THE DEVELOPMENT AND CRITICAL SURVEY OF MODERN TRENDS IN FURNITURE AND FABRICS IN THE UNITED STATES 1925-1945

Thesis for the Degree of M. A.

MICHIGAN STATE COLLEGE

Ruth Estella Hawthorne

1949

This is to certify that the

thesis entitled

THE DEVELOPMENT AND CRITICAL SURVEY OF MODERN TRENDS IN FURNITURE AND FABRICS IN THE UNITED STATES

presented by

Ruth Estella Hawthorne

has been accepted towards fulfillment
of the requirements for

M.A. degree in T.C.&R.A.

Hazel B. Strahan
Major professor

Date August 1, 1949

O-169

THE DEVELOPMENT AND CRITICAL SURVEY OF MODERN TRENDS IN FURNITURE AND FABRICS IN THE UNITED STATES 1925-1945

By

Ruth Estella Hawthorne

A THESIS

Submitted to the School of Graduate Studies of Michigan State College of Agriculture and Applied Science in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

Department of Textiles, Clothing and Related Arts

1949

THESIS

TABLE OF CONTENTS

Page

LIST OF PLATES..... i

LIST OF FIGURES..... ii

INTRODUCTION..... 1

Statement of Problem..... 1
Purpose..... 2
Procedure..... 2

PART I - HISTORICAL BACKGROUND

Chapter I Modern Architects Create a New Philosophy..... 4

Chapter II Revolts Arise Against Tradition in the Minor Arts..... 26

Chapter III The Paris Exposition Awakens the United States 37

PART II - MODERN TRENDS IN THE UNITED STATES

Chapter IV 1925-1929..... 42

Chapter V 1930-1934..... 51

Chapter VI 1935-1939..... 59

Chapter VII 1940-1945..... 69

SUMMARY..... 84

CONCLUSION..... 92

BIBLIOGRAPHY..... 97

LIST OF PLATES

PLATE		PAGE
I	House in Palo Alto, California, by Frank Lloyd Wright...	19
II	Exterior of the Walter F. Bogner House.....	20
III	Floor Plans of the Walter F. Bogner House.....	23
IV	Interior of the Walter F. Bogner House.....	24
V	Interiors typical of the early Twentieth Century.....	28
VI	An Interior in the Art Nouveau Style.....	32
VII	Interior from Paris Exposition.....	58
VIII	An Interior in the Classic Modern Style.....	93
IX	An Interior in the Fantastic Modern Style.....	95
X	An Interior in the Functional Modern Style.....	96

LIST OF FIGURES

FIGURE		PAGE
1.	Tubular Metal Chair by Marcel Breuer, 1925	34
2.	Simplified Metal Chair by Marcel Breuer	36
3.	Upholstered Chairs in the Modernistic Style	45
4.	Bed in the Art Moderne Style	47
5.	Skyscraper Bookcase by Paul T. Frankl	50
6.	Tubular Metal Chair, 1933	53
7.	Chair in the Classic Modern Style	55
8.	Upholstered Chair in the Contemporary Style	57
9.	Chair of Molded Plywood by Alvar Aalto	60
10.	Swedish Modern Chair with Exposed Wood Frame	62
11.	Music Corner on Exhibition at the New York World's Fair, 1939	67
12.	Chair by Saarinen and Eames, 1941	71
13.	"Free Form" coffee table with glass top	74
14.	Sectional Units by Eliel Saarinen	76
15.	Diagram of the Widdecomb "Flexi-Units"	78
16.	Lacquered Chest of Drawers in the Chinese Modern Style	82

INTRODUCTION

Statement of Problem

The modern movement in the beginning was developed primarily as a movement in opposition to the prevailing eclecticism of the nineteenth century. In the arts thinking men rebeled against the continued use of stale classicism and determined to create an expression characteristic of their own time. The prophet of modern architecture in America, Frank Lloyd Wright, as well as certain European architects developed the new philosophy which has become the basis for the whole modern movement.

While modern furnishings have been largely accepted in contemporary living, there is a question as to how many of the owners or prospective purchasers of modern furnishings really understand what lies behind the material evidence of the modern movement. It is only with a knowledge of the background of the movement that one can judge contemporary styles to distinguish the truly modern from the bogus imitation.

The modern movement in the United States was initiated through the influence of the Paris Exhibition in 1925. Obviously, the influence of this event indicated the necessity for thoroughly exploring all information concerning the subject. To understand the development of the modern trend in the United States, the furniture and fabrics (which are the most representative expressions of any style) were studied from 1925 to 1945 in relation to the factors and influences of the times. No study has been made concerning this problem. The information obtained from such a study is of value and interest to students of home furnishings.

Purposes:

The purposes of this thesis are:

First, to study early twentieth century architectural developments so as to understand better the philosophy of contemporary architecture and design.

Second, to study the various modern movements and their effects in order to understand modern interiors.

Third, to survey the furniture and fabrics expressive of this new movement in interior decoration between 1925-1945 inclusive.

Fourth, to review critically the furniture and fabrics of these years as to quality of design and function and to select pictures and drawings of furniture and interior furnishings that are most representative of these years.

Procedure:

Books and periodicals were obtained from the Michigan State College Library, the State Library of Michigan, the Library of the University of Michigan, the New York City Library, and the Library of the Museum of Modern Art. They were examined for material pertinent to the problem. The work and writings of the pioneers of modern architecture and interior design were studied so as to understand better the thinking of these leaders and the philosophy of this era.

All available material concerning the Paris Exposition was studied so as to gain an insight into this event of major importance and influence.

A study was then made, by five year periods, of the modern trends in furniture and fabrics between the years 1925 and 1945 inclusive. The study was made by examining each issue of the volumes of the following periodicals:

House Beautiful from 1925 to 1945 inclusive

House and Garden from 1925 to 1945 inclusive

Architectural Forum from 1925 to 1945 inclusive

The Architectural Record from 1925 to 1945 inclusive

as well as the trade publication, Retailing, Home Furnishings Edition for the years from 1932 to 1945. (The volumes 7, 13, 15-16, and 18-19 were incomplete and at the same time volume 14 was not available.)

From this study conclusions were drawn as to the influences and characteristics of the furnishings from 1925 to 1945. Photographs that were pertinent to the development of the problem were selected. Line drawings were made to illustrate the information obtained.

PART I

HISTCRICAL BACKGROUND

CHAPTER I

Modern Architects Create A New Philosophy

Architecture, the art and science of building, has for centuries provided the background for daily living. The diversity of styles apparent from a survey of historic structures resulted from the various influences at work at the time these buildings were constructed. Notable variations were the result of climate, topography, religion, transportation, and social customs. As these factors influenced the philosophy and daily living of the people, they were reflected in the contemporary architecture. In its turn architecture, as it assimilated new ideas and techniques, became an influence on daily living. In order to have any real understanding of the architecture of any period, it is necessary, therefore, to be conscious of the attitudes and influences contemporary with the building.

Until the nineteenth century all styles were modern in the sense that the architecture was developed to suit the needs of that day. With the nineteenth century came the era of revivals due, in part, to the industrial revolution with its quantities of machine made goods and the increasing influence exerted by the middle class. In spite of technical progress the art expressions of the nineteenth century proved it was a backward-looking era.

Late in the nineteenth century there appeared in the United States a man named Louis Sullivan who was an extraordinary architectural thinker. He was one of the first men to build the simple slablike office buildings that were the prototype of the modern skyscraper. Sullivan was interested in the possibilities of new building materials. He had evolved an

unorthodox idea that architecture should be constructed from the inside out, expressing the purpose for which it was designed. His work demonstrated his formula that "form follows function".

Louis Sullivan and some of the bolder architects of the Middle West were known as members of the Chicago School. The Chicago School employed a new type of construction--the iron skeleton, which became known as "Chicago construction". The modern business and administration building was the creation of the Chicago School. To Louis Sullivan goes much of the credit for these buildings. Sullivan was the most important architect of the Chicago School, and his influence left its mark upon the next generation of architects in the Middle West.

The greatest architect in our country and one of the greatest architects of all time is Frank Lloyd Wright, who began building at the turn of the century, and whose writings as well as his buildings have influenced architecture all over the world.

Frank Lloyd Wright, born in Wisconsin in 1869, attended the University of Wisconsin where he studied civil engineering because there was no School of Architecture at the university. In 1887 he left the university before completing his course of study and went to Chicago, where a year later he was working in the drafting room of the great pioneer of modern architecture, Louis Sullivan. Here he worked for six years. Sullivan, who has been fondly referred to as "der liebemiester", is the only architect to whom Wright has ever admitted a debt. Wright's philosophy was markedly influenced by his association with Sullivan and he adapted Sullivan's formula "form follows function". However, when Wright began to work independently, he did not continue directly in the manner

of the Chicago School. "He did not carry over the use of the new materials, the iron skeleton, and the great glass surfaces of the office buildings into his own sphere--housing."[1]

In describing his early building efforts Wright has written:

> Already, when I began to build, commercial machine standardization had taken the life of handicraft. To make the new forms living expressions of the new order of the machine and continue what was noble in tradition did trouble me. I wanted to realize genuine new forms appropriate to the old (natural) and to new (synthetic) materials but I should have to so design them that the machine (or process) that must make them could make them better than anything could possibly be made by hand.[2]

In his lectures on modern architecture, which were given at Princeton University, Frank Lloyd Wright presented these objectives in explaining his building:

> 1. To reduce the number of necessary parts of the house and the separate rooms to a minimum, and make all come together as enclosed space--so divided that light, air and vista permeated the whole with a sense of unity.
>
> 2. To associate the building as a whole with its site by extension and emphasis of the planes parallel to the ground.
>
> 3. To eliminate the room as a box and the house as another by making all walls enclosing screens. Make all house proportions more liberally human, with less wasted space in structure, and structure more appropriate to material, and so the whole more livable.
>
> 4. To get the unwholesome basement up out of the ground.
>
> 5. To harmonize all necessary openings to "outside" or to "inside" with good human proportions and make them occur naturally in the scheme of the whole building. The room as such was now the essential architectural expression.

---

[1] Sigfried Giedion, Space, Time and Architecture (Cambridge: The Harvard University Press, 1941), p. 319.

[2] Frederick Gutheim, editor, Frank Lloyd Wright on Architecture (New York: Duell, Sloan and Pearce, 1941), pp. 185-186.

6. To eliminate combinations of different materials in favor of mono-materials so far as possible; to use no ornament that did not come out of the nature of materials, to make the whole building clearer and more expressible as a place to live in, and give the conception of the building appropriate revealing emphasis.

7. To incorporate all heating, lighting, plumbing so that these systems become constituent parts of the building itself.

8. To incorporate as organic architecture--so far as possible--furnishings, making them all one with the building and designing them in simple terms for machine work. Again straight lines and rectilinear forms.

9. Eliminate the decorator. He was all curves and all efflorescence, if not all "period".[3]

Wright's first house was built in 1893. The loose planning, the block-like forms, and the horizontality of his style were already conspicuous. The young architect from this time forward showed himself to be a greater innovator and a greater architect than his master. The Willet house built in 1901 is a notable example of Wright's early work. In the Robbe house, built in Chicago, the architect has expressed the functional plan in a three dimensional organization of planes that was absolutely unprecedented. This house marked the climax of Wright's period of Prarie Architecture.

In the early years of the twentieth century when every house large or small was covered with ingenious jigger work, the product of the scroll saw and the turning lathe, Wright's ideas of house planning were little short of revolutionary. Wright's houses look as if they belonged to the earth; the plan had been brought down and broadened out into spaciousness. He wrote of his early plans:

---

[3]Frank Lloyd Wright, Modern Architecture (Princeton: Princeton University Press, 1931), pp. 73-75.

> So I declared the whole lower floor as one room, cutting off the kitchen as a laboratory, putting servants' sleeping and living quarters next to it, for certain domestic purposes--like dining or reading, or receiving a formal caller. There were no plans like these in existance at the time....Scores of doors disappeared and no end of partition. The house became more free as "space" and more livable, too. Interior spaciousness began to dawn.[4]

It was not easy for Wright to carry out his original plans in the actual building for on every hand he met opposition. After completing the Winslow House, his next client said that he "did not want a house so different that he would have to go down the backway to his morning train to avoid being laughed at."[5] There were many other difficulties. Bankers refused to loan money on the queer houses and so friends had to be found to give financial assistance. Mill men upon reading the name of the architect quickly returned the drawings, remarking that they were not hunting for trouble. Contractors, unfamiliar with the architect's innovations, more often than not failed to read the plans correctly, so that frequently much had to be left off the building. By this time the buildings had strayed from the original plans, nevertheless, the clients usually stood by interested and excited, but unfortunately when they moved into their new house quite frequently they had no money left and had to drag their old furniture into their new world. The matter of money too frequently crippled the original scheme in which all the furnishings and the heating and lighting systems were incorporated with the architectural plan.[6]

---

[4]Frank Lloyd Wright, op. cit., p. 72

[5]Frederick Gutheim, editor, op. cit., p. 187.

[6]Ibid., p. 187.

By 1910 Wright had achieved a flexibility of open planning that was heretofore unapproached; in other countries at that time the flexible ground plan and the flexible molded interior and exterior were almost unknown. "Wright's realization of a flexible treatment of the inner space of a building is probably his greatest service to architecture. It brought life, movement, freedom into the whole rigid and benumbed body of modern architecture."[7] Now, at forty years of age, Wright had completed a body of work which was both great and influential enough to assure him his place in history.

Ironically enough, it was not in his own country that Wright's work was acclaimed, for in America he lived almost as an exile. To his American contemporaries, he seemed to be the last representative of a lost cause. Actually the cause was not lost, but for a while it became over shadowed by Classic and Gothic revivals. While in America Wright was not understood by his countrymen, the important thinkers in Europe realized what he had achieved, and especially in Holland and Germany his work was most influential.

Thus, in Europe, Wright, after a short time, was accepted and understood by the pioneers of the modern movement in architecture. His book "Augerfuhrte Bauten und Entwurfe Von Frank Lloyd Wright" was published in Germany in 1910 and has not since been approached in comprehensiveness. This book was supplemented a year later by a smaller work on the same subject. This, too, enjoyed a very wide circulation and influence.

---

[7]Sigfried Giedion, op. cit., p. 327.

Berlage, an important Dutch architect, came under the influence of Wright when in 1912, he visited the United States and became impressed by the work of Wright. The lectures of Berlage on the work of Frank Lloyd Wright and the books written by Wright and published in German were a strong influence on the younger students of Berlage, the most notable of these being J. J. P. Oud.

In the early years of the twentieth century, only a few individuals consciously broke with the nominal discipline of the revivals. Such men were Berlage, Wagner, and Behrens.

> Each architect broke in his own way with the immediate past, each sought in his own direction the positive elements which have been combined in the last decade. But there was no stylistic integration until after the war.[8]

In Vienna, Otto Wagner attempted to break away from traditional architecture. He believed that a new style in architecture arose from an old one as a result of new materials, new technical processes, and new socialogical problems. These were the elements of the new style: steel and reinforced concrete, the new materials; factory manufactured building instruments, the new technical processes; and the baffling problems of rapidly growing industrial cities, the new social conditions.

Josef Hoffmann, a student of Otto Wagner, has, perhaps, become more widely recognized than his teacher. Hoffmann studied under Wagner at the Vienna Academy of Arts and in Hoffmann's work there can be seen a reaction against the formal coldness of Wagner's buildings. Hoffmann's chief interest was in the minor arts and under his leadership brilliantly decorative ornament was developed. From the field of handicraft

---

[8] Henry-Russell Hitchcock, The International Style: Architecture Since 1922 (New York: W. W. Norton and Company, Inc., 1932), p. 24.

which was Hoffmann's first interest, he entered the field of architecture. In his architectural designs his early interest in ornament is reflected to an extent that has prompted Henry-Russell Hitchock to remark that the architecture of Hoffmann "is too often fine only on account of the exquisitely executed ornament and not as in many works of Berlage or Wright, despite crudity of detail."[9] One particularly fine example to Hoffmann's work was the Austrian Pavilion at the Expositions in Rome and Cologne just before World War I.

Peter Behrens in Germany began executing buildings at the same time as Josef Hoffmann and under somewhat the same influences. Behrens studied as a painter in Karlsruch, Dussledorf, and Munich. His architectural work was sound and vigorous, perhaps due to the influence of Van de Velde who was director of the Weimar Art School. Behrens, also came under the influence of Hermann Muthesius, an architect who had spent some time in London making a study of English housing. Upon his return to Germany, Muthesius wrote a book, "Das Englische Haus" which was published in 1905.

Behrens became the architect of the German General Electric Company in 1907. He built power plants and factories of monumental impressiveness by using modern construction methods. Such buildings were necessarily of utilitarian character; consequently, little ornament was used. Behrens consciously transformed the factory into a dignified place of work. In his industrial architecture before the war, Behrens, through extreme simplification, created the effect of volume to replace the

---

[9]Henry-Russell Hitchock, Modern Architecture; Romanticism and Reintegration (New York: Payon and Clark Ltd., 1929), p. 132.

traditional effect of mass. Behrens's industrial architecture was free from the compromise with tradition which characterized his houses. "While his houses and apartments lack the grace and delicacy of the Austrian and the fantacy and humor of the Dutch, they have a sobriety which represents the honesty and the grandeur of the conception of the new tradition."[10]

The work of these men, Berlage, Wagner, and Behrens, was not related or integrated to any sense except by the fact that each man was working independently with the techniques and materials at hand to create a truly contemporary architecture. To the next generation fell the task of combining and crystallizing the various aesthetics and technical results of the experimentation of their elders.[11] These post-war architects, Gropius, Le Corbusier, Oud, and Van der Rohe, were the leaders of modern architecture in Europe; their work comprised the international style. Since these men were the creators of modern architecture and of the modern movement, the principles of their architecture should be comprehended to understand the modern movement as a whole.

Walter Gropius was the nephew of a great German architect. He studied in Berlin and Munich; in 1908 he went to the atelier of Peter Behrens where Le Corbusier and Mies van der Rohe also came to work. Two years later he established his own office in Berlin. Gropius has become well known as both an architect and an educator. In 1914 he was appointed

---

[10] Henry-Russell-Hitchcock, Modern Architecture; Romanticism and Reintegration (New York: Payon and Clark Ltd., 1929), p. 137.

[11] Henry-Russell Hitchcock, The International Style; Architecture Since 1922 (New York: W. W. Norton, and Company Inc., 1932), p. 25.

Director of the Exposition at Cologne and the same year, with Adolf Meyer, Gropius designed the factory at Alfred, which was completed before he entered the service of World War I. This building stands alone as the only piece of architecture by a so called modern architect which was built before World War I.

After the war there was very little architectural production, particularly in France and Germany. Building ceased for even longer than the war years, and it was not until 1922 that building reflected the results of the modern trend. When the new buildings appeared, they were to be found contemporaneously in France, Holland, and Germany. It was not until 1925 that Le Corbusier's Pavillion de E'Sprit Nouveau at the Paris Exposition of Decorative Arts formally presented modern architecture to the general public.

Although Gropius did not reestablish his private practice after the war until 1928, he was still closely allied with architecture and the modern movement. When the war ended, Gropius was appointed Director of the Grand Ducal Art School and the Arts and Crafts School at Weimar. These two schools he amalgamated into a high school for design, Das Staatliche Bauhaus Weimar.

> "At the Bauhaus under Gropius the effort was made to unite art and industry, art and daily life; using architecture as the intermediary....The principles of contemporary art were there, for the first time, transplanted into the field of education."[12]

In 1925 the Bauhaus was moved to Dessau. The opposition had grown too strong for Gropius in Weimar, where he had been accused of teaching "architectural socialism". The new building for the Bauhaus at Dessau

---

[12]Sigfried Giedion, op. cit., p. 397.

which Gropius designed is one of his most outstanding accomplishments. He designed the buildings for the community surrounding the Bauhaus including homes for faculty, dormitories for students, and the school and workshop known as the Bauhaus. The school building was supported by steel and had walls of glass. The appearance of the building was like nothing that had ever been seen before.

Gropius's greatest interest had always been in the field of low cost housing. He made many plans for low cost communities, some of which were carried out by the government. Frequently the buildings were not completed according to the plans, due to lack of funds, and as time went on the government did less and less building as political conditions became more unsettled in Germany.

In 1934 Gropius moved to London and continued his work as an architect there. Three years later he accepted a professorship in the Department of Architecture at Harvard University, and in 1938 he was appointed Chairman of the Department of Architecture. In the United States Gropius has been associated with Marcel Breuer, a young designer and architect. Breuer studied at the Bauhaus where he later became an instructor. In America Breuer has designed the furnishings for several of the projects undertaken with Gropius. "Breuer is considered the more imaginative and intuitive of the two architects, while Gropius seems the more logical and precise."[13] The greatest contribution which Gropius has made to modern architecture has been his innovations in technique.

---

[13]Maxine Block, editor, "Walter Gropius," Current Biography 1941 (New York: The H. W. Wilson Company, 1941), p. 101.

It was Le Corbusier who made the world conscious of the new architecture. The influence of his books, projects, and buildings has been without equal since the end of World War I. Le Corbusier, the pen name used by Edouard Jeanerat, was born in Switzerland and studied engineering in the local school of Arts and Crafts. In Paris he worked under Perret and in Berlin under Peter Behrens. After travelling about in Europe for a year he settled down, as a painter in Paris. In 1920 with Ozenfont, a painter, he founded the review, L'Esprit Nouveau. The influence of Le Corbusier's writings has been extensive though the number of his building projects has been relatively small. LeCorbusier's architectural plans have been chiefly for country villas. His experiments in glass and concrete could be afforded only by the wealthy while his technical extravagances indicated that he would never be a sociological architect. Perhaps the designs of Le Corbusier reflect more of the artist than the builder.

J. J. P. Oud, the leading architect in Holland, studied in the Amsterdam School of Arts and Crafts. From the lectures of Berlage he became interested in the work and writings of Frank Lloyd Wright. Cubism, the contemporary movement in painting, and the influence of abstract art were reflected in Oud's designs, which became extremely simple, vigorous, and geometric. His early work was an exercise in free creation--an aesthetic experiment. In 1918 Oud became the architect for the city of Rotterdam. He designed street houses for the Hook von Holland in 1924. These were executed three years later. The buildings were technically excellent and rich in expression. Perhaps it is because Holland is such a tiny country and so cramped for space that in

order to utilize space in the very best manner Oud was forced to develop his designs, for it is true that Oud's greatest contribution to modern architecture has been in his designs.

Two years after Walter Gropius left the Bauhaus School at Dessau, Mies van der Rohe took over his position. Van der Rohe, who was born in Germany, had designed furniture in the office of the interior designer, Bruno Paul, and had worked as an assistant to Peter Behrens. He established himself in Berlin as an architect in 1911. The German Pavilion of the International Exhibition in Barcelona in 1929 was his masterpiece. The building was a dramatic piece of work created through the use of modern materials--glass, shining metal, and slabs of marble in a free flowing plan. Van der Rohe is an artist of the plan, a decorator in the best sense. The creation of space through a free flowing plan was his greatest contribution to modern architecture.

These modern architects through experimentation and analization developed the following concepts of modern architecture. The treatment of architecture as volume is the first principle. This new conception of structure as volume rather than mass, has been made possible by the technical advances in the building industry. Solidity, no longer an essential for sound building, has been replaced by lightness and poise. These advances in both theory and technology have made possible the flowing space plan which is the essence of the modern doctrine. Walls no longer necessary for support have become merely screens to enclose space. Windows, heretofore restricted in size at a time when walls were necessary for support, took on new proportions. This conception

of flowing space is not restricted to the floor plan alone but envelopes the outdoor living area to create a unified whole.

The asymmetric plan is one of the distinguishing characteristics of modern architecture. The asymmetrical form is a result not of a conscious effort to be new or different; but to express more realistically the functions of contemporary living. In the words of Louis Sullivan "form follows function". Whereas in the past the process of daily living had to be adjusted to fit into the square or rectangular box called home, the modern architect has reversed the process and designed the house to fit the activities of the family. Besides the functional aspect of the plan, a harmonious organization of the whole is necessary to express an esthetic design.

The almost complete absence of ornament has set modern architecture apart from every other period. Following the introduction of the machine, the quality of the execution of ornament had steadfastly declined. The modern architect, faced with this situation, preferred instead to use the natural undecorated surface. While ornament of the traditional sort is almost wholly absent from the contemporary scene, there is no lack of interest and variety which is provided by the structure and materials of modern architecture. Texture, color, and patterns of many materials make ornament in the traditional sense unnecessary.

Buildings which were truly modern were constructed in the United States only after the philosophy and objectives of modern architecture were comprehended. By the early thirties there were evidences of the influence of the International Style. At last Frank Lloyd Wright was being recognized, and interest in his work grew. The revival of early

American architecture brought an appreciation of the straightforward use of material. This was the real beginning of modern architecture in America.

In California modern architecture found early acceptance. The informal way of living and the mild climate seemed especially favorable for the development of the new style. There appeared in Southern California the uncompromising modern style of Richard Neutra. William Wilson Wurster in the San Francisco Bay area was building livable wooden houses in the native tradition but with a look of the contemporary. The emphasis placed on outdoor living on the west coast due to the climate as well as the social informality is an important factor in the development of a characteristic sort of architecture. Other features of California's regional architecture are the sprawling plans and the extensive use of wood. A particularly good example of the sprawling plan is evidenced in the Palo Alto house (Plate I) designed by Frank Lloyd Wright. In this plan Wright had continued to demonstrate his own thesis that the house should lie close to the ground and become a part of the natural site. The distinctive regional style of California, wood construction and wide open planning, has been combined in this plan with the personal style of Wright.

Modern architecture has taken root in New England too. Here it has adopted the traditional materials of white painted wood and New England stone to produce a regional style. The home of Walter F. Bogner (Plate II) in Lincoln, Massachusetts is an example of New England regional architecture.

PLATE I

House in Palo Alto, California, by Frank Lloyd Wright

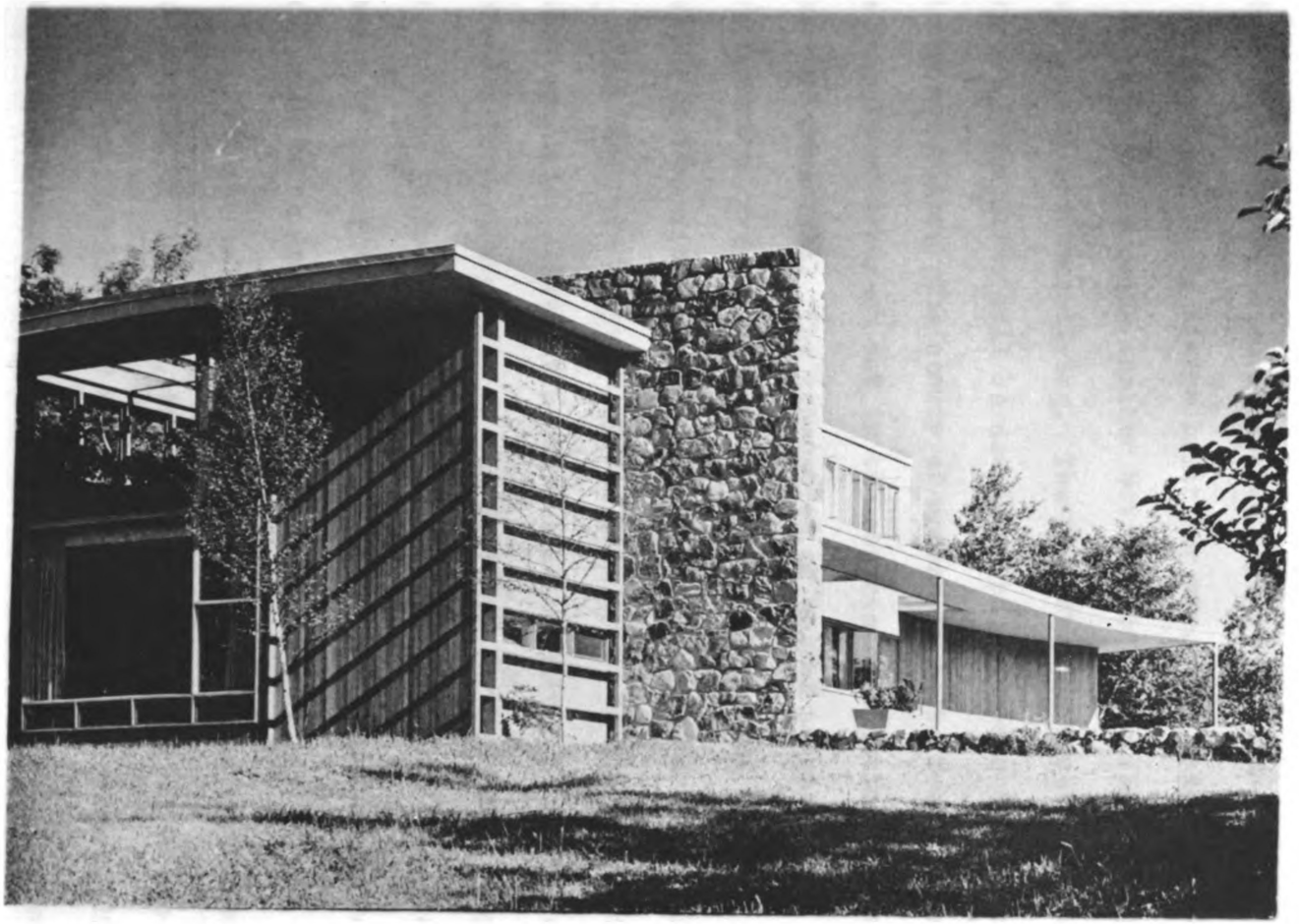


PLATE II

Exterior of the Walter F. Bogner House

As modern architecture was accepted in other parts of the United States, there appeared typical styles for each region. Traditional materials and plans were in some ways reflected in the modern home. Modern architecture is an adaptable style. Wherever the modern home is constructed, it is always built for man. The modern house is not built merely to provide shelter but to provide an opportunity for unhampered and gracious living. The plan will be developed from the inside out. New forms will be developed as solutions to new problems and new materials. The beauty of modern is to be found not merely in the absence of ornament but in the abstract aesthetic forms and the nature of materials. The conception of volume as opposed to mass, the development of free forms and asymmetric plans, and the lack of ornament are the distinguishing characteristics of the new architecture.

To illustrate graphically the principles of the modern theory the following plates illustrating the house of Walter F. Bogner were chosen. Professor Bogner, a member of the staff of Harvard University, designed his own home to demonstrate that modern architecture is not a luxury but a means of giving more to the owner for the same amount of money than would have to be expended on a traditional house.

The traditional New England building materials were used for the construction of this home, though there is nothing about the appearance of the house that hints of the traditional. The design quality of the plan is outstanding and is achieved through the use of various planes and emphasized through the use of materials--the pattern of stone, the tone of wood, and the smoothness of concrete (Plate II). The three dimensional feeling has given a quality of lightness as well as poise.

The design of the facade is but reflection of the well thought out plan inside. The fluid spaciousness is evident in the floor plan (Plate III) as well as in the relation of the house to the surrounding grounds. The living room and dining room, which can be thrown together at will, continues uninterrupted into the library (Plate: IVa and IVb). The living room on one side is separated from the outdoors only by a huge sheet of glass, while the dining room is separated from the terrace by the same sort of transparent wall. Even on the second floor the outdoors has been brought inside with the use of the porch. The whole plan has been oriented in such a way that the living areas will face south and thus receive the greatest amount of sunlight and the accompanying emotional stimulus. (Plate IVc).

Professor Bogner has summed up the problem, "All our ideas for the house would have been of no value had it not been possible to execute them for a limited budget. All the way through I considered the importance of emotional reactions in addition to the functional reasons for the design."[14]

> Modern architecture then seeks not style but substance, not ornament or ostentation but rational simplicity, not standard plans and facade but proficiency in exposition, not fitting the family to the house but the house to the family, not imitation but creation. Ideally it strives to make its fresh approach to the problem of design by the study of the latest findings concerning the nature of man and of social trends. It seeks fresh achievement in construction by thorough understanding and mastery of new materials and processes and of their potentials in use. It studies intensively the client and the members of the household, the site and its neighborhood, the available local organizations and

---

[14]Walter F. Bogner, "Why I Planned My House This Way," House Beautiful, 83:102, April, 1941.

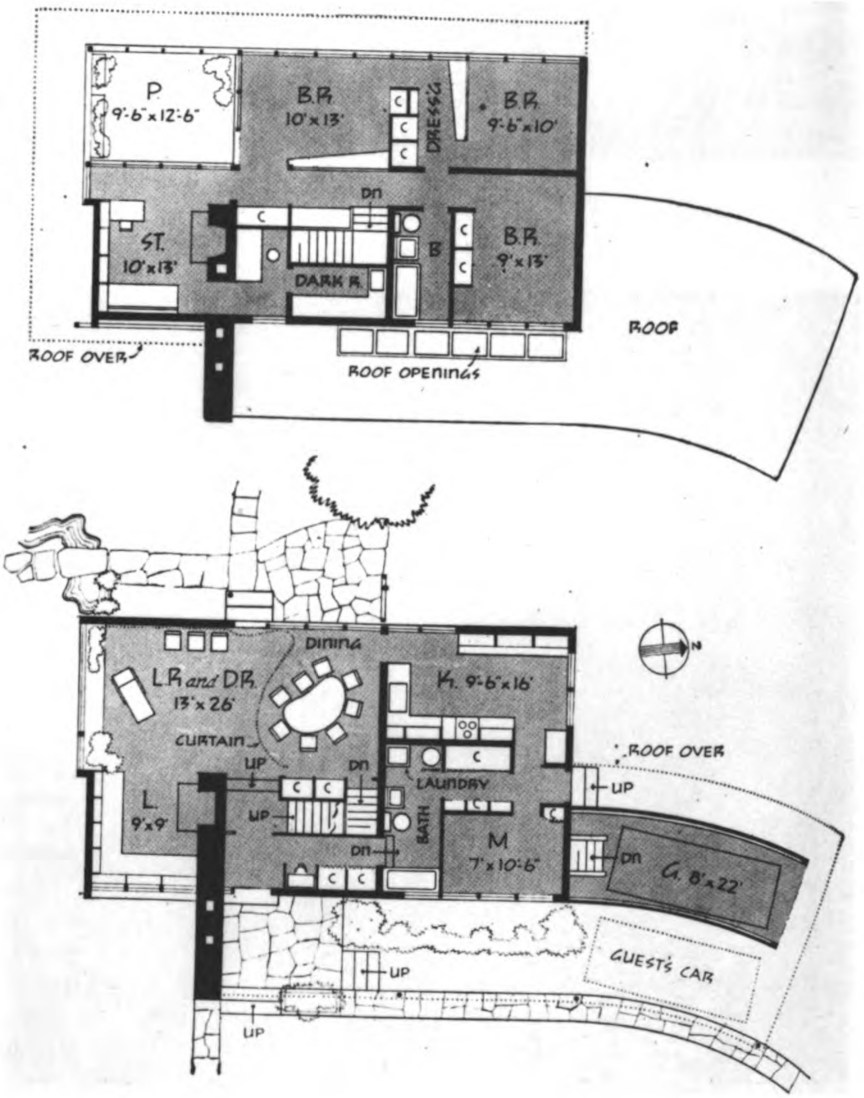
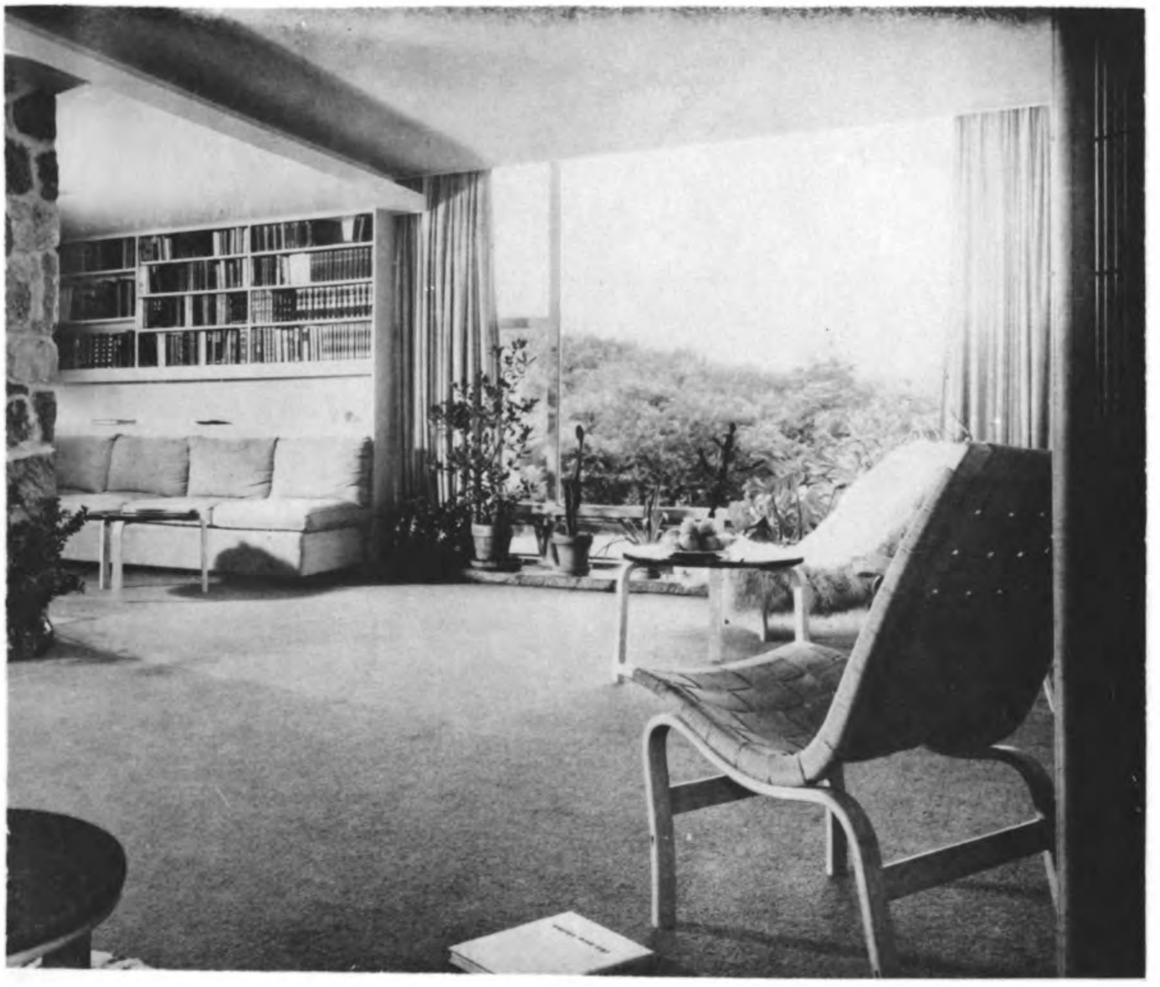


PLATE III

Floor Plans of the Walter F. Bogner House

IVa

IVb



IVc

PLATE IV

Interior of the Walter F. Bogner House

materials for construction, and attempts an individualized synthesis which will perfect the adaptation of the dwelling to man. The resultant house is not a "machine for living" but a perceiving utilization of machine products to ease, facilitate, and even inspire each process of daily living for each member of the family.[15]

[15] James and Kathrine Morrow Ford, The Modern House in America (New York: Architectural Book Publishing Company, 1940), p. 10.

CHAPTER II

Revolts Arise Against Tradition In The Minor Arts

Throughout history the development of furniture design has always been closely related to the evolution of styles in architecture. The furniture of any period when viewed against its contemporary architectural background appears to be coordinated, consciously or unconsciously, with the setting. This continuity of style observed in architecture follows through the designs for furniture and textiles to the smallest accessory and seems to be a result of the contemporary philosophy or plan for living. While the basic philosophy that inspired modern architecture was the same philosophy that inspired modern interiors, there were some variations in the rate of progress in these two movements. This is not to say that the two movements were independent of each other, for actually each influenced the other to a marked degree.

The early beginnings of the modern movement in the minor arts was recognized in the Arts and Crafts movement in the latter half of the nineteenth century. This revolt against the backward-looking dogmas of the Victorian age led to a new if not entirely original concept of design.

> In the transition from handicraft to mechanical production industry lost not only many of the men who were trained and able to think in terms of both form and function but also its traditional basis for appreciation of form in relation to function, material and technique. The development of adaptable materials and the perfection of new production methods capable of imitating the most complicated handwork at low cost removed most of the technical limitations that had kept the craftsmen forcibly aware of the need for differentiation in design.[1]

---

[1] Art in Progress (New York: The Museum of Modern Art, 1944), p. 191.

Thus the proud traditions of handicraft were swept aside by the introduction of the machine, the instigator of the industrial revolution. When the logical construction and honest use of materials heretofore employed by the artisan was superseded by mass production in imitative materials and techniques, the standards of good design dropped to a new low. This irrationality of machine made copies of manual designs, and, in addition, the hodge-podge character and drabness of the furnishings of his own day (Plate V) caused the Englishman William Morris to rise in revolt. William Morris was a poet, social reformer, and designer of the nineteenth century. He believed that the minor arts could be saved from the degradation of machine production by restoring the handicraft method of production. Morris was inspired by the history of life in the Middle Ages, the guilds and crafts of those days were of special interest to him.

In 1859 when Morris married, he had Philip Webb build a house to fit his requirements. When Morris attempted to furnish his home, named the "Red House", he could find no beautiful or even satisfactory furniture on the commercial market. It was then that Morris began to design and make his own furniture. He was not satisfied to have produced furnishings in good taste for himself alone, for he felt art should not be the exclusive luxury of the few. Wanting to make available to a wide public all that he considered good art, in 1861, he opened a shop and founded the firm of Morris, Marshall, Faulkner, Fine Art Workmen in Painting, Carving, Furniture, and the Metals. This organization marked the beginning of modern industrial art.

> He alone had understood that designing without a live knowledge of materials and of how to work them was one of the chief reasons of the futility of nineteenth century industrial art. So, with

PLATE V

Interiors typical of the early Twentieth Century

> an infuriated energy he set out to acquire the technique of those branches of handicraft...with which he was not familiar. ...it is this direct intercourse with his materials that has saved Morris from becoming a mere imitator of medieval styles, which his enthusiasm for the Middle Ages otherwise might easily have caused.[2]

Not only were the accomplishments of William Morris outstanding, but in addition the amount of work achieved by Morris was stupendous. A few of the techniques he learned were: wall paper printing (1861), stained glass (1862), dying (1875), damask-weaving (1877), rug-tufting (1878), tapestry-weaving (1878), and cotton printing (1881).

Morris believed that he was reviving the Middle Ages though actually he was doing much more:

> In his attempt to create this harmony through arts and crafts, he initiated a movement of considerable vitality which, despite its direction contained elements of a true idealism and honesty which are basic elements in contemporary design as well. For this reason it may be said that Morris is the first important figure in the modern movement.[3]

It is due to William Morris and his indefatigable creative energy that the revival of handicraft became a reality in England. The Arts and Crafts Movement, which his teachings had originated, extended to the Continent producing, in the industrial arts, far reaching results. For this reason the modern movement in interior design owes more to William Morris than to any other artist of the nineteenth century.

The Arts and Crafts movement influenced the German designers who were creating curves inspired by nature. Their theories were set forth in a magazine, Jugend (1896), thus giving the name of "Jugendstil" to

---

[2] Nikolaus Pevsner, Academies of Art (Cambridge: The University Press, 1940), p. 263.

[3] Eliot Noyes, Organic Design in Home Furnishings (New York: The Museum of Modern Art, 1941), p. 5.

their style. Several German designers and architects, among them, Peter Behrens, Hans Poilizig, and Bruno Paul, started out as painters; then, influenced by the arts and crafts movement, they moved into the field of design. These men were later influencial in the development of Arts-Crafts Schools in Germany.

When the Belgian painter Henri Van de Velde was married in 1892, he searched for suitable furnishings for his home, but he was no more successful than William Morris in finding furnishings that were pleasing to him. Consequently he designed everything for his home from cutlery to door knobs. Then to house these things in the proper setting Van de Velde built his first house, and thus began his career as an architect and designer. In Belgium, Van de Velde had sought to develop a suitable contemporary manner of furnishing. He was much influenced by Morris but achieved an even greater success with simple rational forms that were devoid of decoration. Henri van de Velde, a tireless artist and evangelist of the new style, carried his version of his findings from Brussels to Paris in 1896 and then to Germany the following year. Van de Velde's importance was not gained from the development of a new style for this he did not do, but in his ability to envision in his findings, the germ of a more logical style which was later to become the basis for all functional modern design.

Van de Velde was called to Paris to install four rooms for the German art dealer, Bing, in his Maison de l'Art Nouveau. In France the imitators of Van de Velde experimented with new forms and materials while the Art Nouveau movement became more widely developed. While Van de Velde had initiated the break with tradition, the rationalism which had lent

validity to his Art Nouveau as to the medevialism of William Morris was quite forgotten by the French designers. In their desire to avoid traditional forms, standards of good taste were cast aside. Now, a chair was no longer a chair but a bunch of lilies or a sheaf of wheat that could be sat upon. "In spite of the revolutionary intentions behind its fight against the use of historical styles, it succeeded only in matching shape against shape. It was essentially an 'anti" movement, and this may explain its comparatively short life."[4] Having developed almost entirely as a form of ornament, the Art Nouveau style is characterized by swirling curves and naturalistic design. The "whiplash" curve was a favorite motif of the period (Plate VI). Naturalistic foliage was used in a manner to simulate actual growth with considerable reminiscence of rococo style, as well as a continuance of the Japonism of the eighties. A superficial and ornamental style at best, Art Nouveau passed quietly out of existance and was soon forgotten having added no real substance to the modern movement.

Hermann Muthesius, an architect who had spent seven years in London as a special attache to the German embassy in order to study English housing, was also influenced by the Arts and Crafts movement. After returning to the continent, he founded the Deutsche Werkbund, in Prussia, in 1907. In an effort to bring about cooperation between the best artists and craftsmen on one hand and trade and industry on the other, Muthesius was seeking a synthesis between machine production and the Arts and Crafts movement. He called Peter Behrens to Dusseldorf and

---

[4]Sigfried Giedion, Space, Time and Architecture (Cambridge: The Harvard University Press, 1941), p. 225.

PLATE VI

An Interior in the Art Nouveau Style

Hans Poelzig to Breslau to reorganize the two academies there. Bruno Paul became principal of the Kunstgewerbeschule in Berlin. With the appointment of so many of the pioneers of modern architecture and design to leading parts in art schools and education, the forms of the new style spread rapidly and a truly contemporary spirit was secured for the coming generation.

> The Werkbund during the first years of its activity strengthened this new attitude considerably by bringing architects and manufacturers together to advocate a sound contemporary style. Hand work was not excluded from the production of Werkbund members, but the stress lay, especially after 1914, on improved standards of machine art.[5]

> The most essential step which raised Germany beyond the stage reached by England was that only by accepting the machine and designing in accordance with its properties could a universal style, as opposed a mere fashion amongst the rich, be created.[6]

The Bauhaus, one of the foremost schools of industrial design, was organized in 1914 by Walter Gropius. "The Bauhaus workshops were really laboratories for working out practical new designs for present day articles and improving models for mass production.[7] The primary aim of the school was to give the student a grasp of life as a whole. Here, the curriculum combined imaginative design and technical profiency. After one year of study at the Bauhaus, each student began his specialization, with textiles and furniture design included in the major fields. Each student was trained by two teachers, an artist and a master-craftsman.

---

[5]Nikolaus Pevsner, op. cit., p. 270-1.

[6]Ibid., p. 260.

[7]Walter Gropius, The New Architecture and the Bauhaus (London: Faber and Faber, Ltd., n. d.), p. 37.

Students learned the use of tools in addition to studying design, art organization, and esthetics. Problems involving realistic as well as abstract solutions were considered. After full scale models were made of all designs, the positive test, that, of actual use was made. Manufacturers not only began to submit their products to the Bauhaus for analysis by the students, but also bought the designs of Bauhaus students. Ultimately the students' work was accepted without change, manufactured, and sold to the public.

Here, at the Bauhaus, for the first time the machine was accepted and designs were created suitable to its properties and limitations. At last, the machine had been mastered. William Morris, who had advocated the return to handicraft, would have no trade with it, but as the intensity of machine production increased, it became evident that man was not the master but the slave of the machine. Now, at the Bauhaus, the importance of good design was considered as well as the practicality of mass production in the new designs being created. Machine made products were therefore no longer merely imitiations of hand processes but had developed in their own right into something that could truly be called "machine art".

The Bauhaus was moved from Weimar to Dessau in 1925. By this time there had arrived a new generation of teachers, former students of the Bauhaus. Perhaps one of the best known of these is Marcel Breuer, a professor and former student. Breuer, the instructor in the carpentry shop, had been experimenting with new designs for chairs. In 1925 the metal chair (Figure 1) he constructed marked an important point in the development of modern furniture. In the years that followed Breuer was

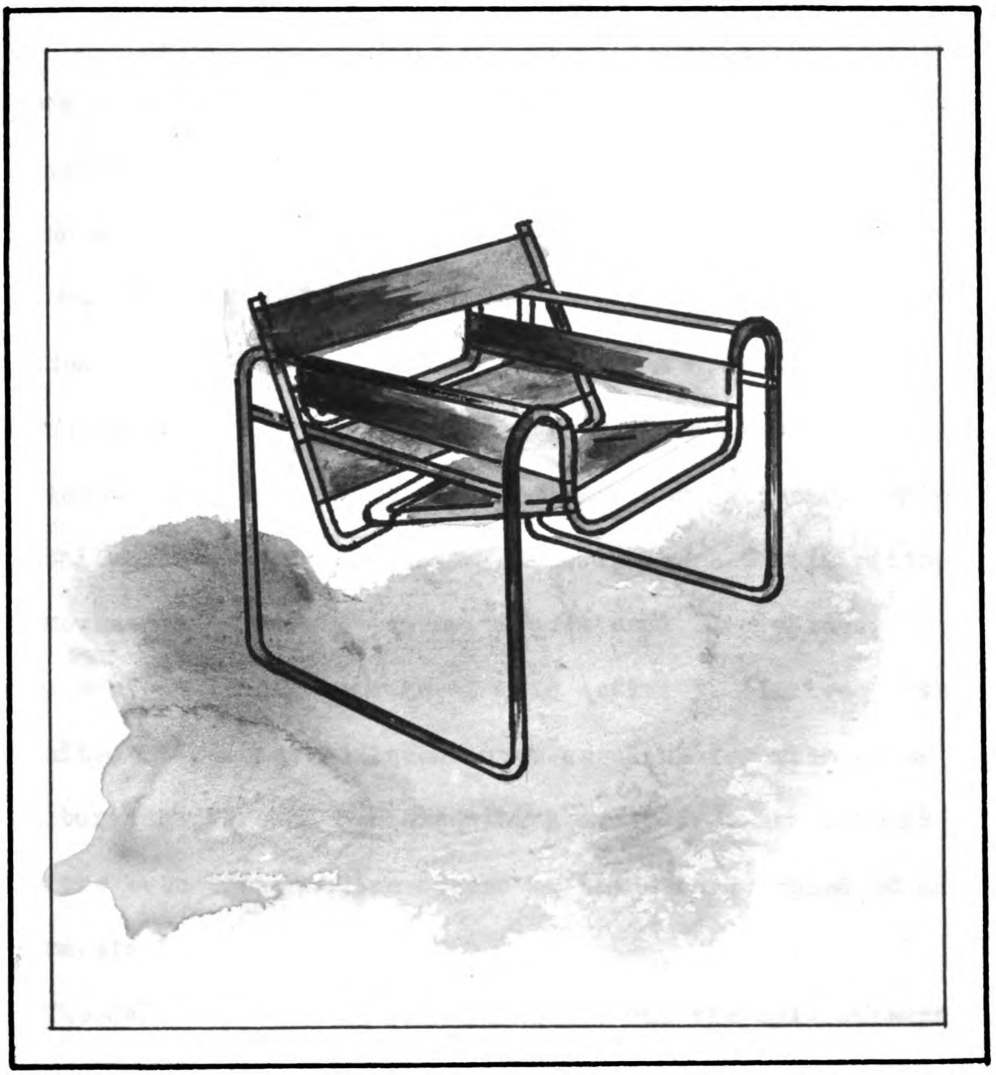


FIGURE I

Tubular Metal Chair by Marcel Breuer, 1925

able to simplify his original design (Figure 2). The use of metal, a new material, in an absolutely unprecedented manner was the first of endless experiments in new types of seating contrivances. Breuer's real achievement was not alone in the use of metal which was relatively unknown so far as home furnishings were concerned but in the manner in which he manipulated his material. He did not cut up the metal tubing and then put the pieces together again in the manner of wood construction but rather after exploring the properties peculiar to metals, he went about utilizing them to produce this revolutionary design.

While the various countries of Europe were participating in these many movements in revolt against traditional furnishings, the United States was completely unaware of this activity. Instead, the people of the United States seemed intent upon securing for themselves some sort of cultural background by borrowing heavily from traditional European furniture even though these second or third hand copies of art treasures were rarely fine pieces.

The California or mission furniture was the only attempt at designing in the United States. This furniture was based on that which was used in the early Spanish missions of the Jesuits. Consequently the pieces, simple, solid, and severe, were called "plank stuff" because of the straight lines and the complete lack of curves. Even though the style became drab because the makers had little feeling for texture, color, or material, it remained in vogue until about 1915. With the coming of World War I, there was little time to think of furniture so mission or golden oak was as satisfying as any other kind of furniture for people were concerned with other interests at this time.

FIGURE 2

Simplified Metal Chair by Marcel Breuer

CHAPTER III

The Paris Exposition Awakens The United States

The year 1925 marked the beginning of the modern movement in the United States. It was the Exhibition des Arts Decoratifs et Industriels Modernes that really awakened the United States. This exhibition held in Paris during the summer of 1925 was an international showing of the modern tendency in the arts of architecture, decorating, landscaping, and the various allied crafts. The interior furnishings in the Paris exhibition were absolutely new and different. According to the entry rules, no exhibit could be based on traditional lines, for this was an exhibition of modernism, as the French authorities conceived it. There was a total elimination of the styles, lines, contours, designs, and colorings that have been associated with historic periods in furniture design, landscaping, decoration, and the crafts (Plate VII).

England and all the European countries contributed to the Paris Exposition. When the United States was invited to participate in the exhibition, the secretary of commerce, Herbert Hoover; was forced to decline the invitation, because designers in the United States had nothing to contribute. Since in America the minor arts had never amounted to much more than copies of traditional European pieces, the United States was represented only as a visitor at the Paris Exhibition.

> Thus, we were brought to the realization, somewhat to our embarrassment, that, although we considered ourselves, and were generally considered, the most progressive country in the world; we were actually lagging behind other countries in the development of a new and distinctive decorative art.[1]

---

[1] "The Modern Style of Interior Design," The American Architect, 133:39, January 5, 1928.

PLATE VII

Interior from Paris Exposition

To the American designers and decorators who had been thinking of furnishings only in terms of period revivals, this new mode of decoration appeared shocking and was viewed with genuine alarm. The furniture and mode of decoration in this country had been based on historic styles borrowed from England and the continent.

> The various epochs in the life of Western Europe produced their respective types of furniture and decoration, appropriate to their surroundings. The surroundings have long since vanished; yet today there are probably more apartments in New York City and Chicago furnished in supposedly strict period style than there are in all the countries where these styles originated. Such is our present lack of originality.....[2]

In the Paris Exhibition of 1925 decoration was at last freed from "period slavery". Here the work of modern designers from all parts of Europe was gathered together and exhibited; and for the first time, these original designs were given international recognition. In the United States the people learned about the exhibit from reporters, who after visiting the showing, wrote their impressions which were subsequently published in home decoration magazines.

Frank Alvah Parsons, a well known decorator, described the furniture in the Paris Exhibition by declaring that it was too heavy, uncomfortable, and impractical. The lack of rhythm, especially in the fabrics and colors, he found to be unpleasant and disturbing.[3]

Another spectator at the exhibition, the editor of House and Garden, Richardson Wright, wrote that the modernist movement in the arts today

---

[2] Adeline deVoo, "The Rational in Modern Decoration," House Beautiful, 64:554, November 1928.

[3] Frank Alvah Parsons, "An Analysis of Modernism," House and Garden, 49:73, February, 1926.

was laboratory work. Although believing that the modern movement was still in the experimental stage, he wrote: "Yet out of this chaos some order may eventually come, some new feeling, some new styles, some new revolution of architecture and decoration that we can take seriously and adopt."[4]

To further describe the exhibition:

> The workmanship was marvelous in its precision, the materials were magnificent in their variety, the imagination of the designers, if often disordered, was sometimes vigorous. One left the exhibition dazed, exhausted, but impressed with a sense of enormous possibilities.
>
> Every shape that the ingenuity of man could conceive had taken concrete form. The results were rarely beautiful, but at least they were never dull. The great anarch, Fancy, governed all. Every other consideration was too often sacrificed to originality. The labs of the chemist and the recesses of unexplored continents had been ransacked to provide new and strange materials. Glass and marble, all metals, their alloys, variegated woods, shagreen and other skins, furs and silks, feathers and gems, were employed in the most unlikely combinations. Too often the designers spoiled their effects by over elaboration of detail and lack of coordination. Pattern fought pattern. Often an individual chair, or wallpaper, or lamp, was beautiful but all distinction was lost in the general hullaballoo. The rooms exhibited hardly seemed intended for human habitation. They were mere testimonials to the ingenuity of the designer and the wealth of the purchaser.
>
> The exhibition catered for a society which was not content with accumulated inheritance of the past, which wished to produce and not to live upon its capital, which was determined to express itself even in its failing rather than to move like a sterile ghost among the relics of a more vigorous age. Chaos in decoration as in society, is more likely than stagnation to beget better things.[5]

---

[4] Richardson Wright, "The Modernist Taste," House and Garden, 84:114, October 1925.

[5] Dorothy Todd and Raymond Mortimer, The New Interior Decoration (New York: Charles Scribner's Sons, 1929), pp. 22-23.

In an effort to create new looking furniture, all former period influences were discarded. The problem was simply to design a setting more in harmony with the requirements of contemporary life. Discounting all previous efforts as historic influences, it was natural that the designer would revert to functionalism, one of the first essentials of good design. This return to first principles in design is rather like the movements of cubism and abstraction in painting, which in order to release themselves from the past, chose to work with the simplest elements of design. The simple geometric forms used by the artists were also the most typical motifs of the designer. This use of simple geometric forms by the designer of modern furnishings is evidence of his efforts to return to the simplest forms, as well as the influence of the contemporary art movement.

The Paris Exhibition was a revolution in the history of furniture. The modern designer sought to provide the furnishings necessary to contemporary living through the use of contemporary materials and techniques. In theory, if not always in practice, the concept of functionalism provided a rational basis for design.

PART II

MODERN TRENDS IN THE UNITED STATES

1925-1945

CHAPTER IV

1925-1929

As was seen in the preceding chapter the Exhibition of the Decorative Arts in Paris marked the introduction of modern decoration to the United States. Before 1925 there was almost no mention of "modern" or contemporary furnishings. In the United States the only furnishings that could possibly be classified as modern or contemporary would have been the interior designs of Frank Lloyd Wright constructed early in the century. Since Wright's work was not generally held in high esteem at this time, the influence of his work is relatively negligible. Therefore, the modern movement, when it was introduced in 1925, appeared to be not only new and different, but for the world of furnishings little short of revolutionary. Thus the work of the European designers proclaimed the beginning of a new age.

The Lord and Taylor Company in New York became interested in this modern movement and sent Dorothy Shaver to Europe to study modernistic design in every country. After studying the work of the European designers, she concluded that the designs of the French people were the most representative of the new movement. In consequence the work of these designers was imported and presented in settings arranged by the French decorators in 1928. The Lord and Taylor Company felt that this French exhibit was so highly successful that a department of modern furnishings was instituted in their organization. Here, the American public was able to buy modernistic furniture, textiles, and accessories. While the furniture in the department was manufactured in America, the fabrics

continued to be imported from France until manufacturers in the United States could convert their production to catch up with the modern trend.

In the same year Macy's department store held an International Exhibit of Modern Art. In this exhibition France and also Germany, Austria, Sweden, Italy, and the United States were represented. The works of Bruno Paul, the German architect, and Joseph Hoffmann of Vienna were represented in this show. As has been seen in a previous chapter these men were noted leaders of the modern movement in Europe. The Americans, Kem Weber, Paul T. Frankl, Eugene Schoen, and William Lescaze were contributors to the Macy's Exhibit. Lescaze, who was born in Switzerland, is an architect and interior designer whose interiors are marked by their simplicity and directness. Kem Weber is a California designer who came to the United States from Germany; Eugene Schoen, a native of New York City, studied in Vienna as the pupil of Otto Wagner; Paul T. Frankl was a pioneer of modern decoration in the United States.

The New York department store, B. Altman and Company, also held an exhibition of contemporary interiors designed by American artists. The men and women whose designs were shown in this exhibition were not interior decorators or furniture designers but artists selected from other fields, since there were so few American designers of modern furnishings.

So many people came to see one or all of these exhibitions of modern furniture that the exhibits were considered a huge success. The furniture that was exhibited in the various department stores of New York followed closely the original French models. In America the

French terms, "Art Moderne" and "Modernistic", borrowed from the Paris Exposition were used to describe these new furnishings.

Furniture

The professed basis for this new furniture design was functionalism, though in many instances the desire to be different and to create something new had overshadowed completely, the original idea. Nevertheless, practicality held a high place in the minds of the designers. Many pieces were multiple-purpose pieces designed to be used in small apartments. Upholstered furniture and chairs were built lower for greater comfort. A great many chairs were strongly reminiscent of the Parisian exhibition pieces that were similarly heavy, bulky, and rather cubistic in appearance (Figure 3). Already many pieces of furniture were being incorporated with the original floor plan thus producing built-in cabinets, bookcases, and a variety of other pieces.

The French designers' work seen in the Paris Exposition was marked by the use of rare woods which were frequently used in dark and light combination. In America designers adopted this manner of working. Although a variety of woods were used, those most frequently found were: teak, theija, amboyna, tulipwood, cherry, ebony, pear, lemonwood, rosewood, snake or leopardwood, mahogany burl, and satinwood. The ebony that was employed in cabinet making was not only the typically black, but also brown, green, red, yellow, and white. Theija is a citrus wood with a curly figure. A very popular wood was harewood, the name given to the wood of the sycamore or birch which was rubbed with an aluminum powder to give it a gray or silver color. The grain was not obliterated in this treatment.

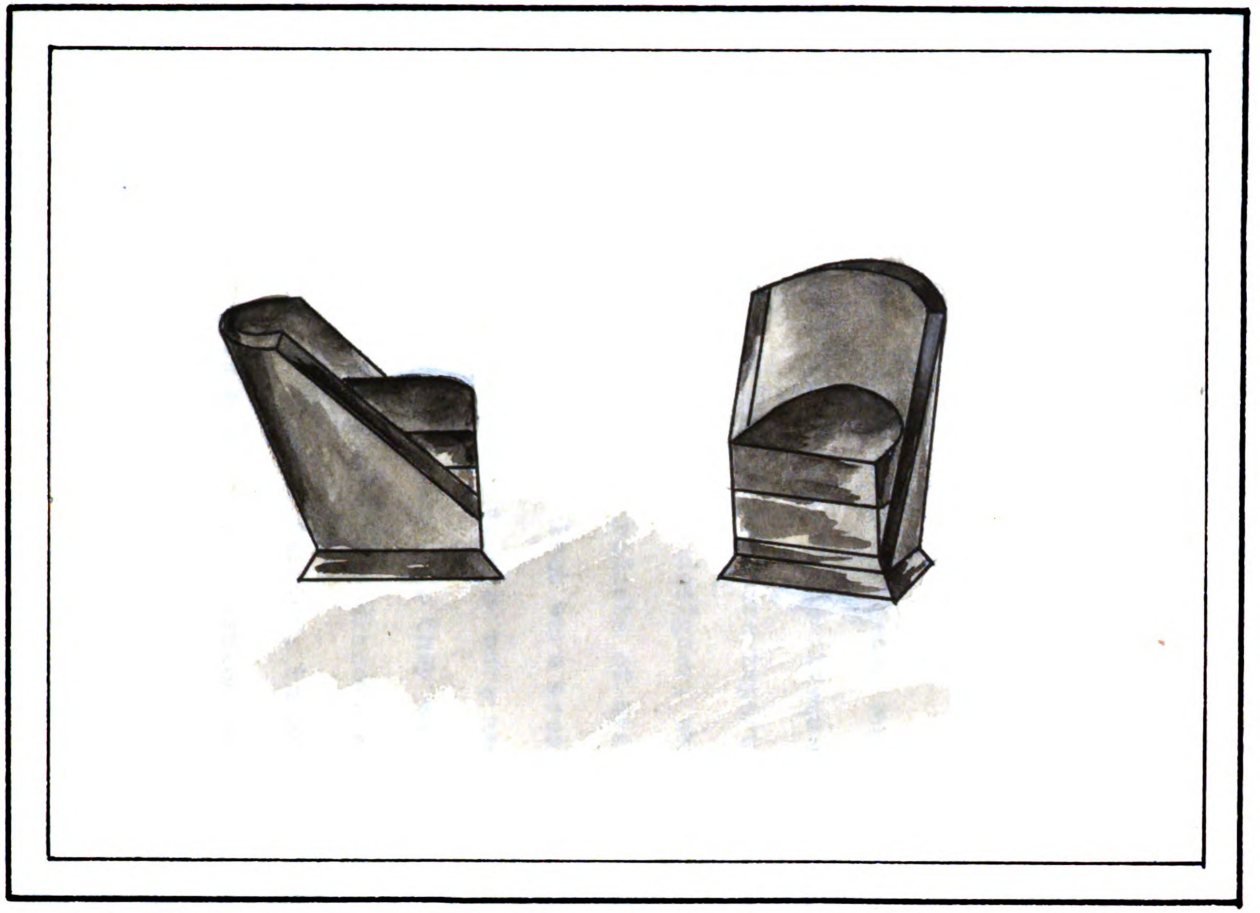


FIGURE 3

Upholstered Chairs in the Modernistic Style

Decoration in the modorn sense was achieved through surface interest while the most evident form was the use of veneers to form interesting patterns (Figure 4). The important methods of decoration were veneering, marquetry, and ivory and silver inlay. Colorful lacquers used to produce a smooth undecorated surface were also popular. Carving, molding, fluting, and other traditional forms of decoration had been banished from the scene.

Fabrics

The fabrics used in upholstered pieces were very much like those found in the original French pieces, for frequently French fabrics from the looms of Rodier and others were imported for decorative purposes. Rodier, the French textile designer, was the first to arouse an interest in texture through the products of his own loom. Leather, fur, velvet, and especially crushed velvet were used for upholstery. These materials were used partly because they were new and startling as upholstery, but what was more important, they were rich in texture, a quality the modern decorator had just discovered and was beginning to exploit. The designs of printed fabrics, in general flat and two dimensional, were executed in sharply contrasting hues. The striking color combinations employed in addition to the extensive use of geometric forms and zigzag lines created a strong feeling of unrest. Woven upholstery fabrics and floor coverings were introduced in neutral shades of beige and gray. A few custom designed rugs demonstrated a striking similarity in design to the work of the cubist painters of the period.

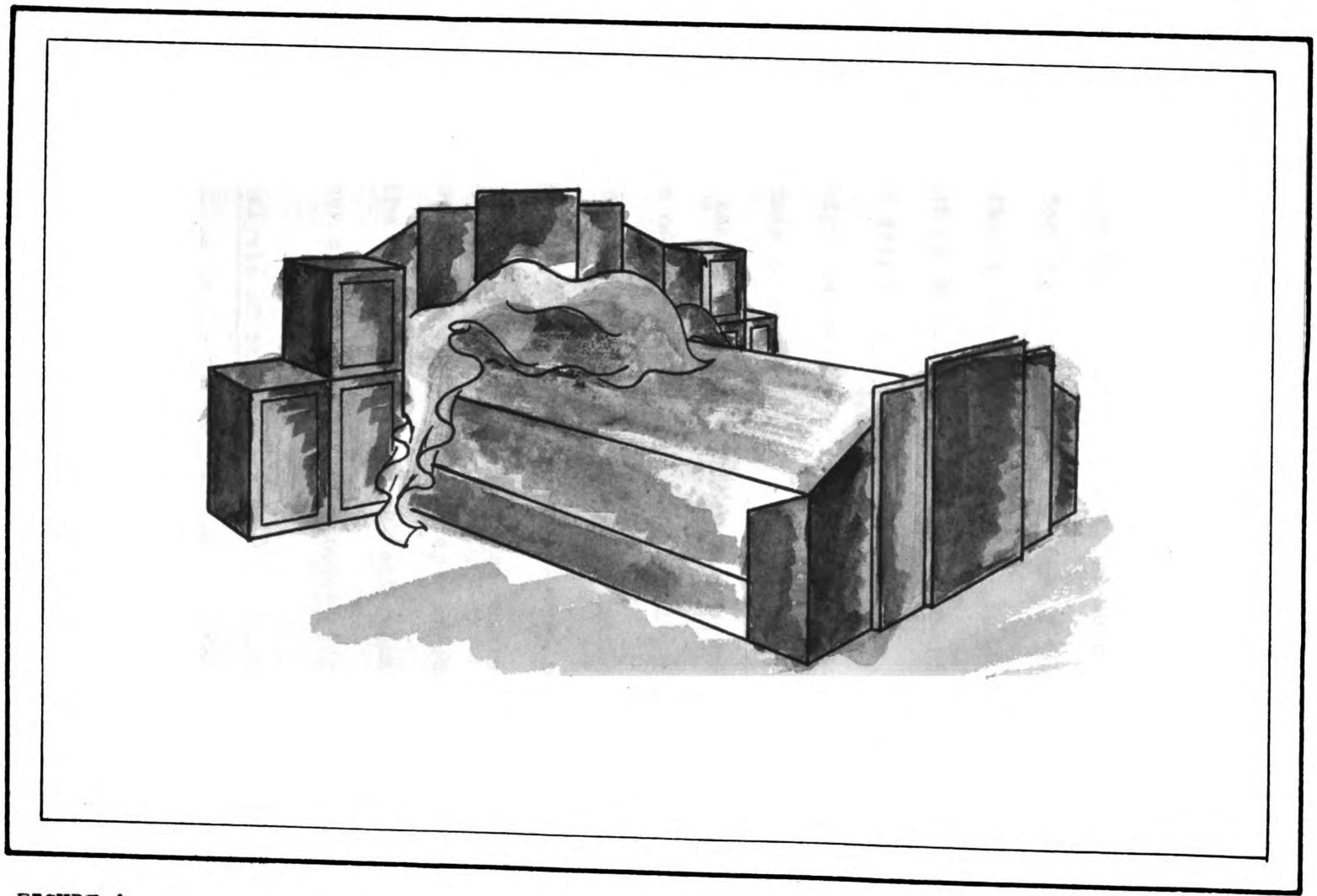


FIGURE 4

Bed in the Art Moderne Style

Rugs were also made of fur. Rayon, the new synthetic yarn, was beginning to replace silk in curtains and draperies.

Even though American designers were still leaning heavily on the inspiration of the Paris Exhibition and the work of European designers, there were beginning to be designers of note who were planning modern furniture for the American public. One of these was an obscure pioneer of modern decoration named Paul T. Frankl, who working independently of the movement in Europe, took his inspiration from the architecture of Frank Lloyd Wright. Frankl was one of those persons with rare and unusual foresight evidenced by the fact that he was sponsoring modern furniture in this country before 1925 even though little was known of his work. He created custom built furnishings with special emphasis placed on the utilization of new materials--rayon, Monel metal, cork, and glass. He used lacquer most often in striking combinations of two colors, or black and a color. Frankl's case pieces reflected contemporary architecture in the height and angularity of the general outline as well as in details such as the set back found in skyscraper construction (Figure 5). At the same time the name of Paul T. Frankl was probably more widely recognized as the author of books and articles concerning modern furnishings.

Critical Analysis of the Trends

The design of much of the furniture at this time could not be considered good, in fact, it often was not truly functional. Many pieces were heavy, bulky, and difficult to handle, or so light and spindly as to appear too fragile for daily use. Modern furniture found more rapid acceptance than did modern textiles, for printed fabrics were difficult

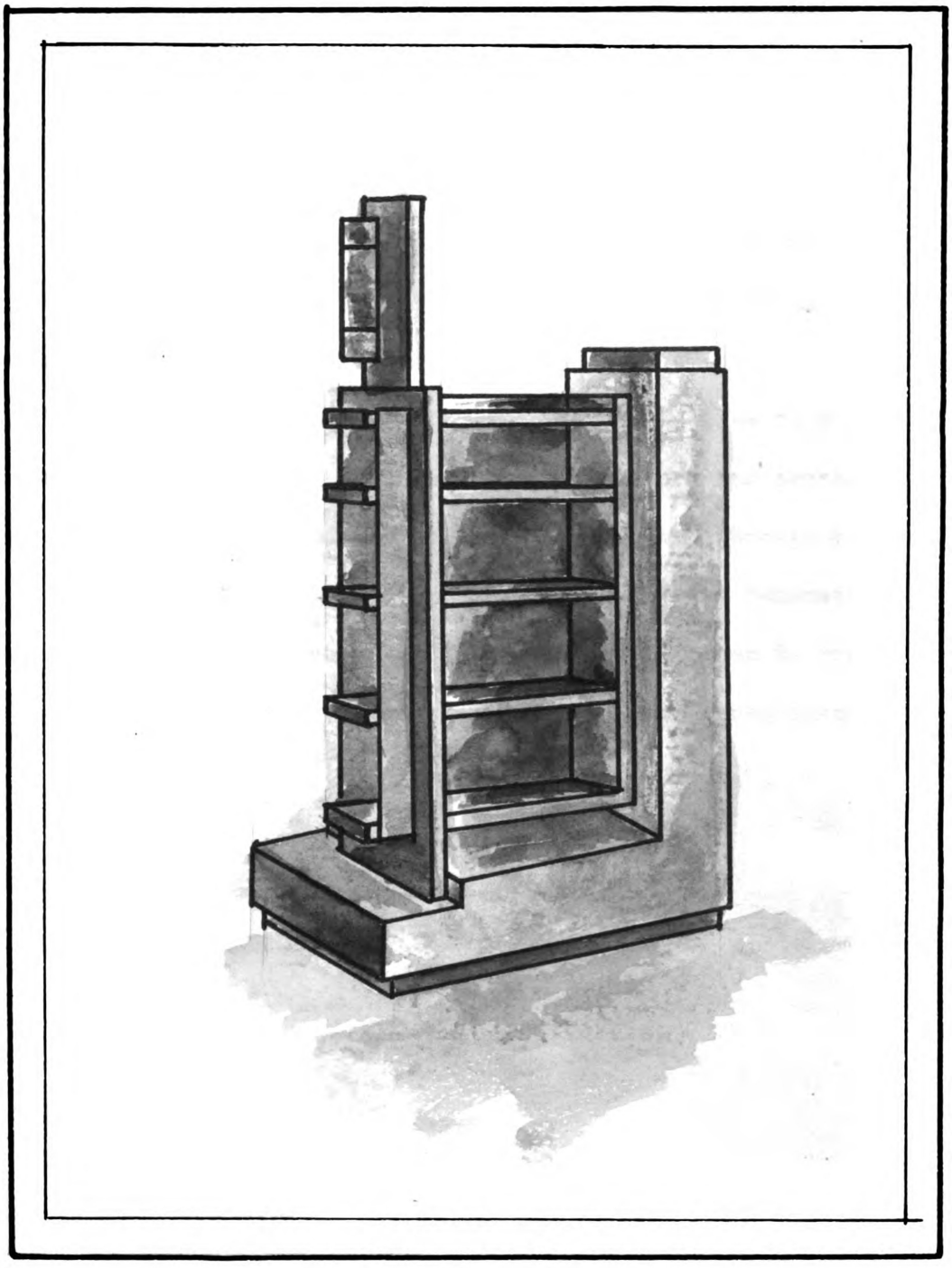


FIGURE 5

Skyscraper Bookcase by Paul T. Frankl

to live with. Velvet and other novelty fabrics were obviously employed for their dramatic quality rather than their functional attributes. Extraordinary claims were made for the new "synthetic silk", rayon, which did not have the strength and durability of silk nor the luster and color range. In spite of the lack of these properties, rayon did find a limited use in the home.

In five years "modern" had developed from an idea to a reality. This amazing new concept of contemporary furniture for contemporary living was forcefully introduced to the United States through the Paris Exposition. The French furniture brought to America demonstrated this new idea. As manufacturers in the United States began to produce modern furniture, it was evident that the idea had gained substance and was now a reality.

CHAPTER V

1930-1934

During the early thirties the horizons of New York and other eastern cities were being studded with skyscrapers; modern architecture had invaded the business world. The technical advances in construction, as well as the modern conception of design, spelled the end for Renaissance architecture. In the field of housing there was constructed in Los Angeles in 1931 a completely modern home designed by Richard Neutra. This house in many ways resembled European examples of the International Style as evidence of the influence of Neutra's study in Vienna before he came to the United States.

Two years later the people of the United States had an opportunity to see, in their own country, the most recently developed homes and furnishings at the Century of Progress Exposition in Chicago. Here were exhibited the newest designs in furniture and equipment. The modern trend in building was evidenced in a radical departure from the traditional housing of the past for much use was made of glass and other new materials. Emphasis was placed on outdoor living.

The opening, in 1933, of the Modernage "Space House" in New York was described as pure undiluted modernism. Modernage, the first thoroughly modern retail furniture store in the United States, was completely modern in its conception. From the street the facade was arresting; the interior was frank and functional. There were few walls and no doors; glass was used extensively. Further evidence of the public's interest in the modern trend is indicated by the fact that in the same

year McCreery's department store in New York opened a modern home in the home furnishings department. Gilbert Rohde, one of the pioneer American designers, was employed to plan this house and much of the furniture.

Furniture

The rare woods used in the previous period continued to be used for furniture, but new materials such as cork, stainless steel, aluminum, and glass were becoming increasingly important. Gold and silver, formerly used, were now replaced by chromium. The name plastics was given to the synthetic products that could be shaped or molded when soft and hardened under heat and intense pressure. Since it was possible for plastics to be sawed and nailed, they were occasionally used in place of wood. The use of plastics produced some novel and beautiful effects.

The early thirties have been referred to humorously as the "bent pipe era" on account of the profusion of tubular metal chairs and tables that appeared on the market (Figure 6). Built-in pieces were becoming more popular, while studio couches, which were at first used in small apartments, had proved so useful that they were now found everywhere. Dramatic glass furniture featured such pieces as a coffee table with a top of amythest glass and a bed with a mirror headboard. Radio and recording cabinets were designed to harmonize with contemporary modern interiors.

The American designer, Donald Desky, designed a new line which he called "Chinese modern". This furniture, which in general structure

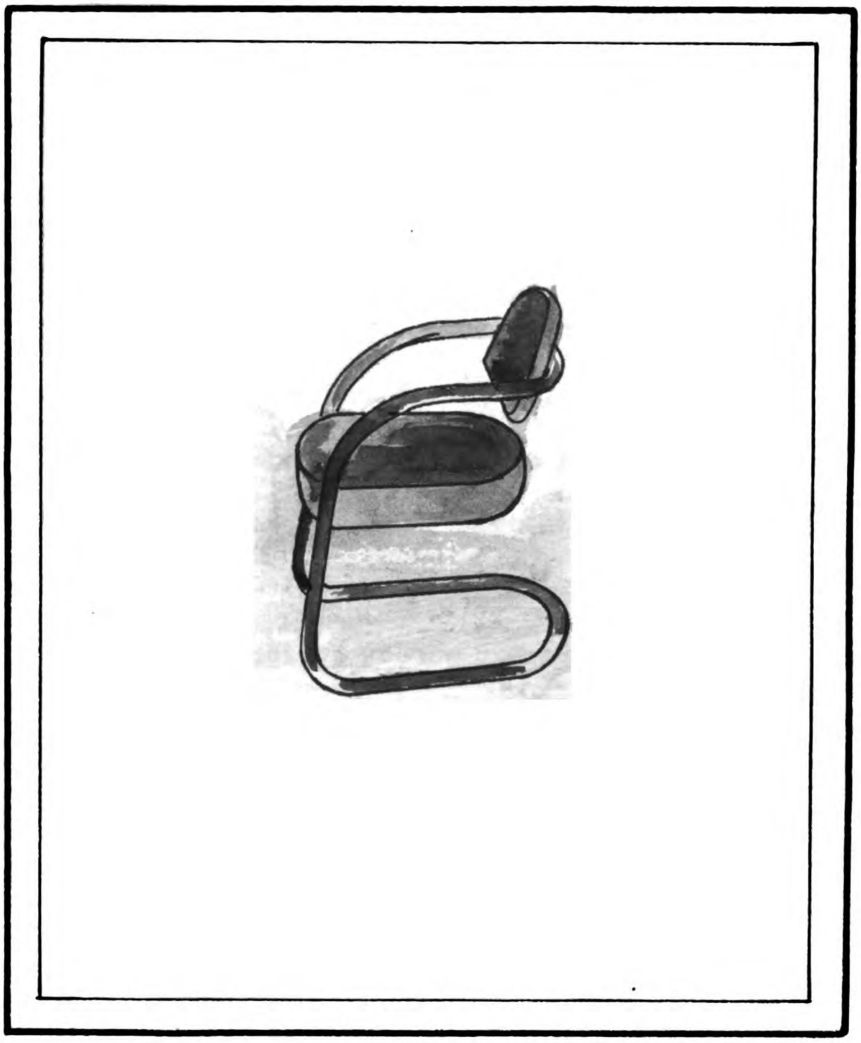


FIGURE 6

Tubular Metal Chair, 1933

was strongly reminiscent of oriental designs, had removed some of the bulkiness and a few of the angles of earlier modern designs.

There appeared also on the market another type of modern furniture which seemed to be a transition between the classic traditional and contemporary modern pieces. This furniture was designed along classic lines and having been stripped of its characteristic historic ornament appeared smooth and unadorned. (Figure 7). Classic modern was the name given to this very popular form of modern furniture. While the neo-classic style was in itself quite an important influence on decoration at this time, it is in this study obviously more important because of its influence on the modern trend. The designers of classic modern furniture selected styles and motifs from ancient Greece by way of the neo-classical revival. The classic formulas for fine proportion, as well as the classic lines of the Greek kylsmos, were adapted by contemporary designers who simplified the original designs and eliminated superfluous ornament in order to produce this classic modern style.

Fabrics

The flat type of drapery and upholstery fabric was popular at this time for expressing the classic modern style. Textured fabrics now made in the United States were beginning to be shown. Cotton and linen were used in a manner to suggest hand woven fabrics. Cotton was made to look like wool, homespun, or tweed; it was also effectively used in corduroy, velveteen, and velour. Woven effects, herringbone, chevron, and diagional stripes, were shown. Exotic effects were attained through the use of leopard, zebra, and reptile skins. Textured effects and leather were

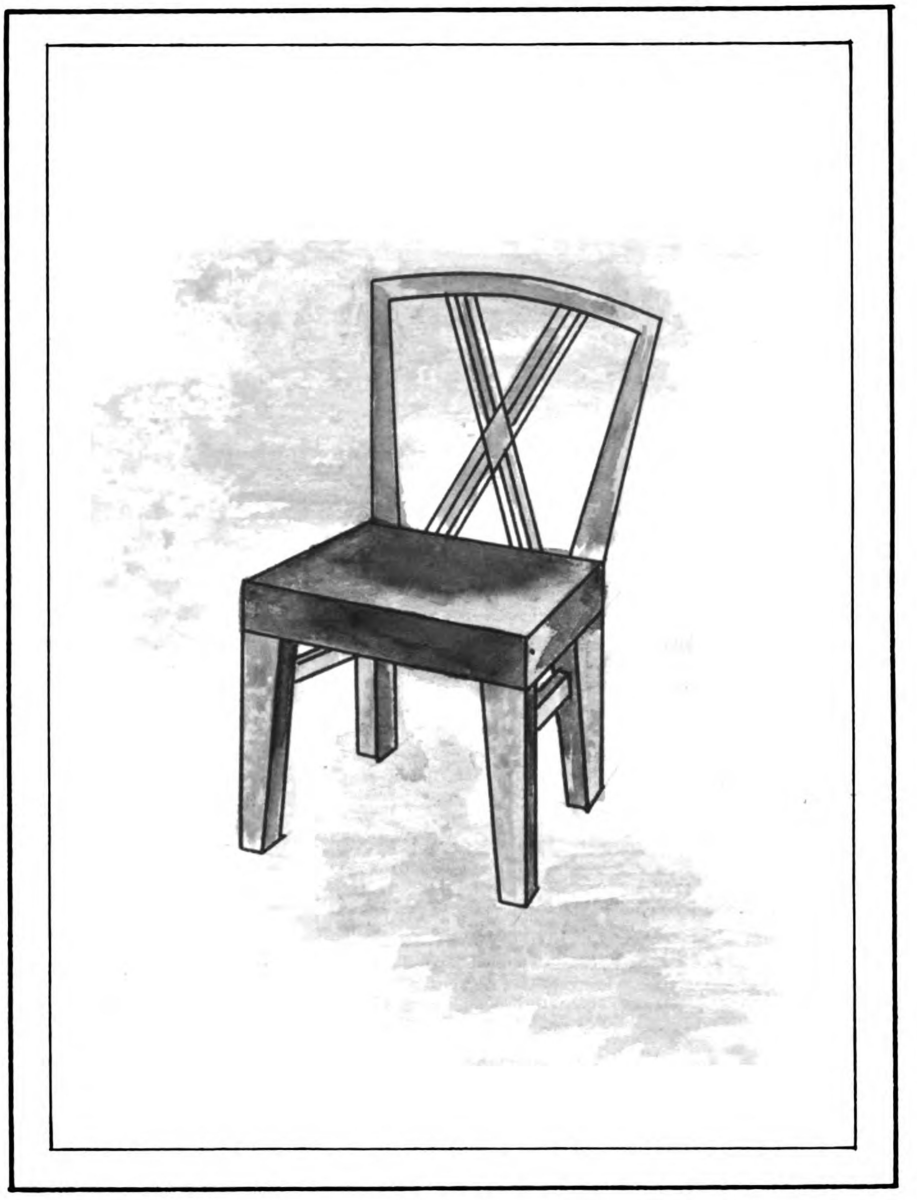


FIGURE 7

Chair in the Classic Modern Style

popular for upholstery. Leather, which was now available in a wide variety of colors, proved to be extremely practical, for it was easy to clean, and very durable, as well as pleasing to the tactile sense. Black patent leather found its way into the home furnishings field to be used on small upholstered pieces. In addition leather substitutes such as "fabrikoid" were often used. A process of moth proofing for mohair had now been perfected. Outdoor furniture was covered with sunfast, waterproof, and weather proof fabrics. Rayon, which continued to be used for glass curtains, was now used in combination with linen and cotton for drapery fabrics. Cellophane was woven into drapery and upholstery material to produce a novel effect. Donald Desky even used it for glass curtains.

Geometric patterns were being used in some floor coverings, while monotone patterns achieved by a variation in the depth of the pile, were also popular. Off white and beige were the promotional colors.

Critical Analysis of the Trends

Before the Chicago Exposition modern furniture continued to look much like the Art Moderne pieces of the twenties (Figure 8). At the Chicago Century of Progress Exposition, it was apparent that American designers were no longer dependent upon Europe for inspiration although the influence of European designers continued to be felt in this country. At the Chicago Exposition the rooms on display appeared laboratory-like in their simplicity and directness; the furnishings, of metal, leather, and glass were strongly reminiscent of the work of Meis van der Rohe. The kitchens were exceedingly well planned.

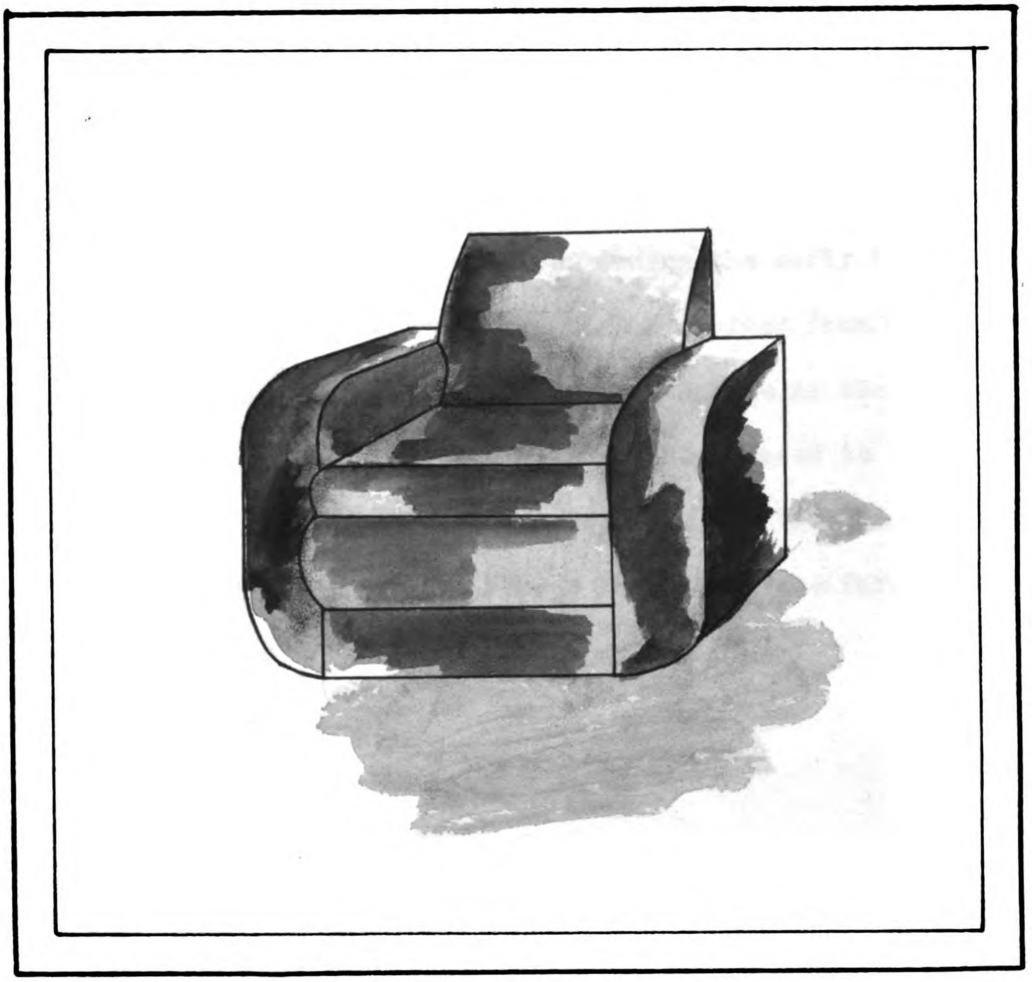


FIGURE 8

Upholstered Chair in the Contemporary Style

Metal furniture seemed most characteristic of this period. Those pieces that were both well designed and executed, proved very useful, though in some parts of the house they were not adaptable for aesthetic purposes. However, this is not a criticism of design but rather of use. The classic modern furniture introduced during the early thirties appealed to a great many people because it was derived from more familiar looking furniture and was not such a radical change as the modernistic furniture had been. The classic mode has never ceased to be an inspiration for fine design in furniture and fabrics. By this time the descriptive adjective "modernistic" had become obsolete since furniture no longer resembled the work of the French salon.

CHAPTER VI

1935-1939

From the time during the middle thirties, when classic modern dominated the furniture field, the modern movement continued to grow. In fact modern furniture had now become so important that at the furniture show in Grand Rapids in 1935 only Eighteenth Century English furniture was more widely represented than modern. In the following year there were twice as many modern as traditional pieces.

At the same time furniture from Europe which was displayed and retailed in the United States exercised a notable influence on the trend of modern furnishings.

In 1938 the American public had the privilige of seeing the work of the Finnish architect, Alvar Aalto, which was exhibited at the Museum of Modern Art. Aalto is a well known Finnish architect who works with his wife and partner, Aino, and is only incidentally a designer of furniture. The manner in which Aalto handled wood was as revolutionary as Breuer's use of metal had been ten years earlier (Figure 9). Wood, which is found in abundance in Finland and has always been a popular material in the Scandanavian countries, was the logical choice of material for inexpensive furniture. In Finland, Aalto had produced inexpensive furnishings made of molded plywood and laminated wood. Birch and other light woods were used. This use of wood extended a degree of warmth and feeling to modern furniture which had been absent in earlier pieces. For not only was Aalto an innovator in the sense of design, but he recognized the psychological needs of man as well. Another feature of

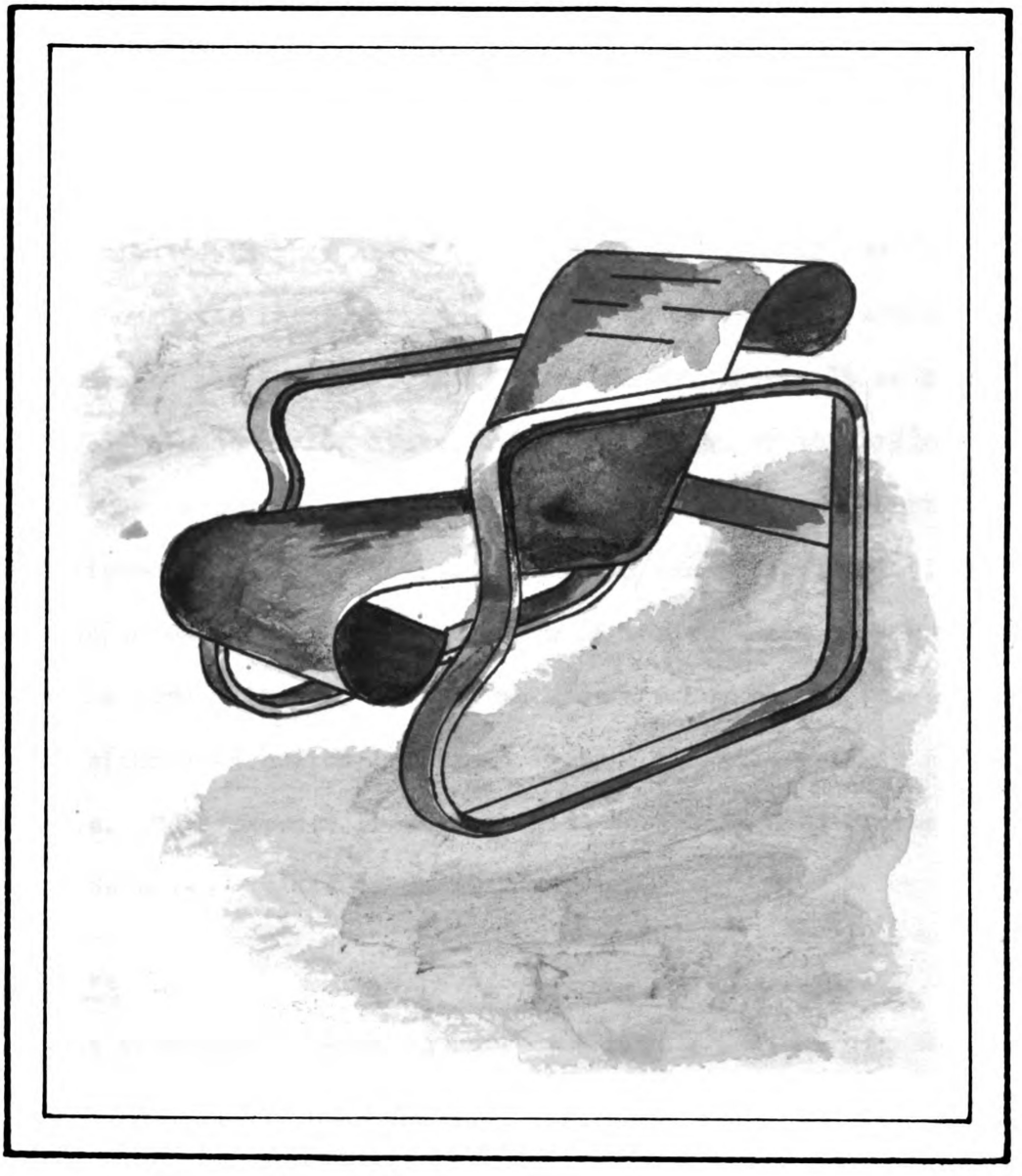


FIGURE 9

Chair of Molded Plywood by Alvar Aalto

Aalto's work was the manner in which the pieces were designed so that it was possible to stack one on another to decrease the storage or shipping space. This is a significant factor, for to include the cost of transport would make the retail price prohibitive. Aalto's furniture was distributed in the United States by Artek Pasco in New York.

Although the introduction at this time of Swedish furniture to the United States was important, its influence was difficult to measure. The "Swedish Modern" furniture, as it was called by the trade, was imported from Sweden. The furniture which was definitely light in scale was designed with both straight and curved lines (Figure 10). Generally light woods were used. The influence of the movement was soon apparent. After the popularity of the Swedish Modern movement had passed, contemporary furniture had obviously become lighter in scale and had gained greater elegance. More exposed frames appeared in upholstered pieces, and more curves were used in all types of furniture.

Furniture

The furnishings began to reflect a more practical approach to design. For example, the bases of chests were recessed and many pieces were now elevated from the floor so as to facilitate cleaning. Designs were improved to give more comfort; chairs had become smaller and lighter. More large furniture collections were being designed with interrelated pieces rather than as independent suites. Such collections were frequently known as "open stock" groupings or sectional furniture. In such collections much of the furniture was interchangeable; that is, it could be used in the bedroom as well as in the living room or, in fact, in any other

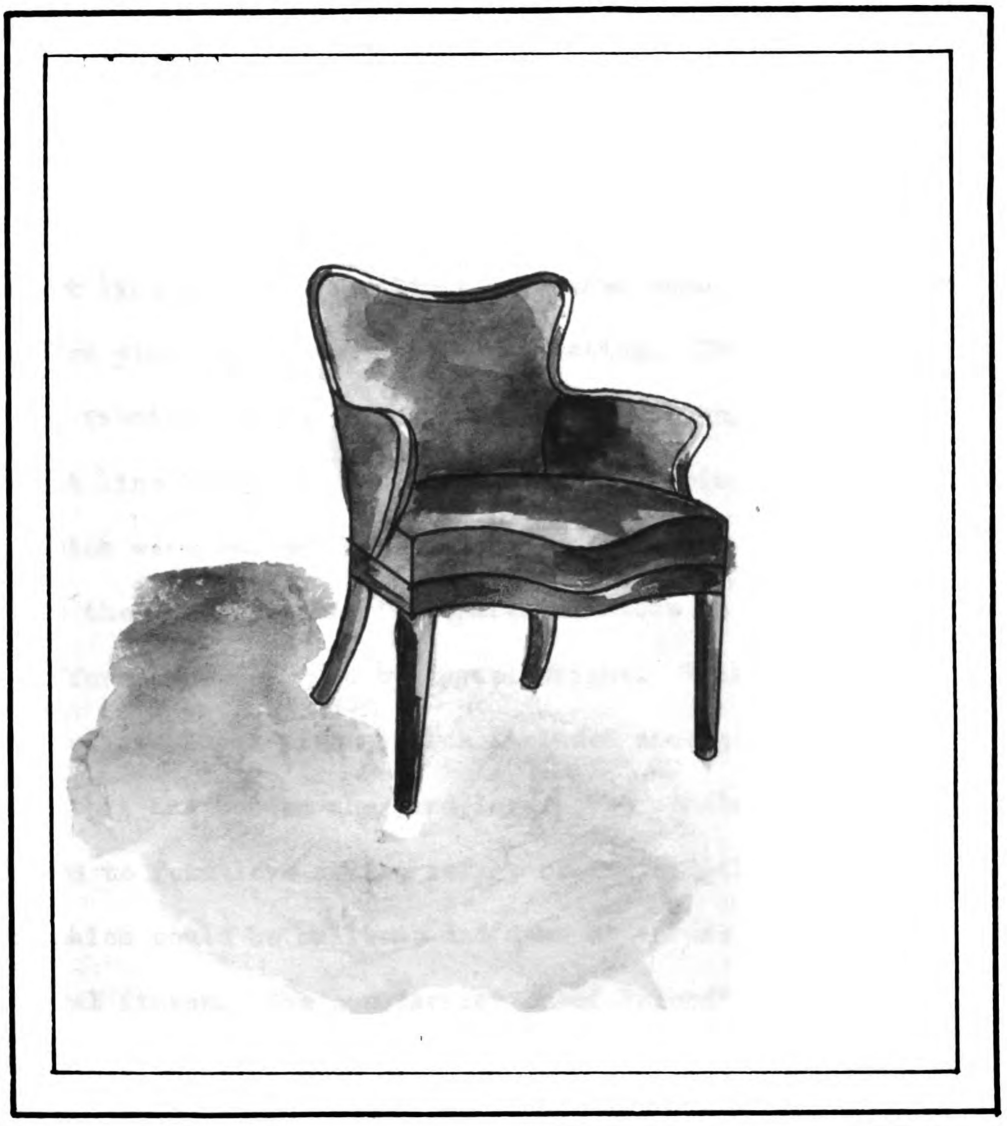


FIGURE 10

Swedish Modern Chair with Exposed Wood Frame

room. This was by far the most important development in modern furnishings thus far.

In the Contemporary American Industrial Art Show in 1935 at the Metropolitan Museum, the mail order house, Montgomery Ward and Company, exhibited a living room in the modern mode. The furniture was of straight line design. Sectional bookcases were featured against a background of plain walls and simple decoration. The sofa cover, a tweedy looking fabric, was really a small woven pattern. There were other straight line modern pieces for dining and living rooms included in this line which were not exhibited.

At the same time Macy's department store in New York was featuring modern furniture designed by Russel Wright. This furniture group consisted of sectional pieces which included case goods and upholstered pieces that had wooden arms and legs. The upholstered pieces could be arranged to form love seats, sofas, or individual chairs. The case goods which could be built up and down or across were made of maple in a natural finish. The popularization of "blond" maple has been credited to Russel Wright. His designs for the light finished maple stand out pleasantly in contrast to the quaint and bizarre styling of the popular maple pieces of the period.

During these years some rare woods continued to be used in the production of furniture, but the well known and commonly used cabinet making woods were used to the greatest extent. While the woods employed were not unlike those found in traditional pieces, the finish that was applied accounted for their new and different appearance. Modern furniture was now characterized by the use of light woods. Oak was bleached,

pickled, or limed. Maple in a blond finish was used extensively in lower priced furniture. The natural woods, oak, mahogany, cherry, maple, and ash, were the most popular because of their soft warm color. Fruit woods and natural primavera were used a great deal while harewood continued to be a big seller. Transparent and opaque lacquers were found on occasional pieces. Glass and synthetics such as tenite, plastacel, lucite, bakelite, catalin, and beetle were used in place of wood in some pieces of furniture.

Fabrics

As the forms of upholstered pieces became more standardized, the coverings for these pieces became increasingly important. Design for upholstery fabrics was achieved in the weaving process by creating smooth as well as nubby surfaces. There were pile fabrics, pebbled surfaces, heavy looped piles, flat textures with hand loomed effects, and dobby patterns. Swedish inspired fabrics were produced in serge or diagonal weaves for stripes, prints, and plaids. The Swedish preference for natural and undyed fabrics inspired this trend in contemporary modern textiles.

Due recognition was given to Dorothy Liebes when in 1938 she was awarded a cash prize by Lord and Taylor for her outstanding work in textile design. Born in California, Dorothy Liebes studied art there and was teaching art when she became interested in weaving. She went to France for a year to work under the most important French textile designers. The materials she employed include the more conventional cotton, wool, and silk as well as such unusual materials as jute, lucite, glass

yarn, lace, plastics, metals, grass, brilliants, strips of leather, and bamboo.

In 1935 the Sanforizing process was used in cotton and linen materials that were designed for slip covers or draperies. (This process had been used previously only on wearing apparel.) With the increased use of slip covers, the serviceability of the fabric became more important. In fact, the interest in serviceability grew year by year, so that by 1939 the practical features of drapery and upholstery fabrics preceded the fashion trends in the market reports, thus giving the practical features of serviceability a new importance. Fastness to sunlight and laundering, and resistance to shrinkage, mildew, and stains were points considered along with color and style. Sailcloth and other tightly woven goods, which were inclined to shrink less in the pre-shrinkage process, were coming into wide use.

Window fabrics continued to be very plain for the only designs were those produced through the weaving process. Spun rayon, which was introduced in 1938, had a wool like appearance and a soft dull sheen. Textures became less harsh and more of the character of the yarn itself was revealed. Modern looking printed fabrics were imported from Sweden.

Texture dominated the newest developments in floor covering, all sorts of weaving tricks were employed to give a rough look. There were carved or embossed and nubby piles. Pastels and nautrals continued to make the news while light shades were now offered in medium priced rugs. Floor coverings were seldom the inspiration for new trends though, in general, they did keep pace with the current trends in home furnishings.

Critical Analysis of the Trends

By the late thirties modern furniture was no longer a cult indulged in by the few, but rather a wide reaching and popularly accepted style. Influenced by imported Swedish furniture, modern furniture had become more livable, lighter in appearance, smaller in scale, and more pleasing in contour. The influence of Aalto's work while not yet apparent was nevertheless of great importance. His development of a technique to use molded plywood and laminated wood for furniture marked the beginning of a trend away from the cold and impersonal sort of furniture that characterized metal furniture earlier in the decade. As the practical aspects of furniture design were now becoming a reality, the aesthetic properties of the design were considered as well, for as furniture became more functional in a technical sense, it became of prime concern to the designer that his product be pleasing on its artistic merits. The introduction of the new light woods, for example, was both practical and humanizing, for the light color added warmth while at the same time required less care since these woods do not show dust as quickly as the dark woods. Sectional furniture (Figure 11) which could be used in various rooms in the house were now on the market at moderate prices. At last modern had become American and designers in the United States were creating furnishings and fabrics for the American people. The scientific attitude in contemporary life was reflected in the interest in serviceability of fabrics.

The World's Fair of 1939 in New York was the event that climaxed this period. Here was shown a collection of the products of the arts and industries of all the countries of the world. The exhibitions were housed in the most modern structures and furnished with the latest modern

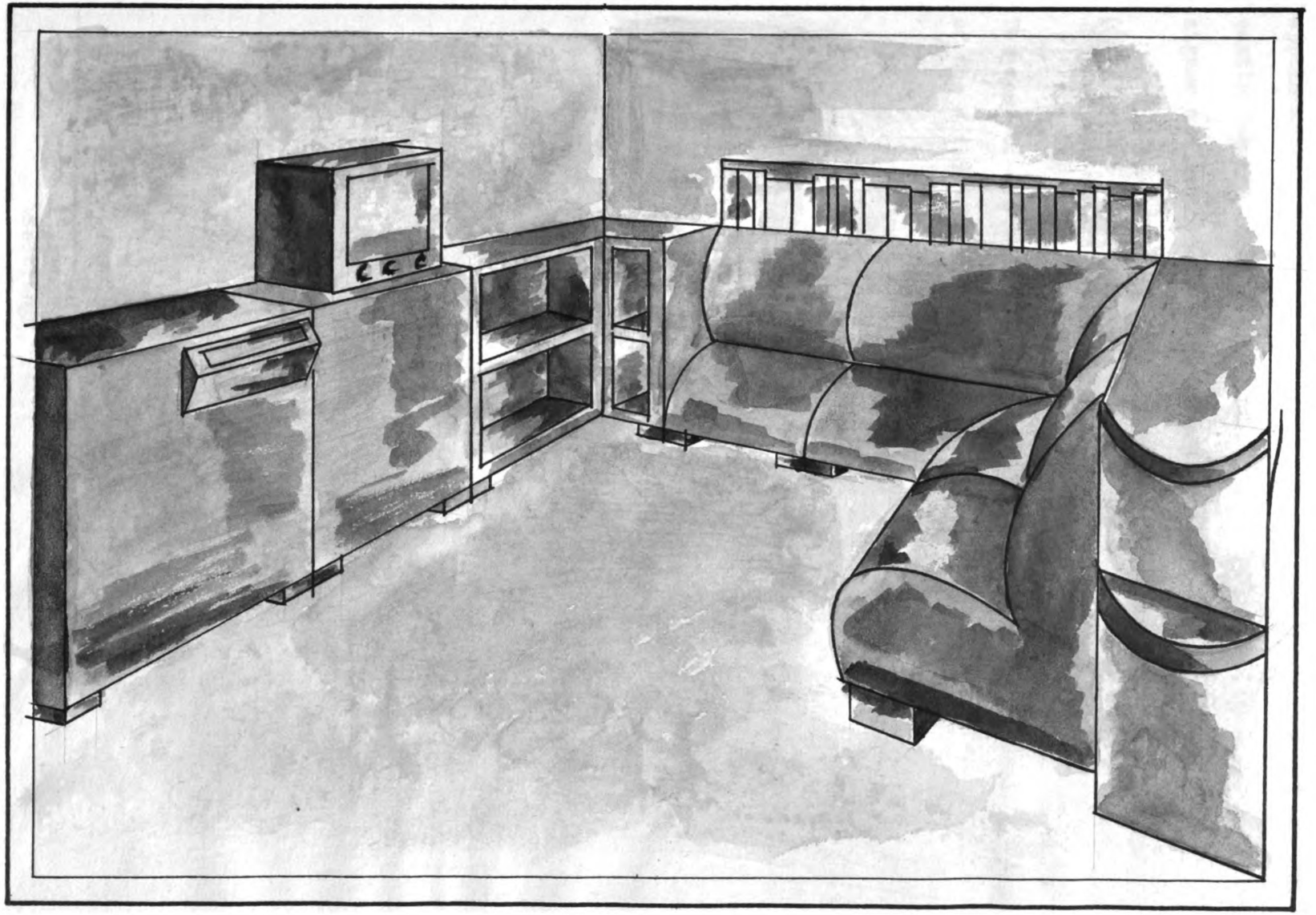


FIGURE 11

Music Corner on Exhibition at the New York World's Fair, 1939

appointments. The theme of the fair "The World of Tomorrow" was significantly forward looking. The theme, while providing impetas to the designer and exhibitor, proved provocative to the beholder.

> "The impact of the fair as a whole will surely bend the collective American mind to a much more wide spread acceptance of the modern idiom--in architecture, decoration and landscaping. For modern is the theme throughout."[1]

The acme of the modern trend in the late thirties was expressed in the theme of the World's Fair, "The World of Tomorrow".

---

[1] "Trends of Tomorrow", House and Garden, (July, Section I, 1939), Vol. 76, p. 15.

CHAPTER VII

1940-1945

The years from 1940 to 1945 were years of war for the western world. As the war in Europe cut off former sources of design and decoration for American designers, they began to look at home for their inspiration. However, since there was a great deal of interest in modern furnishings at this time, the Museum of Modern Art, to give added stimulus to American designers, in 1941, sponsored an industrial design competition for furniture, fabrics, and lighting. There were competitors from twenty-one republics in North and South America. Bloomingdale's department store in New York collaborated with other stores throughout the country in presenting the resultant merchandise to the public. The purpose of the contest was to create a useful and beautiful environment for today's living in terms of furniture, fabrics, and lighting. Flexibility of use was a point that was stressed. While many excellent designs were submitted, several plans which were good insofar as the design quality was concerned had to be eliminated because the product in the manufacturing process would have proved to be above the moderate price level. Eero Saarinen and Charles O. Eames of Bloomfield Hills were the winners of the competition for living room furniture. Ann Hatfield and Martin Craig were the winners of the competition for a one room apartment, while Oscar Stonorov and Willo von Moltke of Philadelphia were awarded first prize for their bedroom furniture and honorable mention for their living room furniture. Marli Ehrman of Chicago was the winner of the competition in woven fabrics as was Antonin Raymond in printed fabrics.

This "Organic Design" exhibit was sent for display to one store in each major city to explain the most recent developments in modern design for home decoration. The work of Saarinen and Eames was revolutionary in both design and manner of production. Their chairs simplified in construction used a new type of spring. The usual wood frame was replaced by a laminated shell of wood veneers, and foam rubber was used instead of the usual stuffing. The chairs were constructed upon the principle of continuous contact and support with a thin rubber pad for softness at all points (Figure 12). In the case furniture by Saarinen and Eames, the principle of standardization based on the eighteen inch module, was adopted. All units were eighteen inches square or a multiple thereof; bases for the units were thirteen inches high and long enough to hold two, three, or four units. Small rubber grips held the pieces in place. The height of the base, which made it easy to clean under, avoided base plugs, heating registers, and the like and could be used alone as well as to support other pieces. Drawers were interchangeable; that is, two shallow drawers equaled one larger drawer. Standardization was carried out as far as was possible although this proved to be a more difficult task in wood than metal construction for metal is relatively stable whereas wood has a tendency to swell during wet weather.

"Organic design" was the name applied to this new and very different looking modern furniture. The philosophy that had produced modern architecture was now the basis for interior design. Each piece was designed for a specific purpose; it was designed from the inside out thus employing the formula "form follows function". Materials were used honestly,

FIGURE 12

Chair by Saarinen and Eames, 1941

and beauty was inherent in the design as well as in the material. New and strange forms resulted from this new approach to design. "Free form" was the name applied to the abstract ameboid shapes that were to become symbolic of functional modern design (Figure 13).

The war brought a bit of humor into decoration and even a shade of fantasy for when new furniture was not available, old pieces were rejuvinated. A new coat of paint or new slip cover made many a period piece appear "at home" in an otherwise modern scheme. Dramatic effects with modern colors and refinished period pieces were achieved. Theatrical tricks were employed; the painting process called by the French "trompe l'oeil" consisted of painting objects on the walls or background in order to "trick the eye". Green plants, extra chairs, a luxurious swag, almost anything real or imagined could be painted to produce an effect or to disguise some unwanted architectural feature.

The requirement of the government for certain materials to successfully carry on the war restricted the field of home furnishings in no small way. The number of different styles to be manufactured had early in the period been limited by the government, and the shortage of labor and materials provided an even more stringent limitation on production. By the end of the war years the home furnishings industries had reached a new low in production.

Furniture

The woods in use during this period were predominately blond. There were bleached and natural oak and medium toned mahogany. The use of native woods was strongly emphasized since the supply of mahogany was

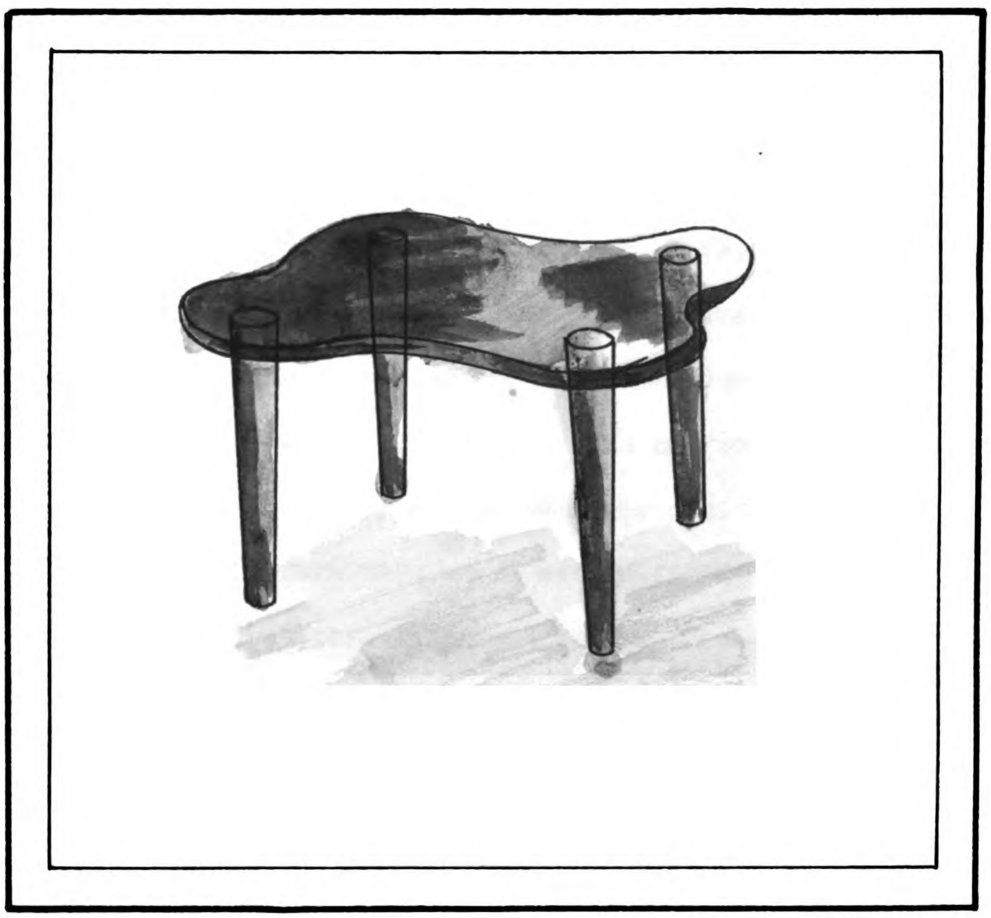


FIGURE 13

"Free Form" coffee table with glass top

limited which, of course, seriously affected the manufacturing of traditional styles. Modern, being little affected, continued using what was abundant and close at hand. There was more enamelled and lacquered furniture than before. A new finish called "gardsman" gave furniture resistance to liquor, boiling water, hot dishes, mars, and scratches while it protected the wood grain and improved its appearance.

Eliel Saarinen, the president and architect-designer of Cranbrook Academy of Art, was selected to design a line of furniture for a Grand Rapids manufacturer. Saarinen worked with his son, Eero, Robert Swanson, and Renze Rutili. The furniture which was designed for maximum usefulness had flexibility, adaptability, and style. The sizes were standardized and related, and at the same time scaled for medium sized rooms. It was made to fit together so that the pieces could be used together, grouped into composite pieces, or used separately and interchangeably in various rooms (Figure 14). American birch in a light natural finish was used on a laminated core. The pieces were finished on all sides so that they would look well free standing or against a wall. This line which also included sectional upholstered seats was moderately priced.

The Widdicomb Furniture Company of Grand Rapids introduced a line of sectional case goods and a year later, in 1941, terminated production of traditional pieces. The different pieces of furniture could be broken down in moving and set up again in the same or different patterns. New pieces could be added at any time. This sort of furniture seemed to be well suited to the transient sort of life many families were living during the war years. "Flexi-Units" was the name of this sectional furniture. The units were made in bisque (blond oak), harvest, or cordovan

FIGURE 14

Sectional Units by Eliel Saarinen

mahogany, and lacquered pieces in red, blue, green, white, brown, and black. There was a wide selection of cabinet units, shelf units, and drawer units which were made to be mounted upon a base and capped with a top (Figure 15). There were three styles of bases and tops in the four previously mentioned finishes. There was a Chinese type base with an overhanging ledge top. The mahogany set had an Eighteenth Century feeling; the blond oak was typically modern. The "Flexi-Unit" line contained a wide selection of beautiful woods while the various combinations of units used to produce this furniture seemed almost endless. This was an example of functional modern at its best.

Since open stock collections had proven sensational to furniture manufacturers, suites of furniture for individual rooms were passing out of existance so far as modern was concerned. At the same time the popular acceptance of open stock collections made it possible for manufacturers to concentrate on fewer patterns required by a war time economy. Hidden conveniences were being incorporated into the design of many pieces; for instance, shirt sized drawers, hosiery and glove compartments in dressers, space for glasses, serving trays, and silver drawers in buffets. Liquor cabinets and record cabinets began to look more like pieces of furniture. For transient living Dan Cooper designed furniture which included folding chairs and double duty tables all of which were sectional and completely demountable. The newest furniture was made without springs or with wooden springs as the result of war time restrictions. Airfoam, the new stuffing for matresses and sofa cushions which was rubber beaten up with air, had hardly been introduced when it was drafted into military service. Metal pulls on furniture were banned by the

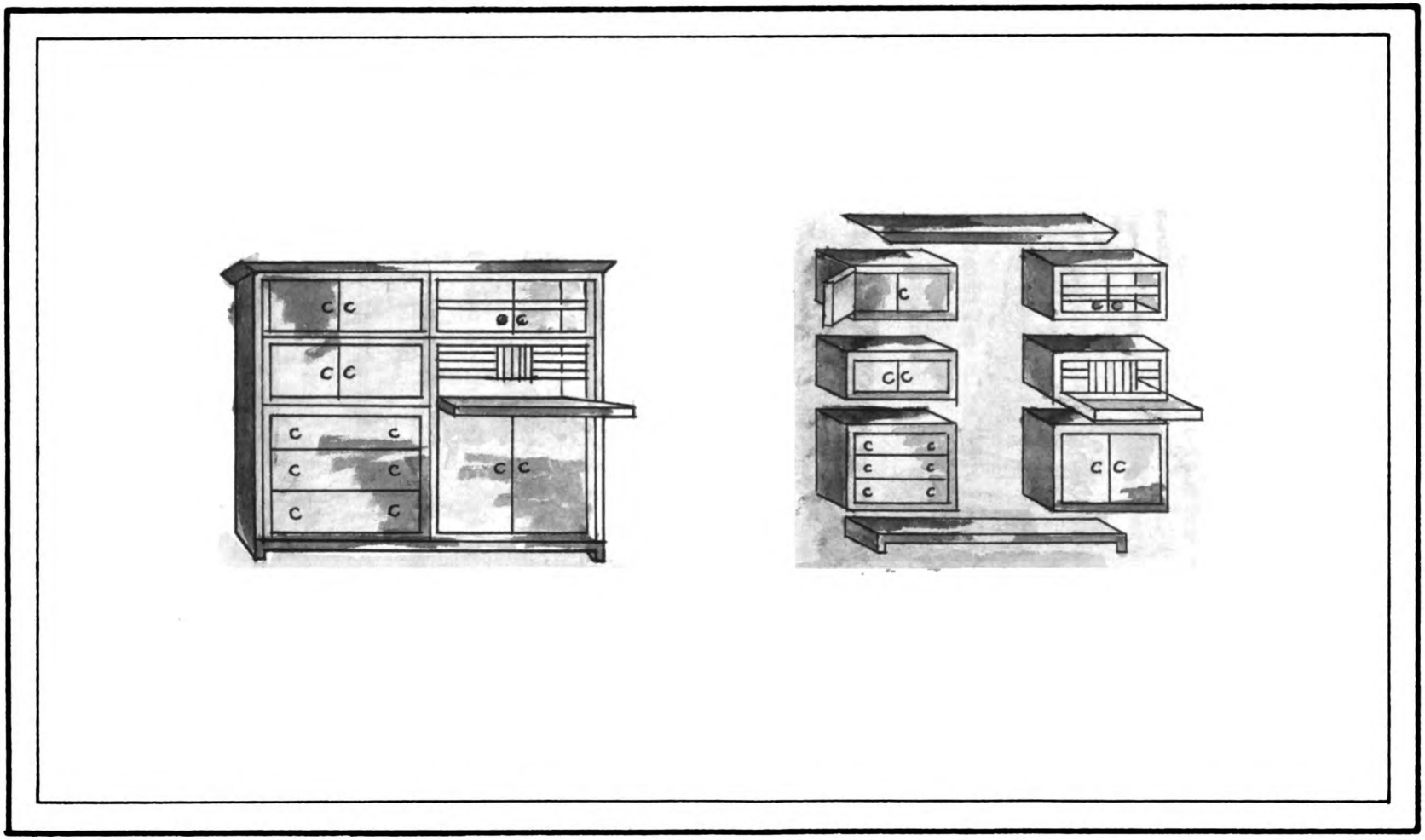


FIGURE 15

Diagram of the Widdecomb "Flexi-Units".

government; consequently, wooden and plastic pulls came into use.

Fabrics

In the field of upholstery materials, although leather continued to be popular, elegant textured fabrics were also seen. Most of the new materials that appeared in 1940 were guaranteed washable, preshrunk, and of permanent finish, but such features disappeared rapidly as the need for war materials took these goods off the consumer market. New machine made textiles closely simulated the hand woven textiles. Dorothy Liebes was employed by the Goodall Company in 1942 to design fabrics that would be adaptable to the power loom. While the prosecution of the war took off the market some very familiar fabrics, it eventually offered in their stead some new and amazing discoveries. Vinyon, which is made from the vinylite resins, is a yarn that is permanently water resistant and has great tensile strength. It is easy to clean and is non-absorbant. Synthetic rubber developed during the war was destined for use in upholstery. Coated fabrics, developed in war research, combined beauty and style with functionalism and wearability. Korseal, a synthetic plastic material, was used for furniture webbing and seat covers. Synthetic and natural fibers were coated with plastic which gave to the fabric added strength, made it fireproof, and easier to clean. Curtains made of "fiber glass" were also available.

The trend toward an increased use of printed fabrics was intensified by the wartime economy program. The number of looms designated for civilian production was limited. Complicated patterns involving more than the minimum of time and labor were prohibitive; production

consisted mostly of plain flat weaves or uncomplicated twills. In order to create interest and variety these fabrics were printed. Fabric rejected by the government for use in military service was printed as drapery material. Modern floral patterns in overscaled prints and flamboyant tropical designs seemed most evident. Stripes were also popular. In reality there was such an acute shortage of fabric during the years of the war that many of the conventional fabrics were replaced with synthetics or other substitutes. Much use was made of spun rayon while acetate rayon took the place of silk. Even cotton had developed a sense of sophistication.

The shortage of wool for floor coverings made it necessary to experiment with other fibers for this purpose. Wool and rayon combinations were found in all price brackets. Some use was made of linen while cotton was used to make new looking floor coverings. One style appeared in twelve sizes and fifty-four colors. Manufacturers were forced to reduce the number of styles because of the lack of materials as well as the lack of man power.

Color remained the most important medium available in decoration during the war. The "safe neutrals" were put away and color filled every room. Rooms were literally decorated with color; effects of formality or spaciousness were achieved through thoughtfully planned color schemes. This new conception of color affected not only modern decoration but filtered into traditional decoration as well, thus giving to the traditional style a contemporary air. Bright warm colors became especially popular

in California. This was undoubtedly due to the fact that more emphasis was put on outdoor living there.

At this time, California was becoming a recognized design center. The oriental influence, which was being felt in the United States, was especially important in California. While modern interiors had been influenced in the past by the orient, Chinese modern had now become a sophisticated version of contemporary decoration (Figure 16). Obviously, the use of lacquered furniture had been borrowed from the orient as well as the use of brass and bamboo. Chinese fret patterns were frequently adapted as design motifs while the asymmetry of Chinese designs seemed especially expressive of the modern trend.

Critical Analysis of the Trends

While shortages caused by the participation of the United States in the war seemed to stem the tide of progress in the development of the modern trend, it obviously stimulated creation in other fields. In the field of furniture design, real progress had been made before the shortage of manpower and materials almost called a halt to various aspects of the industry. The results of the contest sponsored by the Museum of Modern Art did much to point out the direction for the development of contemporary functional furniture. The production of beauty was no longer an accidental by-product but a part of the process of design and as important as functionalism. Not only beautiful but extremely practical were the contemporary designs of sectional furniture, for this was the sort of furniture that made the architect's plan of flowing space a plausible reality. The increased use of wood brought warmth and

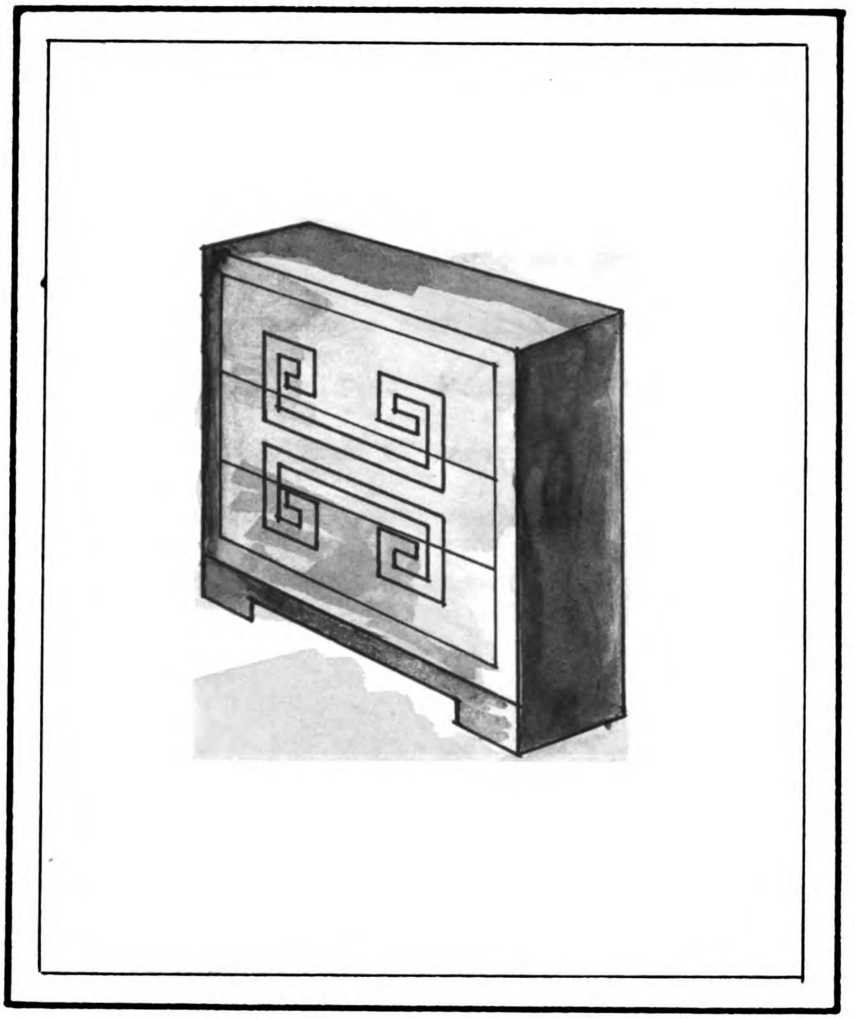


FIGURE 16

Lacquered Chest of Drawers in the Chinese Modern Style

personality to the new style while at the same time color had given new life and vigor to the whole field of interior design. Improved textiles and new synthetics promised increased beauty and comfort for better living in the world of tomorrow.

Modern furnishings with the emphasis on functionalism had now become generally accepted. The furniture was practical, easy to care for, and adaptable. This was the sort of furniture that was demanded by defense workers and war brides. Modern furniture had proved itself; it was here to stay. Even the restrictions of a war-time economy could not slow down its development, for as each limitation was imposed on the modern movement it seemed to rise as the phoenix to greater achievements.

SUMMARY

In America, modern architecture began with the work of Frank Lloyd Wright. Wright had, early in his career, worked under Louis Sullivan, who was one of the first men to build the simple slab-like office building that has become the prototype of the modern skyscraper. Sullivan is remembered as well for the now famous phrase, "form follows function", which has been credited to him. Wright's first house was built in 1893. In this house as in succeeding projects his work was distinguished by the loose planning and imaginative use of materials. The open planning resulted from the emphasis upon the room, as such, rather than the room as a smaller component of the house. The use of materials to give variety and interest with the lack of ornament made Wright's work distinctive and prophetic.

While, in America, Wright met opposition on every hand, in Europe he was recognized and accepted by the pioneers of the modern movement. Before World War I there were a few men in Europe, namely, Berlage, Wagner, and Behrens, who broke away from the traditional style and worked in their own way. The aesthetic and technical experiments of these early modern architects provided the background for the modern movement which got underway following World War I. It was the modern post-war architects whose work crystallized the modern movement. Walter Gropius, a famous educator and architect from Germany, contributed much to the technique of modern architecture. Le Corbusier made the world conscious of the new architecture and is remembered for his phrase "the house is a machine for living". His writings more than his buildings

have brought him recognition. In Holland J. J. P. Oud influenced by Cubism designed buildings that were technically excellent and rich in expression. An architect and interior designer, Mies van der Rohe gained recognition for his free-flowing plans and dramatic use of modern materials. Gropius, Le Corbusier, Oud, and Meis van der Rohe were the great leaders of modern architecture in Europe.

Through the years, as modern architecture was developing, it assumed new shapes and forms of expression. While it appeared to be constantly changing in appearance, the basic philosophy of modern architecture has remained the same. The basis of the new philosophy was the conception of architecture as volume. With this conception of volume as opposed to mass and walls no longer necessary for support, the floor plan was opened up as a design in free flowing space. Thus modern architecture is distinguished by emphasis upon the design, the properties of the materials used, and the lack of ornament.

By the early thirties there was evidence of the influence of modern European architecture in the United States and at last Frank Lloyd Wright was being recognized at home, and interest in his work increased. As modern architecture continued to develop in America, the work of the European modernists and the work of Wright were fused into an expression which could be called American modern. Since the United States is such a broad and expansive country, it would be impossible to expect one style of architecture to prevail over the whole country. Climate, topography, and natural resources were factors that architecture could not ignore. These considerations along with the basic concepts of the modern

movement were the determining influences that brought about the regional forms of contemporary architecture.

The development of furnishings for the home has always been closely related to the prevailing architectural style. The philosophy of modern architecture has been adopted for the basis of the development of home furnishings as well. The revolt against eclecticism in the minor arts took place in the latter part of the nineteenth century. The beginning of contemporary furnishings was initiated with the work of William Morris and the Arts and Crafts movement. Morris was a poet, social reformer, and designer who set out to save the minor arts from the degradation of machine production by restoring the handicraft method of production. It was through the work and teachings of Morris that the Arts and Crafts movement originated. From England the movement extended to the continent. The style of Art Nouveau was originated in the desire to avoid the traditional forms, but in spite of its revolutionary intentions it developed almost entirely as a form of ornament. It was in Germany that the real basis for modern industrial design had its beginnings, for there the machine was accepted and wisely put to use. The machine, no longer despised as in Morris's day, was now looked upon as a tool to be used to further production. In the Bauhaus the first truly modern school of design students worked out practical new designs for present day living which were intended for mass production.

In the Paris Exposition of 1925 the United States was made aware of the fact that a new style had been born. Until this time, America had been busy borrowing from the cultures of Europe to provide what was considered a proper background for living. The Paris Exposition was

news, and modern furniture became a new promotional line for the otherwise dull and slow moving furniture trade. Thus modern was introduced to America.

In its eagerness to be different, early modern furniture was at all times arresting but only rarely beautiful. Rare woods were employed in cabinet pieces with an obvious lack of ornament but intricate veneered patterns provided decoration for the plain flat surfaces. The furniture was known by the names "modernistic" and "Art Moderne" which were borrowed from the French as was the furniture. Much of the furniture appeared to be rather clumsy and heavy.

In 1932 at the Century of Progress Exposition in Chicago the most typical furniture was that which was made from bent metal tubing. With the development of this sort of furniture it was obvious that the French influence was negligible, now, evidenced by the fact that "modernistic" was taboo.

During the thirties there developed a type of modern furniture which was known as Classic Modern. This furniture, classic in origin, was derived from the style of the neo-classic period. The classic furniture was stripped of its historic ornament and in its simplicity and directness became acceptably modern. This more graceful, more conservative classic modern style found wide acceptance.

While classic modern continued to dominate the furniture field for the decade, functional modern had passed from the "bent pipe" era into the "packing case" stage. The sectional case and upholstered pieces developed during the later half of the 1930's were an important step in the realization of the full meaning of functional design. The use of

light woods notable during the late thirties was due, in part, to the work of Russel Wright. The influence of imported Swedish modern furniture as well as the introduction of a new technique of working with wood developed by the Finnish architect, Alvar Aalto, and exhibited in the United States in 1938, was notable in its effect on contemporary modern furnishings.

Design in the years after 1940 was obviously influenced by World War II. The war, while it cut off all influence from Europe, limited certain physical and economic restructions on the furniture trade. The Organic Design contest which was sponsored by the Museum of Modern Art for the purpose of stimulating the creation of furniture, fabrics, and lighting that would provide a useful and beautiful background for contemporary living presented the work of American designers. These designs were intended for mass production in a moderate price range. The strange looking shapes of abstract, ameboid character that were known as "free form" shapes resulted from the application of the well known formula, "form follows function". Among the prize winners, the work of Eero Saarinen and Charles O. Eames was outstanding and proved to be both startling and provocative. The case pieces were developed on the module theory and a seating contrivance was based on the theory of continuous contact and support. At the same time the shortage of labor and materials due to a restrictive war time economy caused the home furnishings industry to fall to a new low. Wooden springs or no springs at all were used in upholstered pieces. Imported woods impossible to obtain were superseded by domestic woods.

Early modernistic textiles were imported from France. Two types were popular late in the twenties: textured fabrics (especially those of the pile variety) and flat printed designs in sharply contrasting colors and geometric patterns. By 1930 textured fabrics were being manufactured in the United States. Cotton and linen were used in a manner to suggest hand woven fabrics. Flat fabrics, both printed and plain, were expressive of the classic modern style. Leather, too, was popular. By the end of the decade there appeared to be more interest in the serviceability features such as fastness to sunlight and laundering, and resistance to shrinkage, mildew, and stains then in color and style factors. Those fabrics of proven serviceability were, of necessity, withdrawn from the market by the wartime restrictions of the forties. Sometime later certain new developments in the field of synthetics were offered instead; vinyon, synthetic rubber, korseal and coated fabrics were employed as upholstery material. The acute shortage of fabric at this time coupled with a psychological need seemed to cause a quantity of colorful prints to appear.

Rayon, which was first employed as a substitute for silk in the twenties, became widely used in glass curtains. Later it was combined with cotton and linen in drapery materials. Spun rayon was introduced in 1938. The use of rayon was much in evidence during the war years as a substitute for the more conventional fabrics.

Floor coverings in general have followed the trends of the times. The exotic fur rugs of the late twenties were supplanted by textured floor coverings in the thirties. Carved, embossed, and nubby piles most often in pale shades or neutral colors were typical. The trend

toward texture continued into the forties although production of floor coverings was seriously interrupted due to the lack of conventional fibers and the necessity of experimenting with new combinations and synthetic fibers.

Color which was starkly brazen or cooly neutral at the beginning of the modern movement quietly progressed and gained a degree of warmth by the end of the thirties. In the war years color burst into bloom everywhere. It was employed scientifically and with skill in some instances; in others it was used to add warmth and personality which had been lacking heretofore. Whether it was used knowingly for its emotional value or for pure love of it, color had become a new medium of expression.

CONCLUSION

In the twenty years following its introduction the modern movement had obviously been altered from a cold, determined, and rational style to an intimate, individual, and informal way of living. The sharp geometric forms of the twenties were slowly transformed into graceful curves and "free form" shapes; cold neutral or harshly contrasting colors were exchanged for harmonious, sun-lit tints and shades. From the beginning, an anti-traditional movement, modern had succeeded in developing through the years a philosophy for itself. Architecture, while it has always exerted a great deal of influence on the interior design and furnishings of the period, was perhaps never before so significant, for the philosophy that produced modern architecture had been adopted by the designers of modern furnishings. It would be a difficult task, indeed, to point out where architecture ended and interior design began. The close working relationship between architecture and interior design is evidenced in more recent buildings where built-in furniture has, to a large extent, made free standing furniture unnecessary as well as impractical.

By 1945 contemporary modern furnishings had developed into three distinguishable moods: classic, fantastic, and functional modern. Classic modern, which appeared early in the thirties, had become a widely accepted style. It was not such a radical form of modern, having been derived from the more familiar neo-classic style (Plate VIII). Due to the fact that it had some roots in the past, this style could be combined equally well with modern or traditional pieces. This was the

PLATE VIII

An Interior in the Classic Modern Style

style most acceptable to the conservative modernist and the more timid experimenter.

Fantastic modern, the most recent development in the modern mood, was a dramatic, theatrical, sophisticated style created during the war years. Historic styles and contemporary materials contributed to the synthesis of this style. Amusing, fanciful, at times surrealistic but never serious, this style does not seem to be destined for long life (Plate IX). Transient though it may be as a style, it is nevertheless important, to the modern movement as a whole, for in its daring and unselfconscious attitude it has provided a new mood in decoration.

The most genuine contemporary expression of today's living was to be found in the functional modern style (Plate X). Here, it was that the new conception of architecture was adopted to encourage the use of new techniques and new materials. Actually, the idea of functionalism was not new though it was a point of view that did result in a fresh approach to design. In the years since its introduction, functionalism had developed into something much more than the stark, realistic approach of the twenties. There came a realization that the need for beauty is as real as any other requirement in design. Neither science nor the arts has been neglected in an ever present effort to produce the simple, practical, and beautiful furnishings that provide the background for the confusion and complexity of contemporary life.

PLATE IX

An Interior in the Fantastic Modern Style

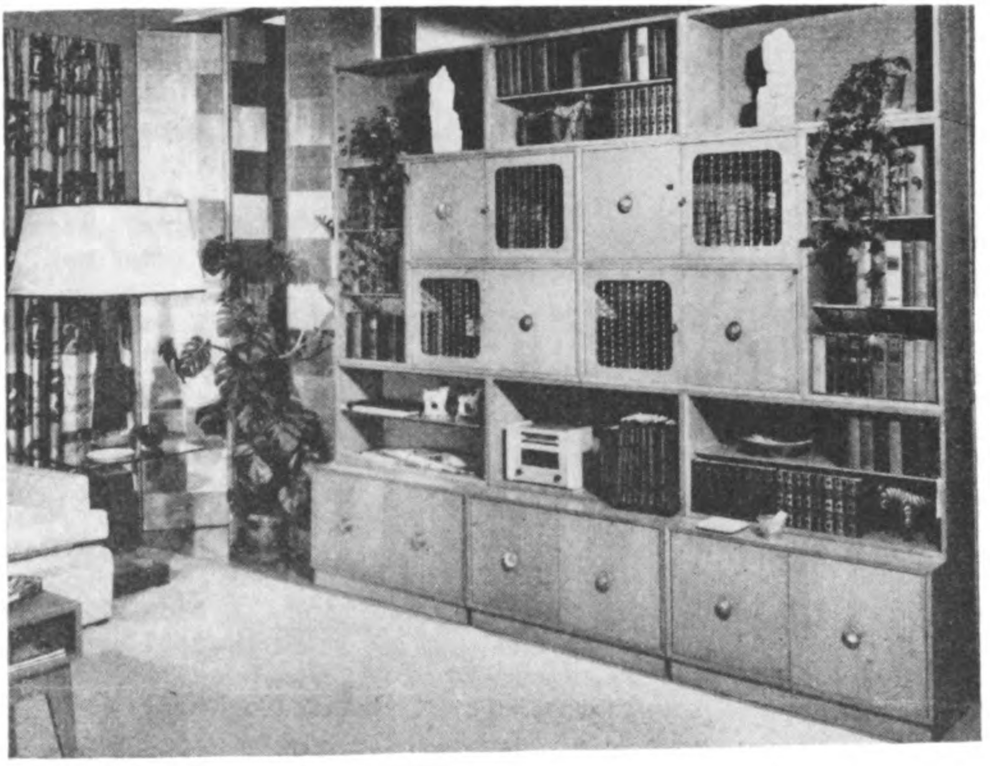


PLATE X

An Interior in the Functional Modern Style

BIBLIOGRAPHY

Books

Aalto: Architecture and Furniture. New York: Museum of Modern Art, 1938.

Art in Progress. New York: Museum of Modern Art, 1944.

Barr, Alfred H., Jr., Henry-Russell Hitchcock, Jr., Phillip Johnson and Lewis Mumford, Modern Architects. New York: Museum of Modern Art and W. W. Norton Company, 1932.

Bayer, Herbert, Walter Gropius and Ise Gropius. Bauhaus 1919 and 1928. New York: Museum of Modern Art, 1938.

Block, Maxine, editor, "Marcel Breuer," Current Biography. New York: H. W. Wilson Company, 1941.

Block, Maxine, editor, "Walter Gropius," Current Biography. New York: H. W. Wilson Company, 1941.

Block, Maxine, editor, "Eliel Saarinen," Current Biography. New York: H. W. Wilson Company, 1942.

Block, Maxine, editor, "Russel Wright," Current Biography. New York: H. W. Wilson Company, 1940.

Bragdon, Claude, Architecture and Democracy. New York: Alfred A. Knopf, 1918.

Brownell, Baker and Frank Lloyd Wright, Architecture and Modern Life. New York: Harper and Brothers, 1937.

Burris-Meyer, Elizabeth, This Is Fashion. New York: Harper and Brothers, 1943.

Cheney, Sheldon and Martha Candler Cheney, Industrial Design. New York: Whittlesey House, 1936.

Cooper, Dan, Inside Your Home. New York: Farrar, Straus and Company, Inc., 1946.

Gerard, Sanford E., How Good Is Your Taste? New York: Doubleday and Company, 1946.

Faulkner, Ray, Edwin Zeigfield and Gerald Hill, Art Today. New York: Henry Holt Company, 1941.

Ford, James and Katherine Morrow Ford, Design of Modern Interiors. New York: Architectural Book Publishing Company, Inc., 1942.

Ford, James and Katherine Morrow Ford, The Modern House In America. New York: Architectural Book Publishing Company, Inc., 1940.

Frankl, Paul T., Form and Reform. New York: Harper and Brothers, 1930.

Frankl, Paul T., New Dimensions. New York: Payson and Clarke, Ltd., 1928.

Frankl, Paul T., Space for Living. New York: Doubleday, Doran and Company, Inc., 1938.

Genauer, Emily, Modern Interiors--Today and Tomorrow. New York: Illustrated Editions Company, Inc., 1939.

Giedion, Sigfried, Space, Time and Architecture. Cambridge: The Harvard University Press, 1941.

Gillies, Mary Davis, All About Modern Decorating. New York: Harper and Brothers, 1942.

Gropius, Walter, The New Architecture and the Bauhaus. Translated from the German by P. Morton Shand; London: Faber and Faber Ltd., n.d.

Gutheim, Frederick, editor, Frank Lloyd Wright on Architecture: selected writings, 1894-1940. New York: Duell, Sloan and Pearce, 1941.

Hamlin, Talbot, Architecture Through the Ages. New York: G. P. Putnam's Sons, 1940.

Hitchcock, Henry-Russell, Jr., and Philip Johnson, The International Style: Architecture Since 1922. First edition; New York: W. W. Norton and Company, Inc., 1932.

Hitchcock, Henry-Russell, Jr., Modern Architecture; Romanticism and Reintegration. New York: Payson and Clarke, 1929.

Johnson, Philip, Machine Art. New York: W. W. Norton and Company, Inc., 1934.

Kahn, Ely Jacques, Design in Art and Industry. New York: Charles Scribner's Sons, 1936.

Lancaster, Osbert, Homes Sweet Homes. London: John Murry, 1939.

Le Corbusier, Towards a New Architecture. Translated from the thirteenth French edition; New York: Payson and Clarke, n.d.

Mock, Elizabeth B., editor, Built in U.S.A., 1932-44. New York: Museum of Modern Art, 1944.

Mock, Elizabeth B., If You Want to Build a House. New York: Museum of Modern Art, 1946.

Mumford, Lewis, Architecture. Chicago: American Library Association, 1926.

Mumford, Lewis, Sticks and Stones; a study of american architecture and civilization. New York: Norton, 1933.

Mumford, Lewis, Technics and Civilization. New York: Harcourt, Brace and Company, 1934.

Noyes, Eliot F., Organic Design in Home Furnishings. New York: Museum of Modern Art, 1941.

Pevsner, Nikolaus, Academics of Art. Printed in Great Britian; Cambridge: The University Press, 1940.

Pevsner, Nikolaus, Pioneers of the Modern Movement. London: Faber and Faber, 1936.

Read, Herbert, Art and Industry. New York: Harcourt, Brace and Company, 1938.

Richards, J. M. and Elizabeth B. Mock, An Introduction to Modern Architecture. Revised edition; New York: Penguin Books Inc., 1947.

Robsjohn-Gibbings, Terrhance H., Good-bye, Mr. Chippendale. New York: Alfred A. Knopf, 1944.

Rockow, Hazel Kory and Julius Rockau, Creative Home Decorating. New York: H. S. Stuttman Company, 1946.

Rothe, Anna, editor, "Alvar Aalto," Current Biography. New York: H. W. Wilson Company, 1949.

Rothe, Anna, editor, "Dorothy Liebes," Current Biography. New York: H. W. Wilson Company, 1949.

Sullivan, Louis, The Autobiography of an Idea. New York: Press of the American Institute of Architects, Inc., 1926.

Todd, Dorothy and Raymond, The New Interior Decoration. New York: Charles Scribner's Sons, 1929.

What is Modern Architecture? New York: Museum of Modern Art, 1946.

Wright, Frank Lloyd, An Autobiography. New York: Duell, Sloan and Pearce, 1943.

Wright, Frank Lloyd, Modern Architecture. Princeton: Princeton University Press, 1931.

Periodicals

Architectural Forum, 42-83, January, 1925--December, 1945.

The Architectural Record, 57-98, January, 1925--December, 1945.

Bogner, Walter F., "Why I Planned My House this Way," House Beautiful, 83:57-59, 102-3, April 15, 1941.

DeVoo, Adeline, "The Rational in Modern Decoration," House Beautiful, 64:554-555, November, 1928.

"Divorce from Tradition," Architectural Forum, 81:63, July 1944.

"Eero Saarinen," Architectural Forum, 67:303, October, 1937.

"Gilbert Rohde," Architectural Forum, 67:265, October, 1937.

Hamlin, Talbot, "The Roots of Modern Architecture," House and Garden, 88:84-87, September, 1945.

House Beautiful, 57-87, January, 1925--December, 1945.

House and Garden, 47-88, January, 1925--December, 1945.

"How to Judge Modern," House and Garden, 86:41-49, August, 1944.

"How Modern Got this Way," House Beautiful, 88:256, December, 1946.

"L'Art Nouveau," Interiors, 101:40-42, March 1943.

Maas, Carl, "The Design is Modern," House Beautiful 88:22-3, 84, July-August, 1941.

McElroy, Margaret, "Reviewing the New Furniture," House and Garden, 63: 23-24, February, 1933.

"Modern Design Becomes Contemporary American," House and Garden, 64:71, May 1934.

"Modern Gets a Break," House and Garden, 80:27, October, 1941.

"A Modern Style of Interior Design," The American Architect, 133:39, June 5, 1928.

Mumford, Lewis, "Modernist Furniture," The New Republic, 55:154-155, March 21, 1928.

New York Times, June 17, 1944.

Parsons, Frank Alvah, "An Analysis of Modernism," House and Garden 49:72-73, 134, February 1934.

Patterson, Augusta Owen, "What is Happening to Modern?" House Beautiful, 79:37-39, 106-7, September 1937.

Pevsner, Nikolaus, "Fifty Years of Arts and Crafts," Studio, 548:225-228, November, 1938.

"Pioneers in Modern," House and Garden, 79:67, April, 1941.

Price, Matlock, "The New Art and the Designer," House and Garden, 54: 109, 140, October, 1928.

Retailing--Home Furnishings Edition, 4-13, 15-17, January 1932-December 1941, January 1943-December 1945. (Volumes 7, 13, 15-16, 18-19, are incomplete.)

"Russel Wright," Architectural Forum, 67:283, October, 1937.

Sargent, Winthrop, "Titan of Modern Architecture," Life, 21:84-88, 90, 93, 94, 96, August 12, 1946.

Schroeder, Frances de N., "The Growth of American Taste 1888-1945," Interiors, 105:68-72, November, 1945.

"Trends of Tomorrow," House and Garden, 76:75, July, Section I, 1939.

Wright, Richardson, "The Modernists Taste," House and Garden, 48: 77-79, 110-114, October, 1925.