Fig.20 Alan Turville - Perspex Settee.

INFLUENCES ON 1960'S PRODUCT DESIGN

The two most prominent influences on 60's design were:
1. Ergonomics, and
2. New technologies and materials.

Ergonomics really only came to the fore in the late fifties, and early sixties. Although anthropometric dimensions were considered by the Army Operational Research Group in the Forties, it wasn't until the '50's and '60's that documentation and information was readily available. In the '30's and '40's designers lacked both data and incentive to improve the 'usability' of their products. Until the '60's, designers rarely incorporated user trials or consumer research into their design method. In the late fifties, ergonimics literature became widely available for the first time. In 1957, 'Engineering' magazine produced a booklet entitled 'Data on human performance for engineering designers'. In 1958, 'Ergonomics', a technical journal, was printed for the first time. It published research papers and their findings. However, it was 1965 before the first full-length ergonomics textbook appeared on the market. In the '60's, studies were carried out in fatigue, machine pacing and stress. Simultaneously, manufacturers were coming to terms with the marketing potential of 'ergonomically designed consumer products' and as a result, the ergonomic properties of various goods were advertised. In October 1960, companies such as ERCOL were proclaiming the anthropometric attributes of their Windsor contemporary furniture.

Although ergonomic data became more and more accessible in the late fifties and early sixties, tradition often proved an obstacle to the application of such knowledge. The 'Nelson Complex' is a good example of this. A study of shock waves experienced by a standing human due to the action of a 110 foot flat bottomed motor boat bouncing

along on a rough sea, pointed to the desirability of seating the coxswain, as in an automobile. Naval objections to this were partly based on the assertion that 'Nelson stood up to steer a boat'.

The human ego also had its part to play in hindering the progress in ergonomic research. For example, operators of pedal-powered machines refused to help in the attempt to prove that the ill-located pedal caused swelling to the lower leg of the operator. This inertia was due to the fact that a photograph of their unsightly swelling leg would be no good for the ego, in spite of its value in an ergonomic study.

Despite all these setbacks, the biggest factor stopping the introduction of ergonomics into production was production costs. Many of the 'new-fangled' ergonomic updates would mean complete retooling in a manufacturing plant. An example of this was the ergonomically designed chair offered to the prestigious PEL around 1956. The chair was rejected on the grounds that the cost of re-tooling for its production could not be justified as it was so easy to sell what was already being produced.

The prominent factor in introducing ergonomic data into consumer products in the sixties was the introduction of new production methods and new materials. During this time, Britons experienced almost on a monthly basis new polymers with wonderful properties with the ability to be moulded or shaped in almost any contortion imaginable. Manufacturers proclaimed the attributes of their new innovative materials. Hille, in conjunction with Shell thermoplastics praised their polypropylene designs; Ferguson preached of their shim and colourful transistor made of High Impact Polythyrene; P.V.C. was widely available in varying colours and textures.

Other manufacturing improvements were also evident in the sixties in the metalwork department. Expanded Metal was widely publicized. New and improved pressing and forming

methods were becoming readily available and thus more economical to use.

The unprecedented affluence of the sixties allowed designers, manufacturers and consumers alike to consider these options for new and existing products to fit in with the already established new popular culture. With new production methods being used for these new materials, manufacturers weren't as opposed to (and in most cases were in favour of) the incorporation of ergonomics into their products. It all fitted together quite neatly. New products; new materials, new manufacturing methods and all with the consumer and human efficiency in mind.

On the crest of this technological wave rode the new and existing breakthroughs in the electronics field. Microchips were readily available and slotted in nicely with the new era in product design. Products now had the ability to be produced smaller than before due to the ever-decreasing size of components parts. Televisions and radios, for example, no longer needed to be the size of furniture cabinets. Because of this reduction in scale of consumer durables, designers were given greater freedom to design the shapes they wanted without the previous restrictions in size, technology and materials.

THE EMERGENCE OF THE DESIGNER

Product design as we know it today only came to being in the 1960's. The product design of the sixties was influenced by technological advancements and the initiation of a fixed role for the product or industrial designer. Product design, in terms of form was therefore virtually unaffected by the sixties 'principles of pop' i.e. fun, witty and disposable. By and large it was only graphics placed on already designed products which gave them a pop image. For example, the 1968 Murphy television was strictly an industrially designed product, designed with material, manufacturing and monetary compromise as key factors in the outcome. It was simply covered in a graphic pattern of the given era (psychedylic lettering) in order to give it the appearance of an 'in-product'. (Fig.21). Most product design of the sixties was to suffer the same fate; Designed with the CoID version of good design in mind, only to be covered with flamboyant patterns or colours for marketting purposes.

No doubt, British product design would have adhered to existing principles of design were it not for other over-riding influences. Already spoken of are the technological and ergonomic advancements leading up to and continuing through the sixties.

Product design was still in its infancy in the sixties. The actual definition of the industrial designer was, as yet, undecided. The question of the role of the industrial designer was first posed in 1951, the year of the Festival of Britain which was a landmark for British architecture and design. Never before was a corporate-image exercise seen on such a scale. The Council of Industrial Design was empowered to co-ordinate design throughout the Festival. This meant the responsibility for up to 10,000 manufactured products ranging from litter bins to sign posts to chairs and tables. This resulted in a new concern with standards of environment and the

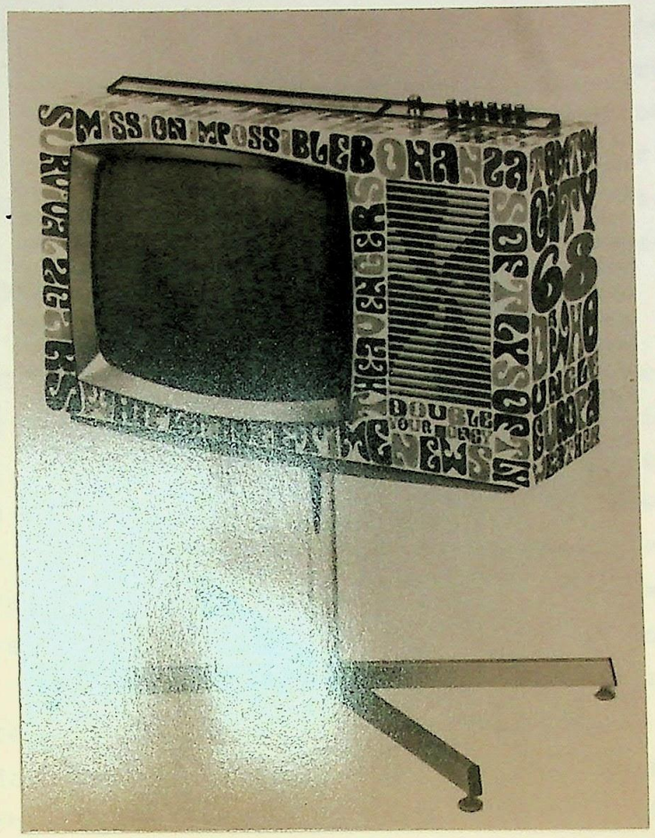

Fig.21 Psychedelic T.V.

designer's role in attempting to control them, pre-occupations which reappeared in the next two decades. In the period after the Festival, design became a cult. However, it was still very much a pioneering period of individual enterprise. This stimulation of public awareness in design resulted in the instigation of a small number of design shops. These reflected their proprietor's own choice in design and set a standard for household style and judgement which one can see leading on to the Habitat stores of the late 1960's.

As the 1950's progressed, design standards for consumer goods and all other products slowly but undeniably improved. In 1956, the now famous Design Centre was opened in the Haymarket in London. The following year, the first of the Design Centre Awards were given to 'exemplary products', such as the Rayburn room-heaters which were as fit for their purpose as they could be. (Fig.22) The Design Centre Awards of the first years helped greatly to consolidate the reputations of the newly trained designers and their companies. Consumers began to realise the importance of product and industrial designers.

By the late fifties, the need for product designers seemed obvious. However, as yet, his/her role was undefined. The public were incessantly reminded of the need for this new breed of professionals. The first of a series of talks on 'Industrial Design and the Engineering Industries was held in Birmingham in 1955. Design magazine was including regular reviews of engineering products stressing the role of the Industrial Designer. The designer's contribution to visual aspects of products, its final appearance and its ergonomics was proclaimed constantly by design moguls of the era. The designer's role was being recognised in the public sector. In '56, British Rail introduced a Design panel to its list of employees. London transport also had a design panel at its disposal. The Department of the Environment realised

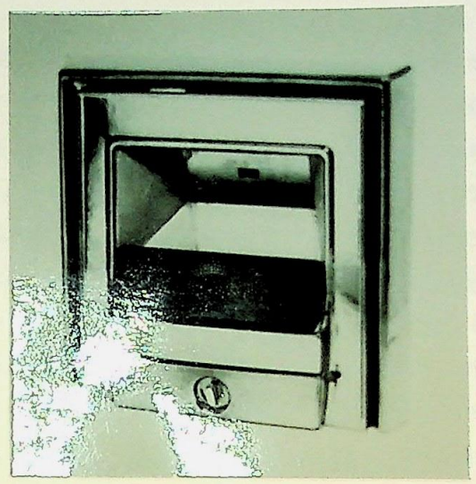

Fig.22 Rayburn Room
Heater.

the advantages of using a systematic design policy. Existing small, often craft orientated design consultancies were replaced by much larger multi-purpose, more Americanised consultancies. These companies prided themselves on presenting a service so complete that they could undertake any design case which might confront the State, Municipal Authorities, Industry and Commerce.

A vast expansion in design education and the design profession in the early sixties influenced greatly the recognition of product design as a formidable profession in its own right. In 1960, the Coldstream Report on Art Education massively reorganised design education. More and more Art colleges included an industrial design sector to their curriculum. Ergonomics was introduced to design education as were manufacturing methods and the technology of materials. This resulted in the large scale build-up of products designed with an increasing expertise. "Design' was a word no longer used solely for the description of a wallpaper pattern. Design was related to engineering, the relatively new 'world of ergonomics' and systematic methods. In the 1960's, industrial designers were for the first time involved in these areas. In the '60's, good design was no longer a matter of aesthetics. Design methods were being put forward by pioneers such as J. Christopher Jones. As a result design processes were no longer surrounded with the mysticism they previously encountered. John Blake, in 'The Practical Idealists' pointed out the three main directions in which the stress on ergonomics from the early 1960's influenced design: "First, it emphasised that in the design of products, the needs of consumers were more important than those of the designer; Second it put forward the then rather novel idea that such needs can be determined by scientific means, rather than by guesswork or intuition; and third it provided a systematic framework for the design activity." (5) The first solid theories of systematic design methods came in '59 and '60 from Jones and Bruce Archer. Although not greatly appreciated by designers of the day,

they proposed that design was a matter of scientific method and was measurable; not solely a matter of aesthetic tuition. Although scorned, these theories were followed throughout the sixties and gave the consumer a previously uncomprehensible knowledge into the source and importance of visual values. By 1962, the designers role had a new previously imperceivable important social force. Design was seen as the link joining scientist to artist, artist to designer, designer to engineer and engineer to common man, the user. By the mid sixties, industry was at last convinced that good design is indivisable and should ideally extend to all activities within a company. This realization was undoubtedly encouraged by evidence of the new tangible bases for designing. This in turn resulted in the emergence of a new kind of designer; the Design Manager (or Director) who was broadly responsible for visual liaison within a company. It came inevitably to a stage in the early to mid sixties when the designer was reluctant to present himself as an artist.

However, despite all the angst associated with the design profession, the industrial designer was well and truly born and recognised for the definite contribution he could make to the design world.

THE DESIGNERS AND THE PRODUCTS

Products of the '60's era had the same proportion of good and bad designs as in any other era in design. It was not a time filled with a never-ending flow of inspired designers. Similarly it was not an epoch of disastrous designs.

The products of the sixties, as described previously were designed with new technologies, materials and engineering principles as their prime influences. The products were neither flamboyant nor witty nor were they designed for fun.

The sixties produced their share of so-called design classics. There was Kenneth Grange's award winning 'Courrier' lighters; his Kenwood Chef; the Moulton Bicycle; Alec Issigonis' Mini-Minor; David Mellors traffic signal system (Fig.23) and Grange's 'Brownie' Vecta Camera for Kodak. To get a view into product design of this decade, it is suffice to take certain '60's products and designers and analyse them.

KENNETH GRANGE

Kenneth Grange was born in 1929. He trained as a technical illustrator during his national service in the British Army, and has worked as an assistant in various architectural offices. Grange worked primarily as an industrial designer producing cameras for Kodak, parking meters for Venner and food mixers for Kenwood.

Kenneth Grange joined the successful design consultancy Pentagram in 1964. Pentagram with its collection of graphic and product designers along with architects prided themselves on being one of the first real industrial design counsultancies. They boasted a 'total design' package. Their scope including corporate schemes,

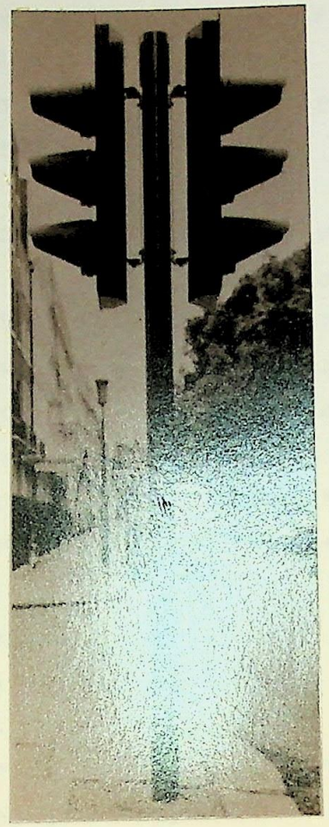

Fig.23 David Mellor -
Traffic Lights.

posters, packaging, promotion, exhibitions and environmental design as well as product design. The 'new' market for this kind of service was explained by Grange:- 'Whereas successful architectural practices and graphic design studies can be counted in their hundreds, the count barely reaches ten for successful industrial design consultancies'. (6)

Grange and Pentagram were amongst the first to recognise the product designer as an integral part of industry. In 1960, before joining Pentagram, Grange worked with Kenwood. His work for Kenwood saw him being fully involved in the task of co-operating with the company. This included working on the marketing, tooling and labour costs, production techniques and making models and prototypes. This integration of the designers role with the industry as a whole was very successful. His Kenwood Chef kitchen mixer of 1961 was so successful throughout the sixties and early seventies that it wasn't revised until 1976. (Fig.24) The successful relationship between Kenwood and Grange continued through to the latter's Pentagram days when the consultancy took on the task of designing kitchen appliances and the added chore of packaging them.

Grange described the necessary talents of the industrial designer; His particular skill is to reconcile the benefits of long association with those of remaining open to new ideas and in particular to the cross pollination of ideas from one field to another. It is a difficult skill embracing problems of confidentiality, a wide knowledge of many engineering and fabricating skills, an awareness of consumer and cultural needs (in the widest sense), plus sympathy for financial evaluation. He extends the normal consulting role into a continuous commitment to the client. It is not an easy role to maintain. Perhaps that is why there are so few of him! (7)

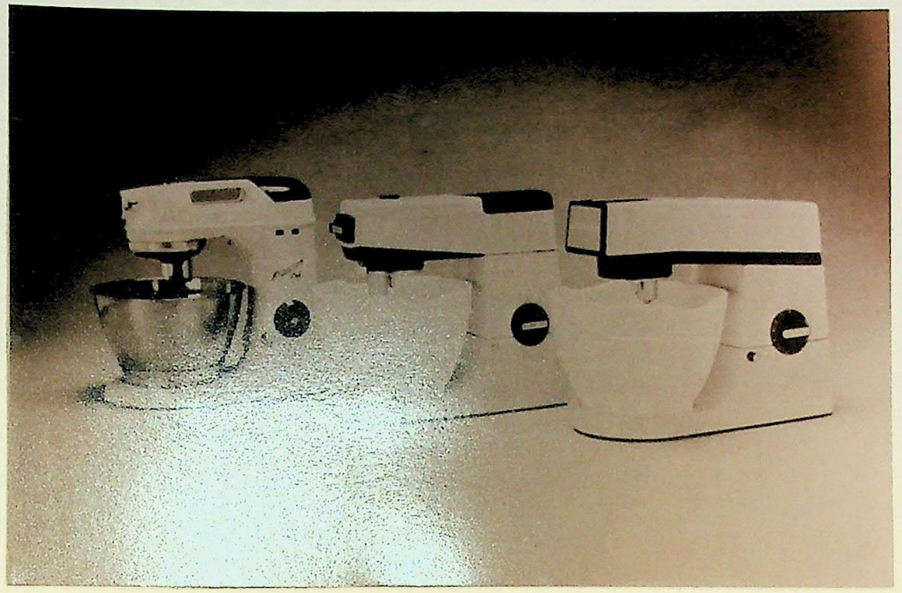

Fig.24 Kenneth Grange - Kenwood Chef.
Evolution of product to his
1961 model on the right.

DAVID MELLOR

Another successful designer of the '60's was David Mellor. Mellor studied silversmithing at the Sheffield College of Art, the Royal College of Art and the British School in Rome. By the late fifties he was returned to his home in Sheffield where he set up his own workshop and design consultancy. Throughout the sixties he worked as a consultant for a number of companies. His commissions included work for Glacier Metal, Abacus Municipal, the Post Office (square pillar-box) and for the Department of the Environment for whom he designed a traffic signal system. He worked both on specifically industrial design products as well as continuing his work in the field of cutlery (his specialised subject) producing examples for both industrial and batch manufacture. (Fig.25) David Mellor was described by Fiona MacCarthy as one of a 'realistic breed of designers who were evolving a new realistic style'. (8)

Mellor always expressed the belief that design is usually only a very small part of the overall process of producing a successful product. He retained the belief of the importance the designer has without forgetting the even more dominant importance of industry with the amalgamation of the two resulting inevitably in well designed well produced products.

Robert Heritage attempted to sum up Mellor's success and reasons for it. 'There has been a tendancy, through competition, for work to be more outrageous and stylistic in order to attract publicity and the next client, whereas David Mellor has followed a continuous process of retirement, with quality of form and application of materials predominating. His designs will retain their integrity and stand the test of time'. (9)

For the most part, British industrial designers of the sixties remained anonymous employees of mass manufacturing industries. The glory bestowed on designers of the U.S. a decade earlier never came. However, as the sixties

progressed, it was soon recognised that the industrial designer's role was all the more important. Their versatility within a company working with materials manufacturing restraints and cost limitations in an effort to produce successful designs became more apparent. As Raymond Loewy said: 'The designer is a nimble creature and a dependable one. Flexibility is his most valuable asset'. (10)

Although Grange and Mellor are typical of the '60's industrial designer, to assess products of the era it is more beneficial to take equally typical products of that time. I shall discuss Alec Issigonis' Mini-Minor which is an example of all that was good in sixties product design. I shall also discuss London and Upjohns design for a microscope which is an excellant example of the direction industrial design was taking in Britain in the late sixties.

THE MINI-MINOR

The Mini-Minor, designed by Alec Issigonis in 1959 was a major break from typeform. The British cars of the period were large and cumbersome. Leonard Lord initiated the mini-project. He remarked to Issigonis: 'God damn these bloody awful bubble-cars. We must drive them off the streets by designing a proper miniature car'. Thus, Issogonis tackled the mini problem and in three years (1960) it was in production. (Fig.25)

The mini was ten feet long. Any car in this size class up to this time was either uncomfortable, ugly, engineeringly wrong or a combination of these. Demand for cheap travel came with the end of the Second World War. The need for a small, low-cost vehicle was boosted by the Suez oil crisis in 1956, which resulted in the rationing of petrol. From the outset of the mini project, Issigonis vowed to design and build a four-wheeled vehical (the majority of the mini's predecessors were three-wheelers). He also promised that his vehicle would not rely on a more cylinder engine. He kept his promise. He revolutionised

Fig.25a Alec Issigonis -
Mini-Morris.

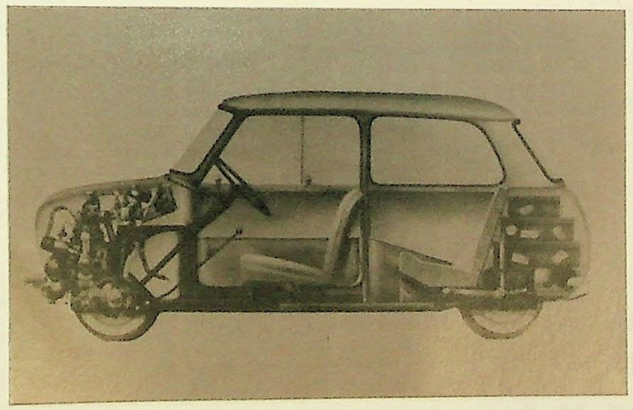

Fig.25b Mini-Morris -
Cut-away View.

small-car design integrating the engine and gearbox into one structured so that they would share the same oil (or in Issigonis' words 'share the same bath water'). He placed this structure in the front of the vehicle, using front wheel drive, thus allowing extra space and comfort for the passengers. It's interesting to note that Issigonis designed the basic shape of the mini ergonomically before tackling the engineering problems. He initially decided on the length (10 feet) and then set aside eight feet and six inches for the positioning of the car's passengers so as to ensure no undue discomfort for four adults. Another engineering 'break-through' was the use of four separate suspension blocks, one for each wheel. This done away with any connecting pipes between wheels, again maximising the space available. The springs, the brainchild of Alex Moulton, were made of rubber. They had an added, vital advantage which contributed to the success of the mini. The rubber springs had a variable rate. They stiffened in proportion to the load. This was an important factor, as the ratio of a persons body-weight to the overall weight of the car was considerably greater than the existing ratio of a persons weight to that of, say, a Jaguar. Because of this basic problem the design of the suspension had to be considerably better than other cars as it was more important to get it right.

Issigonis maximised the space available to him in the interior of the mini. He did not incorporate the conventional roll up/down door window. Alternatively he used a simple glass panel which slid on tracks to open or shut. This left Issigonis with room on each door panel for storage of arbitary driver or passenger items. The control panel or dashboard was again designed with economy in mind. The specified necessary dials and warning lights were used only with no superfluous extras. These he assembled on a central unit. Beneath this he put another storage space.

The exterior of the mini was as new as everything else associated with the vehicle. The mini rid itself of any class status. Issigonis stated, 'if you style a car, it goes out of date'. (12) All preceding miniature cars had the appearance of being aware of their place in the classing of automobiles. They appeared to be 'shy' and designed so as to look like a second-class car. The mini, on the contrary was unashamed in its appearance, 'accepting' that it was a miniature car without bowing to its 'bigger cousins'. It's road-holding, and general all-round efficiency allowed the mini its ability to seem proud of its existance.

LONDON & UPJOHN'S MICROSCOPE

Another good example of '60's product design is the patholette microscope redesigned by consultant industrial designers London and Upjohn for Vickers Instruments Ltd. in 1968.

This project undertaken by London and Upjohn epitomised the direction industrial design had taken. Their design was not only redesigned so as to make their microscope more pleasing aesthetically, although this they undoubtedly achieved. They approached the project taking in a number of factors during the research stage, most of which wouldn't have been given a second thought ten years earlier. They assessed materials available, manufacturing considerations, ergonomics and packaging as well as visual appearance.

The Patholette microscope (Fig.26) before the consultancy's improvements, was designed without regard to appearance. Nor did it achieve acceptable ergonomic standards, the focussing of the machine being an arduous and tedious task. It also neglected to consider all the manufacturing possibilities available. The updated microscope (Fig.27) firstly, was improved ergonomically. The focusing was now operated by one hand from the base of the instrument (contrary to the existing design). This allowed the operator free to use his other hand to

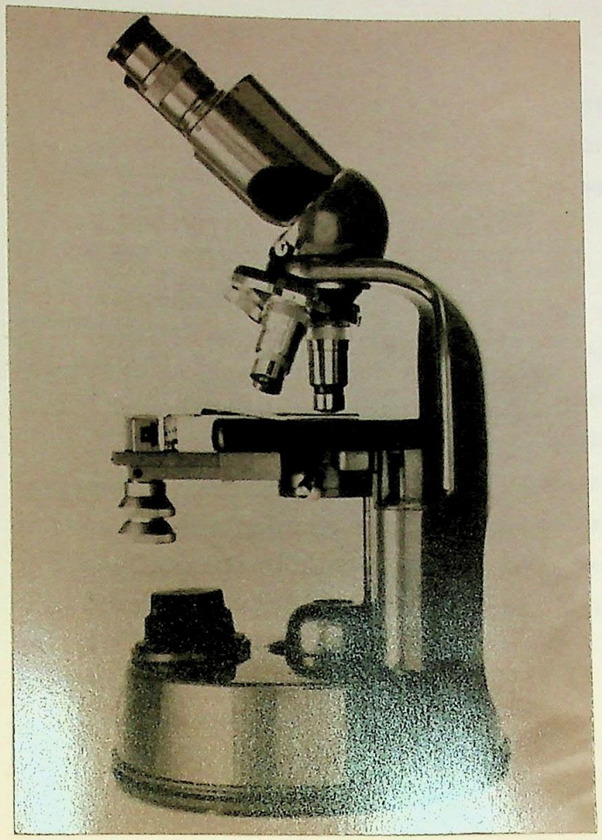

Fig.26 Patholette Microscope.

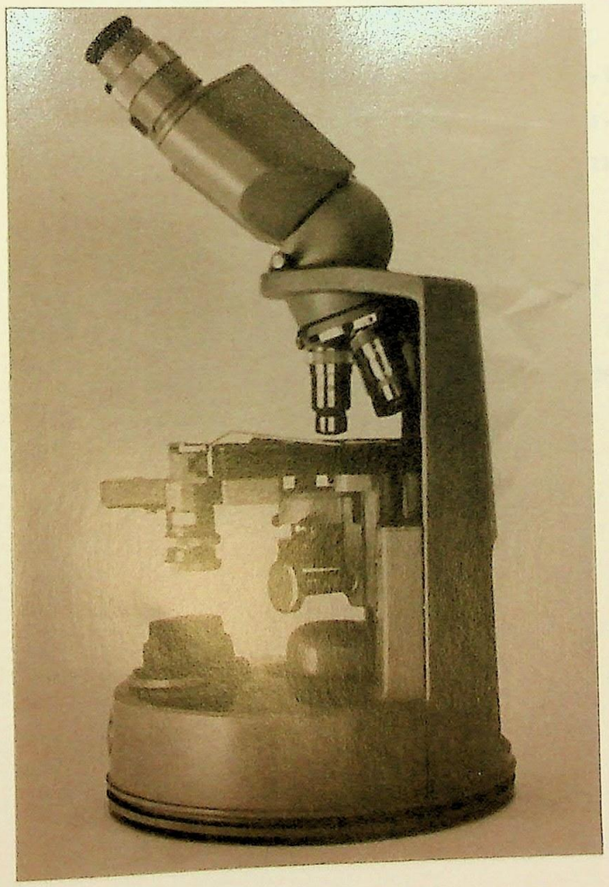

Fig.27 London & Upjohn's Revised Model.

position or reposition the specimen being examined, if necessary. Also, focussing was made easier by virtue of locating coarse and fine adjustments as knurled knobs on the one axis.

The redesigned instrument was also more successful and cheaper in manufacture. The focusing knobs, due to their engineering were easier to manufacture than the previously used slide focussing which required machined parts of considerable accuracy. Similarly the new microscope was die-cast as opposed to sand-cast, the latter being used for the first product. This resulted in a finer, more professional and efficient looking surface finish which was seen as an important part of the overall appearance of the instrument.

The London and Upjohn model was designed with a due regard to packaging contrary to the original. The updated instrument was designed such that it was a circular shape from a plan view. As a direct result, the microscope could be packaged in a lightweight, cylindrical, high-impact polystyrene casing. The original machine was stored and transported in a heavy, relatively ungainly wooden box.

This was an example of product design from 1968 which embodied all that was good in the employing of an industrial design team to compete with and better existing products.

CONCLUSION

The world of design undoubtedly looked at Britain in awe at the happenings of the 1960's. It was a time when a new popular mass culture emerged. The younger generation rose and rebelled against the authorities and parents alike, with new values and ideals. Armed with new fashions and transistors blaring new music, they refused to accept the word of the elder generation. They helped develop a culture which resulted in the instigation of a new wave in design. This new design culture plundered its sources from past styles and periods ranging from Victorian through Dada, Surrealism and Art Deco to the 1940's and '50's until the mass culture passed itself out. The pop culture was as sudden and unexpected as it was short-lived. This bubble-gum culture inflated with the post-war economy, swelled with rock'n'roll, the cinema, sex, comicstrips and the space age until it burst leaving lasting traces on the face of the design world.

Although all avenues of design were sucked into this engulfing and incredible culture, some were swallowed up totally leaving disciplines such as product design relatively unharmed. Fashion and graphics were the primary victims of this explosive era in design. Furniture succumbed somewhat but only slightly in comparison to the former. Product design was the only design sect to outlive the pop euphoria, although not totally unscathed, certainly without a dent. Product design, sidetracked by the incessant stream of revolutionary and novelty materials as well as the emergence of the 'new science' of human engineering (ergonomics) managed to keep the blinkers on. Products of the sixties on the whole did not change form to suit the ephemeral trends of the era, but took as references the more sobering and professional factors mentioned above.

The pop-culture of the sixties was undoubtedly fascinating. It, although imperceivable at the time, was

a natural progression in the evolution of design. Just as fascinating is the investigation of the growth of product design and the by-road it sported while the rest of Britain went on a no-holes-barred journey through the sixties.

REFERENCES

1. Quoted from Vogue, 1959 in WHITELEY, Nigel; Pop Design: Modernism to Mod, 1987, P.82

2. WHITELEY, 1987, P.45

3. WHITELEY quoting READ, Herbert in Pop Design, 1987, P.46

4. WHITELEY, 1987, P.52

5. BLAKE, John, The Practical Idealist, 1969, P.17

6. SPARKE, Penny quoting GRANGE, Kenneth in Consultant Design, 1983, P.67

7. Ibid, P.69

8. MACCARTHY, Fiona; A History of British Design 1979, P.95

9. HERITAGE, Robert in Design Week, Mar '88, P.14

10. SPARKE, Penny quoting LOEWY, Raymond in An Introduction to Design and Culture in the 20th Century, 1986, P.106

11. NAHUM, Andrew quoting ISSIGONIS, Alec in Alec Issigonis, 1988, P.55

12. Ibid, P.59

BIBLIOGRAPHY

BOOKS

BANHAM, Reyner; Design by Choice (Editor, Penny Sparke) Acedemy Editions; 1981

BLAKE, John & Avril; The Practical Idealists; Lund Humphries, 1961

CARRINGTON, Noel; Industrial Design in Britain; Allen and Unwin; 1976

HARRIS, Jennifer; HYDE, Sarah; SMITH, Greg; 1966 and All That; Trefoil, London; 1986

HILLIER, Bevis; The Style of the Century, 1900-1980; Dutton, New York; 1983

HORN, Richard; Fifties Style; Columbus Books, London; 1985

International Design Yearbook 1986/'87; Editor AMBASZ, Emilio; General Editor SUDJIC, Deyan; Thames and Hudson Ltd, London; 1986

International Design Yearbook 1987/'88; Editor STARCK, Philippe; General Editor SUDJIC, Deyan; Thames and Hudson, Ltd; 1987

MACCARTHY, Fiona; A History of British Design, 1930-1970; Allen and Unwin; 1979

MACCARTHY, Fiona; British Design since 1880; A Visual History; Humphries, London, 1982

MURRELL, Hywell; EMERITUS, Professor; How Ergonomics Became Part of Design from From Spiffire to Microchip; The Design Council, London; 1985

NAHUM, Andrew; Alec Issigonis; The Design Council; 1988

SPARKE, Penny; Consultant Design; The History and Practice of the Designer in Industry; Pembridge Press, London; 1983

SPARKE, Penny; An Introduction to Design and Culture in the 20th Century; Allen and Unwin; 1986

STEWART, Richard; Design and British Industry; John Murray Publishers, London; 1987

WHITELEY, Nigel; Pop design : from Modernism to Mod; Design Council, London; 1987.

PERIODICALS

DESIGN - No. 142; October 1960
No. 169; January 1963
No. 235; July 1968
No. 469; January 1988

DESIGNER - vol. 11; No. 2; Mar/Apr 1988

DESIGN WEEK - vol. 3; No. 11; 18 March 1988.