

THE DEVELOPMENT OF MODERN FURNITURE IN THE
UNITED STATES FROM 1940 TO 1954 TRACED THROUGH
THE WORK OF SEVEN OUTSTANDING DESIGNERS

By

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PREFACE

To civilized peoples, home decoration has always been vitally important. It has been an expression of the prevailing economic and social conditions of a country. The conditions of our times as indicated in the development of the skyscraper, the trend toward more casual clothes, and new styles in architecture, music and art, have been equally well expressed in furniture forms. As economic and social conditions change, so, inevitably, do furniture forms change.

The growth of modern furniture design in America is comparatively recent and it is still in the process of being developed. The fact that it is such a recent development and that the principles, influences and aims are only now being thoroughly understood and appreciated has made this study even more fascinating.

The newness of the movement made it difficult to obtain information except in very scattered works. The purpose of this thesis is to collect these scattered facts and to discuss and analyze their importance so that a more thorough understanding of modern furniture forms can be gained.

I am deeply appreciative to the following for the loan of material used in this study: The Widdicomb Furniture Company; The Baker Furniture Company; Jens Risom Design, Incorporated; Herman Miller Furniture Company; The Mengel Company; Planner Group; and Johnson Furniture Company.

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STATES FROM 1940 TO 1954 TRACED THROUGH THE WORK
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CHAPTER I

HISTORICAL BACKGROUND

Part I

Although modern furniture was not completely accepted until the period between 1940 and 1954, its historical development began quietly many years before this time.

The onset of the Industrial Revolution brought a change in established furniture forms of that period. The results of this upheaval, though largely in scientific and engineering fields, caused a change in the arts.¹ The machine brought about the possibility of mass production; and as a result, the pride of craftsmanship was subordinated to the appeal of quantity.

In England, near the middle of the Nineteenth century, a man named William Morris led his followers, known as the "Pre-Raphaelites," to the continent of Europe, in a style known as the Art Nouveau. "It was a revival of the protest against the use of historical forms, and was perhaps nurtured by the ideals of Morris and his creed...."² The designs were based on the free flowing curve and the use of an excessive amount of applied ornament.

¹Sherrill Whiton, Elements Of Interior Design And Decoration (New York, 1951), p. 382.

²Ibid., p. 386.

The Art Nouveau was an artificial movement; and though it was the prominent style at the Paris Exposition in 1900, it did not flourish. It did, however, help prepare the world for a change.

Almost simultaneously, in America, Louis Sullivan, architect and philosopher, was attempting to educate the public to the idea that the form of a structure should follow its function. But to an American public encased in Gothic and Victorian dwellings, his doctrine went unheeded. His most ardent pupil, Frank Lloyd Wright, chose to carry Louis Sullivan's ideals forward. In 1910, Wright went to Holland and Germany, then later to Japan, where his genius was acclaimed as it had not been in his own country. Wright is now recognized as one of the pioneer modern architects, and his influence on modern design has reached manifold proportions in recent years.

It was in Germany that the next important development occurred. In 1919, Walter Gropius organized a school known as the Bauhaus; and in 1926, it settled at Dessau, Germany.

At the Bauhaus, a new synthesis was made evident; abstract Modern Art, the new industrial design, and the new world architecture were shown to be inseparable aspects of one machine-age aesthetic achievement.³

"The object of the Bauhaus was not to propogate a 'style', system, or dogma, but simply to exert a revitalizing influence on design."⁴ This group of men introduced the first models of machine-houses into all principal cities of Germany.

In May of 1925, the International Exposition of Decorative Arts was held in Paris, France. The Exposition was the result of increased European public

³Sheldon Cheney and Martha Candler Cheney, Art and The Machine (New York, 1936), p. 38.

⁴Edgar Kaufmann, Jr., "The Word On Design," Interiors, CXII (December, 1952), p. 116.

interest in the new style. Traces of the Art Nouveau with its free curves and applied ornament were still apparent in the exhibits. Twenty nations were represented; and although the United States did not exhibit, many American importers, buyers, manufacturers and designers were in attendance. The United States had been forced to abstain from placing exhibits because of the ignorance of officialdom and lack of public sympathy for the movement.⁵ Since the American furniture designers had shown little interest in this movement, there was actually very little which the United States could exhibit.

In 1926, the choice exhibits from the Exposition were shown in several American museums. Two retail store exhibitions presenting modern home furnishings were held in 1928, when R. H. Macy and Company exhibited the works representative of six European countries. Shortly thereafter, Lord & Taylor Department Store devoted an entire show to the work of French designers. Then, various stores over the United States attempted to duplicate these New York shows. The public was awakened, and the United States furniture manufacturers were no longer able to ignore "Modernism." Thus, the American public, who had become so accustomed to borrowing ideas from Europeans, grasped at this latest movement.

In Europe, particularly in Finland, Germany, and the Netherlands, the best American work had been appreciated and followed up, and as so often happens, exaggerated; so that the esthetic appreciation of the machine has been carried across the Atlantic and back again....⁶

The American furniture market was flooded with "Modernistic" designs which were monstrous and which, fortunately, were not generally accepted by

⁵Whiton, Elements of Interior Design and Decoration, p. 390.

⁶Lewis Mumford, Sticks and Stones (New York, 1924), p. 182.

the American public. As is fairly typical of any new movement, the first designs were extreme; and it was several years before a simple, basic design was to emerge.⁷

In July of 1929, The Museum of Modern Art, New York, was begun. Although the first exhibitions were paintings, by the mid 1930's exhibitions including modern architecture and modern furniture were being held. The Museum had exhibitions, publications, acquisitions and research projects. Its policy of circulating the exhibitions did much to help educate the American public to modern art in all forms.

Under the sobering influences of the economic depression of 1929, the modern movement almost died. Amid the turmoil and confusion that surrounded them, the public clung to their homes as a refuge, an escape. They felt secure among familiar surroundings, and the desire for change was subordinated. The home was almost the last to be changed. Giant skyscrapers, symbols of America's efficiency and development of the use of the machine, were springing up in large cities. Industrial designs were being revamped, for the public was demanding increased efficiency and a streamlined appearance. Many interior designers were called upon by industries to re-design their products. Factories and business offices were being modernized for increased efficiency of production. Still the general public had not fully accepted modern designs for their homes.

Aside from Wright's independent career, it was not until 1930 that the new style made its first actual residential appearance on the favorite soil of California in the works of Richard Neutra, a pupil of both Wright and the Bauhaus.⁸

⁷Alfred Auerbach, "Modern--From Where and To Where," Interiors, CXII (July, 1953), p. 42c.

⁸Meyric R. Rogers, American Interior Design (New York, 1947), p. 179.

However, popular interest in the "House of the Future" at the Century of Progress Exposition in 1933-34 in Chicago, caused a revival of interest. Many commercial furniture producers made attempts to adapt the new mode of furnishings for the general public.

Modern designs were first accepted by relatively well-to-do clients who could afford to depart from prevailing customs. The acceptance of modern design for homes made it necessary to design suitable furniture. The home was no longer a box with four solid walls, but was a cage or skeleton enclosure with opaque or transparent walls.⁹ Furniture could no longer be shoved against a wall. It had to be designed as sculpture was--to be viewed from all points.¹⁰ Early furniture was largely custom-made, but it was through this practice that the principles of design became clear and the methods of construction established. This early period had been one of confusion and turmoil in which a great number of people had attempted to design modern furniture. The designs that lasted and continued were those of designers of experience and integrity such as:

Marcel Breuer, who designed the tubular metal chair in 1925; Mies van der Rohe of Germany, who designed the aluminum framed chair in 1929; Alvar Aalto of Finland, the moulded plywood chair support in 1932.¹¹

The principles set forth by these early designers included economy of material and upkeep, convenience, simplicity of line and form, functionalism, lightness of weight, comfort, and durability. Prominent materials used included glass, chromium, aluminum, plywood, leather, cork, stainless steel, plastics, monel metal, brass, and copper.

⁹"The Contemporary Domestic Interior," Interiors, CIX (July, 1950), p. 62.

¹⁰Ibid., p. 62.

¹¹Whiton, Elements of Interior Design and Decoration. p. 401-402.

Two fairs held in 1939, the tremendous New York's World Fair and the Golden Gate Exhibition in San Francisco, added prestige to modern design, although the majority of furniture sold was still that of the "period" styles.

Part II

1940 - 1954

Security was one of the prime factors considered when purchasing furniture. Americans had consistently borrowed furniture styles from Europe because of the feeling of security that it gave them. As this young country grew to maturity and developed its own mode of living, security was attained through the use of its own furniture styles.

...As we begin to seek accurate solutions to our own special problems, letting our own needs, tools and processes determine the forms we give to the things we make, it is inevitable that authentic style shall reappear in the world. We are clarifying our ambitions and beginning to see what it is we want to make of our world; we are gaining a sense of mastery over our tools and a better understanding of what can be done successfully with them.¹²

"The first half of the Twentieth century enlarged the frontiers of possibility. The second half is already witnessing our intense cultivation of the newly opened territory."¹³ There had been a rapid development and increasing interpretation of architecture, along with interior, furniture, and industrial design in the modern form.

The major or basic factors of modernism are insistence upon functionalism and increasing emphasis on organism.¹⁴ The primary need of the majority of people is for economical and efficient furniture. Attempts to bring good modern furniture within the reach of the limited income group had been

¹²Walter Dorwin Teague, Design This Day (New York, 1940), p. 45.

¹³"Styles Are Merging," House Beautiful, XCV (October, 1953), p. 187.

¹⁴James Ford and Katherine Morrow Ford, Design Of Modern Interiors (New York, 1942), p. 6.

started by designers and encouraged by museums, educational agencies, periodicals, housing authorities, and some members of the furniture industry. However, good modern furniture had not yet reached its potential public through commercial production and distribution.¹⁵

America's entrance into World War II in 1941, resulted in a temporary stalemate in furniture design. However, currently available furniture designs were stripped for action, cleaned to functionalism, devoid of distraction, and had predominantly straight lines.¹⁶ In 1942, the trend toward more functional and economical furniture received a boost by the addition of Flexi-Unit furniture from the Widdicomb Furniture Company. These units could be added to or subtracted from at will. This type of sectional or unit furniture was one of the outstanding contributions of the Twentieth century interior. Other aspects of modern furniture available at this time included the space saving features of "stacking" and built-in furniture, light weight furniture which was easily moved, and increased durability made

more possible as enrichment emphasis is transferred from constructive features to the large planes of the structure, and to emphasizing major thrusts and counter-thrusts rather than leg, arm, and back details.¹⁷

A report of the January furniture market in 1943, showed that hardly any new furniture designs were exhibited, a not too surprising fact since the nation was deep in an intense war effort. However, buyers reported a slowly rising interest in modern furniture, estimating that it was now approximately thirty per cent of their sales. Traditional furniture was predominate as late as 1946.

¹⁵Ibid., p. 6.

¹⁶"Today's Modern Furniture," Interiors, CI (May, 1942), p. 33.

¹⁷William H. Varnum, Creative Design In Furniture (Peoria, 1937), p. 79.

The 1925 modern had tended to be plush and expensive; and by 1945, the pendulum had swung to the opposite end of the scale. Furniture lines had become too sparse and severe. Modern furniture was still rather expensive although repeated efforts were being made to adapt prices to those that the average wage earner could afford. Still, designs were being intelligently thought through and the contributions attained in such a few years were remarkable. Such a typical contribution was exemplified by the designs for storage units. They were being designed from the inside out, with drawers scaled to meet the storage needs of the average consumer.

At the end of the war many designers returned from the armed service or work in essential industries, and modern furniture design was in full swing. These men had gained knowledge in their war work which enabled them to make revolutionary advances in furniture design. Among these men was Charles Eames, who had designed splints for the armed forces in association with the Molded Plastics Plywood Division of Evans Products Company. He developed a molded plastic chair in 1946, as unique as his molded plywood chair had been in 1940. The plywood chair had been adapted for low cost mass-production by 1946.

Huge housing units were erected after the war to provide for many returning servicemen and their families. This brought about a shift in population, and many families were constantly moving. The need for lightweight, functional and economical furniture was greater than ever. Since many homes were small, the scale of furnishings had to be reduced; and one piece of furniture might be called upon to serve diversified purposes, an attribute which could not usually be fulfilled by older styles of furniture. Designers who had worked largely in the custom design field in the past were called upon by housing authorities to give mass-produced housing and furnishings the benefit of their experiences.

The International Competition for Low-Cost Furniture Design conducted by the Museum of Modern Art was held in 1950. It helped create an incentive for designers to develop furniture for the majority of consumers, with particular emphasis upon good design combined with economy of production.

Another outstanding event occurred in January, 1950, when "Good Design" was established. This series of exhibitions of home furnishings was organized by the Museum of Modern Art, New York, for The Merchandise Mart, Chicago. Mr. Edgar Kaufmann, Jr. was appointed as Director. "An item is eligible if it can be bought in the U.S.A. market, if it is new in this market since the previous show, and if it does not attempt to imitate the past."¹⁸ For "the first time an art museum and wholesale merchandising center have co-operated to present the best examples of modern design in home furnishings."¹⁹ The object of the movement was to stimulate appreciation and creation of good designs among manufacturers, designers, and retailers. New items for "Good Design" were selected about six weeks before the winter and summer furniture markets. In the selection of items, eye appeal was emphasized along with consideration of function, construction and price.

Houses and furniture were being produced with the new mode of contemporary living in mind. This contemporary living was keynoted by the word "informality". Many women, especially wives and mothers, who were combining a career with their homemaking duties, demanded surfaces that were easily cleaned; fabrics which required little or no upkeep and multi-purpose furniture that made entertaining easy. Even the trend toward more casual clothes indicated the willingness to accept new postures. The modern home with glass areas which could be opened to make the home and its surroundings seem to be one

¹⁸The Museum of Modern Art, Good Design (New York, 1953).

¹⁹Ibid.

unit, brought the necessity for furniture that could serve equally well both indoors and outdoors.

The years immediately following the war brought another reaction to the contemporary trend--a desire for more enriched furniture rather than the sterile forms which were predominate to this date. "No lively, rebellious movement in design is free of controversies, schisms and cleavages."²⁰ It may well be that the years during the war with their concentration on the machine, its maximum efficiency and sterility, resulted in a nation starved for the beauty of enrichment. "We are beginning to realize that without human scale and for certain ends, the machine can only defeat itself."²¹ This movement was slow in its inception and it has been fought all the way by some groups, particularly the proponents of the Bauhaus educational theories and those of Le Corbusier and his "Machine-house". However, the effect of the rich and studied simplicity of Oriental interiors was visible in some designs as early as 1947. Paul Frankl's custom-designed furniture reflected Chinese and Japanese art, and T. H. Robsjohn-Gibbings was combining the designs of Oceania with his contemporary furniture.

By the middle of the century, the trend to increased ornamentation was quite evident.

...a good deal of modern furniture, from the Bauhaus period to the present, has been both uncomfortable and inefficient, overlooking the anatomy and psychology of the human beings who were to use it in the preoccupation with aesthetic form.²²

The pendulum, having swung from excessive ornament to forms stripped to the bare essentials, was beginning to settle at the happy medium. The American

²⁰ Auerbach, "Modern--From Where And To Where," p. 42e.

²¹ Rogers, American Interior Design, p. 196.

²²The Detroit Institute Of Arts, An Exhibition For Modern Living (Detroit, 1949), p. 21.

public was developing a taste for gently flowing curves rather than for forms of boxy, geometric masses. They had discovered a beauty in sculptured contours.

From 1950 to 1954, pattern and glitter appeared abundantly in furniture. The pattern was obtained through inlays, marquetry, and contrasting materials. "Unlike intricate marquetry of the past, wood inlay ornamenting today's furniture has bold, decisive scale."²³ Hence, even ornamentation from past ages was adapted to its modern application. Interest was increasing also in exotic woods which gave a rich textural effect without being detrimental to the basic design. As was true of Frank Lloyd Wright's work, "in the recent reaction from mechanization there has been an urge toward nature, toward wood, clay, earthy colors and touch-tempting surfaces."²⁴

Glitter was a facet of contemporary enrichment, which had been initiated during the earlier period of development, but which was now being handled in a more pleasing manner.

Every material that glistens or glows is adding sparkle to home furnishings; the gleam of metal, the glimmer of lusterware, the opalescence of pearl, the prismatic blaze of crystal, the new iridescence in fabrics.²⁵

Brass was one of the most prevalent metals used in contemporary interiors. It first appeared upon modern furnishings in lamps, then hardware and later in furniture itself. It served as a structural part of furniture and as a foil for the low-keyed gloss of wood.²⁶ Other materials included stainless steel, wrought iron, copper, gold, pearl, and metallic dyes and yarns.

²³"Pattern Is Appearing In Modern Furniture," House Beautiful, XCV (May, 1953), p. 155.

²⁴Edgar Kaufmann, Jr., What Is Modern Interior Design? (New York, 1953), p. 19.

²⁵"Glitter, Glitter, Everywhere," House Beautiful, XCV (October, 1953), p. 179.

²⁶Ibid., p. 180.

It would seem at this time that modern design has reached the "happy medium" of its existence. Furniture has been revolutionized to provide for the needs of contemporary living. It runs the gamut from daring to conservative, yet it expresses the values of this age as based on democracy and industrialization. "Good design in any period is simply: the best its designers can produce."²⁷

²⁷Edgar Kaufmann, Jr., What is Modern Design? (New York, 1950), p. 9.

CHAPTER II

SEVEN DESIGNERS AND THEIR UNIQUE CONTRIBUTIONS

It has grown increasingly difficult for present generations to realize the profoundly hostile atmosphere surrounding the early development of the modern house and its furnishings. The human being, often basically afraid of change, has let the need for social acceptance rule him. "Physically, good design can go far to increase the efficiency of our actions. Spiritually, it can add much to our enjoyment of things around us."²⁸

Many of the prominent designers were pioneers in their field, brave men who intelligently recognized the need for change before the general public did so. These were the men who willingly withstood criticism and reproach to develop the ideals of honesty of means, simplicity, clarity, lightness, and unity in furniture design. One important aspect of modern designers was their diversified talents. Many of them designed their own interiors, textiles, and accessories, giving the consumer modern furniture design in its appropriate setting. Co-operation between the designer and furniture and textile producers had resulted in color and design coordination which made it possible for even the average consumer to have the benefit of professional counseling.

Since prominent designers were so numerous during the period studied, it was necessary to limit this study to a comparative few. In so doing, one of the writer's bases for selection was to attempt to present designers

²⁸An Exhibition For Modern Living, p. 5.

representing a wide range in style, materials of construction, and financial adaptability. These designers include T. H. Robsjohn-Gibbings, Finn Juhl, Jens Risom, Paul McCobb, Raymond Loewy, Charles Eames and Paul Frankl.

One of the early designers of this group was T. H. Robsjohn-Gibbings, who had created furniture for the Widdicomb Furniture Company since 1943. Mr. Gibbings carried on a ruthless campaign against copies of traditional furniture, and was equally bitter about the mechanical functionalism of much modern design.²⁹ A statement issued by Mr. Gibbings in 1949, explained the basis for many of his designs. It was, "a house should be homelike, protective as a good raincoat and without the adolescent pretensions of 'functionalism'."³⁰ His furniture tended to be more massive and solid than that of many modern designers. The form was bold and almost severe, relieved only by fluid, rounding lines, and the use of luxurious upholstery fabrics. It was unaffected, useful, comfortable, and attractive furniture with a cool, unfussy look; and it was well constructed. The combination of elegance and simplicity was most outstanding.

Early furniture designed by Robsjohn-Gibbings and produced by the Widdicomb Furniture Company was custom-designed, and the expense made it prohibitive for use by the average income group. By 1950, Widdicomb had produced well-made pieces of contemporary design that were within the reach of moderate income groups, so that many people could afford what only the "custom-trade" had previously enjoyed.³¹ Many of these designs looked familiar because they had grown out of the common types of furniture that Americans

²⁹"At Home Anywhere," House And Garden, XCIX (June, 1951), p. 100-101.

³⁰"Only In The U.S.A.," House And Garden, XCVI (July, 1949), p. 29.

³¹Mary Roche, "The American Ideal Of Leveling Up," House Beautiful, CVII (May, 1950), p.133.

had known for years, such as the sawbuck table, slat-back chair, spindle bed, and rocking chair.

On many of his chairs the supports were rounded and slightly tapered at the termination, giving them a rhythmic, graceful beauty. Legs were tapered and splayed outward. The frame of his webbing-strapped chair widened almost imperceptibly from the top of the back to the front of the seat. The upholstered pieces, done in foam rubber, were precision tailored in fabrics designed by Mr. Gibbings. He primarily used monotone materials whose great interest lay in the texture and weave.³² They were occasionally contrasted with high-keyed color in his interior settings. Most of his work was done in walnut woods, custom-finished with immaculate polish, in tones of sorrel, sienna, bisque, saffron, and cordovan.

An outstanding contribution to the art of informal living could be seen in his huge, overscaled coffee table, with gently curving lines. It met the need for a large flat surface big enough for ash trays, cigarettes, magazines, and perhaps trays of food, yet it seldom looked cluttered because of its three surface levels. His revival of the marble top table expressed the delight in luxurious materials that were also easy to keep.

Mr. Gibbings first introduced the use of brass legs to furniture in 1944.³³ They were so sensitively tapered and proportioned that they looked as if they had been sculptured. The gleam of the metal against the warmth of walnut added decorative interest.

His most popular invention is the louve drawer which has been imitated wherever modern furniture is manufactured. Other innovations originated

³²"Furniture Designed by Robsjohn-Gibbings Needs No Autograph," House And Garden, XCVI (October, 1949), p. 150-153.

³³"Gleaming Metal And Walnut," Widdicomb Furniture Co., (January 5, 1953).

³⁴"Bibliographical Sketch", Widdicomb Furniture Co., (July, 1953).

by Robsjohn-Gibbings, include the strapped chair, the low standing lamp, and the glass top cocktail table.³⁴

The absence of hardware was notable on his early designs. The use of accessories such as poi bowls from Tahiti and Hawaii and masks and spears from the Marquesas Islands added a distinctiveness to the basic simplicity and integrity of the simple furniture forms.³⁵

— Finn Juhl, a native Dane, was an architect as well as a modern furniture designer for Baker Furniture, Incorporated. Distinctive design of a stable yet delicate and fluid line was notable in his work. Mr. Juhl's furniture was so sensitive that it appeared to be sculptured, yet he combined utility with elegance.

In many of his chairs, Mr. Juhl clearly separated the upholstery from the supporting wood framework, giving a sense of strength and flowing lines. In one example the leather-covered seat and back of a delicate chair seemed to float in air, but were firmly joined to the spare maple frame.³⁶ The arms were more slender than the supports since their use did not demand such sturdiness. The chair legs were tipped in walnut, a darker wood, achieving a decorative note similar to that used by Duncan Phyfe, an early American furniture designer who employed a metal tipping rather than wood. Legs were only slightly tapered, the back ones being slightly splayed. An interesting profile in one group of chair designs was attained by the use of a diagonal chair stretcher. The stretchers were tapered at either end and ran from the center of the bottom of the chair seat to the lower half of the front legs. The chair seats and backs

³⁴Bibliographical Sketch, Widdicomb Furniture Co., (July, 1953).

³⁵"Biography Of An Idea: Pacifica, " House and Garden, CI (April, 1952), p. 154.

³⁶" The American Idea In Furniture, " House And Garden, CI (January, 1952), p. 48-51.

were often shaped to fit the contours of the body, making them extremely comfortable. A selection of woods which Mr. Juhl used included maple, walnut, teak, beech, and sycamore. There was little or no use of metals in his work.

As a solution for American storage problems, he had designed chests to hold any combination of drawer depths to serve the variety of storage needs. His shelf and cabinet wall units could be secured in any combination. They were attached to the wall by metal strips so that they appeared to be an architectural unit rather than pieces of furniture.

Finn Juhl carefully studied each detail of his furniture and there were reasons for each of them. For instance, on one of his beds, the footboard was gracefully curved to provide a footrest. He had utilized the drop-leaf in many tables as a space saving feature, so when more surface area was needed, it was at hand. He developed a cocktail table of unusual shape, approximately an oblong, so that chairs could easily be grouped around it. The profile view of this cocktail table showed a gently curved apron, a feature employed in period style furniture which had not been seen extensively in modern design.

Jens Risom was born in Copenhagen, Denmark, in 1916. He finished school and business college in Copenhagen, then went to Stockholm to learn the furniture trade from the bottom up. His next schooling was at the School for Industrial Design in Copenhagen, where he spent his free time working in a large manufacturing plant and fine cabinet shops. In 1941, he opened his own establishment in the United States.

Here he designed and manufactured his own furniture. The following statement issued by Mr. Risom exemplified his basic design principle:

"What furniture is called upon to do helps determine how it should look. The choice of ideal materials and the insistence on good construction are also the designers job".³⁷ A most notable feature of the production was that Jens Risom Design, Incorporated was prepared to make changes in the dimensions of items in stock to meet individual needs or even to execute special designs for a particular interior scheme.³⁸ Risom furniture was available only "through interior decorators, architects doing interior designs and leading furniture stores".³⁹

A slender, horizontal line was predominate in this furniture design. Chair legs were slightly tapered with both front and back legs splayed. On many of his chairs the back and seat were clearly separated. A distinctive feature of one chair design of this type was the tie-on seat and snap-fastened back cushion. The covers zipped off for ease of cleaning. Pieces of upholstered furniture were done in foam rubber or rubberized hair which presented comfort without the over-stuffed look. The cushions were loose and reversible. Other chairs accentuated the curved laminated wood seat and back. Black iron bases added textural interest to some chairs and stools.

The Risom tables were especially interesting.

You will find a wide selection of tables, many designed for the smaller homes of today, with convenient storage areas, space-saving folding tops, tables doubling for seating, and similar useful ideas....⁴⁰

Many of his tables were available with stain and cigarette-proof plastic tops. A tea wagon with a removable top which could double as a tray served many purposes. A low, round coffee table had a revolving top enabling one

³⁷"Only In The U.S.A.," p. 35.

³⁸"Risom Furniture", Jens Risom Design, Incorporated., p. 3.

³⁹Ibid., p. 3.

⁴⁰Ibid., p. 16.

to reach any object. Many of these tables were available in light gray, yellow, or green Micarta tops in addition to walnut or birch, with an oil or lacquer finish. In case pieces, both brass and wooden handles were utilized. This relatively expensive line of furnishings was done in mahogany, walnut, birch and oak.

Paul McCobb was born in Boston and at the age of thirty six, he was one of the youngest of leading designers. He intended to be an artist and attended art colonies at Gloucester and Rockport, Massachusetts. When he started his first job designing store interiors and displays, he realized that there were few contemporary pieces of furniture to fit the displays; so he began designing furniture. In 1953, along with his furniture designing, he was teaching at the Philadelphia Museum School of Art. During the war he worked in Army camouflage, a job which gave him the opportunity to study the importance of color which he uses so attractively in his interior designs. In 1948, he opened his own studios.

Purity, comfort and proportion were the essence of Paul McCobb's designs. He had said "design is proportion, so I design things for rooms, not vacuums. Form and line are controlled by the obvious need for simplicity".⁴¹ In designing, Mr. McCobb studied areas, such as sleep-areas, play-areas, or work-areas, rather than rooms. He studied multitudes of floor plans of apartments and small modern homes and scaled his furniture accordingly. Most pieces were lifted off of the floor to create an illusion of space, so even small rooms look uncrowded.

McCobb's knowledge of manufacturing processes had helped him eliminate many bendings and wood-turnings so that furniture could be produced as inexpensively as possible. He had given much attention to the problems of

⁴¹"Planner Group", Muzey Furniture Manufacturing Co.

young people and his furniture was well within the reach of the average wage earner's income.

Particular emphasis should be given to two groups of McCobb designed furniture; the Planner Group and the Predictor Group. The Planner Group was:

...a completely correlated case and upholstered group designed for the needs and desires of those who appreciate the finest in contemporary designs and sound construction, but could not afford it heretofore.⁴²

This group offered benches, tables, and bookcase units which combine in many versatile groupings. All of the chests were fitted with rubber strips which made slipping impossible. If desired, metal leg bases, finished in black baked enamel or solid rod steel, could easily be attached to the Planner Group bench tops. Wood units of the Planner Group were manufactured in Vermont sugared maple combined with Canadian yellow birch. Upholstered pieces were smartly tailored, many of them in fabrics designed by Mr. McCobb, and were done in hand picked cotton, rubberized hair and foam rubber.

For his Predictor Group, McCobb turned to Early American styles for inspiration. These designs showed honesty, lightness and friendliness combined with the strength of Shaker furniture. New England hardrock maple with rounded, tapered dowels was used in this group. The spindle-back Shaker arm chair was the highlight of this collection. This chair back had from three to five spindles which were gently tapered with the characteristic McCobb touch. These maple chairs were never bulky, and were shaped for comfort. A breakfront in this collection combined useful storage with the protection of glass and a tambour section. The usefulness

⁴²Ibid.

of a desk was enhanced by drawers which were graduated from paper size to file size, and three pencil drawers which were hung from the slab top.

The beauty of all Paul McCobb's designs lay in the glistening surfaces and softly polished woods or other natural materials, such as wrought iron, brass, marble, white opaque and clear glass. His use of black paint on drawer fronts and shelf backs added a sophisticated touch.

His "Accent" collection was glass furniture containing occasional tables, a desk, standing dictionary, magazine rack, dining table, buffet and server. It was clearly Italian inspired; light-looking and sophisticated. Clear glass, white glass bonded to wood, black wrought iron and natural wood supports were used.

By 1953, Paul McCobb's current designs included a ceramic group using cones, circles whose sides were tapered evenly to a point, of varying diameters. This ceramic group was "given a pure white mat glaze, subtle, soft, and sophisticated".⁴³ They were used primarily as vases and bowls, and they were particularly effective when shown against a black background. Their simple, slender lines added a modern decorative note while they also served as a useful household object.

Raymond Loewy, a Frenchman, was a graduate of the University of Paris. He achieved prominence as a modern advertising illustrator in America in the 1920's. Later, he became famous as an independent industrial designer; then became head of the largest industrial design firm in the world, with product designing as a principle concern along with packaging and transportation of such products. Mr. Loewy had said that "good design keeps the

⁴³"Merchandise Cues," Interiors, CXII (July, 1953), p. 122.

user happy, the manufacturer 'in the black' and the esthete unoffended".⁴⁴

Raymond Loewy's outstanding contribution to modern furniture was his dramatic use of color as seen in the Prismata collection. The color was applied to the wood as a stain, not a paint, so that the wood grain with its textural beauty remained intact.⁴⁵ The colors included charcoal, prism green, honey haze, and red radiance. Another unique feature was the use of chrome-plated steel ferules on all legs to prevent scuffing.

The beauty of this furniture lay in the simple, sturdy structure and the polished wood with its color accents. Bookcases, available with or without legs, had colorful interiors. A drop-leaf dining table had interesting X-shaped stretchers. The bed and Hokie, successor to the sofa which served as a bed or seating unit, had curved headboards with slender tapered spindles. Leg bases and lounge chairs were made of solid oak. Cabinets were beautifully proportioned to be successfully arranged in any combination of units. Low benches were available with or without foam rubber pads so they could double as coffee tables.

Raymond Loewy Associates designed room furnishings with smaller homes and apartments in mind, so that storage needs were met effectively, yet rooms remained efficient, light and airy.

Charles Eames was born in St. Louis in 1907. In 1925, he received a scholarship to study architecture at Washington University; and in 1938, he had an architectural fellowship at Cranbrook Academy of Art, Bloomfield Hill, Michigan. While in Michigan he worked in the office of Eliel Saarinen with Eero Saarinen. With Eero Saarinen, he won two first prizes in the

⁴⁴"Only In The U.S.A.", " p. 35.

⁴⁵"Prismata", The Mengel Company, Furniture Division.

Organic Design Competition conducted by the Museum of Modern Art.

During the war he moved to California where he designed splints for the armed forces, and he remained there to practice architecture and design in Los Angeles. An exhibition, *New Furniture Designed by Charles Eames*, was held at the Museum of Modern Art in 1946.

The name Charles Eames became synonymous with the modern chair.

speaking of the probable future of modern furniture, the Eames chair is a significant signpost toward it...not so much because of what it is, but because of the combination of new principles that Charles Eames incorporated in the design.⁴⁶

Three of these outstanding chair designs were the molded plywood chair, the molded plastic armchair and the upholstered wire chair.

The molded plywood chair revolutionized chair sitting, by being designed to fit the body. The molded seats and backs were joined to the chair frames by rubber mounts that absorbed shock. The frames themselves were of heavily plated metal or wood. The plywood chair was small, light, practically indestructible; and it had been developed for low-cost mass-production. The available finishes included walnut, birch, calico ash, and oak, plus red or black stained plywood.

The molded plastic armchair was derived from airplane manufacturing techniques.⁴⁷ It was a fiberglass reinforced plastic shell "skilfully molded to form an exceptionally comfortable and virtually indestructible armchair".⁴⁸ This plastic chair absorbed room temperatures. The chair was available in six integral colors: red, elephant hide grey, lemon yellow, parchment, grieve, and sea foam green, and two applied colors:

⁴⁶Chairs, Interiors Library - 2, (New York, 1953), p. 22.

⁴⁷"Wood, Plastic, Wire Chairs And Tables", Herman Miller Furniture Co.

⁴⁸Ibid.

dark blue and neutral grey. Six different bases included a rocker and swivel desk chair, and they were available in wood and metal.

Charles Eames' newest contribution was the upholstered wire chair, which offered exceptional comfort at low-cost. The wire shell was shaped to fit the body contours and was covered by either a one or two-piece cushion, in fabric or leather. Six bases in wood and metal were used.

Outstanding also were the dining, card, coffee, and incidental tables in plywood or plastic. Several tables had folding or detachable legs to eliminate storage difficulties.

As early as 1926, Paul Frankl was delivering lectures on the modern movement and designing his own furniture. His early furniture designs were based on the skyscraper, an outstanding symbol of American ingenuity at that time. These furniture case pieces were extremely tall, the slim vertical line predominant. The angles were decided and sharp; the surfaces, flat and plain. Cement and lacquer were employed by Frankl; and he also introduced the use of bleached cork which could be wiped clean, scraped or patched. Cork resisted heat, water, grease and candle drippings.

Although the height was extreme and the proportion clumsy, as compared with his present designs, Frankl was truly an outstanding contributor to early modern design. His current designs showed a warm, rich elegance and a classic simplicity.

By 1947, his custom-designed furniture showed Japanese and Chinese influence "and he went on to create tables with fret motifs and the lines of a k'ang".⁴⁹ The lines of his designs were rather sharp and angular which gave a solid, horizontal feeling.

⁴⁹"Biography Of An Idea: Pacifica," p. 154.

His newest designs showed more use of metal than formerly, with solid polished brass, leather, and burnished gold plate as the principle hardware materials.

In three distinctive collections of modern furniture for the Johnson Furniture Company, many Paul Frankl designs were very outstanding. The unusual console magazine table "is a convenient storage piece for favorite magazines, adding so much decorative beauty to the living room, study or hallway".⁵⁰ The top and sides of this magazine table were of bleached cork, and the sides extended to the floor and formed the supports of the table. A clover leaf card table with a bleached cork top and beautifully rounded, tapered wooden legs was another outstanding design. The majority of Frankl's chair designs made use of a ribbon or laced design for back interest. These designs were also seen in table supports and in the headboards and footboards of beds. In the station wagon group, especially designed for young Americans, two unique designs were noted. A vanity "poudre" had cabinet doors that swung open to reveal a swing-up mirror and toiletry and perfume racks. A kidney desk doubled as a desk, bedside table or as a toilet table.

The materials of construction included mahogany, European pearwood, maple, wormy chestnut, and bleached cork. Finishes were palomino, Oriental pearl, old briar and ermine. Paul Frankl also has made use of black lacquer on drawer fronts.

⁵⁰"Contemporary Designs By Paul Frankl" Johnson Furniture Company.

CHAPTER III

A COMPARISON AND CONTRAST OF CHAIR DESIGNS BY SEVEN DESIGNERS

"Every truly original idea — every innovation in design, every new application of materials, every technical invention, furniture wise — seems to have found its most important expression in a chair."⁴⁹ Designers have concentrated their finest efforts on chairs since consumers seem to be more willing to accept new innovations in chair designs than in any other object for the home. Also, other pieces of furniture tend to become architectural leaving the chair in a more prominent light.

"The chair is unique among all objects of furniture in that it substitutes for the action of certain muscles to hold the body in a position other than supine."⁵⁰

Twelve precepts of modern design devised by Edgar Kaufmann seem to have found special attention in chair design. They are:

1. Modern design should fulfill the practical needs of modern life.
2. Modern design should express the spirit of our times.
3. Modern design should benefit by contemporary advances in the fine arts and pure sciences.
4. Modern design should take advantage of new materials and techniques and develop familiar ones.

⁴⁹George Nelson, "Modern Furniture", Interiors, CVIII (July, 1949), p. 79.

⁵⁰Ibid., p. 86.

5. Modern design should develop the forms, textures and colors that spring from the direct fulfillment of requirements in appropriate materials and techniques.
6. Modern design should express the purpose of an object, never making it seem what it is not.
7. Modern design should express the qualities and beauties of the materials used, never making the materials seem to be what they are not.
8. Modern design should express the methods used to make an object, not disguising mass production as handicraft or simulating a technique not used.
9. Modern design should blend the expression of utility, materials and process into a visually satisfactory whole.
10. Modern design should be simple, its structure evident in its appearance, avoiding extraneous enrichment.
11. Modern design should master the machine for the service of man.
12. Modern design should serve as wide a public as possible, considering modest needs and limited costs no less challenging than the requirements of pomp and luxury.⁵¹

Representative chairs from each of the seven selected designers show the following general characteristics: a definite trend to horizontal lines, except in Paul McCobb's spindle-back Shaker armchair which is predominantly vertical in line; elimination of stretchers except in the McCobb and Loewy chairs; the majority of legs tapered and slightly splayed and shorter than those of most period styles; exposed frames, except the Eames chair with the two-piece cushion which leaves the framework only partially exposed. Selected chairs are of native woods except for the newest design of Charles Eames, the upholstered wire chair.

Chairs by Robsjohn-Gibbings (Plate No. I), Finn Juhl (Plate No. II), and Jens Risom (Plate No. III) seem especially suitable for comparison

⁵¹Edgar Kaufmann, Jr., That Is Modern Design?, p. 7.

and contrast of basic design. All three designer's chairs are available in walnut as well as in other woods. For instance, Robsjohn-Gibbings' chair is also manufactured in mahogany, Finn Juhl's in maple, and Jens Risom's in birch.

The entire frame of these chairs appears to be one continuous line, so skillfully are the separate members joined. In the Gibbings chair, all members are smoothly rounded in contrast with the chair by Finn Juhl where the seat rails are the only parts not rounded in form, and that of Jens Risom where the seat rails and the front and back supports are squared. The side rails of the seat frame on Finn Juhl's chair run in a straight line from the front to the back supports and are not tapered. The side rails of the seat frame are not fastened directly to the seat itself, so that the front and back rails are necessarily wider because they support more weight. The front and back seat rails are slightly raised; the top of them curving from the front supports upward to the upholstered seat. In the Risom chair the squared side rails of the seat frame are slightly tapered and slant downward from a point beginning several inches in front of the front supports to the back ones, as compared with the rounded side rails of the Gibbings chair seat frame which begin at the front support and also slant downward from the front to the back supports.

The variety of the shapes of the upholstered seats and backs used by these three designers is most interesting. The upholstered cushion of the Gibbings chair is fitted snugly to the framework and follows the exact chair line. In contrast, on Finn Juhl's chair the seat is a separate unit from the side rails of the seat frame, and the two upholstered

STRATHMORE PARCHMENT

100% RAG U.S.A.

Designer: J. H. Robsjohn-Gibbings

By courtesy of Widdicomb Furniture Company



pieces, the seat and the back, do not meet at the back of the chair. The upholstered parts are shaped to fit the body contours. The back and seat upholstery on the Risom chair follow the chair line in the same manner as that used by Robsjohn-Gibbings, but they are separated at the back of the chair. The upholstered back runs from the top of the chair down to the arms and the upholstered seat terminates slightly in front of the back supports.

The back of the Gibbings chair frame is filled with four delicately tapered spindles, while in the Risom chair there are no spindles or supports connecting the back and the seat upholstered sections. In contrast with the Gibbings and Risom chairs, the arms on Finn Juhl's chair run back to meet a horizontal support behind the back upholstery, and from this support, a single vertical splat runs diagonally down the back to meet a cross rail which is just above the upholstered seat.

In comparing and contrasting the back legs, the designs were studied beginning at the floor, running up the back of the chair, and ending at the top. On the Risom and Gibbings chairs the back legs run in a continuous line up to the top of the chair. The back legs on the Gibbings chair slant inward to the seat frame and then slant slightly backward to the top of the chair. The back legs of the Risom chair slant inward up to the arm supports and from there, they slant slightly backward to the top of the chair. Thus, these two designers employ the same slant in the chair backs, yet the angle of the slant gives them an entirely different appearance. Finn Juhl does not slant the legs of his chair and they run in a continuous line from the bottom of the leg up to the arm support.

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Designer: Finn Juhl

By courtesy of Baker Furniture, Incorporated

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100% RAG U.S.A.

Designer: Jens Risom

By courtesy of Jens Risom Design, Incorporated

REGIMENT



A study of the front legs and the arms of these three chairs again reveals their basic similarities in design. In all three chairs the front legs run in a continuous line up to the arm with the thickest section of these tapered members at the point of intersection with the seat rails. In the Risom chair, the front legs are set back from the edge of the front seat, while the front legs on the Juhl and Gibbings chairs are even with the edge of the seat. Mr. Gibbings has tapered the chair legs to a more slender and delicate base than those on the Juhl and Risom chairs. The arms on all three chairs are thickest near the back of the chair where the widest portion of the arm will rest.

Raymond Loewy's chair (Plate No. IV) is similar in basic design to the Juhl, Risom, and Gibbings chairs, yet the final appearance is a little different. The form is more rectangular and not as sculptured in appearance. The legs are clearly separated from the seat frame. The rounded front legs terminate at the bottom of the seat frame rather than being continuous up to the arm as were those on the Gibbings, Juhl and Risom chairs. The rounded back legs slant inward to a point of contact with the side seat rail and continue upward to a rail set mid-way in the chair back. This side seat rail has been used as a sort of stretcher set directly under the seat frame, and it runs from the front legs past the back of the seat frame to meet the back legs. All of the legs are tapered and splayed, and are tipped with chrome plated steel ferules, which are similar to the contrasting wood tips used by Finn Juhl. Three tapered spindles are placed in the back of the frame and are supported mid-way by a horizontal rail. The tapered spindles used by Loewy are similar to those used by Robsjohn-Gibbings.

PARCHMENT

U.S.A.

Designer: Raymond Loewy

By courtesy of Raymond Loewy Associates

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100% RAG U.S.A.



The arms of the Loewy chair are supported and connected to the sides of the seat rail by two pieces of slender metal tubing. This metal tubing curves out and then upward from the bottom of the seat rail and slants outward to the arm rest. The flat arms are tapered, with the widest point nearest the back, and the outer edge curves gently inward toward the front of the chair. Mr. Loewy is one of few designers found in this research who makes extensive use of oak.

Paul McCobb's spindle-back Shaker armchair (Plate No. V), is a modern version of a period style. The legs of this chair are tapered and splayed outward as are those of the Risom, Juhl, and Loewy chairs. The legs terminate slightly inside the outer edge of the wooden seat. H-stretchers, rounded and tapered with the thickest point in the center, are placed slightly above center in the upper half of the legs.

The arms of Paul McCobb's chair, a U-shaped form, are rounded and run in a continuous line from one side, around the back of the chair where they are attached to the spindles, to the other side, forming the back framework. The fronts of the arm rests are supported by a slender, splayed spindle set slightly back of the front legs. Through the back frame run four elongated spindles, similar to those used by Gibbings and Loewy. At the top of the spindles is a wide curved top rail. The length of the spindles and the delicate form of the curved supports maintain a vertical line in contrast to all of the other designs. This chair is not upholstered but the seat of the chair is shaped to fit the contours of the body. The spindle-back Shaker armchair is produced in maple.

The chair selected from designs by Charles Eames is so unique that it can hardly be compared with those of other designers. Yet, it presents

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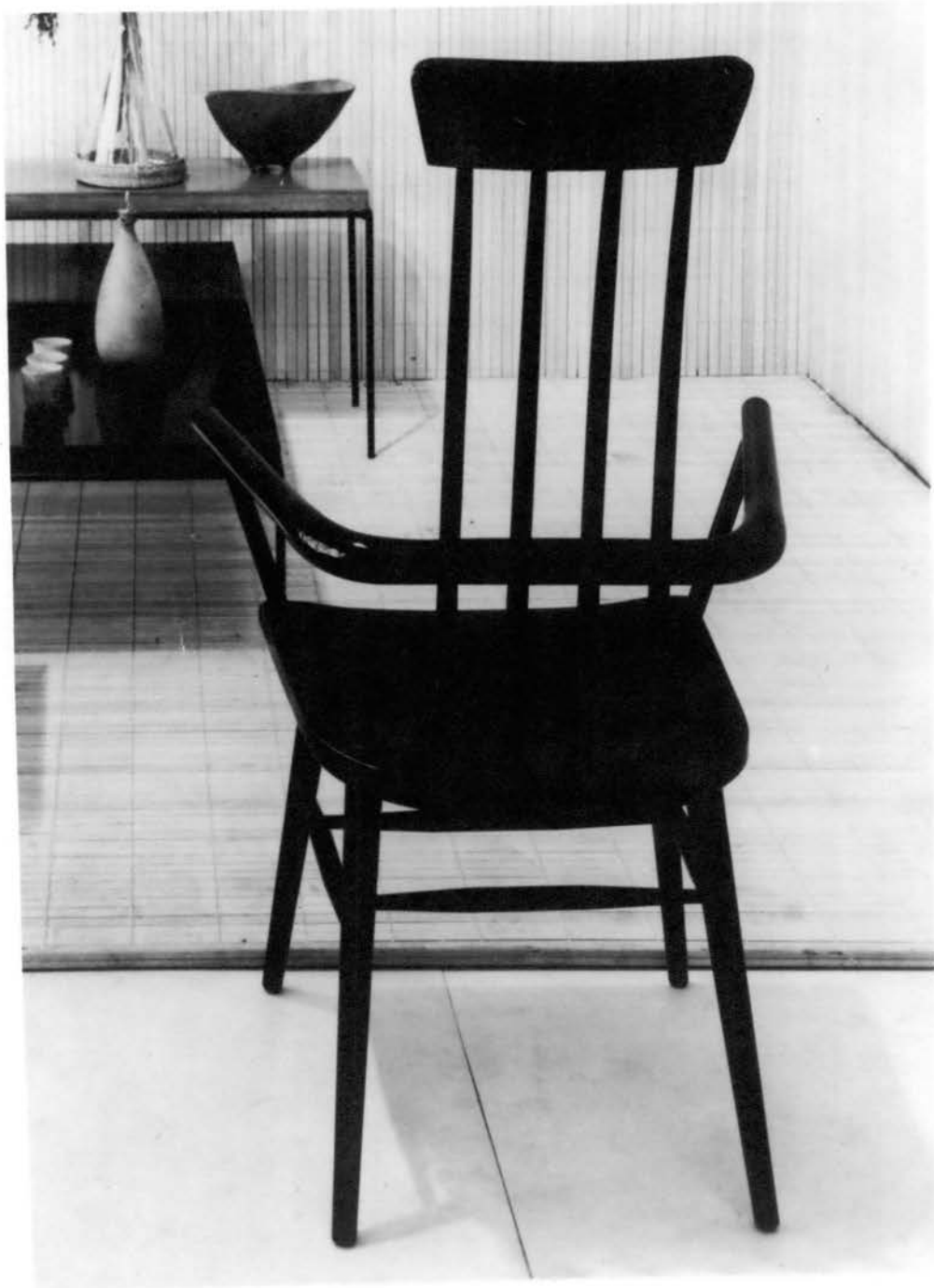
100% RAG U.S.A.

Designer: Paul McCobb

By courtesy of Flanner Group

RE PARCHMENT

RAG U.S.A.



an interesting and exciting contrast with the available designs of the modern movement.

This molded wire shell (Plate No. VI) has slender rod legs, which are slightly splayed. The left front leg and the right front leg continue under the seat diagonally and terminate as back legs on the opposite sides. Thus, the legs form an X under the seat and support the chair body. The back legs are shorter than the front ones, so that when the chair body is attached to the base, the seat slants downward toward the back. This feature brings added seating comfort.

The body of the Eames chair is of woven, molded wire with a reinforced edge. The back and the seat slope from their outer edges toward the center so that they fit the body. The seat is the widest point, and the back is narrower at the top than at the base. All members of this chair are rounded.

The two-piece cushion used on this chair is quite unique. One cushion covers the entire top of the back to a point approximately midway on the side of the back shell. At this point, the cushion slants from the outer edge diagonally down to the center and to the point of intersection with the seat cushion. A second cushion covers the entire seat to the point where the curve of the wire shell begins to form the back of the chair. At this point the sides of the seat cushions slant diagonally up to meet the back cushion. The cushions are available in one or two pieces and may be easily removed. The chair is available with five other bases and a variety of upholstery fabrics and leather to meet individual needs.

In Paul Frankl's armchair (Plate No. VII) the front legs run upward and continue into the arms. The front legs are squared and slightly

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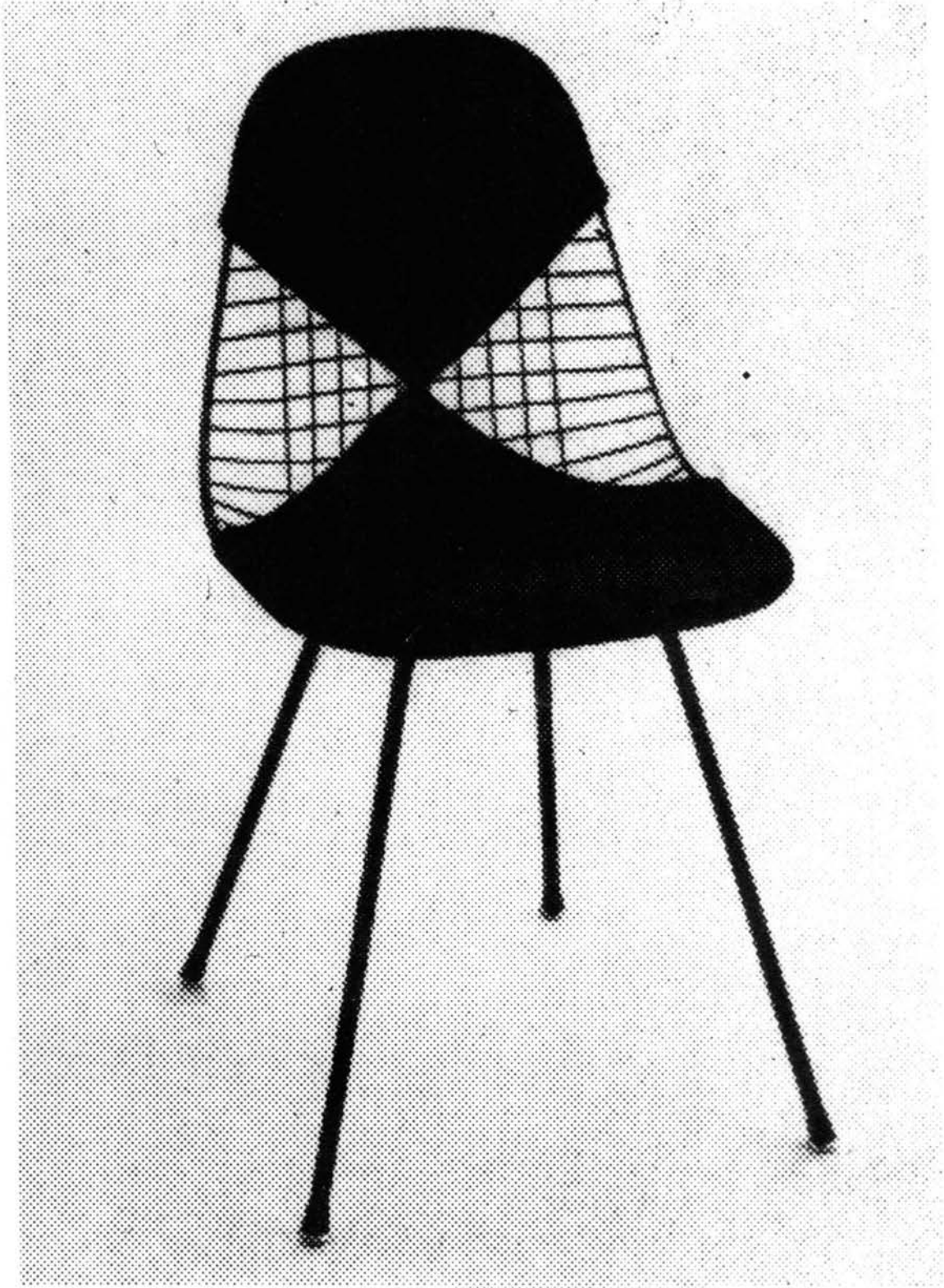
MADE IN U.S.A.

Designer: Charles Eames

By courtesy of Herman Miller Furniture Company

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Designer: Paul Frankl

By courtesy of Johnson Furniture Company

ORE PARCHMENT

100% RAG U.S.A.



tapered to the seat rail where there is a change in form. They become wide, flat, and are bent and curve gently to form the flat arms. This use of bent wood in the arms is a unique contrast to the other designs. The back legs are slightly splayed and curve upward to the top of the back. The back of the chair is filled with a ribbon design, which is unique in comparison with those of the other six chairs. The frame of the chair is entirely exposed, and has a slightly raised seat upholstery. The lines of the upholstery follow the exact chair lines.

In reference to Edgar Kaufmann's twelve precepts of modern design, it is fitting to note that all of these chair designs are indicative of the following principles: they take advantage of new techniques and ^{results} develop older, familiar ones for the modern chair; they express the beauty of natural materials and are never made to appear to be what they are not; their beauty lies in a simple structure with no extraneous enrichment; they clearly show man's mastery over the machine; and they serve a large number of requirements as to price and individual taste in design.

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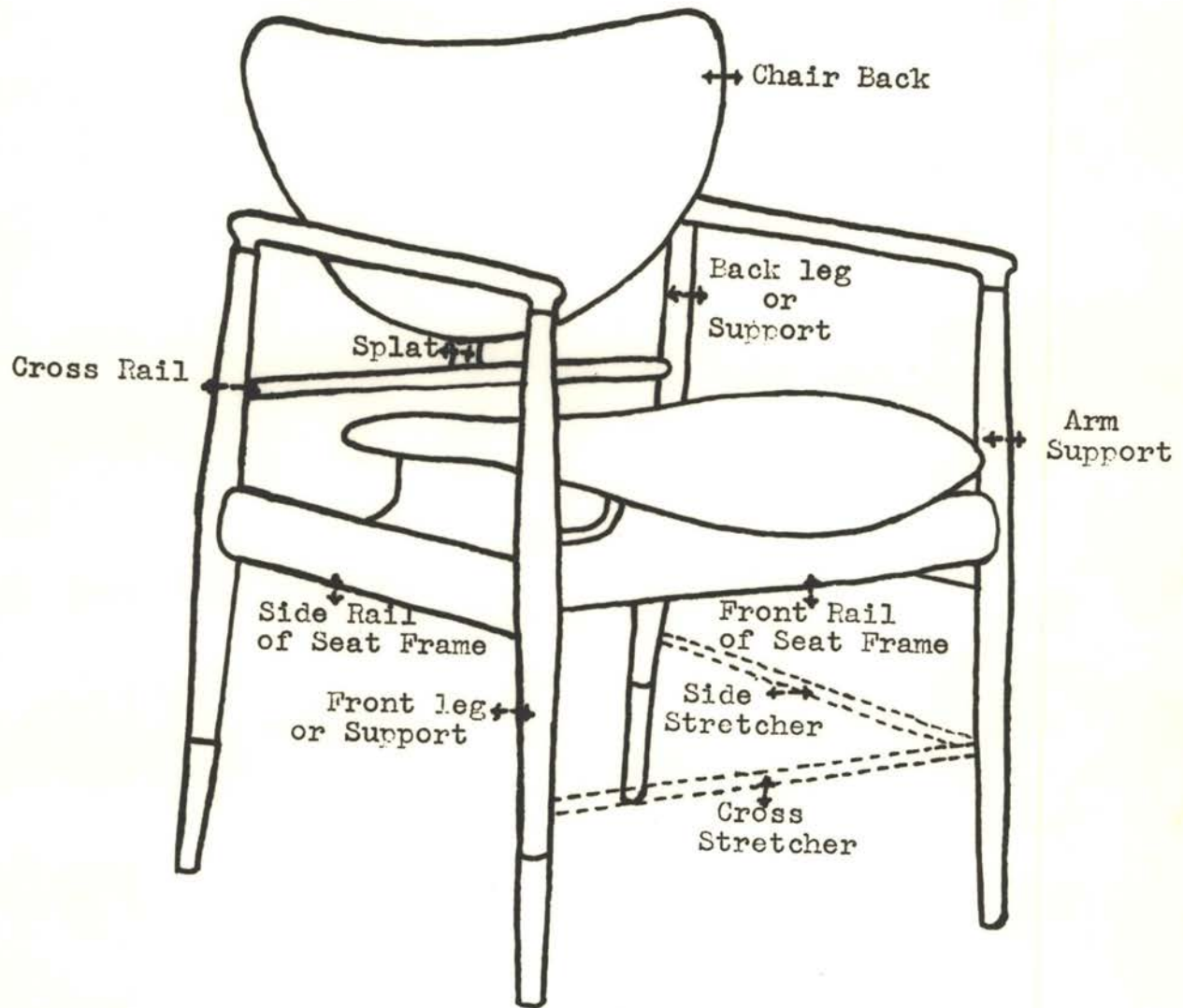
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Designer: Finn Juhl

Construction of a Chair

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CHAPTER IV

NEW MATERIALS OF CONSTRUCTION AND UPHOLSTERY TEXTILES

AND NEW USES OF TRADITIONAL ONES

New materials of construction, new methods of construction and new upholstery textiles played such important roles in the growth of modern furniture design that a discussion of them is mandatory. Without new materials and fabrics, the rapid changes which occurred in furniture forms would not have been possible. It will be noted that many of the new methods and materials of construction and new upholstery textiles were first developed for use in the modern chair as the public was often more willing to accept new ideas in chairs than in other furniture forms.

The outstanding contributions of modern furniture to the contemporary world were the development of new materials of construction, new methods of construction, upholstery fabrics, and the new uses of the traditional ones. Through these media it could be seen that the qualities which had characterized good design in traditional work were equally important in good modern design. "There has probably never been a period in the history of furniture when there was so much variety in design, when so many kinds of shapes, materials, and techniques were being explored."⁵²

The materials utilized in modern design, whether they were new or old, were allowed to express their intrinsic beauty. Three principle

⁵²George Nelson, "Modern Furniture", Interiors, CVIII (July, 1949), p. 78.

means of enriching the structure had become evident in modern furniture. The first was developed by "placing emphasis on the attractive qualities of the materials of structure".⁵³ This principle was evident in the use of rare and native woods used in patterns or unbroken areas, and in the use of contrasting materials such as plastic and metal, wood and metal, and glass and wood. A second principle was produced "by accentuating in various ways the general thrust of the volumetric mass".⁵⁴ Examples of this principle were seen in the use of inlays, shadows, and bands of enamel or plastic. The third principle was to relieve "the monotony of plain surfaces"⁵⁵ by use of veneers, color contrasts or different materials.

The new materials of construction were many and varied. One of the early contributions was made by Marcel Breuer. He used metal tubing for chairs and substituted the double S-shaped support for the conventional four legs.

Another early contribution to the new materials of construction was made by Dr. Karl Baekeland when he completed the processes for making a synthetic resin from phenol and formaldehyde. "Hard rubber and celluloid had been used for a generation, but the discovery of Bakelite was the beginning of today's vast plastic industry."⁵⁶ Other plastics which were composed chiefly of phenol and formaldehyde included Durex, Resinox and Durite. These phenolic resins were non-inflammable, acid proof, tough and durable. They could be cast into tubes, rods, and sheets, and they

⁵³Varmum, p. 83.

⁵⁴Ibid., p. 83.

⁵⁵Ibid., p. 83.

⁵⁶"The Growth of American Taste", Interiors, CII (November, 1942), p. 50.

could also be cut and carved. The cast forms were available in almost any range of colors. The urea resins were known commercially as Plaskon, Uryte and Beetleware. Laminated plastics were sheets of paper, fabric, rubber or fiber soaked in a liquid plastic material with heat and pressure applied.⁵⁷ Micarta was a laminated plastic which was receptive of inlays, and was used extensively by Charles Eames.

These plastics proved to be a most outstanding contribution to the furniture world. They were particularly useful for outdoor furniture which would be exposed to the elements. Other materials which were particularly developed for outdoor furniture were metal, glass and canvas. Wrought iron was treated to make it rust resistant and expanded metal was used extensively. Canvas was available in a variety of colors, solids and stripes, and white canvas was often combined with black iron for a sophisticated appearance. Glass, for the most part, was used for table tops.

Another outstanding contribution to modern furniture was foam rubber which was used for upholstering. "Noted for its long-wearing qualities, its maximum comfort, and its small upkeep, foam rubber lends itself to any shape furniture."⁵⁸ Foam rubber could be cut, shaped, and cemented. There was little or no waste to an upholstery done with foam rubber.

Charles Eames, who had made such outstanding contributions to modern chair designs, developed a molded fiber glass chair. The new use of this

⁵⁷Varnum, p. 77.

⁵⁸"Upholstering", Furniture Manufacturer, (73) (February, 1952), p. 24.

material resulted in a chair with the smooth surface of plastic which was strengthened by glass threads. The glass threads made it possible for the chair to absorb room temperatures, which ability was an attribute long desired in plastic furnishings.

Metals were comparatively new materials as developed for use in furniture designs, and their advantages over wood were numerous. They were superior to wood in strength and malleability; they would not burn, warp or crack, and, if properly constructed, they would not break at the joints.⁵⁹ They gave lightness, strength and comfort, and they were appropriate in textural feel and harmonious relationship for modern homes. Metal furniture was often capable of more space penetration than was wood furniture.

Metals which proved to be particularly successful in modern furniture included stainless steel, monel metal, wrought iron, black-finished iron and brass. Entire pieces of furniture were often constructed of all of these metals except brass. Monel metal, made of two-thirds nickel and one-third copper, could be welded, formed, drawn, machined or spun. Wrought iron and black-finished iron were first used particularly for supports in modern furniture. However, more recent designs show it used for entire pieces of furniture. Wrought iron seemed to be especially useful for outdoor furniture, and it had gained considerable attention for use in the field of accessories for modern furnishings.

Two materials which had recently been used for bodies of chairs were cords and webbed-straps. These materials were used with metal or wooden

⁵⁹Varnum, p. 115-119.

bases and were developed for maximum comfort. Because of the low cost of these materials, their possibilities for uses in inexpensive furniture were most numerous.

The new uses of traditional materials of construction were so numerous that only the most familiar could be discussed. Of particular interest were the rare and native woods which had been utilized for many centuries. Among the more prominent woods used were walnut, maple, birch, mahogany, sycamore, oak, teak, European pearwood, hawthorn (English sycamore), and various plywoods. These furniture woods were often treated with a clear lacquer or wax coating so that their intrinsic beauty and texture were visible. Some designers stained the woods with colors to add interest to room furnishings. Wood inlays and marquetry were revived in recent furniture designs. This type of surface enrichment was an ancient art, but the modern versions were adapted to contemporary designs. The patterns had become bold and decisive where in traditional designs they had been very small and intricate.

Modern designers were using metals with wood in fresh new ways. For instance, in one comb-back bed, bright dowels of brass were structural parts of the bed as well as foils for the low-keyed gloss of the wood.⁶⁰ Brass was also often used as supports and hardware on modern furniture.

As interest grew in the textural harmony of the modern home, such age old materials of construction as marble and slate were revived. They were prevalently used for table tops and for tops of buffets and cabinets.

⁶⁰"Glitter, Glitter, Everywhere", House Beautiful, XCV (October, 1953), p. 179-185.

Along with their textural interest, they were easily cleaned and required little or no upkeep.

Glass, with its reflective qualities, added sparkle and light to interiors. Although glass had been used for many years, modern furniture designers appeared to have fully developed its uses. Clear glass was used by virtually all designers, and some designers employed vitrolite, a heavy black glass, and a white opaque glass for color contrast or textural emphasis.

Almost simultaneously with the development of modern furniture, came the extensive research into and the development of man-made fibers for upholstery textiles. These fibers had greatly enhanced the beauty and durability of upholstery materials. Man-made fibers included nylon, orlon, dacron, dynel, fiber glass, saran, vicara, rayons (acetate, viscose, and fiber E), acrilan, chromspun and X-51. Most of these fabrics were washable, an attribute which greatly reduced the cost of cleaning upholstery. Many fabrics were made resistant to mildew, mold and fungi. Colors were fade-proof and heat resistant.

The majority of modern textiles relied on textural interest for beauty and among the more popular were those with slub weaves. Many weaves were done in neutral, monotone colors so that they could be adapted to any number of color schemes. Textural weaves were often enhanced by the use of metallic yarns and threads which added glitter and light, or cellophane stripes, bamboo and reeds were woven into fabrics for added interest. "It is in the more restrained contrasts of textures and tones that modern weaving has made its contribution to good living."⁶¹ In the

⁶¹"An Exhibition for Modern Living", The Detroit Institute of Arts, 1949, p. 48.

modern interiors, the use of these textured fabrics gave a more restful, serene feeling.

In patterned fabrics, which were mostly limited to small areas, the later modern prints were generally smaller and more subdued where early modern prints largely had been very bold. Primitive and geometric designs continued to be popular as did designs depicting items from everyday life.

Experiments with color resulted in beautiful fabrics in an unlimited variety of colors. "The experiments of modern painters, showing that pure colors juxtaposed in small specks are more subtle and lively than any mixed tones, have influenced modern weavers advantageously."⁶²

Leather was a traditional upholstery fabric which was revived for use on modern furniture. It was available in as many as twenty-five decorator colors, required little upkeep, and its smooth texture was harmonious with modern interiors. No fabric had yet been found which could surpass leather for a durable upholstery material and it was seen in shutters, curtains, and wall and floor coverings as well as in upholstery. In modern design leather has been combined with wood, metal and fabric for dramatic backgrounds.

⁶²Ibid., p. 48.

CHAPTER V

CRITICAL ANALYSIS AND CONCLUSIONS

It becomes necessary to evaluate the development of modern furniture in the United States in order to discover the influences and events which led to its development, the difficulties which had to be surmounted, the results of certain inclinations, and the final results in 1954.

The very nature of the introduction of the "Modern" style had been detrimental to its successful development. The people of the United States had grasped at this latest European style without realizing the principles and aims which underlie such designs. American furniture manufacturers and department stores had pushed sales of "Modernistic" furniture without regard as to whether designs were good or bad. As a result, the public became extremely confused and modern furniture was almost entirely rejected. The economic depression in 1929 made the very extravagant and poorly designed furniture unmarketable. The modern furniture which passed through this first big crisis without detriment was that of designers of experience and integrity.

During the 1930's, many of the obstacles surrounding the infancy of modern design were successfully surmounted. Furniture became more economical and practical. Designers and manufacturers were cooperating to bring the public good modern design, and all types of educational agencies were showing increased interest in the contemporary trend. The principles and aims of such designs were seriously studied and developed,

and the public began to realize that modern furniture design was consistent with the industrialization which was being developed in almost every other phase of their lives. Modern design was obeying a law valid among the Greeks and under the Louis, "that craftsmen produce what is natural to the tool".⁶³ Modern wasn't breaking from tradition, nor was it a fad; it was simply the result of controlling conditions.

By 1940, modern furniture was well on its way to becoming a period style. It was well-established and good basic design was becoming the rule rather than the exception.

What we seek, and what we recognize and respond to, are values of which beauty is only a sign, a visible evidence, important to us because it is the outward revelation of inward soundness and rightness, the aspect of a perfectly functioning order.⁶⁴

However, World War II, which began in 1941, brought a halt to the extensive development of modern design and it was not until 1946 that such work was resumed to any great extent. Many furniture designers who had worked in war industries had acquired a knowledge of certain materials and techniques of construction which proved to be of great aid in their furniture design. These new materials and new methods of construction often resulted in more low-cost mass produced furniture. The development of low-cost furniture had been one of the most difficult obstacles for designers and manufacturers of modern furniture to overcome. By 1950, with designers and producers cooperating to the fullest extent, and with the availability of new plastics, textiles, plywoods, and streamlined production methods,

⁶³Cheney, Art And The Machine, p. 188.

⁶⁴Teague, p. 15.

low-cost furnishings became a reality rather than a dream. "Low-cost housing and home furnishings are among the most important factors in the national economy and the general welfare of the peoples of all countries."⁶⁵

Post-war social and economic conditions had added other problems to modern furniture design.

To serve the needs of the vast majority of people we must have home furniture that is adaptable to small apartments and houses, furniture that is well-designed yet moderate in price, that is comfortable but not bulky, and that can be easily moved, stored and cared for; in other words, mass-produced furniture that is planned and executed to fit the needs of modern living, production and merchandising.⁶⁶

To fulfill these needs, furniture was made lightweight for ease in moving; smaller in scale for use in small homes and apartments; stackable for ease in storing; and multi-purpose so that one piece of furniture could be used in almost any room and for many purposes.

By 1953, two new aspects of modern furniture were becoming evident.

1. The first was the extensive use of curves in furniture design. Furniture forms had run from extremely boxy and geometric designs to those more sculptured in appearance. Lines were delicately curved and angles were rounded. The curves used were by no means as extreme as those of earlier traditional forms but were easy, naturally graceful and very pleasing to the eye.

2. A second new aspect of modern furniture was the growing use of enrichment in the form of metallic yarns and threads in upholstery fabrics and the use of gleaming metals and rich, exotic woods. Metallic yarns

⁶⁵Kaufmann, Prize Designs for Modern Furniture, p. 6.

⁶⁶Ibid., p. 6.

were added to textural weaves for enrichment of design, giving color and life to fabrics without detracting from the simple weaves. The traditional arts of inlay and marquetry were revived and their scale and form made suitable for modern designs. Metals, such as copper, brass, stainless steel, wrought iron and aluminum, added glitter and color to interiors.

As the early modern furniture designs were often extreme in their stark simplicity, so some of the latest designs using the new and revived forms of enrichment were also extreme. This development may be indicative of future furniture designs. Only time will reveal what future modern furniture designs may be, but it appears at the present time that the principles, aims and needs of modern furniture forms are thoroughly understood and that they will serve as an anchor for future designs.

As a result of this study of the development of modern furniture in the United States from 1940 to 1954 traced through the work of seven outstanding designers, the following conclusions were reached: that the American public was not receptive to modern design until it became popular on the continent of Europe, even though we had two great leaders of the style, Louis Sullivan and Frank Lloyd Wright, in our own midst; that the public was confused by the manner in which the modern furniture styles were exploited and marketed without regard for good and bad designs; that the depression made extravagant and extreme furniture unsalable; that cooperation among designers and manufacturers increased during the 1930's as did public interest in the designs; that techniques of mass production and new materials of construction resulting from the war industries during World War II aided in the production of low-cost

furniture in the post-war period; that because of social and economic conditions in the post-war period, furniture was designed to serve apartments and small homes with stackable, multi-purpose, lightweight and small-scale furnishings predominant; that increases in the use of various types of enrichment in furniture forms may be indicative of a trend in future designs; that modern furniture is no longer a fad but a definite, established period style; that modern furniture is congruent with prevailing social and economic conditions.

This study of modern furniture utilized findings in books, periodicals, newspapers, and brochures from various furniture manufacturers. In the process of completing this work, various studies suitable for other theses were discovered. Studies of how foreign furniture forms have influenced current American designers and how modern upholstery fabrics characterize the growth of modern design are suggested as possible fields of further study.

This study of modern furniture has been vitally interesting to the writer and it is hoped that it may prove to be of value to others from the historical, descriptive, and analytical viewpoints.

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