

National College of Art and Design,

Faculty of Design,

Department of Industrial Design.

Ron Arad & Marc Newson:

A Study of Two Contemporary Furniture Designers.

by John Doolin

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Complimentary Studies

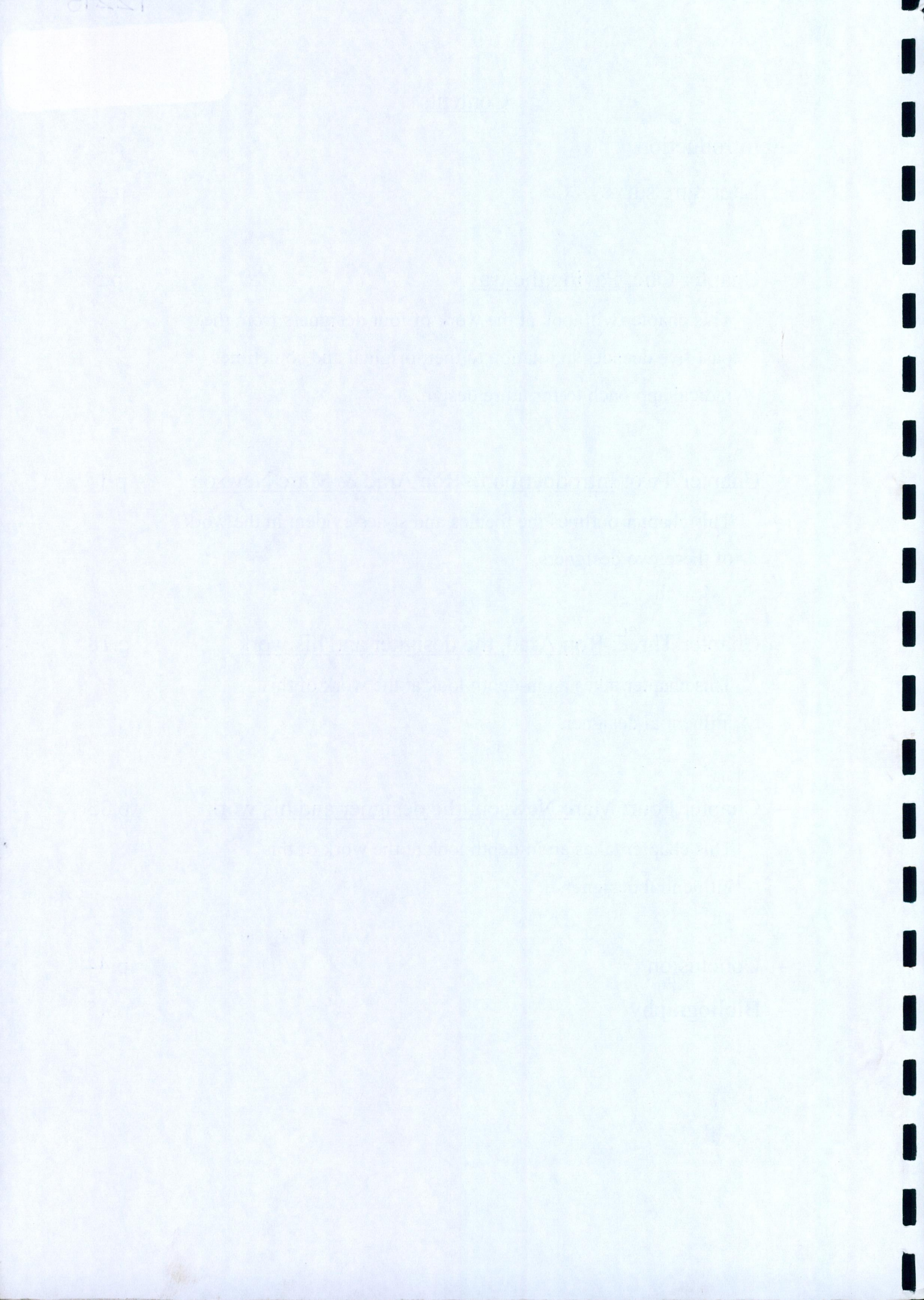
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Introduction

Change and development is made possible through the efforts of individuals who have the inspiration and courage to break away from the common conventions laid down by routine. Throughout the history of furniture design there have been a number of designs and designers that have stood out from the rest. Their work is of great importance to the evolution of design, in general. Although they may not have had a direct influence on designs of their time, they serve the purpose of expanding the boundaries of referential material for designers of the future. Quite often the inspiration for these pieces, although innovative in themselves, is drawn from influences of past, more conventional furniture. It is this practice, of drawing from the past in order to develop and create what is new, that much of the work examined in this thesis is based on. The designers discussed choose not simply to work to traditional furniture practices, but often question the conventions and examine the use of new materials and forms.

Innovation spurs change. The items examined serve as a means for other designers to question accepted conventions. This questioning and the conclusions that are drawn from it are what influences future design. The effect that these items have on future design might not be as radical as the items themselves. Filtered derivatives of radical innovations such as these often appear after time in the new styles and ideas, which find their way into our homes and surroundings. As such they are integral in the evolutionary process of design and in the formation of perceived notions relating to style and fashion.

Introduction

The purpose of this study is to investigate the effects of various factors on the performance of a system. The study is divided into two main parts: a theoretical analysis and an experimental investigation. The theoretical analysis focuses on the development of a model that can predict the system's behavior under different conditions. The experimental investigation involves the design and execution of a series of tests to validate the model and to determine the range of conditions over which it is applicable. The results of the study are presented in the form of a series of graphs and tables, which show the relationship between the various factors and the system's performance. The study concludes with a discussion of the implications of the findings and a list of references.

The first part of the study is a theoretical analysis of the system. This involves the development of a model that can predict the system's behavior under different conditions. The model is based on a set of assumptions that are discussed in detail in the following sections. The second part of the study is an experimental investigation. This involves the design and execution of a series of tests to validate the model and to determine the range of conditions over which it is applicable. The results of the study are presented in the form of a series of graphs and tables, which show the relationship between the various factors and the system's performance. The study concludes with a discussion of the implications of the findings and a list of references.

This thesis intends to examine several innovative chairs produced during the last five decades along with the work of two contemporary designers: Ron Arad and Marc Newson. Through their unorthodox use of materials and form, each piece has in its own way redefined the boundaries of furniture design.

Literature survey

When researching Ron Arad there were quite a number of publications available profiling his work. There are two books in particular that are solely about him. These are "Ron Arad Restless Furniture" by Deyan Sudjic and the other is an exhibition catalogue entitled "Ron Arad Vitra Design Museum" edited by Alexander Von Vegesack. Both of these books proved to be invaluable in profiling Arad's work and life. Other books that proved useful include "Neo Furniture" by Claire Downey, "Contemporary Furniture and Lamps" by Francisco Asensio Cerver and "Modern Chairs" by Charlotte and Peter Fiell.

Information on Marc Newson was not as easy to come by. There are no books published solely about Newson, so when it came to profiling his work the information was more reliant on material gathered about each piece separately from a wide range of books. Two examples of these books would be "100 Masterpieces from the Vitra Museum Collection" edited by Alexander Von Vegesack and again "Modern Chairs" by Charlotte and Peter Fiell. There was one article in "I.D. Magazine" March/April 1997 which provided a full profile of Newson's career and work. This included some sections of an interview with Newson, which helped in establishing a good idea of his personality.

There were a large number of books used to gather information on general furniture design. The most useful being "Twentieth Century

The first part of the report deals with the general situation of the country and the position of the various groups. It is followed by a detailed account of the events of the past few years, and then by a summary of the present situation and the prospects for the future.

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Furniture” by Philippe Garner, “Modern Furniture Classics” by Miriam Stimpson, “The New Furniture, trends and traditions” by Peter Dormer and that favourite again “Modern Chairs” by Charlotte and Peter Fiell. Books refereed to in relation to specific designers and design movements include, “Tubular Steel Furniture” edited by Barbie Campbell-Cole and Tim Benton and “Gerrit Thomas Rietveld Furniture” by Daniele Baroni.

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the study and the objectives of the research. It also provides a brief overview of the methodology used in the study.

2. The second part of the report is a detailed description of the study area. It includes information about the location of the study area, the population of the study area, and the characteristics of the study area. It also discusses the data sources used in the study.

3. The third part of the report is a detailed description of the study results. It includes information about the findings of the study, the conclusions drawn from the findings, and the implications of the findings. It also discusses the limitations of the study and the need for further research.

4. The fourth part of the report is a conclusion and a summary of the study. It provides a final statement of the findings of the study and a summary of the key points of the report.

Chapter One: Paving the way

This chapter will look at the work of four designers from the past five decades in relation to their original and sometimes radical approach to furniture design



Fig. 1: Rietveld's Aluminium Chair

The first piece to be examined is an Aluminium Armchair designed by Gerrit Thomas Rietveld in 1942. Much of Rietveld's work was centred on creating furniture that could be produced using minimal labour and material inputs. This led to a great amount of time being spent on creating a chair made of one piece of material. In 1927 Rietveld built his "Birza" chair, this chair was successfully produced using a single sheet of fiberboard. The construction of this chair was so simple that it only required a sheet of material to have a number of cuts before being folded

and screwed together. Although this chair was structurally a success, it's hard edges and angular appearance gave it a somewhat utilitarian look.



Fig. 2: Birza chair

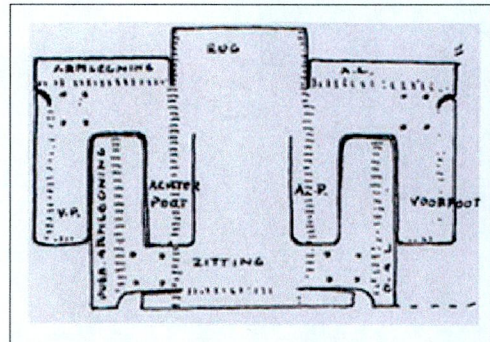


Fig. 3: Plans for Birza

Through extensive experimentation with sheet metals, Rietveld found that it was possible for this material to be bent into complex self supporting structures without the need for additional structural elements. However, as the conical feet at the back and the use of crossbeams in the front legs show, Rietveld was not completely successful in shaping this chair from a single piece of material.

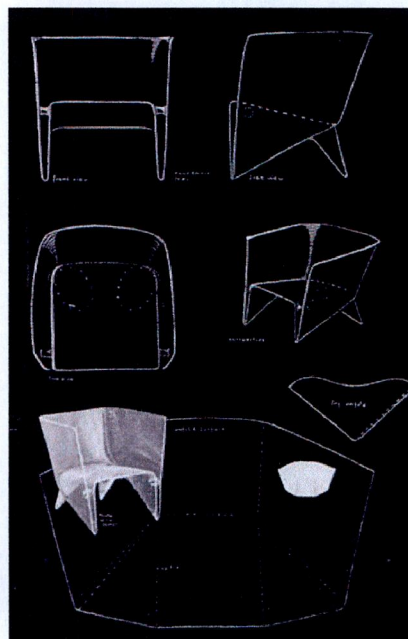
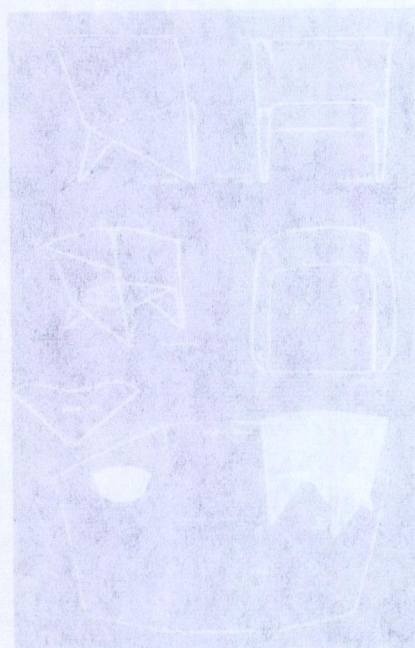
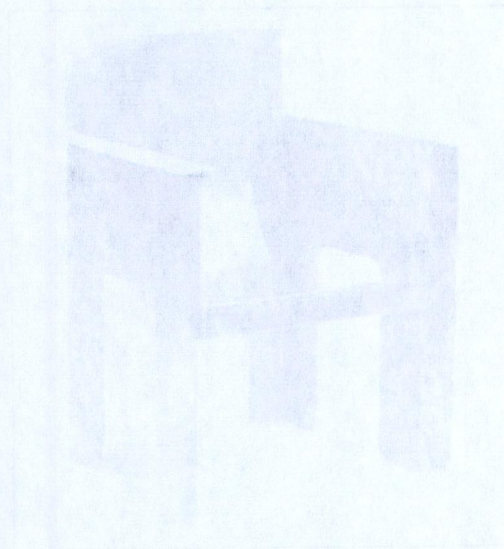
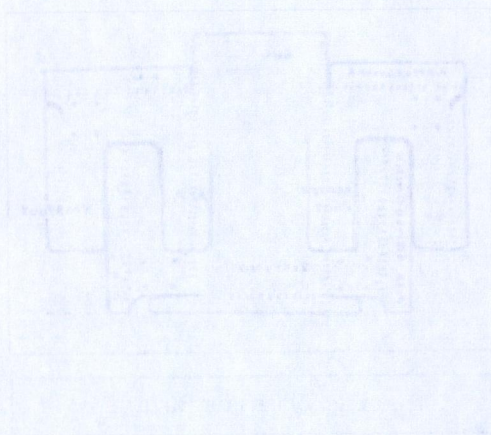


Fig. 4: Plans for Aluminium chair



It is thought, from two of the original drawings, that Rietveld had intended that this design be made from folded fiberboard. Since this material was not readily available at the time, Rietveld made some alterations to the design to enable the use of aluminium for the production of the prototypes. The large holes punched in the material are necessary for the stability of the unit. The turned out edges of the holes as on the edges of the chair stiffen the larger expanses of the metal. This is a technique that Rietveld was obviously familiar with from Hans Coray's aluminium stacking chair, "Landi", from 1938.



Fig. 5: Landi stacking chair

The designers personal ambitions aside, Rietveld's Aluminium chair was successful in creating an aesthetic and construction that is even by today's standards futuristic. Rietveld before his death wrote, "In the future I envisage, for example, a piece of material, which, after a series of mechanical functions, leaves the machine as a finished product in only 10 minutes and in such a pure form that it can fit into any interior because it is such a simple element." This prediction was made a reality with the advent of plastic and the many production methods to go with it. It is now

possible to produce a wide scope of furniture ranging from, garden chairs and tables to very extravagant chairs comprising of nothing more than a variety of complex curves.

The next example comes from a designer who was a pioneer of industrial design in Switzerland his name is Willy Guhl. In 1954 Guhl designed a beach and garden chair which is unique in the history of furniture design.

Guhl began work on this project after the 1948 MoMa competition, entitled “Low-Cost Furniture Design,” captured his imagination. Previous work of Guhl’s, using laminated wood had already yielded the form evident in this design, namely a simple extruded/profile. However laminated wood would have been unsuitable for outdoor use. For this reason Guhl decided to use a material that is not typically associated with furniture making, fibrated concrete. This material offered unrivalled possibilities that Guhl was able to use to his advantage.



Fig. 6: Concrete Chair

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FOR THE YEAR
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THE
BUREAU OF CHEMISTRY
DURING THE
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FIGURE 1

The production of this material was very simple and imposed very few limitations. Because of the materials great ability to resist breakage and its exceptional tensile strength it was possible to design a form that, again, had no need for supporting structures. This allowed Guhl to create a chair that was so minimalist in its appearance that it almost appears to be a piece of abstract sculpture. In fact comparisons could be drawn to Max Bill's "Unendliche Schleife" (endless loop) sculpture of 1953. Nathan Lerner's "One Piece Chair," of 1940 could also be an inspiration for this piece.

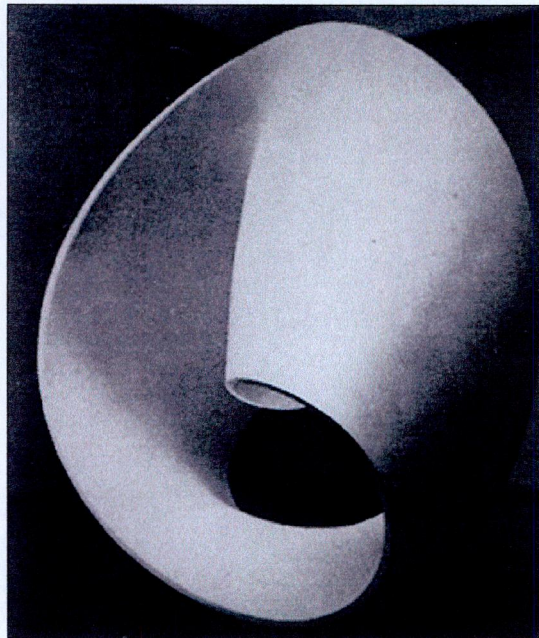
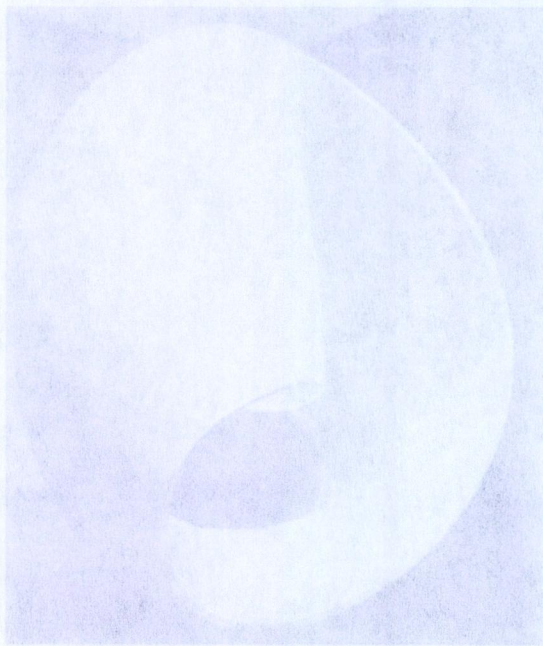


Fig. 7: Unendliche Schleife (endless loop)

The boom of a new leisure culture in the post-war era gave rise to the success of this chair for outdoor use.



Fig. 8: Beach scene



Not only was this design original in its approach to the use of materials, but its unique form has been highly influential to many designers. References can be drawn to a whole string of designs such as, Pierre Paulin's "Ribbon Chair," of 1965 as well as Cesare Leoardi and Franca Stagi's similarly named chair of 1961. This piece also fits in with the bold curved forms evident in sixties and seventies interiors.

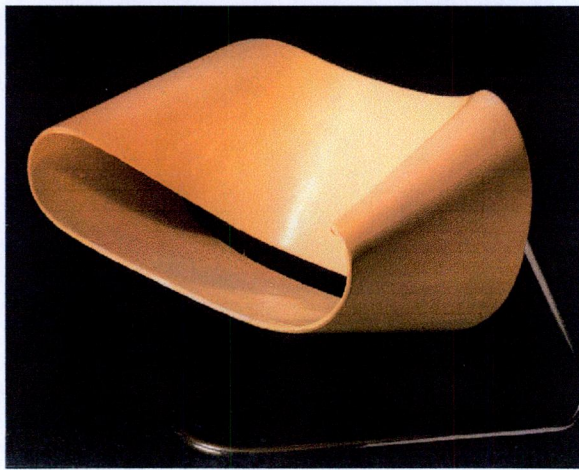


Fig. 9: Franca Stagi's Ribbon Chair

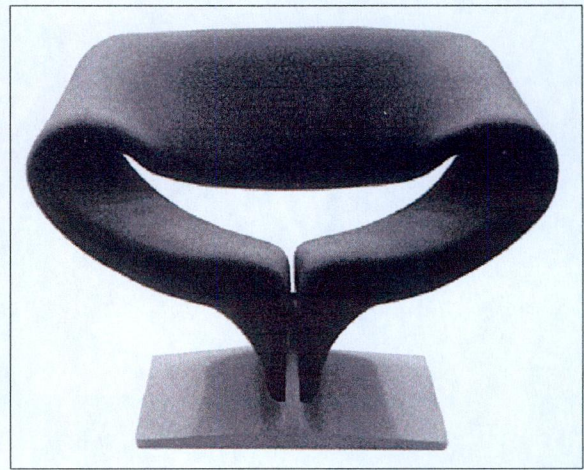


Fig. 10: Pierre Paulin's Ribbon Chair

Unfortunately there is a down side to the history of this design. In the late seventies it was discovered that the asbestos in fibrated concrete was found to be a carcinogen. Guhl's chair had to be withdrawn and any existing ones had to be destroyed. There are still a few of these chairs, which have since had their surfaces sealed, in museums today. Making possible the preservation of this great example of furniture design.

Shiro Kuramata is a designer whose name is synonymous with pushing forward the boundaries of acceptable materials for use in furnishings and interiors. Kuramata has worked extensively with a variety of unorthodox materials such as Plexiglas and rib mesh, creating a unique body of work encompassing shop fittings, furniture and living spaces. Much of his work, because of his strange choice of materials, hovers between function and suggestion. His chairs seem almost too fragile to sit on, but it is obvious that this is the purpose that they serve.

His chair, “How High The Moon,” (1986), named after a jazz piece by Duke Ellington, is a classic example of his use of material. The chair takes the form of a large armchair that is reduced to its elements, i.e. back, armrests, seat and so on. These elements are then reassembled in a wire mesh frame to form a somewhat deceptive piece of furniture. The use of rib mesh allows Kuramata to work only with the outer surfaces, which enables him to produce, for its size, a very lightweight chair. Its dematerialising surfaces suggest weightlessness, yet its voluminous form implies substance.

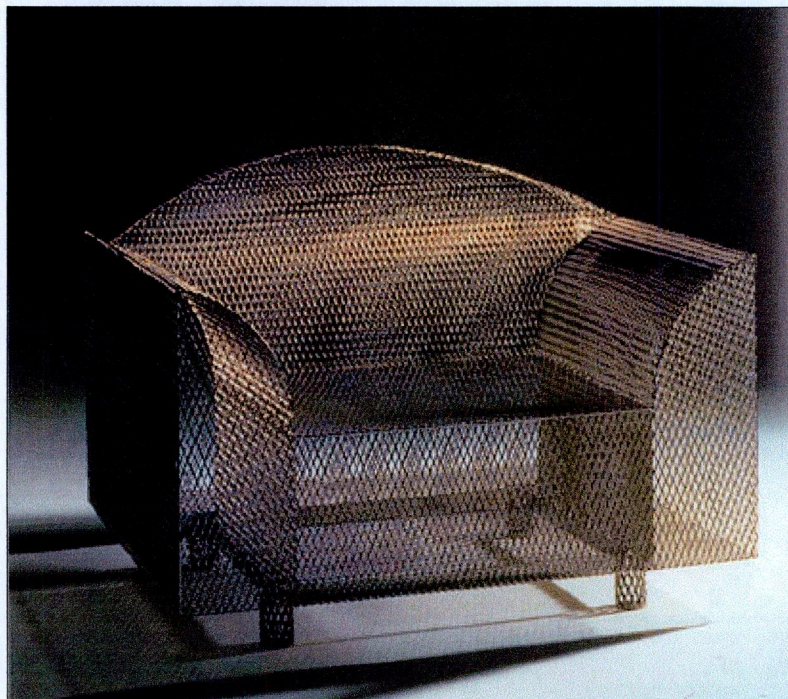


Fig. 11: How High The Moon

This play on the preconceptions of the traditional upholstered armchairs is a theme that is also apparent in Ron Arad's, "Big Easy" and "Well Tempered" chairs of the late eighties. These two designers, like many others, address the issue of spatial awareness in furniture design. However, many of the solutions derived in the past have been to physically reduce the size of the structural components, i.e. through the use of tubular steel instead of wood. Kuramata's chairs differ, in that his structures adopt materials that have a translucent quality to them, i.e. Plexiglas and rib mesh. This allows him to create an illusion of spatial presence while retaining the same mass.

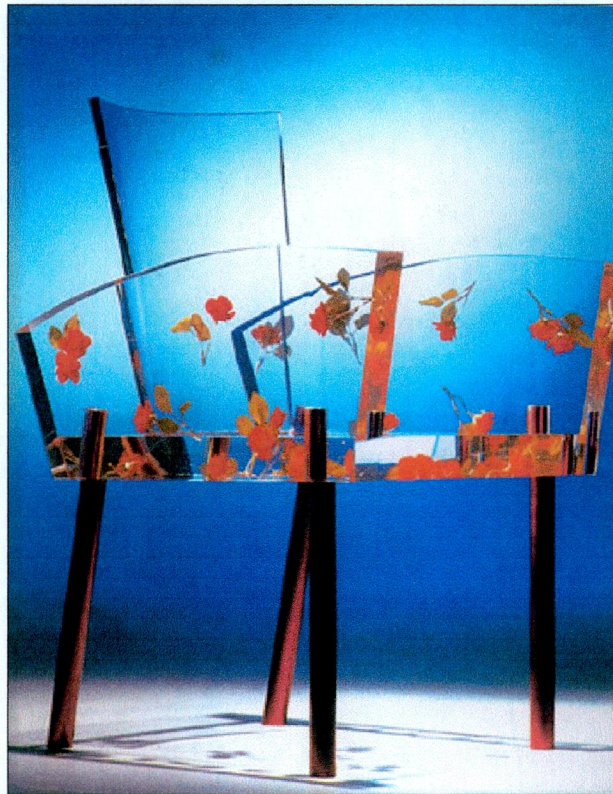
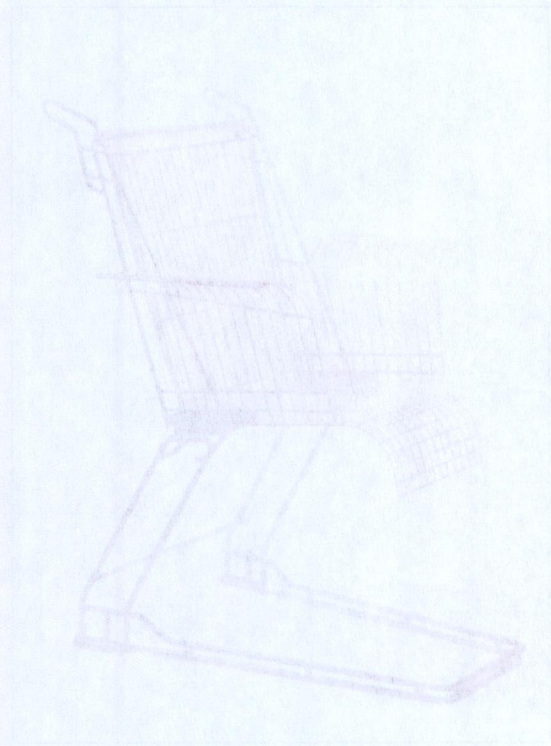
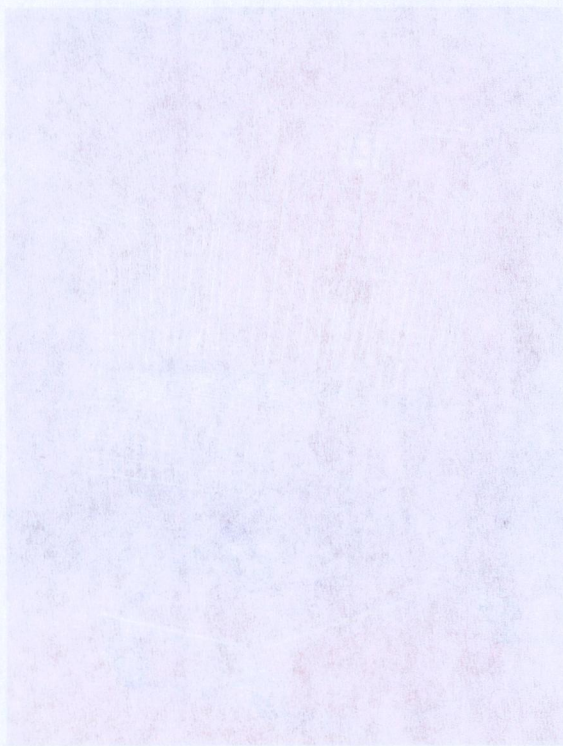


Fig. 12: Miss Blanche

This next piece was not chosen as an example of good design, rather it was chosen as an example of how a designed piece can be representative of thoughts and ideas other than those implied by its literal function. “Consumer’s Rest” (1983), was created by Stiletto. Stiletto refers to himself as a practitioner of design. He has worked in the area of experimental graphic design, amongst other forms of art, since 1981. Consumer’s Rest is an everyday item, in this case a shopping trolley, which is taken and is given a new breath of life. This practice of reinterpreting and investing a new function in everyday manufactured goods, has been employed by many artists and designers in the past. Examples include Marcel Duchamp, Tom Dixon and Ron Arad.



Fig. 13 & 14: Consumer’s Rest



Stiletto says about his choice of subject matter:

They are to have a lucid structure, fulfill their intended function in terms of length by weight by height, be industrially sound, stable, and solid, serially produced. I can meet these conditions most easily when I use containers taken from the everyday consumer cycle as my starting point... (von Vegesack, 1996, p.228)

The chosen object, in this case a shopping trolley is taken apart, reshaped and sprayed. Padding is provided by a cut sheet of transparent plastic normally used in industrial applications such as, swinging doors in warehouses. The provision of the plastic cover for the seat is to provide the user with a certain amount of comfort, but also to let the onlooker know that what they are looking at is indeed for sitting on. The shopping trolley, an object which by many is viewed as having very little "design value," has now been transformed into a functional piece of furniture.

Stiletto feels that the challenge is not in improving the product or the application of it. Instead he feels that the challenge is in making the most of what is available and what has already stood the test of time. Stiletto along with other practitioners of this style achieve in successfully expanding the public's awareness and design's vocabulary of, the use and the related tasks that are applied to everyday objects.

Chapter Two: Introduction to Ron Arad & Marc Newson

This chapter outlines the themes and styles evident in the work of these two designers

Marc Newson and Ron Arad are two designers that work in different ways and source their inspiration from completely different areas. They have been chosen for discussion because they have repeatedly shown that it is possible to break the constraints of traditional design practices in order to redefine the perceived links between form, function and materials in both furniture and design. They have accomplished this through their own unique approaches to furniture design.

Both designers work extensively in steel and this in itself is not strange. Unlike traditional tubular steel seating, however, they do not use this material as a structural element for the chair. Rather, the steel is used independently to form the entire structure: both the frame and the seated area. Their work quite often plays on the user's preconceptions of the materials used. This has the effect of sending out mixed and confusing messages to the user. This is one of the facets of their work that makes it so interesting.

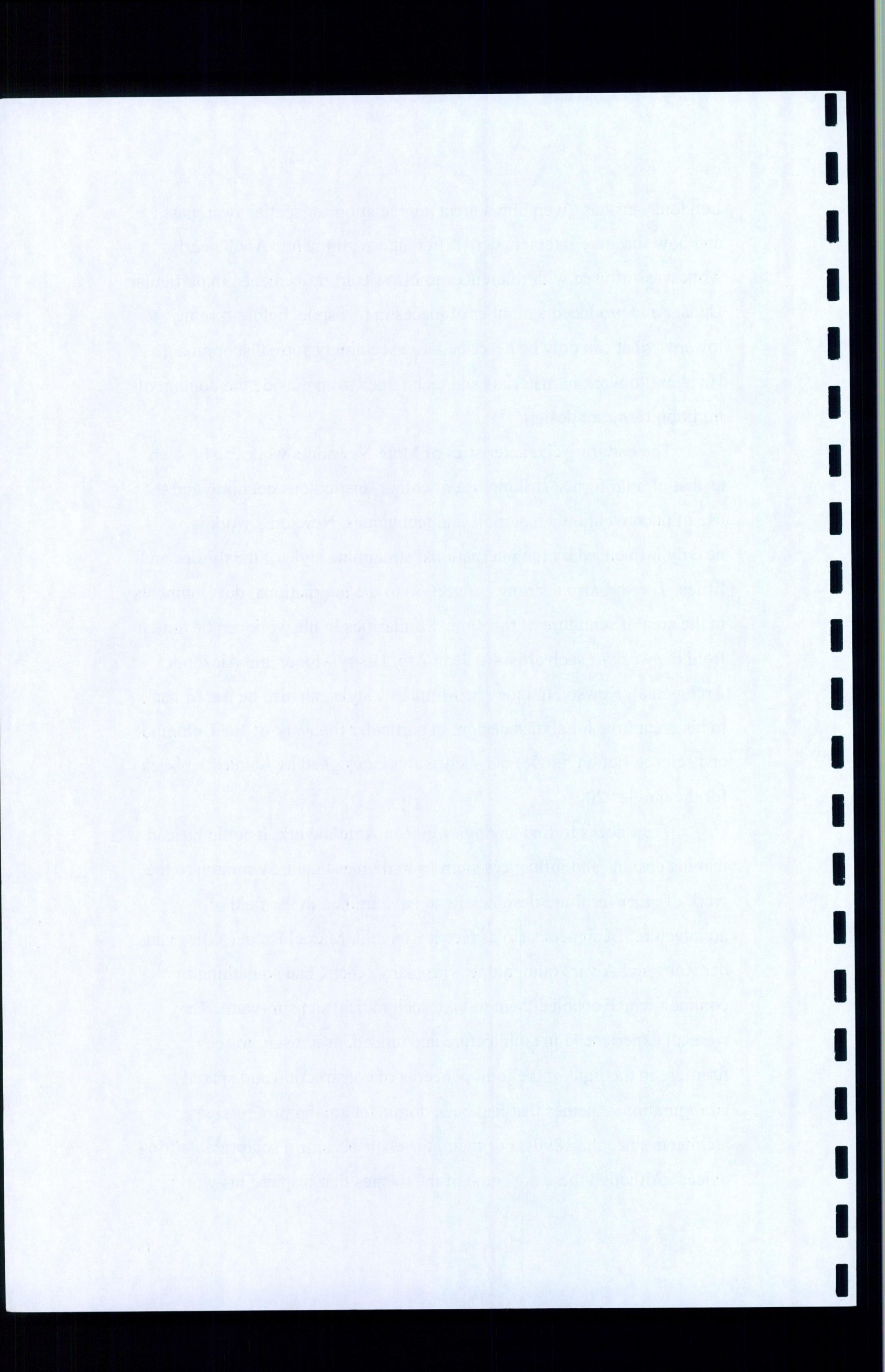
Their different educational training has undoubtedly contributed to their different styles. Marc Newson was born in Australia and it was here that he studied sculpture and jewelry making. This in itself is somewhat strange training for a furniture designer. However, the training in sculpture has given him a very good appreciation for form, while the training in jewelry making has given him an eye for detail and visual perfection.

Ron Arad's background is more in keeping with the traditions of furniture makers. He studied architecture in the Architectural Association,

London. This has given him a great appreciation for spatial awareness and how furniture interacts with different environments. Arad's early work was suffused with references to historic art movements, in particular Dada. Arad produced a number of pieces in this style, before turning towards what can only be described as a seemingly surrealist approach. He chose to work in materials and techniques from outside the domain of tradition furniture design.

The enduring characteristics of Marc Newson's work can be seen as that of bold forms, striking use of colour, meticulous detailing and the use of unconventional materials and techniques. Newson's work is heavily influenced by the international streamline style of the thirties and fifties. There is also a strong connection to the international developments in the area of sculpture of this time. Similarities in his work can be drawn from the work of such artists as Jean Arp, Henry Moore and Alexander Archipenko. Newson unique retro-futuristic style can also be traced back to his great love for sixties design, in particular the work of Joe Colombo, and science fiction movie sets such as those designed by Stanley Kubrick for the movie "2001."

If one seeks to find analogies in Ron Arad's work, it could be said that his designs and influences stem from themes that are common to the work of other furniture designers who have trained in the field of architecture. Designers such as Gerrit Rietveld, Marcel Breuer, Mies van der Rohe and Alvar Aalto, along with many others, had something in common which enabled them to take such radical steps forward. They were all experienced in architecture and tended, as a result, to see furniture in the light of the joint concerns of construction and spatial configuration – themes that had been dominant among progressive architects since the 1890s. For them, the chair became a sculptural 'sitting object'. Although these are some of the themes that inspired his work;



Arad arrived at a somewhat different conclusion, which is shown in the unique style of his work.

Newson approaches his works in a visual way, the forms, he says, come to him instinctively. "My mind is totally visual. It's stuffed with images of shapes that I want to see, but don't know how to make."

(Rawsthorn, 1997, p.74) Designing objects that he does not always know how to make has meant that he has often had to have his work produced employing highly specialized techniques.

In 1988 a design obsessed Japanese entrepreneur offered to put Newson's work into production through his company, Idee. This allowed him the freedom to use specialized production methods, which without financial backing would not have been possible. An Aston Martin sports car factory in England manufactured a number of pieces. Among these pieces, were the Event Horizon Table and the Orgone Chair. Both of these designs are so complex and unique in form that they need such a specialised production team to realise them. It is this kind of extravagance that has made Marc Newson known for his revolutionary approach to furniture design.

In contrast to Newson's style Arad chooses to produce much of his work by hand. This allows him the freedom to explore and develop his technique to its full potential. Although Arad renounces common practices and techniques of traditional furniture design, it can be seen that he has a great respect for some of their disciplines. The great attention that he pays to certain elements of his design, such as the finish (which he applies by hand), shows that his work is rooted in the kind of perfection and attention to finish that is found in the likes of French polishing.

THE HISTORY OF THE
CITY OF BOSTON
FROM THE FIRST SETTLEMENT
TO THE PRESENT TIME
BY
JOHN HUTCHINGS
OF THE BOSTON BAR
IN TWO VOLUMES
VOL. II
BOSTON
PUBLISHED BY
J. B. ALLEN
1856

Chapter Three: Ron Arad, the designer and his work

This chapter takes an in-depth look at the work of this influential designer.

It is in examining Arad's working methods that his motivations and personality become clear. Judging by his working habits it might be said that Ron Arad is a very humble designer. In the same way that singers might see herself as separate from their voices or that an artist might see his work as separate from himself, it seems that Arad sees his work as something that comes to him as distinct from something that comes from him.

This is a common notion, usually evident in those whose work is said to rely on inspiration, which is seen as an uncertain and perhaps finite substance that must be maximised and respected. "There is a traceable continuum to the work. One piece grows from the last. A shape left open in one design comes to a complete closure in the next. In this approach, Arad says, 'the ideas and the influences come from within' from within the group, and certainly from within Arad's imagination." (Downey, 1992, p.132) It is as if Arad feels that by doing this work he is serving his inspiration and not that his inspiration is serving him.

Previous critics have remarked on the manner in which projects grow from their initial stages: "He works quickly, throwing up a continual stream of ideas rapidly transforming them in the workshop into three dimensions from his tracing paper sketches." (Sudjic, 1987, p.5) One Off is constantly streaming through ideas, sometimes merely noting them by a crude artefact, sometimes processing them to a greater degree." It is as if Arad is working and producing the pieces as quickly as the ideas come to him, perhaps out of fear that they could stop coming at any stage.

One of the recurrent themes in his work is that of movement. Arad has always shown an interest in movement and how an object reacts when in contact with the body. The Moroso collection is in itself an insight into movement: chairs that roll back when in use and forward when not, others which have reassuring spring in them to support your weight. An example of this would be the Big Heart chair which, in keeping with Arad's style of working, is a development of an earlier piece, Heart and Industry. This chair is shaped like a heart with a small indentation at the widest part just big enough to sit in. The tip of the heart is weighted so that when not in use the heart stands to attention, to show a more apparent heart shape.

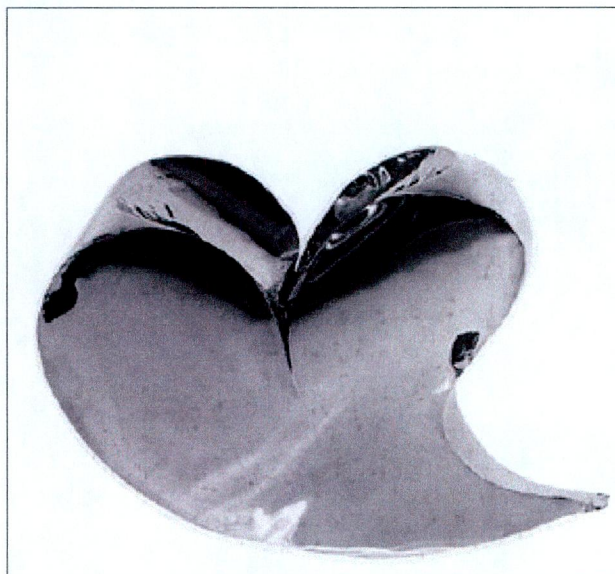


Fig. 15: Heart & Industry

Another good example of movement, but perhaps a better example of Arad's reluctance to over develop an idea, is the Looming Lloyd. This is not a piece of furniture as much as a play with motion, which uses a piece of traditional furniture as a prop. Looming Lloyd, is a pair of leaded steel shoes that can be attached to any chair with four legs. The idea is

that when attached to the front legs, the chair will rise up and give the impression that the chair is about to walk away. This piece shows effectively shows the humour that is evident in much of his work. But perhaps there is an underlying meaning here. Perhaps Arad is trying to make a mockery of traditional furniture, putting clown shoes on it. One might also say that by providing the chairs with these shoes, the ability to walk, he is perhaps suggesting that it is time for traditional furniture to move on and to make way for the new. When wearing these shoes the chair gives the impression of walking with its head down, maybe intentionally suggesting that they are suppressed.



Fig. 16: Looming Lloyd

Looming Lloyd is a very effective piece, however you might question why he did not design a chair to accompany these steel shoes? This shows another trait of Arad's, his resistance to labour too long on the one piece. Arad feels that the more laboured a design becomes the more it

is in danger of losing it's original 'raison d'être.' Perhaps Arad felt that with Looming Lloyd he had achieved what he had set out to do, explore the movement itself, if this were the case designing an accompanying chair would only have been a frivolous exercise.

Arad's work grows and develops out of the constant experimentation that he carries out with materials. He is always pushing forward the uses for materials and the different effects that they can have within the one piece. A good example of the way with which he uses materials can be found in his screen designs. These comprise of variations of expanded and unexpanded honeycombe aluminium, trapped in between two layers of toughened glass, bolted onto a steel frame. The use of the aluminium honeycombe allows varying degrees of light transmission, this gives Arad control over the nature of the screen itself, he is "concerned with the ambiguity of what is seen and what is surmised...the whole question of transparency, solidity and translucency." (Cook, 1988, p.10) These screens are also a good example of the individuality of each piece of work. Arad uses the honeycombe as a medium to create patterns and images between the glass.



Fig. 17: Screen designs

This somewhat haphazard approach to the use of materials has gained him quite a reputation and has made his work stand out in the area of both design and art. In fact, many people have to ask themselves whether he is an artist or a designer.

Whatever he might be, his work is rooted in the actual process of making: of etching glass, forming metal, casting concrete and so on. Arad does not differentiate design from making the way that a conventional industrial designer would. He is prepared to take risks with his material, in order to invent new shapes and forms that sometimes look as if they could never make the transition from paper to reality.

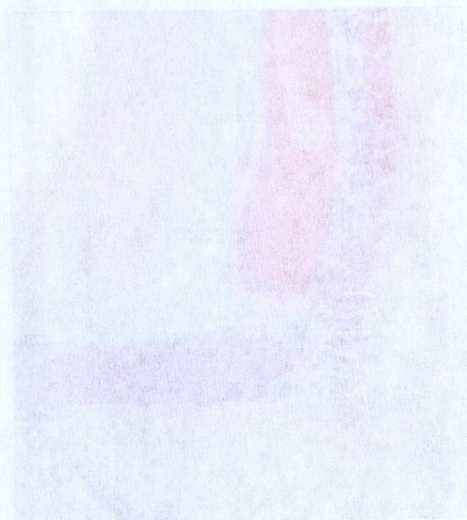
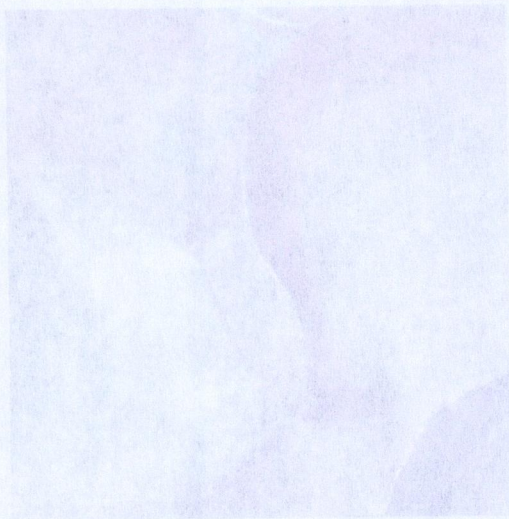
‘One-Off’ design studio was born in 1981. From here Arad designed, developed and produced his work. Since the beginning of Arad’s career his work has always been created as much from the drawing board as from the workshop. All of the earlier work that came

from the One-Off studio was produced by hand. This allowed Arad to develop ideas and experiment with materials and techniques. He developed a number of techniques that allowed him to give each of the chairs a sense of individuality. It is this aspect of his work that the public craves for. People like to think of themselves as being individual. Clothes, music, cars, watches and home furnishings are just a few ways through which people like to express themselves as individuals. 'One-Off' gives the customer the feeling that that was exactly what they were getting, a one off piece of art that was exclusively theirs

One of the techniques used by Arad is way that he uses lines produced in the welding process, like a pen on paper, to highlight the seams or outline of a chair. The welds, when done this way, stand out from the highly polished and bold surfaces of the chairs. This has the effect of drawing attention towards the outline of the solid, which lightens the viewer's perception of the chair. It achieves this by visually flattening the image and making it appear as if it were a two dimensional sketch on a piece of paper.



Fig. 18 & 19: Detail of welding techniques used by Arad in his work



This welding technique is very evident in the early examples of the 'Big Easy' series. The Big Easy is made of beaten, bent and welded sheets of steel which are joined together to form an apparent solid mass. Although these chairs are born of the same pattern and design each piece has its own sense of individuality. Just as a work of art is thought to be an expression of the artist, his thoughts and feelings. This individuality of his work comes from the creation of each individual piece. Because Arad produces his work by hand, it is unlikely that he would beat or weld each piece in exactly the same way. For this reason it could be said that each individual piece is an expression of himself, and therefore a work of art.



Fig. 20: Big Easy

The heavily upholstered chairs of the 19th century have managed to capture and epitomise the idea of seating comfort. Not only has this type of furniture managed to take over our homes, but also many architects and designers, past and present, have developed a great respect for it. Arad takes advantage of the familiarity that people have for this style of furniture and exploits preconceptions of comfort to highlight the obvious contradictions in much of his work. The Big Easy series quite obviously takes the form of a heavily upholstered armchair, which in itself suggests

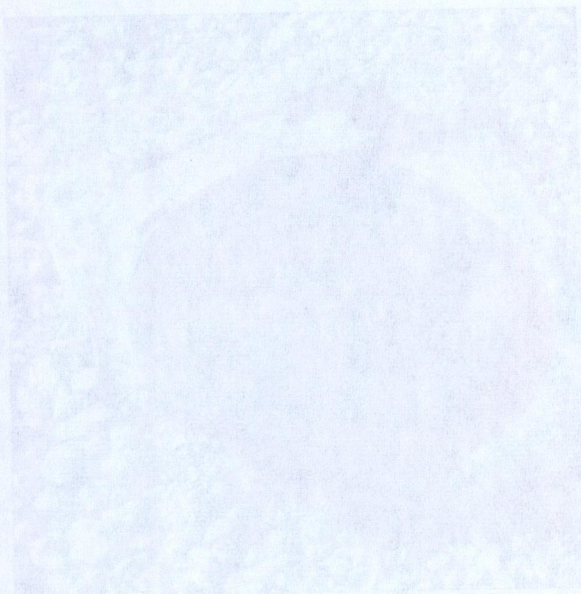
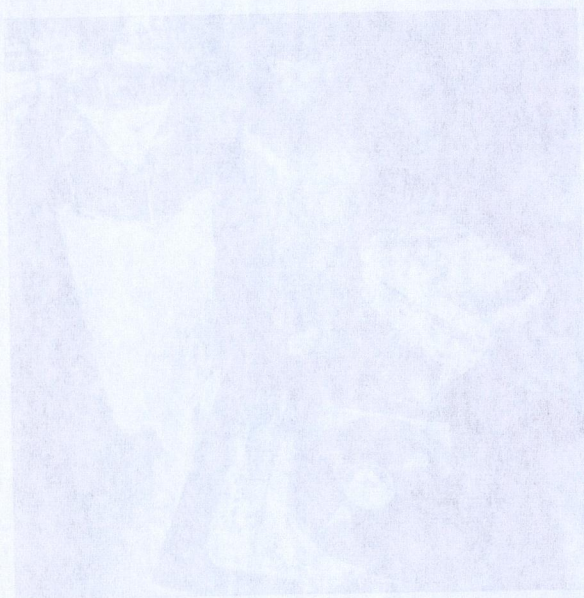


comfort and warmth, however he contradicts this with the use of steel, which suggests a very hard and cold object.

The use of craft based techniques in the production of these pieces gives them an anti-industrial aesthetic, which could be an intentional statement against the Industrial style of the late seventies and eighties. One Off produced a hi-fi system that was cast into reinforced concrete. This was an intentional play by Arad on the preciousness of consumer electronics. Arad felt that the precision and the technocracy in this industry only existed as a means to massage the ego of the purchaser. The sophistication of the components of stereo systems was so that they could be considered entirely independently from their casing. Arad soon lost interest in this project when it began to appear in knock off form in novelty shops.



Fig. 21 & 22: Hi-fi Range



The beaten surfaces of the volume series together with the highly polished finish have the effect of softening the appearance of the steel. The light reflects off the surface to emphasise the dips and rises in the surface. This transforms a material, which is usually associated with strength, into an apparently soft material. It is as though Arad is trying to imitate the creases and folds of the chairs upholstered counterpart.



Fig.23: Big Easy, late version

Le Corbusier, Eric Mendelsohn, Breuer and many others from their period were extremely respectful of the comfortable classic leather club chair. In fact, at first glance Breuer's first tubular steel chair, the Wassily chair of 1925 might appear to be a steel tube version of the club armchair. The Wassily chair is in fact an Elementarist, open-space version of the club chair; the tube draws in space the outline of the familiar form.

Arad, through the use of his unique welding technique, as did Breuer through the use of tubular steel, outlines the leading edges of the Big Easy, which essentially creates a similar spatial effect to that of the Wassily chair. However, whereas Breuer's aim was to use this wonderful material, tubular steel, to reduce the chair to its essential elements and

create a feeling of space. Arad uses this technique to create a visual illusion. He aims to lighten in appearance what is heavy.

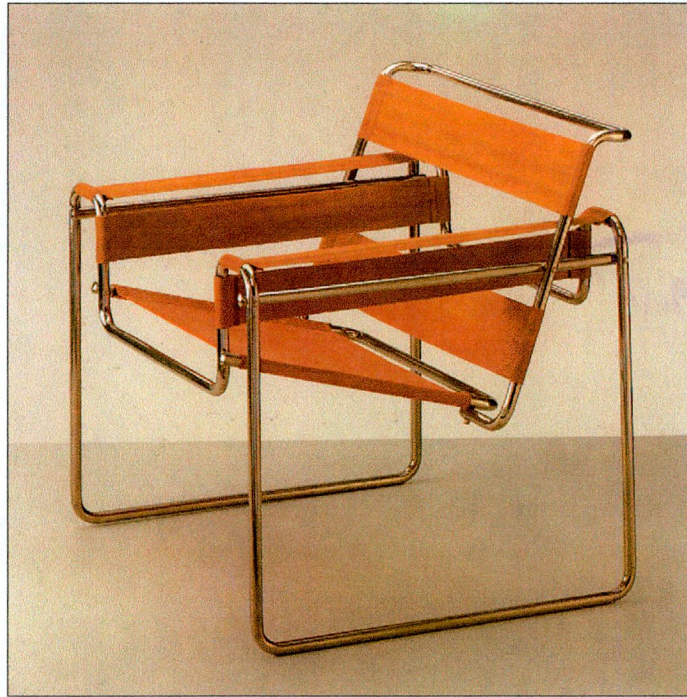


Fig. 24: Wassily chair, Marcel Breuer, 1925

Another chair that is based on the classic armchair is the Well Tempered Chair. This chair shows many of the same characteristics as the Big Easy series, however is somewhat of a novelty in comparison to Arad's earlier work. A lot of his work is based on creating a form that appears to be a solid but is actually hollow, there is a constant theme of empty / full. The Well Tempered Chair differs from those pieces in that here, Arad opens up the volume of the classic armchair and leaves only the pure surfaces of its rounded forms. He approaches this piece with a perspective of minimalism and spatial awareness. The sharp edges and the cool gleaming surfaces offer, from appearances, a somewhat doubtful seating experience. But the Well Tempered Chair offers a unique kind of seating comfort. Sitting on the steel loops you are constantly wavering between cosiness and uncertainty. The uncertainty comes from the

apparent collapsibility of the structure. However, the use of tempered steel makes a rather stable seat, with a reassuring spring.

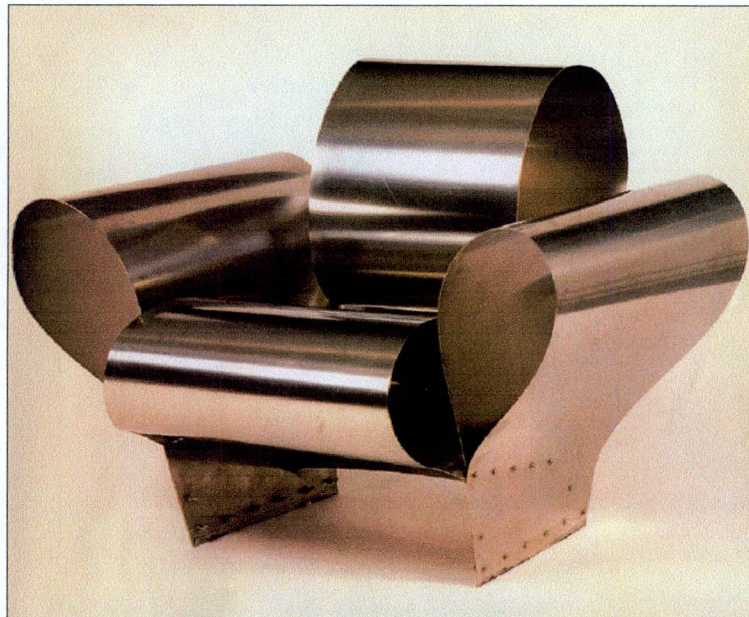


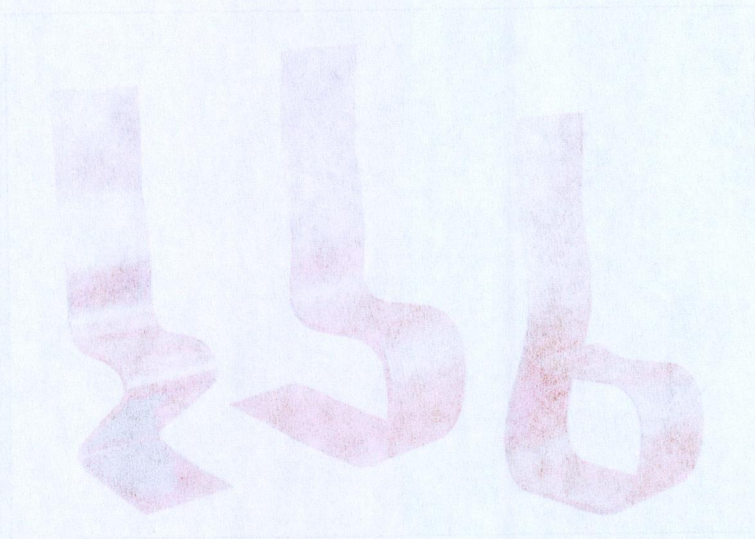
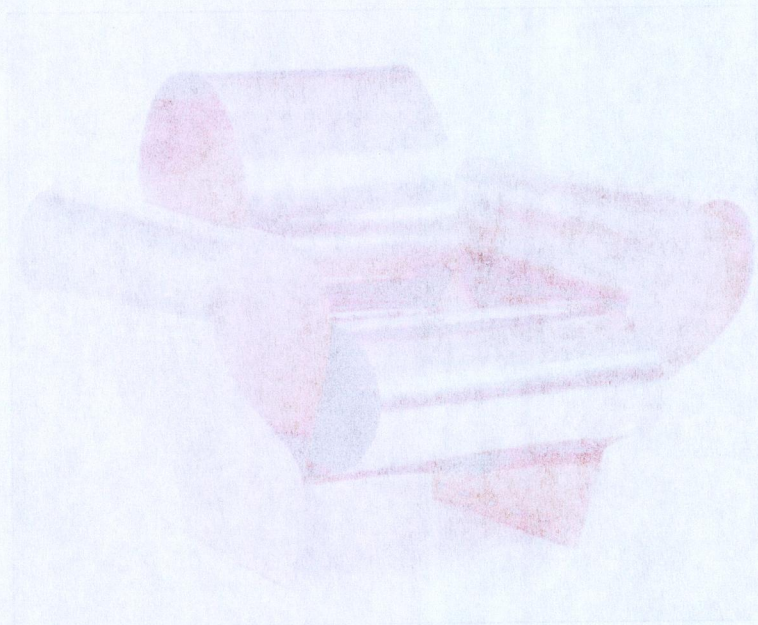
Fig. 25: Well Tempered Chair

This is not the only work of Arad's that expresses an attitude towards minimalism. Other examples of this are to be found in the Eight By One series and the Strict Family.

Some of the pieces in the Eight By One series strongly resemble Gerrit Thomas Rietveld's Zig-Zag chair. It can only be assumed that Arad was designing with the same objectives as Rietveld during the creation of these chairs.



Fig. 26: Eight by One series



An idea that has always accompanied the history of furniture design is that of producing a chair from a single continuous form. It was this idea that captivated Rietveld, he began experiments in 1927 using bent, spliced and plywood. In 1934 he had designed what is known today as the Zig-Zag chair. The Zig-Zag appears to completely contradict the idea of a practicable piece of furniture. It's form, with its free-standing surfaces seems to have a structure that is similar to that of a house of cards, this suggests that it would collapse on contact. The design comprises of four planks of wood, the seat and backrest are joined using dovetail joints for extra strength, other reinforcements such as screws and nuts, as well as wooden wedges in the corners keep the chair stable. It was the discrepancy between the simple shape and the relatively complicated construction that defeated the purpose of the chair. Rietveld himself said that it is not a chair but more a "designer joke." Arad through the use of steel manages to overcome this and creates a chair which is both simple in form and structure.

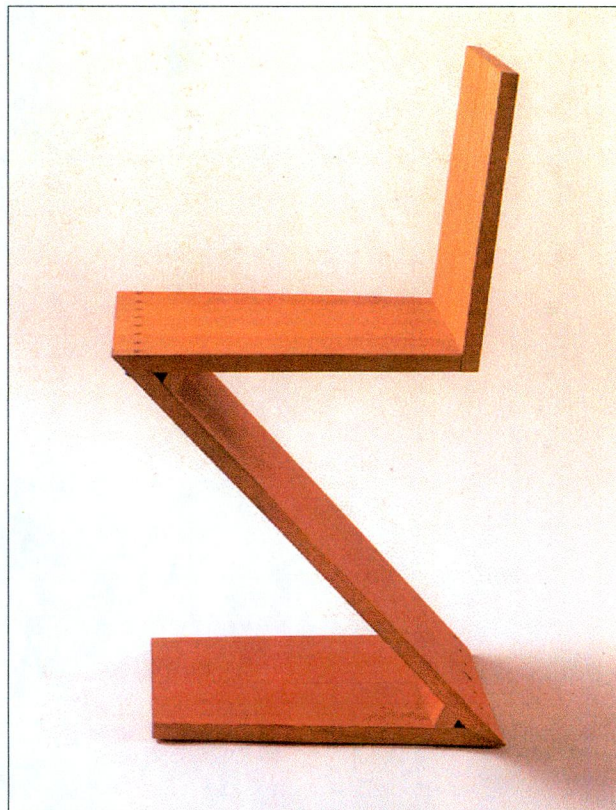


Fig. 27: Zig Zag chair

Rietveld's goal was to design a chair of "functional form which does not displace space but allows it to be perceived as a continuum." (von Vegesack, 1996, p.112) Arad achieves this goal through the design of three chairs. Their structures are very economical. Arad's designs succeed in reducing the form to one essential plane comprising of all three elements required, backrest, seat and foot. This is accomplished through the enormous potential for malleability and the versatile possibilities for working with steel. The compositions of these pieces are dominated by curved, winding silhouettes. The name Eight By One is derived from the size of the single component metal plates: eight feet by one.

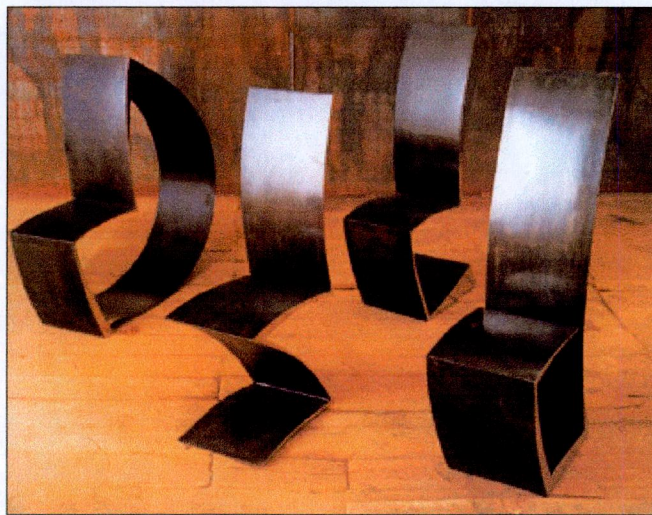
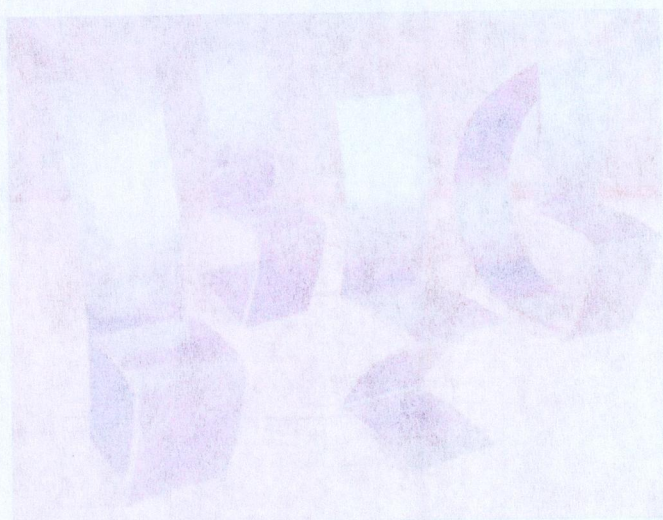


Fig. 28: The Strict Family

The Strict Family is a series of chairs that are very similar to Eight By One in their general appearance. However they are not concerned with the continuous flow of the form. In fact quite the opposite, here Arad takes the forms created in Eight By One and metaphorically breaks them up into their separate components. They are then reassembled in the same order. When reassembled the chairs no longer have the same continuous flowing form but resemble more a jigsaw; an item made whole through the joining of separate pieces. This results in a somewhat different



aesthetic than that of Eight By One. Eight By One resembles a flowing ribbon; they have a very organic aesthetic. The Strict Family has a very stylised and elegant image with a sculptural resonance.

With the “Double Reitveld” Arad attempts to identify the different elements of the chair, he also explores the possibilities between different steel finishes and the effects of applying each finish to a different element. Arad identifies two main elements in this piece, the seating area, i.e. seat and backrest, and a support element. Each of these elements are separated and differentiated from each other through the use of different materials.

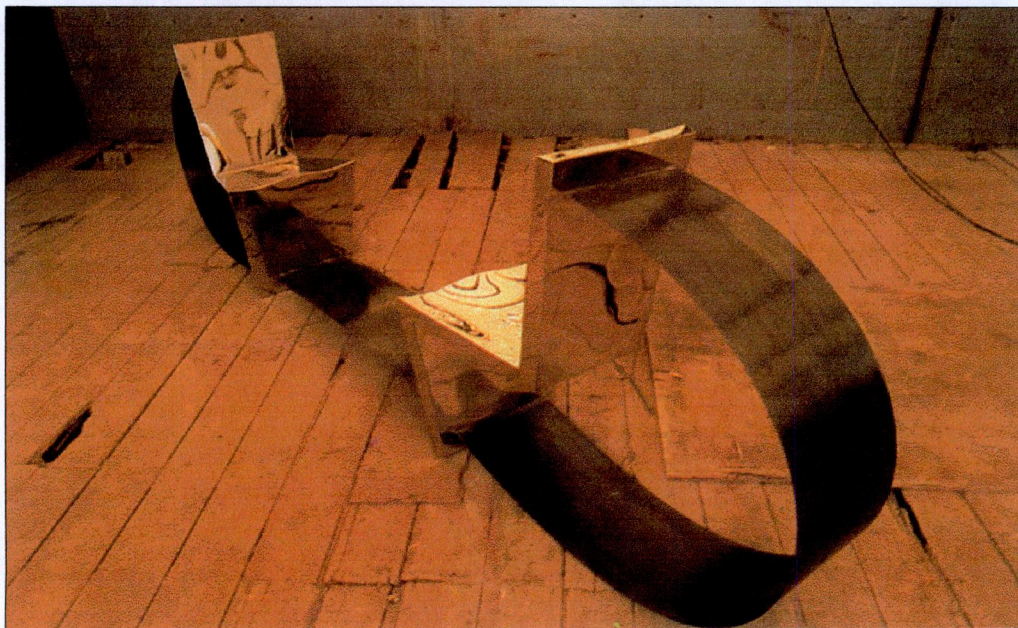


Fig. 29: The Double Reitveld

The chairs, which are made of continuous plate, are finished in vibrant stainless steel. The structural elements are in black forged steel. By doing this Arad can gain a certain amount of control over what elements of the chair the viewers attention will be drawn to. Like a magpie the onlooker will generally be drawn towards the shiny stainless



steel, thus making it instantly apparent where to sit. When viewed in a dimly lit room the forged steel supports fade into the background and the two facing seats have the appearance of floating. Apart from attaching and supporting the two seats the steel strip adds a certain amount of spring to the seat which makes for a comfortable bounce. The Double Reitveld is developed from the more manageable Single Reitveld.

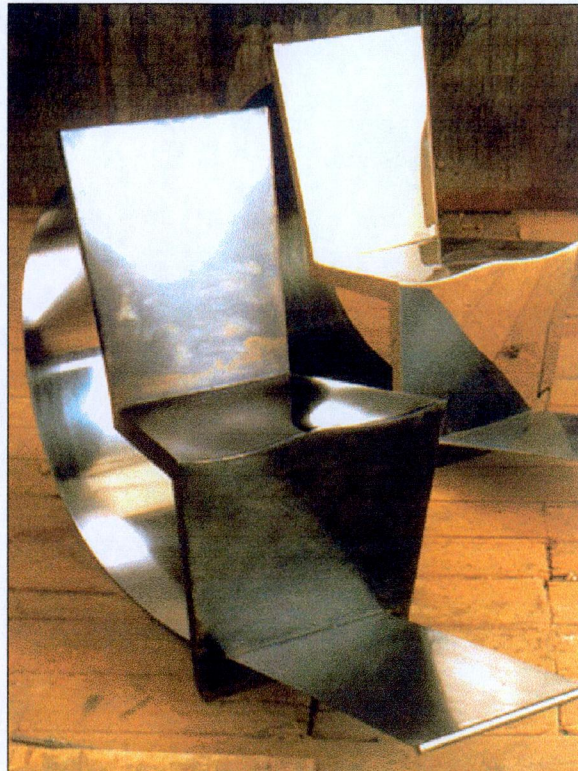


Fig. 30: Single Reitveld

Chapter Four: Marc Newson, the designer and his work

This chapter takes an in-depth look at the work of this influential designer.

Marc Newson work is underlined with a constant theme of form. His extravagant approach is very evident in the commanding forms and bold colours used in his designs. When faced with his work, you are more inclined to look in awe than you are to use it. This is because much of his work appears to offer more pleasure through its aesthetics than through its functional use. The meticulous detailing and perfect finishes demand that they be examined and touched. Newson feels that his creations are as much about fashion as they are about good design. It is this attitude that has gained Newson the reputation of being a superstar designer, however he has managed to avoid the rock-star attitude which means that he is still quite grounded in his work.

Newson's first design exhibition, made possible by the funding of an Australian Arts Council grant, brought him instant success. The centrepiece of this exhibition was a metallic chaise longue.



Fig. 31: Lockheed Lounge

1. The first step in the process is to identify the problem.

2. The second step is to gather information about the problem.

3. The third step is to analyze the information and identify the causes of the problem.

4. The fourth step is to develop a plan of action to address the problem.

5. The fifth step is to implement the plan and monitor the results.

6. The sixth step is to evaluate the results and make adjustments as needed.

7. The seventh step is to document the process and results for future reference.

8. The eighth step is to communicate the results to the relevant stakeholders.

9. The ninth step is to review the process and make improvements as needed.

10. The tenth step is to ensure that the problem is resolved and the process is completed.

11. The eleventh step is to provide feedback to the relevant stakeholders.

12. The twelfth step is to close the process and move on to the next task.

13. The thirteenth step is to ensure that the process is followed consistently.

14. The fourteenth step is to maintain the documentation and update it as needed.

15. The fifteenth step is to ensure that the process is effective and efficient.

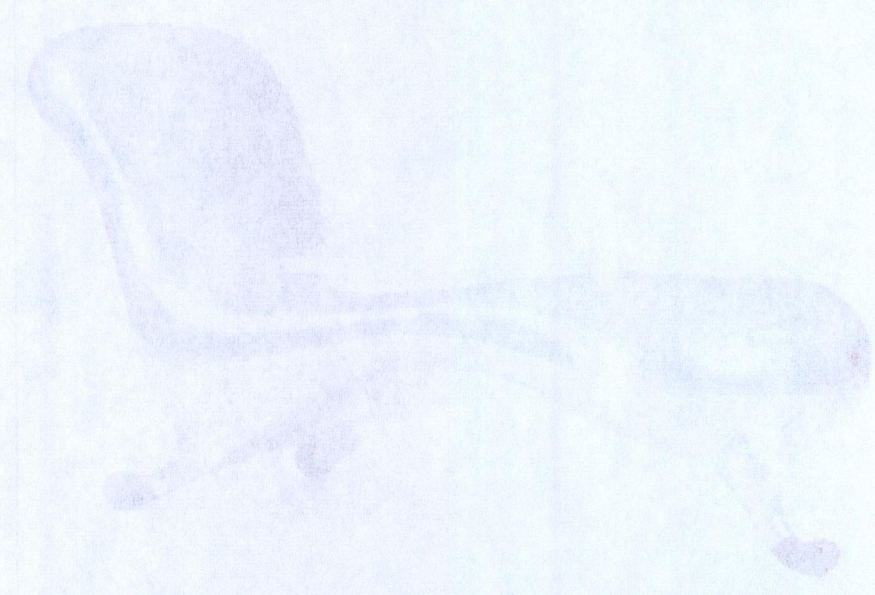
16. The sixteenth step is to ensure that the process is scalable and adaptable.

17. The seventeenth step is to ensure that the process is sustainable and long-term.

18. The eighteenth step is to ensure that the process is transparent and accountable.

19. The nineteenth step is to ensure that the process is flexible and responsive.

20. The twentieth step is to ensure that the process is continuous and ongoing.



It was this design, the “Lockheed Lounge,” that captured the design world’s attention. This piece instantly became a design icon; designer Philippe Starck was so impressed by it that he integrated the design into the foyer of the Paramount Hotel, New York, which he remodelled in 1990. It was also featured in Madonna’s 1994 music video “Rain.”



Fig. 32: Scene from Madonna video ‘Rain’

The idea for this piece like a lot of his work came to him as a form, “ I had this image of a fluid metallic form, like a giant blob of mercury.” (Rawsthorn, 1997, p.74)

At first he did not know how he was going to make this image a reality. Growing up in Australia Newson could not help but be part of the surfing culture, in fact the production of this piece is based on the same techniques used for making surfboards. Taking this principal of, using a fiberglass resin for a core and then covering it in a harder more durable material, Newson’s design was realised. The Lockheed Lounge, which he produced himself, is made of a fiberglass core which is carved into shape, this is then covered in thin walled aluminium sheeting. The aluminium is



shaped and joined almost seamlessly using blind rivets. This technique gives a somewhat unique appearance, from which it was named because it reminded Newson of an airplane.

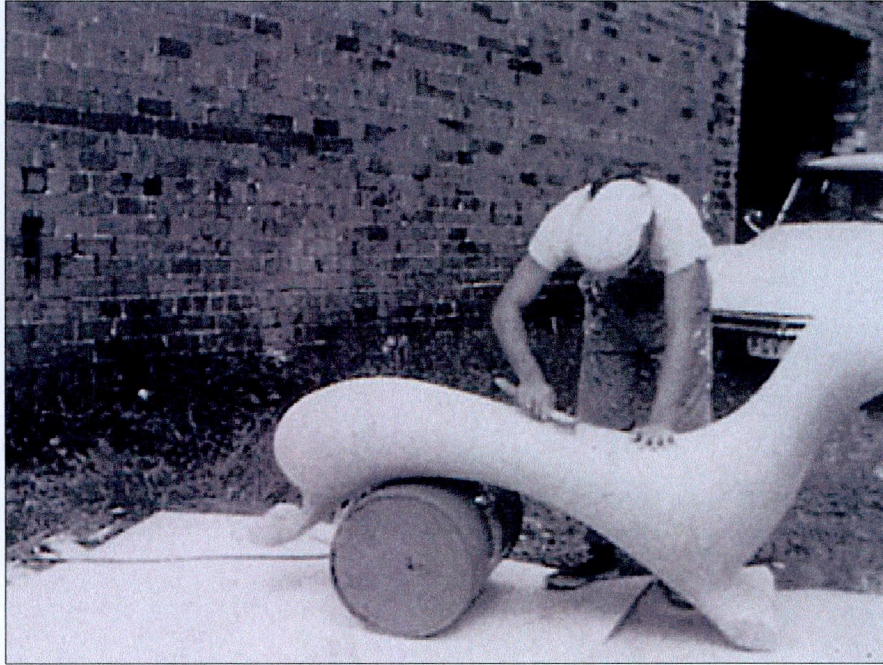


Fig. 33: Marc Newson at work on the Lockheed Lounge

An admitted interest and perhaps preoccupation with history is the driving force behind many of the contradictions apparent in the Lockheed Lounge. The conventional chaise longue is itself a piece of furniture that is steeped in history and instantly conjures all kinds of stereotypes. It is seen as the furniture of royalty and high society but also of eccentrics and old ladies. It also summons images of reclining nudes and learned scholars engrossed in some captivating theory. Chaise longues are usually decorated with velvet ornate stitching and generous amounts of padding. Newson toys with these preconceptions through his choice of material. The soft velvet is now replaced with aluminium and the ornate stitching with angular seams and rivets. Also, Newson adds a further source of incoherence through his marriage of this industrial material with the organic form used. This creates conflicting messages between the

materials used, which represent rigid, geometric and angled surfaces against the organic form, which is usually associated with softness and comfort. But these are preconceptions, says Newson, do not exist outside the learned vocabulary of design.

Working with the same style Newson also produced a chest of drawers, called the Pod Drawers, to match the Lockheed Lounge. The Pod Drawers like the Lockheed Lounge is based on an historical piece of furniture, in this case a chest of drawers from the Art Deco period. The chest of drawers in question was designed by, André Groult in 1925. As you can see it's rounded form and divided surfaces bear a striking resemblance to Newson's. The many seams of the Pod Drawers make it initially unclear as to what sections open and what ones don't.

Both the Lockheed Lounge and the Pod Drawers effectively demonstrate Newson's talent for successfully meshing two or more styles together to create a style that is instantly recognisable as his.

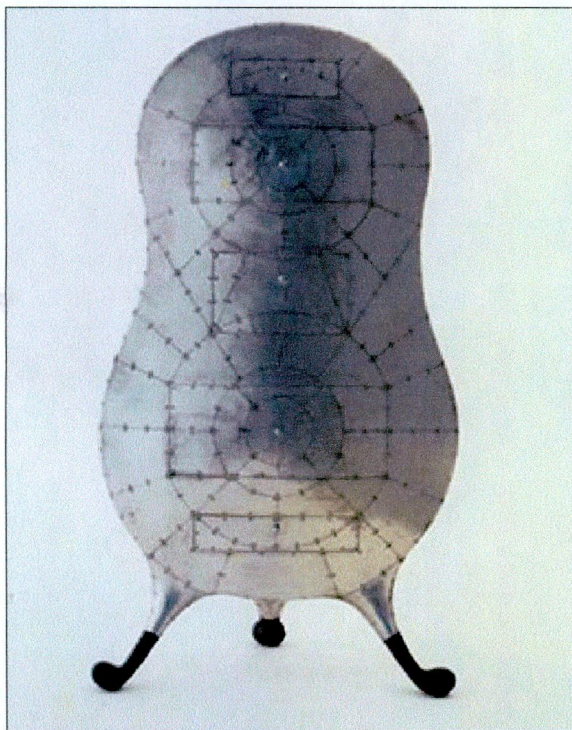


Fig.34: Pod Drawers

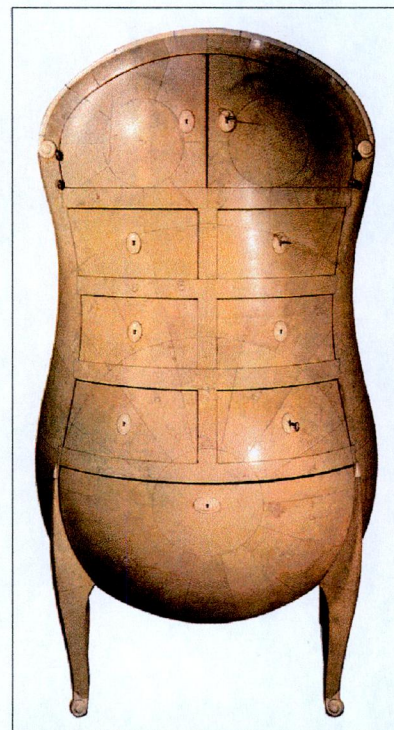


Fig.35: Cabinet by Andre

Much of Newson's work is rooted in a fascination with the space age and space itself. This together with his love for sixties design, has led to his unmistakable retro-futuristic style. The pieces examined here, Event Horizon, The Orgone and the Felt Chair, greatly reflect this style. These pieces are so original in their construction and form that they bear little resemblance to any past furniture.

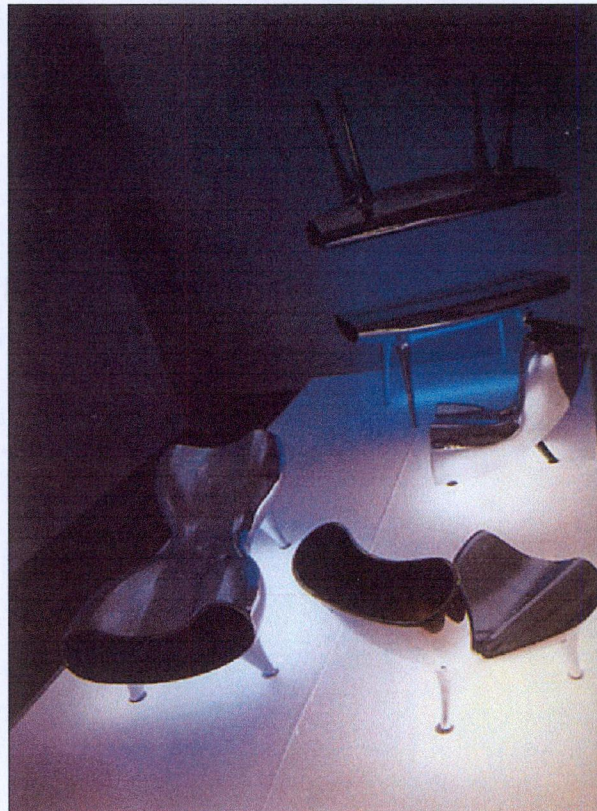


Fig. 36: Event Horizon & The Orgone Family

These pieces from their appearance give the impression of having a personality and perhaps even a life. They are reminiscent of a scene in Tim Burton's film Beetlejuice. In this scene there are a number of statues and modern art sculptures which are brought to life. This allows the viewer to see these inanimate objects come to life and assume characteristics of some strange insect like creature. These pieces,

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especially The Event Horizon and The Orgone, have this same quality. There is a suspicion of there being more to them than what there appears to be. One obvious analogy can be drawn to Event Horizons obvious resemblance to a four-legged animal such as a cow. A contributing factor to this could well be that their seamless construction gives the impression that they are not man made object but rather completely organic.



Fig. 37: The Orgone

The bold use of colour in this work could be construed by some as being very confident or adventurous. In actual fact quite the opposite is true. It is strange then that this use of colour that has become one of the most striking attributes to his work is almost incidental. Newson says, “I don’t feel confident enough about colour to choose shades; rather than doing everything in black and white, I use primary colours...”

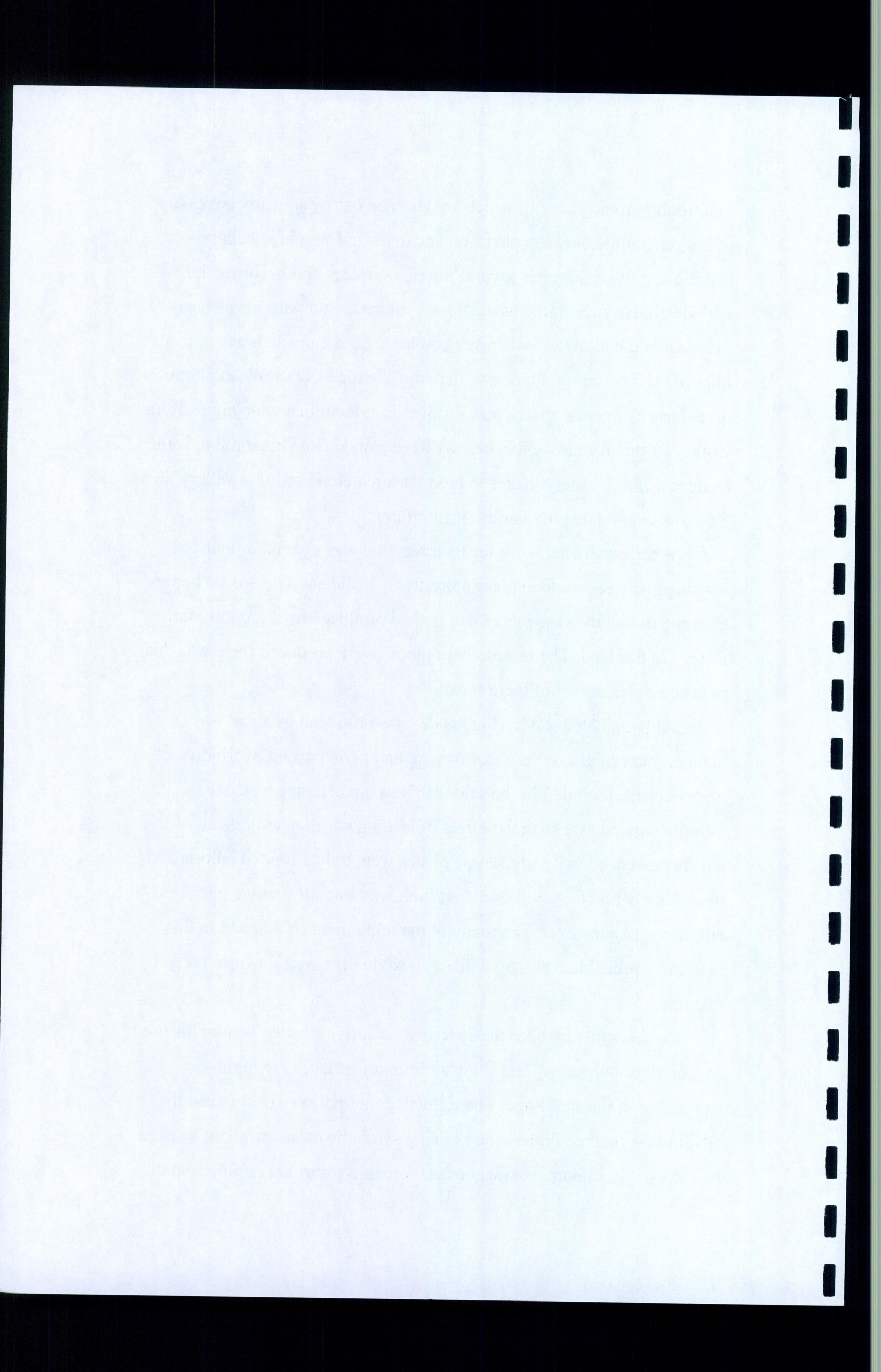
Much of Newson’s work is imbedded in the disciplines that he acquired through his training in jewellery making. This training has given him a great appreciation for detail and finish. His attention to and application of meticulous detailing is evident in most of his work. It is this quality that lifts his work above what may be compared to the

‘anthropomorphic clichés’, which are churned out by so many designers of his generation. Newson pays homage to his training in jewellery making for giving him this love of interior surfaces and his obsession with detail. He says, “One of the things you’re taught with jewellery is that it should be flawless wherever you look. So the inside is as important, if not more important, than the outside.” Newson’s exploration of and use of internal spaces and surfaces is evident in a wide range of his work. Another discipline that he may have gained from his training is the tendency of a jewellery maker to produce a matching set of jewellery, in Newson’s case a distinct family of furniture.

When producing work for Idee Newson was given the financial backing and freedom to express more freely his ideas. There is no better example of this than the pieces that he had produced by an Aston Martin factory in England. The reason these pieces were produced there was due to the complex nature of there forms.

Although Newson having his designs produced by a car manufacturer might be very extravagant and perhaps a bit overindulgent on his behalf. It could also be said that Newson is taking a step to introducing and assessing the effect of leading edge technological advancements on daily life. These pieces were only a limited edition and it is unlikely that they will ever find their way into an average interior environment. However, like many of the other pieces discussed in this thesis it is probable that they will act in paving the way for furniture yet to come.

Newson’s love for the space age is aptly reflected here in his use of materials and forms. The shiny aluminium surfaces are highly suggestive of the space age. The reflective internal surfaces against the silver outer shell could be seen as being symbolic of an astronaut’s space suit. Also, the smooth, curvaceous and organic forms are reminiscent of



the stereo typed image of a space rocket exploited in many space age items such as the lava lamp.



Fig. 38: Marc Newson on The Orgone

Towards the end of the sixties there was a changing attitude towards interior designed objects. Issues such as space permanence and solidity were questioned. These issues along with a conviction that living spaces were getting smaller lead to the design of the first inflatable chair, Blow, 1967. One of this chairs most striking features and an issue which the designers (Jonathan De Pas, Donato D'Urbino, Paolo Lomazzi and Carla Scolari) felt was of great importance was the transparency of the chair. This chair has a similar effect as Newson's work because it exposed the inner surfaces of the chair. Although in Newson's case, through the use of unfamiliar forms, it is not always clear what you are looking at. This gives these pieces a mystical aura.

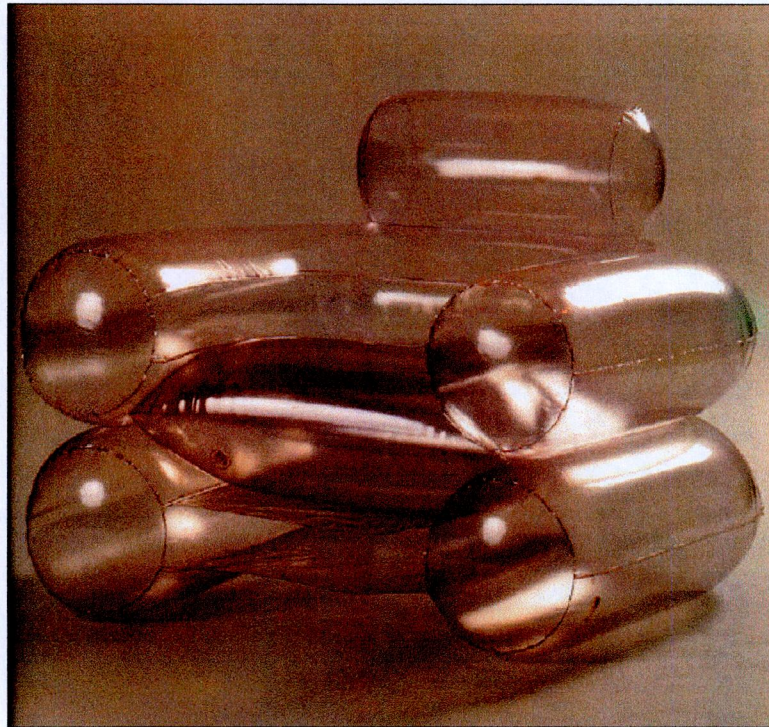


Fig 39: "Blow" (Inflatable chair)

Newson's appreciation for form is apparent in much of his work. In particular The Orgone Stretch bears striking similarities to Jean Arp's Torso motifs of the fifties or the curvaceous forms of cars and the streamlining evident in the trains in the fifties, i.e. Raymond Loewy train designs.



Fig. 40: The Orgone stretch

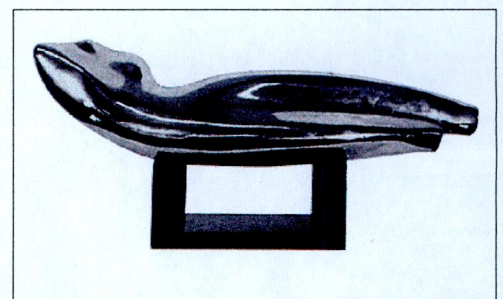


Fig. 41: Torso Motif

Newson's interest in sixties design is very evident in The Felt Chair. This piece, which is made of one piece of material, resembles plastic chairs of this time. The soft edges and gentle curves of this piece are suggestive of a softer material such as plastic. Aesthetically the structure looks as if it were manufactured by heating a sheet of material over a former and gradually allowing it to take form.

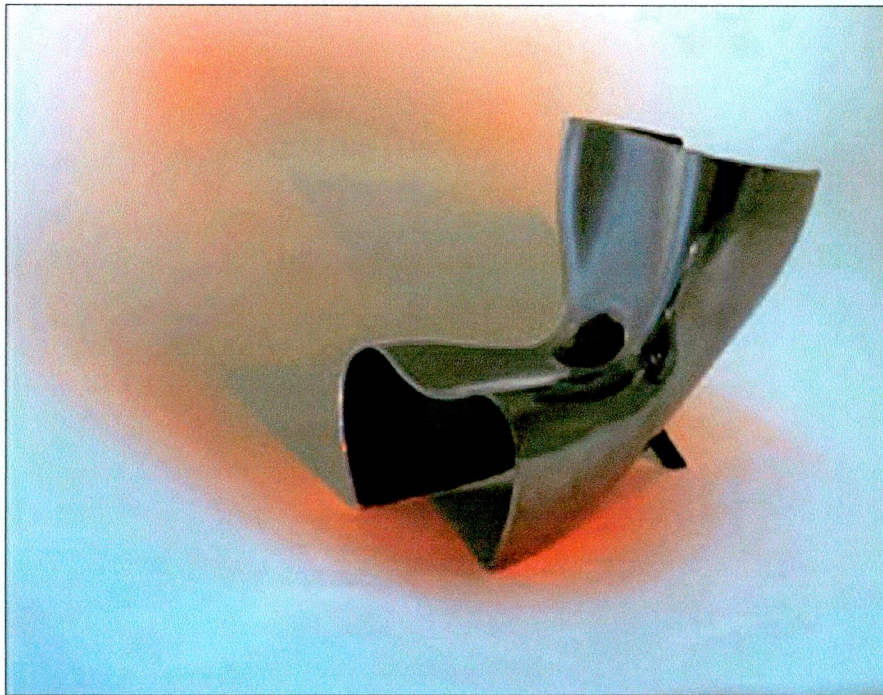


Fig. 42: The Felt Chair

There is a phenomenon in space known as a black hole. This phenomenon occurs when a star collapses under its own weight. This creates an area in space that can only be detected as a void into which passing matter will fall. Event horizon is the name given to the boarder separating the inside of the black hole and the space surrounding it. Newson's Event Horizon table, as well as the other pieces from that family, might be symbolic of this phenomenon or a perhaps study of what exist on the inside and outside of an object. When looking at the Event Horizon you are drawn into the internal void. By exposing the inside of

these pieces Newson is showing us a side of a common object which we are not familiar with. This creates an impression of peering into another world. It is as if we are looking through a mirror into this alien world where everything is the negative of what we know.



Fig. 43 & 44: Event Horizon (fig. 41 with Marc Newson hanging on)



Conclusion

Both Ron Arad and Marc Newson are recognised for their originality, with common themes of material innovation and sculptural forms.

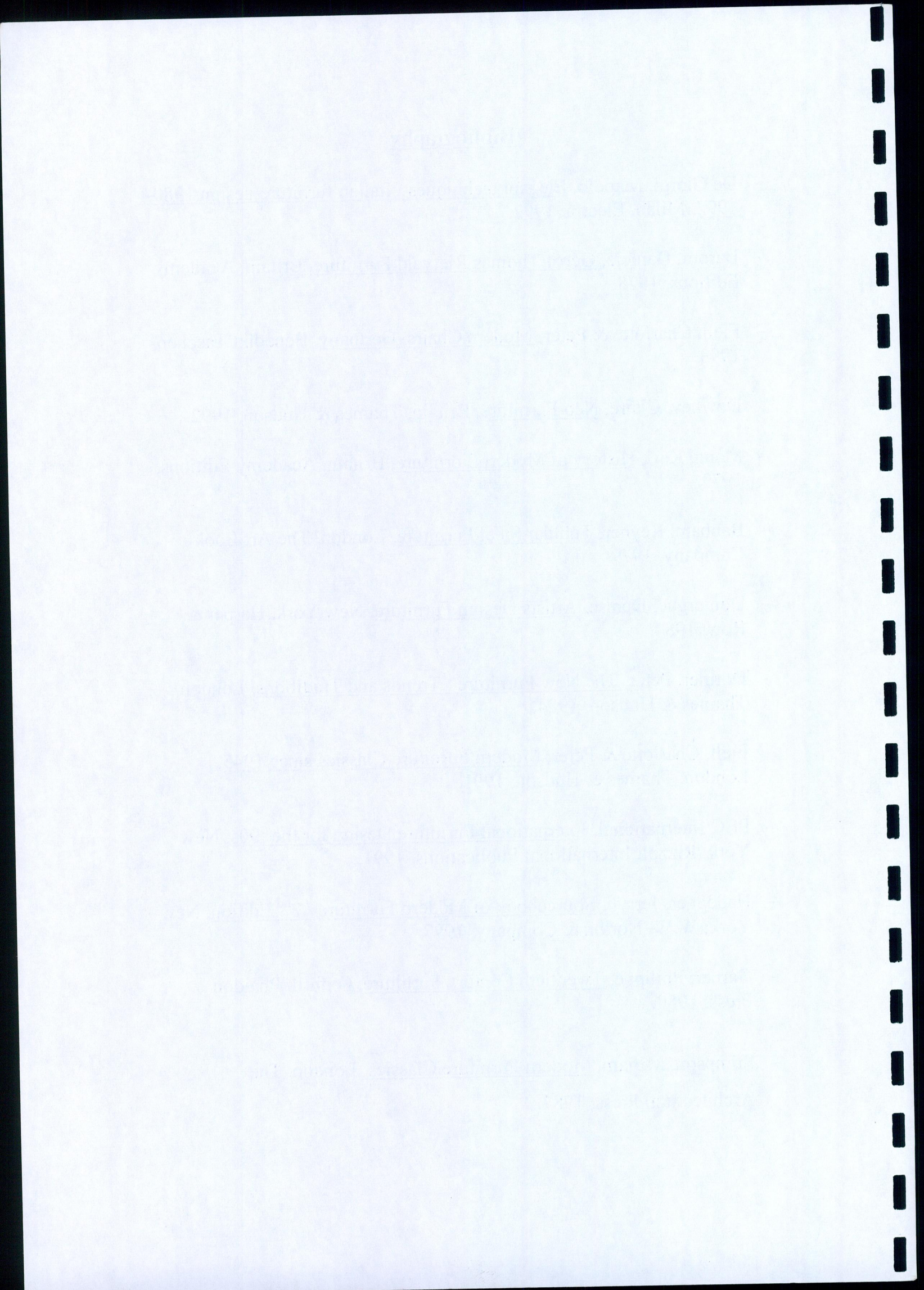
However, such originality stems only from the influences and knowledge of previous innovators. It is in this way that seemingly unique designers can be seen to follow a rich tradition. Each generation of work grows from the last, in an evolutionary process that sustains both the variety of new work and the strengths of its predecessors.

Introduction

The purpose of this study is to investigate the effects of various factors on the growth and development of the human body. The study will focus on the relationship between nutrition, exercise, and the overall health of the individual. The research will be conducted over a period of six months, with data collected at regular intervals. The results of the study will be presented in a series of reports, which will be made available to the public. The study is being conducted in collaboration with the National Institute of Health, and the results will be used to inform the development of public health policies.

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