

**FLORENCE KNOLL, DESIGN AND THE MODERN
AMERICAN OFFICE WORKPLACE**

BY

Phillip G. Hofstra

Submitted to the graduate degree program in American Studies
and the Graduate Faculty of the University of Kansas
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy.

Cheryl Lester, PhD
Chairperson

Committee Members

Norman Yetman, PhD
Co- Chairperson
Maurice Bryan, PhD
Dennis Domer, PhD
Denise Stone, PhD

Date defended: November 21, 2008

The Dissertation Committee for Phillip G. Hofstra certifies that this is the approved version of the following dissertation:

FLORENCE KNOLL, DESIGN AND THE MODERN AMERICAN OFFICE
WORKPLACE

Committee:

Cheryl Lester, PhD
Chairperson

Norman Yetman, PhD
Co- Chairperson

Maurice Bryan, PhD

Dennis Domer, PhD

Denise Stone, PhD

Date approved: _____

Table of Contents

Acknowledgements	vi
Introduction	1
Chapter 1	
The Development of Interior Design: Opportunity, Education, and Practice	9
Necessity, Tradition, Craft, and Design	9
Early American Design Education	15
A Turning Point in 1937	17
Brief Overview of Interior Design	21
Interior Design and Related Disciplines in Practice	21
Interior Decorator	24
Interior Designer	25
Space Planner	26
Architect	26
Industrial Designer	27
Engineers (Structural, Mechanical, and Electrical)	28
1945-1970: The Profession of Interior Design Established	29
Chapter 2	
An Unstoppable Combination: Florence Schust and Hans Knoll	35
Florence Schust Knoll Bassett	36
Hans Knoll	44
Chapter 3	
The Planning Unit and Knoll Look	61
Knoll Showrooms	68
Florence Knoll's Crowning Achievement: CBS Headquarters	87
Chapter 4	
Florence Knoll's Impact on the Industry:	
Moving Toward the Professionalization of Interior Design	101

Florence Knoll in the History of Interior Design.....	101
Professional Organizations and the Rise of Certification.....	108
Societal Changes and the Impacts of Professionalization.....	111
Chapter 5	
The Boss’s Wife: Florence Knoll and Issues of Gender in Interior Design.....	127
The Gendered American Workforce.....	127
Gender in Interior Design	133
Chapter 6	
Knoll After the Knolls: 1965-2008.....	151
New Products, New Processes, New Connections	151
Knoll’s “Modernism” Meets the Modern Office Marketplace	156
Knoll’s Changing Ownership	159
Design for the Next Workplace	163
Chapter 7	
The Legacy of Florence Knoll Bassett	168
The Office Workspace	169
The Perceived Value of Good Design	179
Woman in a Man’s Business.....	185
Bibliographic Essay on the Influence of Florence Knoll on Design and the American Workplace.....	189
Works Cited.....	202
List of Works Consulted.....	209
Books	209
Journals	218
Special Collections.....	222
Personal Interviews.....	223
Internet Resources.....	223
List of Figures.....	226
Appendix A	229

Acknowledgements

An interpretation of the aphorism “if you find a turtle on a fence post you know it didn’t get there by itself” is that someone helped the turtle and that the turtle aspired to a different view of the world. Both would apply to this writer and the outcome of the work represented here in this study. This project began with a visit with Dr. Dennis Domer, who counseled me toward American Studies and a meeting with Dr. Norman Yetman. Without that advice none of the rest would have occurred quite as it has. In those first two meetings, I knew immediately that I was woefully unprepared for this whole undertaking, and that I was in good hands.

Thank you to this dissertation committee and particularly the Chair Dr. Cheryl Lester and Co-Chair Dr. Norman Yetman, for their support, input, and guidance.

Significant teaching contributors have been, in chronological order of introduction, Dr. James W. Hillesheim (History and Philosophy of American Education first course); Dr. Ann Schofield (AmS 800); and particularly Dr. Cheryl Lester (Theorizing America). In our first classroom meeting, Dr. Lester said to me “I’m not done with you yet. ...” Little did she know at the time how much work there was to yet to do.

Thank you to Knoll International for the generosity of access to their museum and resources, particularly the time with Ms. Kass Bradley and Mr. Carl Magnusson.

Critically important to this project have been the teachers in my family that

have contributed in their own ways: my father (deceased), Mr. Leonard Hofstra, Masters in Education (Ed. ABD), my greatest teacher and mentor; my mother (deceased), Ms. Dorothy Kopplin Hofstra, who gave me what it takes; my daughter, Sarah Hofstra, BS Education, who carries on the tradition, teaching first graders with grace and tenderness; and my grandson, Shea Hofstra Rush, who teaches me about the future, every day.

Thank you, above all, to Dr. Jane Mobley, the truest and brightest scholar and my beautiful wife. Anyone who knows her will see her in this work; anyone who does not, can be assured that without her patient contribution this dissertation would not exist.

Introduction

In every human community, certain built forms are physical expressions of ways in which people think about their lives together. These forms express beliefs that people share about the world around them; what they expect from each other; what they hope to achieve; the standards to which they hold others responsible and the standards for which they are willing to be responsible themselves; and what they want their peers in certain endeavors and the community at large to believe about them.

While homes may make these kinds of statements about individuals, the buildings that will be examined in this study are public buildings. That is, they are intended for use by people who go there regularly or periodically for purposes that they have in common – as opposed to residential buildings, which meet the private needs of individuals or families. These buildings may have occasional use for a larger number of people: a stadium or an opera house, for example. Or they may be institutions central to the way people establish and maintain a community, such as workplaces, hospitals, government facilities, and schools. Public buildings reveal a kind of consensus about what is acceptable in a building to the people who use it.

Therefore, these structures – their architecture and, to an even greater extent, their interiors – are a tangible record of who the people were and what was important to them. They are also a record of how such buildings come to be built – who envisions them, who actually designs and builds them, and why. Studying a category of these kinds of public-use built environments – for instance, workplaces – is a

layered inquiry that can illuminate not only building and builders, but also the society that desired the outcome and supported the effort to achieve it. In particular, examining processes and technologies as well as materials can reveal aspects of cultural systems, as Joan Vastokas observes,

cultural ways – including moral and aesthetic values, art forms, social and ritual performances, as well as social structural patterns and relationships – are affected to a high degree by the dominant . . . system. The revolution in material culture studies since the 1960s has resulted in the recognition that artifacts are culturally expressive, symbolic objects. While most attention these past three decades has been paid to the meaning of the artifact in itself, there is increasing recognition that the dynamics of the technical processes in themselves play an important cognitive role in the social and ideational life of cultural systems (Vastokas 343).

The flourishing of public interest in the late twentieth century in all aspects of design is testament to the way that some aspects of the technical processes of built forms can take hold in the social and ideational life of a society. In the middle of the nineteenth century in America, only a small percentage of the population could name a designer of anything, except perhaps some luxurious items, such as Sheraton furniture or Revere silver. By the close of the century, some designer names were household words, and a plethora of magazines – not only for the trade, but aimed at the general public – showcased the work of architects and interior and industrial designers.

Some aspects of understanding the evolution of workplace design are more profoundly cultural recognitions, desirable to achieve simply because they help us

know who we are at every level from individual to societal. In an introduction to the catalog of the National Building Museum's exhibition, On the Job: Design and the American Office, Donald Albrecht and Chrysanthe B. Broikos point out that:

The office is a microcosm of American social transformation and a yardstick of cultural progress. National dialogs between freedom and control, the individual and the crowd, private agendas and public concerns, personal mobility and communal connection are played out in the office. The shifting interaction between building design, technology, finance, and employees has yielded a dynamic environment whose significance extends beyond its physical boundaries. The office has figured in American life as architecture, but it has also been on the job as an incubator of radical change (16).

The beginning of the twenty-first century has permitted a useful evaluation point, looking back over a century during which work changed dramatically, putting about 60 percent of Americans at desk jobs (Jones 9) and looking ahead to work environments made increasingly fluid by the demands and opportunities of emerging technologies. The office as a dominant form in the American workplace is, as Susan Henshaw James notes, "not disappearing, but merely transforming itself, as it has always done . . . making a resurgence, retooling itself to be a place of creative interaction" (16). This period of retooling makes understanding the material culture of the office important. Understanding how and why workplaces were designed as they were can help us make judgments useful to our communities today, and they can show us continuities with the past, as well as breaks from it.

Ideally, these studies can help us interpret, and perhaps even guide, human behavior. Vastokas points to these possibilities, regarding elements of theory within the method of examining “artifacts” (which, in this study, include elements of workplace interiors):

Five essential points of theory arise from a consideration of artifacts in a social-semiotic perspective:

- (1) the meaning of artifacts, including works of visual “art,” is constituted in the life of the objects themselves, not in words or texts about them;
- (2) the artifact is not an inert, passive object, but an interactive agent in sociocultural life and cognition;
- (3) the signification of the artifact resides in both the object as a self-enclosed material fact and in its performative, “gestural” patterns of behavior in relation to space, time, and society;
- (4) the processes, materials, and products of technology, especially those of a society’s dominant technology, function as cultural metaphors at many levels and in many socio-cultural domains; and
- (5) theoretical insights derive, not from theorizing in the abstract, but from direct observation and experience of the phenomenal world of nature and culture (337)

Because people are producers of our own built environment, studying aspects of that environment can show us a great deal about where we have been, collectively, and how we might determine where we are going. If, for example, we understand how the American workplace has evolved to its present building forms, both outside and in, when we begin to accommodate the growth of today’s entrepreneurial companies into

larger workplaces, those places may be more effectively designed – and the people who work there happier and more productive.

Different social sectors provide examples, as well. If a house of worship helped make physical and spiritual sense of the experience of people in the prairie homesteading communities of our forebears, perhaps understanding how and why the buildings were designed as they were can help us make judgments useful to our communities today. Can they show us continuities with the past, as well as breaks from it? Can they help us interpret, and perhaps even guide, human behavior? Indeed, they can. Analyzing certain building types to these ends is often complex and difficult of course. An example that establishes this as clearly as a house of worship is a sports stadium.

It's easy to see in the trends of some types of built forms the desire to recapture some elements of the past (i.e. neo-classic structures express the desire for an imagined order) or reject others (the way the clean lines of “contemporary furniture” rejected the applied decoration of furniture from earlier periods). Arguably, all built forms can be examined from this perspective, but the scope of this study focuses on interior design of the workplace in the United States after 1940, especially the work of Florence Schust Knoll Bassett and her substantial influence in two important dimensions: (1) on workplace design that had and still has the capacity to change the way occupants work; and (2) on the professional status of the people who design contemporary commercial interior spaces in America.

The impact of the professional life and work of Florence Schust Knoll Bassett

on the process of the professionalization of interior design is critical because that process encapsulates two other areas of inquiry that are important to understanding workplace design: one is the nature of the education of a designer, and the other is the role of gender in the design professions. Knoll Bassett's influence on the content of design education and the model she provided women in design are still observable, though rarely highlighted, today.

The education of designers (in this case architects and interior designers, although the broad question of how designers are educated applies to many fields) is important because it defines the disciplines that produce built forms. And gender issues are important because interior design provides an interesting and disturbing example of what happens when gender and the process of professionalization in a discipline intersect. These areas of inquiry lead directly to the impact that professionalized interior design has had on the character of the information/service office as a workplace in America after 1945, and, thereby, its effect on contemporary American culture.

Throughout this study, *workplace* will be taken to mean the general corporate business office environment, as differentiated from industrial production, warehousing, agricultural, institutional, retail, and hospitality-related workplaces, each of which often utilize interior design services.

In 1930, architect Charles Loring reflected on the previous sixty years and remarked that “the offices of our grandfathers were without steel frames and files, without elevators and radiators, without telephones – and without skirts” (Strom 34).

His contrast used material items – elevators, telephones, skirts – to describe a complex period of transition during which the skills, experience, and meaning of office work were changed forever.

Loring’s explanation of differences between one world and another reveals a connection in those work spheres of material culture and gender. His combination of elevators and women was deliberate and appropriate: technological changes in the office environment and the introduction of women office workers were two of the most important and obvious forces in the creation of the modern office workplace (Kwolek-Folland 157).

In an effort to understand the modern office workplace and the role of interior designers in creating that space at its best, this study focuses on a seismic change that occurred in American design, a change summarized as the “Knoll Look” by designers and design historians, but really a change far more substantial than a look; it was a change that affected organizations, the people in them, and the work that resulted from their coming together. The scope and development of this study include:

- A description of the occupational, educational, and professional developments necessary to provide an overview familiarity with the field of interior design;
- A contextual discussion of the background of social, economic, technological, and demographic circumstances bearing on the major issues surrounding the process of professionalization in interior design;

- A consideration of interior design as material culture, resonant with expressions of human behavior and belief given shape in built form;
- A discussion of the issue of gender in interior design and the effect of the process of professionalization on a discipline that has attracted women without protecting them from gender-based inequities;
- And, central to the study as a whole, an examination of the workplace-changing Knoll Planning Unit and subsequent “Knoll Look,” created by Florence Schust Knoll Bassett, whose professional life and career provides a singular example of the issues regarding both professionalization and gender in American design.

Note: Over the course of her educational and professional working life and after, in her retirement, the subject of this study used several names, which the author has tried to keep chronologically consistent. Thus, “Florence Schust” is used for the time up to her marriage; “Florence Schust Knoll” is used for the period from 1946, when she married Hans Knoll, until 1958, when she married Harry Hood Bassett. From 1958 forward she was publically called “Mrs. Bassett.” From her days at Cranbrook forward (The Cranbrook community was established in 1904 by publishing mogul George Booth. Cranbrook Schools is part of the Cranbrook Educational Community (CEC), which includes the Cranbrook Institute of Science, the Cranbrook Academy of Art, and Cranbrook House and Gardens), Florence Schust Knoll Bassett has said “the people who really knew me called me Shu” (Makovsky, Shu U 80), a nickname only used in context in this study.

Chapter 1

The Development of Interior Design: Opportunity, Education, and Practice

Necessity, Tradition, Craft, and Design

In developed countries, most people spend a major part of their lives indoors. “Home” means an indoor place – a room, an apartment, a house, a mobile home, even a trailer or a van. People conduct much of their lives within structures of various kinds designed and very often built for functions related to the activities. People study in schools and colleges, worship in “houses of worship,” eat in restaurants, work in barns, shops, factories, and, more and more in America, in buildings designed to be offices. More than ever before, people in the United States are born in hospitals and may die there, too.

With the exception of fewer and fewer people whose days are spent in outdoor occupations or avocations, outdoor time for most people tends to be interludes in lives spent largely inside some structure created by humans. The design and decoration of these structures affect individuals in myriad ways, some observable and some hidden, but still important to personal well-being and social interaction.

Historically, most interiors were put together, and put together very successfully, as a natural part of the process of building and inhabiting structures.

Ancient indigenous (and some still-surviving) societies developed various forms of huts, tents, igloos, teepees, and yurts to solve the problems of shelter suited for their way of life in a particular climate, using available materials. The inhabitants then simply took their few possessions inside, much as a contemporary adventurer might arrange gear in a tent while camping. The resulting interior was practical and, by vernacular estimation, often handsome.

Developing civilizations found appropriate ways of building more elaborate structures, which created their own kinds of interior space. One cannot think of a Gothic cathedral's interior apart from the structure of the building itself, and the glass, additions of carved wood, and other decorative elements created a consistent whole, inside and out. For centuries, dwellings and farm buildings were designed and built according to traditions and innovations that took into account the requirements for daily life. The furnishings evolved from similar traditions and necessities, creating interiors thoroughly compatible with both the enclosing structures and the inhabitants' needs and customs (Walker 38).

As wealth became more widespread, so did the development of more elaborate buildings, especially for aristocratic, often royal, occupants. The idea of an interior as a designed unit, comparable to a fashionable costume as an expression of wealth and power as well as taste, emerged (Kirkham 58-85). The design disciplines that had begun to take form in the Renaissance as strictly traditional practices evolved to a more individualized way of thinking about design of every sort.

Arguably, every intelligently formed decision is design. The natural sciences have observed and studied the capacity of some animals other than humans to create structures that meet the often-stated requirements of design “to solve a problem” and “to suit form to function.” Some such structures, like the beautifully made nests of certain species of birds, are even artful. Among humans, design is ubiquitous and examples can be cited across an enormous range from a form as simple as a battlefield monument to buildings as complex as the Guggenheim Museum designed by architect Frank Gehry in Bilbao, Spain. Indeed, design is so innately human, so widely spread across time in so many forms, that it is important to distinguish among kinds of intelligent decision-making focused on design outcomes. This study is about making decisions in a particular applied arena of design: interior design.

Interior design is less often explained by what it is than by what it is not. Interior design is not architecture; it is not engineering; it is not space planning. But it often incorporates important elements of all of these disciplines. Indeed, one of the most problematic dimensions of studying the history and development of interior design is to determine where and how and why interior design grew in a direction different from the intertwined roots of the other design professions.

As is the case in all areas of human enterprise, in design sometimes the work of an individual, drawing on lessons of the past, recasts the future in unexpected ways that define entirely new directions. But before a cataclysmic moment can occur, people making decisions about built forms and their decoration create a kind of evolutionary readiness for change. This cataclysmic moment and readiness for

change is not dissimilar to the conditions described by Thomas Kuhn in his work The Structure of Scientific Revolutions. Kuhn also posits that stating a hypothesis tends to predict the outcome in the application of the scientific method. Design process follows a similar set of steps in establishing a concept, revising and refining and then finalizing the design. New directions come about when precedents are not in control of the process.

The long history of human craft provides a good example. Although craft and design are two different concepts, they are closely linked: craftspersons generally engage in design, and the mass production of designed goods frequently relies upon craft processes. The word *craft* means skill, particularly the manual kind, hence *handicraft*. It also means trade or occupation. Familiar, traditional crafts include: pottery, furniture making, leatherwork, metalwork, stone masonry, jewelry, glass-blowing, stained glass, embroidery, knitting, weaving, tapestry, bookbinding, basketry, and toy-making, among others (Walker). From the beginning of built forms, buildings and their interiors were informed by traditions in craft and by aesthetics that were a mixture of traditional and individual design sensibilities.

Beginning in the middle of the nineteenth century, modern industrial society added tremendous technical complexity, both in the nature of buildings themselves and in the variety of specialized purposes that buildings began to be expected to serve. The process of training designers and builders in apprenticeships, ateliers, and, by the late nineteenth century, in the *écoles*, specialized schools for art and design in Europe, helped carry forward the traditional aspects of building design. But the

industrialization that was affecting all areas of creative effort challenged the designers to find a new direction in training and preparation.

Designers began to explore significant changes in philosophy about the design problems they faced and the educational processes (the actual curriculum) they used to meet these challenges. For hundreds of years, classical antiquity had provided the vocabulary of devices, elements, and forms for building, but these were no longer suitable to apply to mechanized environments. Designs for the outsides and insides of buildings began to reflect what machines – not craftspeople – could make. As forms and functions changed, human expectations and tastes changed, too, but not always in the same emotional trajectory. People who used spaces often yearned for the familiarities of tradition, or they sought a “modern” sensibility in comfort and affordability, or they imagined the possibilities of the future – and sometimes desired it all at once. Not only the designer, but the client was undergoing metamorphosis as industrialization swept Europe and America in the late nineteenth and early twentieth centuries.

By the early twentieth century, buildings, especially those for public use, had increasingly moved away from traditional vocabularies of comfort and style, toward the interiors-equivalent of mass production. It is possible to create spaces in which people can live comfortably, work well, and have pleasant experiences, as a great number of examples can demonstrate. These examples remain extraordinary, however, in a world where our artificial environments are all too often anything but comfortable and pleasant. Occupants of commercial office space often express a lack

of connection with traditions that provide familiar, available visual and formal cues that convey the meaning of interior space (Abercrombie).

At its best, design can convey the meaning of interior space. This meaning of the design is often so integral to both the physical form as well as the function it supports that it can be referred to as “embedded”. Certainly in a workplace, the meaning of the space is to some degree the work that is done there. But beyond that purpose, great interior spaces convey “embedded meaning”: the core values of an enterprise. When we experience embedded meaning, the effect is unavoidable (if not always explicable). For example, when we go into the Lincoln Memorial on the National Mall in Washington, D.C., we know instantly we are in the presence of reverence for a man’s life and legacy, his contribution to the nation and to the lives of individuals in it. The embedded meaning of that space is evident to everyone who visits it.

Expressing the embedded meaning in most spaces is very difficult to do. Attempts to accomplish it usually fall short. Most spaces that are “purposed” – built to suit their work purpose, be it manufacturing or health care or education or whatever kind of work – fail at conveying larger meaning. It is this failure that can produce soulless places in which to work. Unfortunately, what succeeds for one organization in expressing embedded meaning may be replicated in other organizations and fail for them. No doubt, aficionados of the Knoll Look can cite examples of the Planning Unit’s successes in expressing embedded meaning for some organizations – such as CBS – that were simply hollow knock-offs when the same

forms, textures, and furnishings were put in place in different workplaces with different core values. On the other hand, it is clear that the Knoll Planning Unit inspired many designers and their clients to use planning concepts to help make intelligent, customized choices that resulted in design that expressed the meaning to be found in their own workplaces.

For the most part, however, industrialized civilization has done a poor job of providing worthwhile alternatives to replace traditional forms that are widely accessible and understood. When workplace interiors are well designed, the success is rarely the result of chance. Most good interiors for commercial offices result from the use of skilled, talented, and well-trained professionals capable of integrating such cues along with effective functional spaces.

This is not surprising in a world where modern, complex tasks are dealt with by experts with a high level of specialized skill. Experts provide health care, financial guidance, even automobile repair. The idea that becoming adept at an occupation or profession requires study and practice is virtually unchallenged. The same attitude governs the approach to preparation of designers of buildings, who deal with ever-more complex technical issues.

Early American Design Education

In Europe throughout the nineteenth century, a series of polytechnics, trade schools, and schools of “design” were created to prepare designers capable of responding to the design needs of industry. Since academies of fine arts were found

wanting by industry in providing such preparation, they too began to develop different teaching traditions in response to the needs for an integration of more empirical/technical information than the classical preparation permitted.

Unlike the study of art in Europe and Great Britain, where there was a marked separation between the visual and liberal arts, American institutions more widely experimented with a variety of curricular structures. Some, such as the National Academy of Design (founded in 1826 in New York), maintained a concentrated focus on the traditional fine arts, using European academies as their models. Others, such as Harvard (after 1868), experimented with the visual arts as a form of liberal arts study involving a mixture of studio instruction, architecture, and lectures on art history. Still other colleges, such as Yale and Syracuse, developed programs that were professional art schools, turning out students capable of practicing either as fine artists or as industrial designers. Somewhat later, independent professional art schools, such as the Pratt Institute and the Rhode Island School of Design, were founded to provide training for industrial designers and illustrators (Bowser 12).

Not all American architects at the time received formal training, as apprenticeship was still considered an appropriate way to enter the field, but when they were formally trained, it was in a curriculum that blended studies in architecture (design) with archeology, fine art, and art history. Still many architects and designers were practicing who were not academically trained by these new programs, or who were trained abroad, especially in France at the *écoles*.

The development of these new schools of design and departments of design within universities in Europe and the United States exhibited an increasing degree of diversification in preparation of designers, reflecting the specialized needs of industrial societies to provide design that met a changing variety of needs expressed in the way people worked and lived together and in the products they manufactured, sold, and bought. By the end of the nineteenth century, Harvard, Yale, and Princeton were among 47 colleges and universities in the United States offering courses in the fine arts with architecture as one of the disciplines. The initial programs of study developed at Harvard, Yale, and Princeton set the three distinctive instructional patterns adopted by that pioneering group of 47 institutions. Harvard attempted to combine the practice of art with art history. Yale, by contrast, emphasized studio studies, such as drawing, painting, and sculpture. Princeton focused on art history (Efland 159).

A Turning Point in 1937

In Dessau, Germany, in the first quarter of the twentieth century, a different kind of design institution began with an innovative mix of elements in its curriculum. The Staatliches Bauhaus was founded by Walter Gropius in 1919, who gave his concept a name that means “house of building” or “building school.” The Bauhaus was founded as a combination architecture school, crafts school, and arts academy. Born out of a liberalism of expression in post-World War I Germany, the Bauhaus was viewed by many as a radical artistic experimentation. However, Gropius saw his

school as a completely apolitical workshop (Wolfe). The school reflected post-war Germany's New Objectivity and the philosophy of peaceful coexistence between mass-production and the individual spirit, an idea that persisted despite Nazi repression that closed the school and the disruption caused by the emigration of key faculty (Gropius, van der Rohe, and Maholy Nagy).

The Bauhaus faculty included notable artists and designers, including German sculptor Gerhard Marcks, Russian painter Wassily Kandinsky, and Hungarian designer Laszlo Moholy-Nagy. An architect, Gropius headed the Bauhaus until 1927. It was then led by Hannes Meyer until 1930. Finally, Ludwig Mies van der Rohe served as architect-director until the school was closed by the Nazi regime in 1933. The faculty and students were scattered; some emigrated to the United States, taking with them the spirit of the Bauhaus, ideas about design education, and the impact design could (and some would say should) have on society (Hubbard).

Heavily influenced by modernism, Bauhaus style is notable for its lack of ornamentation and focus on harmony between function and form, also known as the International Style. The Bauhaus aim was to unify arts, crafts, and technology. This approach had a widespread impact on art, architecture, typography, and graphic, interior, and industrial design (Wolfe).

Gropius was able to leave Germany in 1934, supposedly for a temporary, work-related visit to Britain, but he did not return home. Instead, he worked in Britain as part of the Isokon group until 1937, when he moved to the United States. By then, the Bauhaus had been widely publicized.

In 1937, the Museum of Modern Art published an edition of Gropius' treatise, The New Architecture and the Bauhaus. The preface by Joseph Hudnut, newly appointed dean of Harvard's School of Design, was hardly less remarkable than the book itself. Writing with considerable foresight, Hudnut described a civilization "incessantly and tumultuously transformed by the triumphs of science" (Cuff 32) and hailed the pivotal role of the Bauhaus in the development of an art appropriate to that technical civilization. Commenting that "the construction of these buildings [the Bauhaus] assured, I believe, the triumph of modern architecture," he concluded, "we have learned at the Bauhaus how our process of education may be addressed to this coming" (Cuff 32). Within a year, Gropius had joined Hudnut at Harvard. The tumultuous changes Gropius had perceived and addressed in his treatise and the Bauhaus approach to design began to transform American design education (Williamson).

In no part of the curriculum were the changes more significant than in the introductory courses, or to use Gropius' term, the "Foundation Course." Gropius and his contemporaries were absolutely determined to find alternatives to the "Analytique," the practice of drawing from casts, and other paraphernalia, that was central to the beginning courses at the time. In this approach, students were charged to make "beautiful" solutions to studio projects (design programs/problems) using physical elements from historical structures or artifacts that were also considered beautiful. Gropius and his contemporaries insisted that alternatives were essential, because they believed the practice of drawing on these traditional and time-worn

“devices” was both culturally biased and an impediment to creative development. In this, they were surely correct, but what is most interesting in the circumstance is what they decided to change and what they decided to keep (Pulos).

Unlike the L’Ecole des Beaux Arts, the French school for artists that determined almost entirely the way art and related disciplines were taught and critiqued, the Bauhaus chose to involve students in composition from the earliest moments of their training. This decision required some simplification of the design process to bring it within the capabilities of beginners.

Because designers generally face only two fundamental questions: *What to do?* and *How to do it?*, the most obvious simplification is to tackle first one and then the other. In the “Analytique,” the Beaux Arts student was assigned elements, usually of classic origin (such as columns, globes, or pedestals), and challenged to apply them in some simple situation as imaginatively and elegantly as possible. Gropius accepted this principle of beginning study; it was the use of classical elements he could not tolerate. In their place, he substituted the vocabulary of the mathematician: point, line, and plane. Instead of the classical orders for columns (Doric, Ionic, and Corinthian), he used formulae from geometry to guide the students’ design inquiry (Pulos).

One of the characteristics of contemporary design education that has evolved from this initial shift in approach is the belief that students truly understand only what they discover for themselves. The vocabulary of point, line, and plane allows a vast arena for discovery, one not limited by traditional solutions (Wolfe).

Brief Overview of Interior Design

The decorative arts and interior decoration have been elements of material culture for centuries, virtually as long as humans have inhabited enclosed space. Interior decoration as an independent commercial occupation, however, is really a modern development beginning in the late nineteenth century, with the use of the expression “interior designer” to describe a person who provided space planning, finishes (such as wall covering), and counsel on furniture selection for a fee. Until then, homeowners had taken the lead in making these choices for residences, depending on tradespeople to provide the necessary goods and, often, the requisite advice the homeowner desired. This is nowhere so clearly illustrated as in the education of “interior decorators,” which took place in American colleges and universities in home economics departments until the 1960s (Cuff 38).

In commercial spaces, these services were usually performed or secured by the architect. For nearly half a century in America, building interiors were a result of a haphazard conjunction of ideas, tastes, experiences, and disciplines supplied by architects, decorators, craftspeople, and merchants, with the role of the interior designer slowly becoming more defined, until there was a shift to professional stature, which started to develop in the early to mid 1940s (Ferebee 87).

Interior Design and Related Disciplines in Practice

The term interior design has come to describe a group of related projects that are involved in making any interior space into an effective setting for whatever range

of human activities are to take place there. The term is also used as the name of the profession that concerns itself with these matters, but that profession is not as clearly defined as the professions of the lawyer or physician, partly because of the requirements of commercial interior design in the kinds of buildings that have developed to shelter and accommodate public and private sector business during the late twentieth century. Many people in differing occupations may contribute to the interior design of large and complex spaces.

Professional interior design projects can be divided into two broad categories: residential and contract design. Each of these has its own character. Some designers work in both areas, but most choose to concentrate in one category or the other.

Residential design is concerned with projects that aim to accommodate all the functions of individual, shared, and family living spaces (that can sometimes include work in a home office). These projects are generally influenced and often directed by the people who will live in them. Even speculative residential development utilizes design based on the lifestyles of people expected to live in the spaces. These projects tend to be more modest in both budget and in the amount of interior square footage than commercial projects. Even a large residence or multi-family apartment building is usually within the scope of an individual designer, or a small firm.

Contract design refers to commercial and institutional projects, which tend to generate larger projects by area and dollar value, with clients ranging from individuals to large corporations or institutions. Usually less personal in their needs and demands, these projects are most often designed for organizations large enough

to be represented by committees or by various individuals sharing management roles; these multi-person decision-making bodies increase the challenges of interpretation in client/designer communications. Turning over commercial design projects to a management committee is a phenomenon that grew to widespread acceptance in the last three decades of the twentieth century. Even in the 1960s, it was not uncommon for corporate chief executive officers or company founders to be closely involved in the entire design process. In the early twenty-first century, public and shareholder scrutiny and corporate custom discourage such close personal design supervision.

In all disciplines of design, specialization has developed, although larger design firms do often manage a varied range of project types. The size of contract design projects, their long duration, and the large fees involved make this kind of work more attractive to larger design firms. It is in the area of contract design, which involves design problems of public spaces for hotels, restaurants, schools, hospitals, and corporate offices, that professionalism has evolved.

Until the 1980s, the practice of interior design in America was not controlled by any legal restrictions. However, state laws establishing regulations similar to those in effect for other professions, requiring the professional interior designer to meet some standards of competence, are on the increase. Except where such new regulation has been adopted, anyone is free to design interiors and even to establish a professional business in the field without any qualifications beyond the necessary level of self-confidence. Other professions, such as medicine and law, also were practiced that way at one time, but they became professionally regulated long enough

ago that a time of unlicensed doctors or lawyers is mostly forgotten. Interior designers, however, were in this circumstance barely two decades ago, and many aspects of interior design can still be offered for hire by anyone who wishes to try to attract customers (Hildebrandt).

This situation contributes to the rather confusing nature of the field, in which many designers with varied backgrounds and with varied professional titles and competencies work on whatever projects they can secure and put under contract. The following list identifies the various professional titles in use in the field of interior design and defines what each title usually describes.

Interior Decorator

This is the designation most widely used and understood by the general public today. The title, which gained currency in the late nineteenth and early twentieth centuries, applied to the large group of designers who were specialists in putting together interiors in the various traditional styles (Colonial, Louis XIV, XV, or XVI, Tudor, Georgian, or even “modernistic,” for example) that became popular to imitate. The term implies a focus on the decorative, ornamental, and movable aspects of interior design, color, furniture, rugs/carpet, drapery, and the fixed details of moldings, paneling, and similar small elements that can be introduced into an existing space with relative ease.

Many decorators were also dealers in the elements used in interiors, buying and reselling furniture and rugs and contracting for whatever on-site work needed to

be done to pull together a finished project. This latter practice called into question the decorator's status as an independent professional, and with a decline in the emphasis on traditional stylistic work, the term has tended to take on some pejorative implications for commercial work. At best, a decorator can produce work of top quality, but self-appointed decorators who may simply be painting contractors or salespeople in drapery outlets have discouraged others from using the term. Most decorators now prefer to call themselves interior designers, although it is more accurate to reserve that term for work approached in a somewhat different way.

Interior Designer

This term describes a professional(ized) approach to interiors that puts more emphasis on basic planning and functional design than the word "decoration" implies. The term "interior designer" refers to designers who address the basic organization of spaces, lay out room arrangements, and manage technical issues (such as lighting and acoustics), much as architects design entire buildings. In the United States, where the use of the title "architect" as well as the practice of architecture is legally limited (as described below), the term *interior designer* has become the accepted term for this type of parallel practice. Interior designers may work as individuals, in partnerships, or in firms that grow quite large. These larger firms tend to work on larger projects in commercial, institutional, and office projects. The term contract design is also used for this type of practice. It refers to the fact that components and construction work are arranged for under contracts, not simply bought at retail.

Space Planner

Firms providing space planning and office planning have surfaced in the past two decades to handle the development of large corporate and institutional offices that fill whole floors, many floors, or entire buildings as tenants rather than owner-users of the buildings. Since office buildings are usually constructed as floors of open, undivided space, layout planning becomes an important first step in their design. Space and office planners also provide interior design (or decoration) services.

In addition to these professionals who specialize in interior design, several other design professions overlap the interior design field, sometimes providing interior design.

Architect

An architect must have formal training and experience and must pass a qualification examination leading to registration, a type of license to practice architecture. Trained in basic building construction and design, architects are prepared to design buildings from the foundation up. In many cases, the architect's design includes many interior elements: room shapes, door and window locations, details and selection of materials, and such elements as lighting, heating and air-conditioning, plumbing, and related fixtures.

Formerly, architects provided fairly complete interior design, sometimes stopping short of furniture and decorative elements and sometimes, and in some notable instances, including these as well. In modern practice, architects may design some buildings as shells (speculative office buildings, for example), leaving the interior design to others. In other situations – a museum, church, or school, for example – they often provide complete interior design. Some architectural offices accomplish this by including within the larger organization interior design departments that are essentially complete interior design firms themselves.

Industrial Designer

Industrial designers or design firms specializing in industrially manufactured objects typically work on the design of products, such as appliances, furniture, machinery, automobiles, exhibits, and packaging. Some products of industrial design, such as furniture, hardware, and light fixtures, become elements used in interior design. Since industrial designers also deal with the interiors of automobiles, ships, and aircraft, many go further to design shops, restaurants, and similar projects. Exhibition design, for museums or commercial purposes, although sometimes considered a specialized type of interior design, often comes within the jurisdiction of industrial designers.

Engineers (Structural, Mechanical, and Electrical)

In addition to the professionals involved in interior design described above, a number of specialists may make contributions to interior design projects in specific, limited ways. Although architects can and do undertake complete interior design assignments, engineers more often participate in the work of interior designers as consultants. This occurs when an interior project involves structural changes (such as moving a load-bearing wall), or when the technical problems extend beyond the scope of the interior designer's training. Both architects and interior designers turn to the still more specialized professional skills of engineers to manage complex and extensive technical issues.

Among the many areas of specialization, engineers are concerned with the structural and mechanical engineering of buildings. Structural engineering is required for larger buildings with complex framing, typically of steel or concrete, in contemporary construction. Mechanical engineering deals with the plumbing and electrical systems of buildings: heating, ventilating, and air-conditioning systems (HVAC), and such elements as elevators and escalators. Lighting, acoustical, food service, and signage/graphics are all areas of design specialty that may relate to engineering, architecture, or industrial design and affect the interior design project.

Legal restrictions in many localities call for filing plans with a municipal building department to secure a building permit. These plans must bear the seal of an architect or engineer to assure that a licensed professional is taking responsibility for

the project and its design compliance with all legal requirements such as building codes and ordinances.

The interior designer may retain an architect or engineer to deal with these matters since none of the current licensing laws pertaining to interior designers include “sealing” privileges, the affixing to design documents the emblem of a state’s licensure, or regulation of professional status. Such privileges are provided through professional licensing to architects and engineers and allow them to place an embossed seal on documents they have produced signifying that the design work was done under the supervision of an appropriately licensed individual and may therefore be considered for issuance of a building permit for construction. Without this privilege, work executed solely by an unlicensed individual cannot be issued a permit for construction.

1945-1970: The Profession of Interior Design Established

In recent years, the long-developing trend toward greater professionalism in interior design has become even clearer. This may make the field more serious and demanding, but it seems to be an inevitable response to the complex expectations of the technologically enhanced world, especially the workplace. The identification of the field with the amateurism of the eighteenth century and the craft traditions that stretch back into the distant past has largely broken down.

At one time, amateurs might be craftspersons or designers, led by gifts and passion that developed a sufficient level of skill to practice. For example, Thomas

Jefferson at Monticello and Lord Burlington at Chiswick were their own interior designers. Lord Burlington (1694-1753), was a distinguished amateur architect and important patron of the decorative arts who became the acknowledged arbiter of taste in Palladian England. At Chiswick he added to his Jacobean mansion (since destroyed) a smaller version of the Rotonda, Chiswick House. The plan has two suites of apartments around an octagonal domed saloon. The sequence of variously shaped rooms, round, octagonal and apsidal-ended, reappears at Holkham Hall, Norfolk, and influenced other architects (Fletcher 1044).

Chippendale, Sheraton, and the Adam brothers were cabinet makers, upholsterers, and, in the case of the latter, what would now be called contractors, as well as designers (Hildebrandt 80). In the late nineteenth and early twentieth centuries, many well-known interior designers were simply self-taught amateurs who decided to become interior designers more on the basis of fashion and taste than technical preparation as professionals. The legendary Elsie de Wolfe is a twentieth century example (Abercrombie 146). While this still happens occasionally, professional training is now the norm.

Interior design provides an excellent model for examining the nature of professionalism and professionalization because its inception as an occupation is contemporary with the social and economic developments supporting the rise of professions. Medicine and law provide early historical bases for, and examples of, the characteristic elements typical to professions generally. But engineering provides perhaps the best model of professionalism and professionalization connected to

industrialization and modern corporate capitalism, and therefore, to the workplace because it is the model that architecture and subsequently interior design have followed. It is a straightforward, somewhat empirical model that relies on three essential components 1. Elements of transferable knowledge through formal education 2. Professional association(s) providing collective membership based on set criteria of achievement and 3. Legislated licensing for practice and use of the title (Abbott).

The relationship between architecture and the engineering disciplines related to buildings can be characterized as one that is both a symbiotic and a dominant/subordinate relationship. Architecture and these engineering disciplines are completely interdependent within the process of the design decision-making throughout a building project. However, in the business relationship with the client/owner, one disciplinary expert, typically the architect, has the prime contractual relationship and the other (the engineer) is then a sub-contractor (or subordinate). This same type of relationship exists between architecture and interior design; interior design, however, is further distinguished by being the most recently professionalized of these three (including engineering). In addition, much as the practice of nursing historically relates to the practice of medicine, with more women serving as nurses, subordinate to physicians who are men, a gendered aspect exists in the relationship between interior design and architecture. More women than men historically have populated interior design and have usually worked as subordinates to men, who have dominated the practice of architecture.

The process of professionalization is gradual. Herbalists were healers for centuries as they gradually became merchants who compounded medications and eventually a profession developed, which licensed pharmacists. Occasionally, in this gradual development over time in any discipline, the work of one organization or even one person can signal a profound shift. Such a definitive shift from “interior decoration” toward interior design as a professional activity occurred in 1945 when Florence Schust created the Planning Unit at the furniture manufacturing company Knoll. This Planning Unit, founded as a division of Knoll, provided to clients for the first time a design service separate from the acquisition of furniture as merchandise. This distinction made it possible for interior designers to provide only consulting “design” service which creates a fundamental basis in the occupation from which professionalization/professionalism can evolve.

Reflecting on the shift (that at that time was simply a set of decisions related to the work at hand), almost fifty years later, Florence Knoll Bassett by then had recognized that her work shook up the design status quo and signaled a different approach to interiors, one that mixed what had been traditionally kept separate – architecture and interior decoration – before. In an interview in 2001, Mrs. Bassett reflected

The traditional layout was the absolute norm when I started designing offices. They had a big box in the middle of the room. They had a table behind it, and it was always full of stuff. ‘That doesn’t make sense,’ I said. ‘We should make the storage behind and make the front a table.’ That’s how it got started. I was architecturally trained to think

logically about space.... In those days the boss usually had a decorator. They did his office and maybe some of the other senior executives, but the people further down the line had offices designed by the purchasing agent, who ordered furniture out of a catalog. So when I came along with my questionnaire, I wanted to know what they needed. It was kind of a radical ideal, but it was also logical and obvious (Makovsky, *Shu U 97*).

Separating design services from the simple acquisition of furniture is an important distinction, but even more important is the philosophy that Florence Schust Knoll brought to the activity of interior design provided by the Planning Unit. Her work was always a synthesis of three design disciplines – architecture, industrial design, and interior decoration. In combination and applied to the commercial office workplace, that kind of endeavor became interior design, and it is the synthesized activity that has become increasingly professionalized.

The formative influences of Florence Schust's early design experience and education in concert with her professional experiences in practice and business with Knoll founder, Hans Knoll, whom she married, provide exceptional insight into the character and culture of interior design education, practice, and professional stature in America today.

Interior decoration was an occupation previously perceived as most appropriately applied to the home, and most particularly belonged to the domain of women as homemakers. But Florence Schust was educated in architecture by some of the foremost designers of the early twentieth century. She fully expected to be

working in a professional business setting, solving with her work not only the design problem at hand, but by extension and influence other conceptual and applied design issues. Under her guidance, the Knoll Planning Unit created a model for interior design that is still the basis for workplace design today (Rae *Knoll au Louvre* 115).

Chapter 2

An Unstoppable Combination: Florence Schust and Hans Knoll

Each one a talented and charismatic person, Florence Schust and Hans Knoll would no doubt have been successful in whatever they might have pursued singly. But their partnership, as described in a World Architecture magazine article in 1990 by Sylvia Katz and Jeremy Meyerson, created “an unstoppable combination of entrepreneurial genius and design intelligence” (Knoll Bassett Collection, box 1, folder 2). Their collaboration made them the “it” couple of design during their lives together, developed a company still in business nearly 70 years later, defined the look of modernism in American interior design, and provided a platform from which Florence Knoll would launch the Planning Unit approach that influenced the ways people have accomplished much of the work performed in offices since the mid-twentieth century. Maeve Slavin , one observer who knew them, sums it up in the Encyclopedia of Architecture:

Hans and Florence Knoll met and married as a new chapter in history opened with the end of World War II. A ‘better world’ was to be shaped by ‘good design’ and the Knolls were in the vanguard of that excitement (Knoll Bassett Collection, box 1, folder 2).

They clearly shared a blazing passion, even though their personal lives together are almost undocumented, likely reflecting the personal reserve noted by almost everyone who ever interviewed or worked for Florence Schust Knoll Bassett, including Slavin who also noted, “She is a woman who will discuss furniture and design and her life as professional but not her personal life or lifestyle” (Knoll Bassett Collection, box 1, folder 2). The passion evident to the world was the Knolls’ shared love for design.

Florence Schust Knoll Bassett

Florence Margaret Schust was born in Saginaw, Michigan on May 24, 1917, the only child of an engineer, Frederick E. Schust, president of The Schust Company, and Mina M. Schust, his wife. Frederick Schust had immigrated to the United States from Switzerland as a young man, and while studying engineering, he met his wife at college. As a small girl, she recalled many years later, Florence had an enormous sandbox “which was my whole world as a child” and she built castles in it (Knoll Bassett Collection, box 1, folder 2). By 1930, Mina Schust was widowed and she died shortly after. Their daughter Florence was orphaned at age 12 and became the ward of a bank; the bank’s president, Emile Tessin, was Florence’s legal guardian. Her future was changed by her education at the Kingswood School from 1932-1934, as Schust described in her own introductory notes to the personal files now stored in the Archives of American Art at the Smithsonian:

After [my mother's] death arrangements were made for me to go to boarding school, and I was given the opportunity to make the selection. I had heard of Kingswood, and we went to check it out. I was enthralled by its unique beauty and made an immediate decision that it was the right place for me. As a result my interest in design and future career began there (Knoll Bassett Collection, box 1, folder 1).

Kingswood was part of the Cranbrook Academy in the Cranbrook community, founded by George Booth, a prosperous Michigan newspaper publisher who had been influenced by the ideals of William Morris, an English designer, craftsman, poet, and early socialist, whose designs for furniture, fabrics, stained glass, wallpaper, and other decorative arts generated the Arts and Crafts movement in England and revolutionized Victorian taste. In 1904, Booth purchased a large expanse of land in Bloomfield Hills, a rural township outside of Detroit, as a place to raise his five children, and in 1907 he moved there from Detroit into a house he named Cranbrook House, designed by a fledging architect, Albert Kahn. Other structures followed on the several hundred acre estate, beginning with a Greek theatre, the first sign that an arts community would develop there. As a founder of the Detroit Arts and Crafts Society, supporter of the University of Michigan's architecture program, and donor to museum collections, Booth, along with his wife, was committed to strengthening Michigan's cultural enterprises.

The Bloomfield Hills School was opened for elementary school students in 1922, the same year that Finnish architect Eliel Saarinen finished runner-up in the international Chicago Tribune Tower competition. In 1923, Saarinen and his family

traveled to America, where he worked on the Chicago lakefront development project and also became a visiting professor at the University of Michigan, teaching an advanced studio limited to a small number of students. One of these was Booth's son, Henry, like his parents a lover of the arts, and he introduced Saarinen to his father in 1924, shortly before Saarinen planned to return to his home in Finland. George Booth talked of his long-cherished dream of creating an educational community at Cranbrook and captured the imagination of Saarinen, who agreed to bring his wife Loja and their children to Bloomfield Hills so that Saarinen could help realize the Cranbrook dream as an architect and instructor. In 1924, Saarinen embarked on drawing up the plans for the Cranbrook Academy of Art. Christ Church Cranbrook was constructed in 1925. Over the next two decades, Saarinen and his assistants developed the Cranbrook Community; the Cranbrook School for Boys was completed in 1929, and the Kingswood School for Girls was finished not long after (Feily 20).

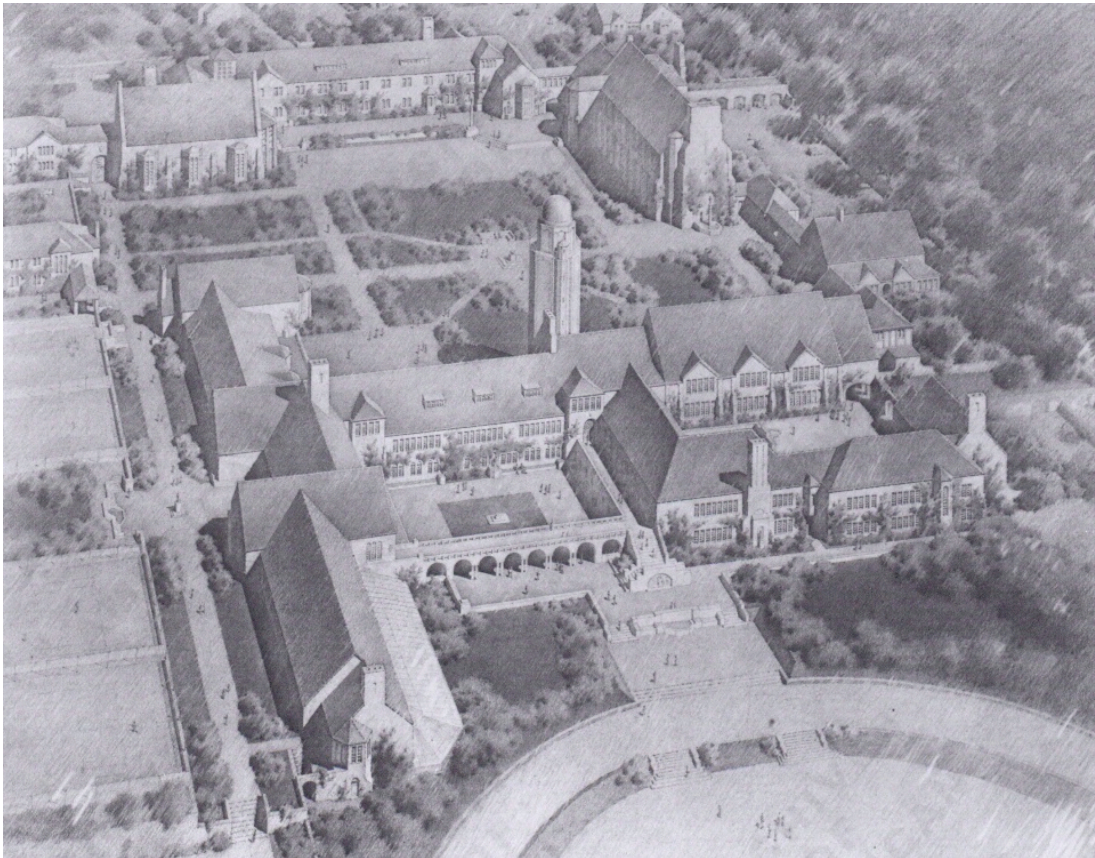


Fig. 1. A drawing by Eliel Saarinen of the Cranbrook campus (Knoll Bassett Collection, box 3, folder 1, slide 5).

In 1927, Booth established the Cranbrook Foundation and decided to construct an academy for arts and crafts. The courses planned for the institution, which Booth modeled on the American Academy in Rome, included architecture, design, decoration, drawing, painting, sculpture, drama, landscape design, and music. Plans were also drawn up for a crafts studio for crafts including cabinetmaking and textiles, library, and museum. The instructors for the studios were nominated in a manner similar to that adopted with the Meister (master craftsmen) at the Bauhaus, and included such artists as Tor Berglund (cabinetmaking), John C. Burnett (ironwork),

Jean Eschman (bookbinding), David Evans (sculpture), Arthur Nevill Kirk (silverwork), Henry P. Roberts (printing), and Maja Andersson (weaving).

In 1932, the year Florence Schust entered Kingswood, Eliel Saarinen was appointed director of the foundation. Florence, who came to be known at Kingswood in familiar circles as Shu, a nickname she kept as an adult, became a protégé of Eliel Saarinen and his family. Introduced to Saarinen by her mentor, the Kingswood art director Rachel de Wolfe Raseman, Schust was welcomed by the active family. Rachel Raseman was herself an architect and the first woman to earn a degree in architecture from Cornell. Raseman encouraged Shu, allowing the child to trace a house she was designing and Florence Schust later recalled, “then she let me design my own house – with a T-square and a drawing board. The school janitor built the house. He was my contractor” (Knoll Bassett Collection, box 1, folder 2).

The intellectual life of the Saarinen household was full, and Florence Schust was active in it, undoubtedly participating in many discussions of architecture and the arts and meeting many of the period’s most creative minds. Schust socialized with the Saarinens and traveled with them extensively, as she recalls in her personal papers:

Life with the Saarinens was not just work. In spite of their Scandinavian reserve, they had a great sense of fun and had amusing friends and gave lively dinner parties We made interesting trips in Finland and then on the Continent at the end of each summer. In the thirties travel was slow by boat or train. The advantage was a leisurely trip through the unexplored countryside of countries like Estonia, Latvia and Lithuania on our way to visit the Saarinens’ friends in Hungary (Knoll Bassett Collection, box 1, folder 1).

The Saarinens expanded Schust's horizons with extensive European travel and challenging intellectual discourse, but they also offered her the safety of a welcoming home environment, otherwise lacking in Schust's orphaned boarding school existence. Eliel Saarinen, realizing her potential, arranged special meetings where he took the time to instruct her personally while she was still at Kingswood. Saarinen's approach to Schust's studies in architecture in many ways paralleled the approach of Walter Gropius and the Bauhaus, where all the design disciplines were viewed as important to the study of architecture. Cranbrook designers were interested in every discipline from weaving, pottery, and furniture to architecture and city planning.

Young Shu was treated by Eliel Saarinen and his wife Loja as if she were their adopted daughter. She also received a great deal of good advice from their son, Eero Saarinen, who was seven years older than she. Together with the influence on Florence Schust of the Saarinen family, the Cranbrook experience clearly began the evolution of what would later become the Knoll company's design philosophy, with its appreciation for craft, superior design, and elegant simplicity.

In 1935, Florence left Cranbrook to study at the Columbia University School of Architecture, as a special student in the Town Planning program (Tigerman 61). In the fall of 1936, she returned to Michigan for surgery and upon recovery enrolled again in the architecture course at Cranbrook. Traveling with the Saarinens in 1938, she was at their home outside Helsinki, she recalled, and "Alvar Aalto was there for lunch one day and he said 'I just came back from London and I think the

Architectural Association is a terrific school” (Makovsky *Shu U* 122). She enrolled in the AA in 1938 but was forced to return to the United States at the beginning of World War II in 1939. Florence Schust rarely mentioned her training at AA, but a single surviving drawing reveals extensive use of glass and industrial materials, asymmetry, and geometric forms, tenets of modernism that presage the direction of the rest of her career (Tigerman 62).



Fig. 2. View from Garden', design for a house, Florence Schust, 1939 (Cranbrook Archives #5467-3).

Back in the United States in 1939, Schust could not find a job in New York and called Marcel Breuer, who was partnered in an architectural practice with Walter Gropius to ask for work as an unpaid apprentice in his office in Cambridge, Massachusetts (Tigerman 63). Breuer was also teaching at Harvard with Gropius

during this period, and in the course of her apprenticeship he recommended that she complete her architectural studies at the Illinois Institute of Technology, Chicago (IIT). She completed her Bachelor of Architecture degree in 1941 at IIT. She later said, “When the war broke out, I came back from Europe. I hadn’t finished my education. I heard that Mies [van der Rohe] was out there so I went to see him” (Makovsky *Shu U 122*).

She’d had experience with two former Bauhaus leaders, Gropius and Breuer, and admired the Bauhaus approach, so similar in many ways to Cranbrook. Ludwig Mies van der Rohe was a former director of the Bauhaus following Gropius’ departure, and at IIT he had implemented a curriculum very much influenced by the egalitarian environment and the pedagogic philosophy of the Bauhaus (Achilles 56). The distinctive difference at the Bauhaus had been the dominance of architecture as the design discipline over all others, but Schust’s background had brought her the benefit of a balanced approach. She graduated with a BS in architecture in 1941 and always remembered Mies – who later designed for Knoll – as an important mentor. She said of him that he had “a profound effect on my design approach and the clarification of design” (Knoll Bassett Collection, box 1, folder 1).

After she graduated, Schust worked as an architect in New York for Wallace K. Harrison (Harrison & Abramovitz), where she was assigned mostly interiors work. In 1943, looking for furniture pieces for a project, she met a young furniture salesman, Hans Knoll, most likely introduced by Harrison, who was using furniture from Knoll in interiors for his clients. Soon after, Florence Schust began

moonlighting for Hans Knoll, helping design his first showroom. They married in 1946, and she became a full partner in the company, renamed Knoll Associates.

Hans Knoll

Hans Knoll, the founder of the Knoll Furniture Company in the United States, was born in the German town of Stuttgart on May 8, 1914. His father Walter was the eldest son of Wilhelm Knoll, who ran a furniture workshop in Stuttgart. Walter Knoll was friendly with designers, including Walter Gropius, Marcel Breuer, and Mies van der Rohe, and at the 1932 New German Architectural Arts Exhibition in Japan, he displayed some tubular furniture that revealed him as one of the pioneers of modern furniture production.

Hans Knoll's grandfather, Wilhelm Knoll (1839-1907), had been a merchant in Wurttemberg who was a purveyor of leather goods and craft products to the Wurttemberg royal family. Until 1917, Stuttgart was the seat of the Wurttemberg royal family, and at that time, the main industrial products were furniture and leather goods. The industrialization of the leather business accelerated in the last two decades of the nineteenth century; the period was an extremely affluent one and the Knoll family was prosperous. The Knoll household observed a family rule that when the children became adults, they had to travel alone to a foreign country, where they were to study and gain work experience, getting by entirely on their own resources. In 1897, Hans' father, Walter Knoll (1876-1971), then 23, traveled to the United States and worked for an import company. He went to America again in 1901, staying there

for six years, and managing a company that dealt with the import of leather processing equipment. Following the death of his father Wilhelm in 1907, Walter returned to his homeland and co-managed the family company with his younger brother, Willy Knoll (1878-1954). In 1925, however, he entrusted Willy with running the affairs of their father's company, and founded his own business in Stuttgart under the name "Walter Knoll Company."

Hans' uncle Willy had studied leather in Switzerland and, after returning to Germany in 1898, joined his father's company as a leather expert. Hans' grandfather Wilhelm's company at first produced leather for furniture such as sofas, and exported their products to France, Holland, Belgium, and Russia. In the 1890s, they manufactured Renaissance-style leather-covered chairs and in due course, Willy produced his original club chair, which was a resounding success.

Hans' father, Walter, established his own furniture company at the age of 49. Instead of turning out the handcrafted club chairs produced by his brother Willy, Walter considered the question of what chairs could be manufactured in large volumes and how the mass-production processes could be implemented. In addition, he attached greater importance to textiles than to leather. He was greatly interested in the tubular steel furniture that was being designed and developed at the Bauhaus around that time by Marcel Breuer and Mart Stam, and he took the initiative ahead of other companies in producing steel furniture. His company's first name was "Polster Mobil Fabrik" ("Upholstery Furniture Factory"). As the name implied, the company manufactured fabric-covered steel furniture. Another factor that greatly influenced his

ideas in this field was the Weissenhof Housing Exhibition held in Stuttgart in 1927, which focused on the work of Mies van der Rohe, and featured a total of sixteen architects, including Le Corbusier, Gropius, and others (Pommer and Otto).

The structures that housed the exhibition had clean lines, flat roofs, and shining white facades. Inside these was newly-designed chrome-plated furniture. The exhibition was of great importance to both Hans' father Walter, who had only just started his business, but also to 13-year-old Hans himself, who already had shown a voracious appetite for knowledge and interest in the furniture business. Indeed, the exhibition was to prove a dominant influence over the rest of his life.

Like his father, Hans was endowed with an enterprising and independent spirit, and he went to study alone in Britain and Switzerland. In Britain, he formed a design company under the name of "Plan Ltd." In 1937, Hans emigrated to the United States. A year later, and only thirteen years after his father Walter had established his own company, Hans formed the "Hans G. Knoll Furniture Company." He was 24 years old. The office was established on East 72nd Street and was known as "Factory No. 1." His plan was to introduce furniture that would give architects opportunities for "liberating design from the false and the showy" (Heythum 1). A German commentator, reflecting on Hans Knoll's achievements, said:

He was a practical man, not a theorist; an organizer rather than a fighter and so he began to introduce into the New World the still unpopular ideas of functional design. Without hesitation, but not without careful preparation and planning, he manufactured several models of chairs, which he considered well thought-out technically as

well as esthetically, and the production of which was economical (Heythum 1).

Florence Schust later recalled that the first product that Hans made at Factory No. 1 was a chair in a design that he had brought from Germany. In the beginning, most of the Knoll Furniture Company designs had been created by Jens Risom, a Danish designer, and the company was early linked with his Scandinavian line that favored wood furniture. In 1945, Hans formed a manufacturing base at Pennsberg, Pennsylvania, near Quakertown, where there were many skilled craftsmen of German descent. In the early 1950s, the Knoll company moved to the present factory site at East Greenville, Pennsylvania. Celebrated furniture designer Richard Schultz, who came to work for the Knolls in 1950, recalled the early Pennsylvania years: “When they [the Knoll company] first came here, the workers almost all spoke Pennsylvania Dutch. It was a dialect like parts of southern Germany and Hans liked that because he had been raised in Stuttgart.” (Richard Schultz, author interview, 16 April 2004).

Hans’ legacy of craft and design served him well as the company’s commissions began quickly to shift from residential to larger commercial projects and he tackled the manufacturing challenges of producing original designs in sufficient quantity at appropriate cost for contract work. In order to produce complex designs, he created models by hand and then considered how to reduce the price by means of mass production. Something of a pioneer in the field of industrial design, Hans Knoll integrated industrial art and production, as was foreseen by Gropius, Breuer, and others at the Bauhaus, and put it into practice.

Hans liked and used the expressions “the Bauhaus approach” and “the Bauhaus idea.” The philosophy underlying these terms was given a concrete form by the advertisements put out for Knoll around this time. The advertisements designed by Alvin Lustig for Risom chairs appealed to consumers with the claim that the chairs possessed the three characteristics of “form, structure [and] economy” (Knoll Bassett Collection, box 3, folder 7). In addition, they set out the firm’s corporate philosophy regarding the importance of consumers by stating that “to improve design, to perfect craftsmanship, and to lower costs is our constant aim” (Knoll Bassett Collection, box 3, folder 7).

Hans tried to realize the Bauhaus philosophy of utilizing industrial means to economically produce superior designs. An advertisement released in 1945 placed emphasis on the low cost, together with an explanation of the reasons for the moderate price.

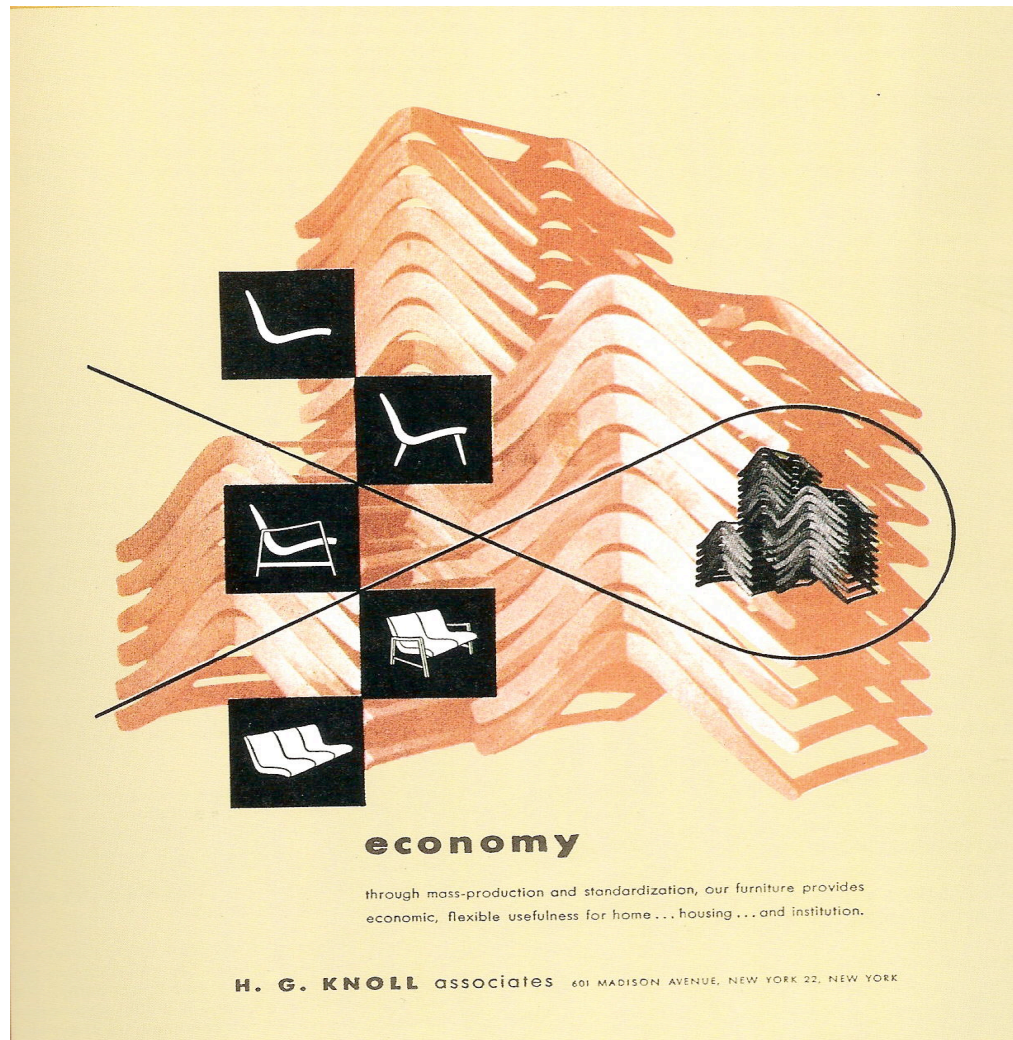


Fig. 3. Knoll advertisement referring to ideas similar to those from the Bauhaus (Izutsu 65).

In the advertisement, which echoes the Bauhaus philosophy that good design should be the most economical alternative, the word “economy” is printed below a picture showing how various legs can be attached to a single standardized, mass-produced frame in order to produce different chairs. This is followed by the assertion that “through mass-production and standardization, our furniture provides economic, flexible usefulness for home. . . housing. . . and institution” (Izutsu 65).

Hans reproduced about twenty distinguished avant-garde designs, some of which were revivals of products such as Mies van der Rohe's Barcelona chair of 1929.



Fig. 4. The "Barcelona Chair" designed by Mies van der Rohe for the German Pavilion at the 1929 Barcelona Exposition (Rouland and Rouland 80).

At the beginning, the designs were simple with a plain sturdiness and an emphasis on low-price products. However, many furniture manufacturers started to steal designs and copy them, and so Hans began to produce more complex tooled items that were difficult to duplicate (Knoll Bassett Collection, box 3, folder 1).

In 1946, Florence Schust and Hans Knoll married and reshaped the company as Knoll Associates, with Florence as equal partner. Since the beginning of their relationship, her design aesthetic had increasingly influenced Hans, encouraging his interest in furniture that reflected the machine and industrial design (Knoll Bassett Collection, box 3, folder 1). Between the two of them, the young couple knew an astonishing number of the century's premier design talents.

Still in contact with people from her Cranbrook years, Shu introduced Hans to Eero Saarinen and to Harry Bertioia. Saarinen was the son of Eiel and Loja and was following in his father's footsteps as an architect with a strong foundation in broad-based design including, most importantly, furniture design. Bertioia was a sculptor most interested in the potential of material and form, although through his parallel acquaintance with Charles and Rae Eames he explored furniture design as well. Hans knew not only designers, but influential businessmen, such as the eminent journalist Howard Meyers who had met Hans and Jens Risom in 1941 and, a Hans Knoll biographer reported, "became attached to them as if he were their godfather and introduced them to many good clients" (Izutsu 93).



Fig. 5. Hans Knoll and Florence Schust Knoll in an undated photograph (Knoll Bassett Collection, box 1, folder 1).

The marriage of Florence's design circle of influence with Hans' business circle created a center of gravity for the new Knoll Associates company. They hired some design talent and contracted with more in relationships described as "genial patronage" (Izutsu 97) that nurtured some of the best furniture and textile design talents of the twentieth century and quickly built a reputation and a book of business for Knoll.

There began with these alliances a period of stunning creativity and influence.

Richard Schultz recalled that in the 1950s:

That period at Knoll was like an ivory tower. There were no deadlines. You just made it. You worked on it until it was right. That was a time when there was close integration of production and design. Chairs came in as concepts. And then the work really started (Personal interview).

The early period of Knoll's technical growth had begun with Jens Risom (who soon left Knoll Associates and began to design for the Walter Knoll Company), and was characterized by Jens Risom and Ralph Rapson chairs for which interwoven jute straps were stapled to frames constructed of robust wood.

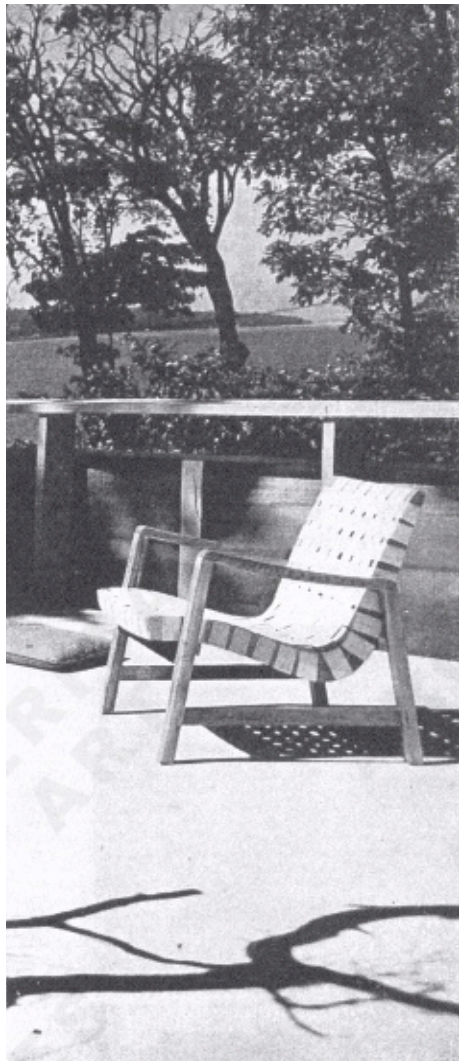


Fig. 6. A Jens Risom-designed chair (Knoll Bassett Collection, box 1, folder 2, slide 8).

Beginning in the mid-1940s, when Florence Knoll took over design direction for the company, the Knoll aesthetic changed. Florence Knoll's own furniture designs favored angular metal frames, with innovations in upholstery, the details of profile and contours, or welting, stitching, or buttoning techniques (Wilson 50). But other designers added other looks, still within a vocabulary of elegant simplicity of form married to comfort. The company introduced furniture that employed compound

curved plastic moulds, such as Eero Saarinen's iconic "Womb" chair (1946) and Harry Bertoia's eponymous wire chairs (1952).



Fig. 7. Eero Saarinen's Womb chair became such a design icon that it was featured in the 1962 Easter issue of the Saturday Evening Post. Through the lens of today's sensitivity this illustration appears ironic: Rockwell's idealized "mom" taking her brood to church while "dad lounges in a chair brought to market by a woman, the kind of professional woman Rockwell would not have painted (Knoll Bassett Collection, box 1, folder 3, slide 24).

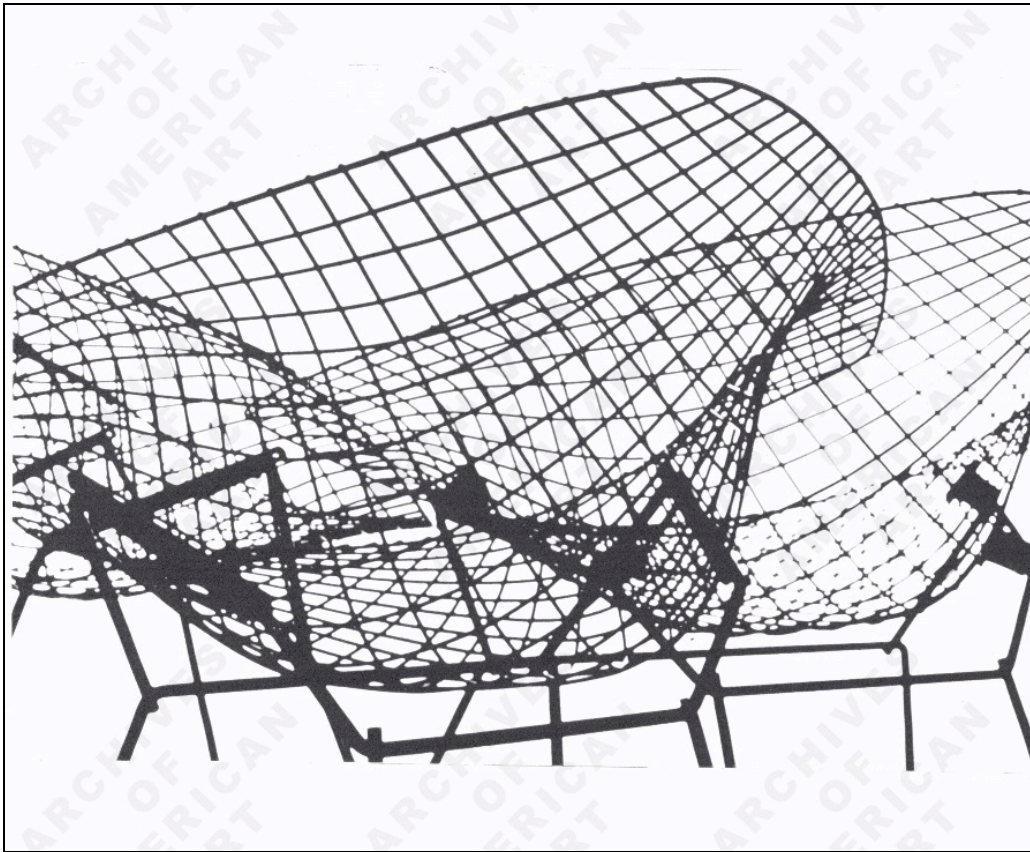


Fig. 8. Harry Bertoia's wire chairs (Knoll Bassett Collection, box 1, folder 1, slide 49).

These new forms required new ways of manufacturing with a resulting alliance of concept and production that became the hallmark of Knoll. “The wire furniture was very difficult to make,” recalled Richard Schultz.

It was like jewelry. It is very interesting to see those pieces, what they were designed to accomplish, why they have the shapes they do. If one wire is out of place, it stands out. So one of those pieces can't just be knocked out. It has to be made meticulously, like a piece of jewelry ... making those chairs is a good example of method being imposed by form (Schultz).

Hans Knoll's exceptional achievements from 1938 to 1945 were to establish design development and production systems that were based on intellectual teamwork, that could accomplish such demanding execution – and then sell the resulting pieces. Once the right team came together – the Knolls, their designers, and the craftsmen/producers – success came quickly.

Many fortunate circumstances combined to put Knoll Associates, after modest beginnings, on a solid basis. Among these ... were Hans Knoll's meeting his future wife, Florence; his encounter with Eero Saarinen, one of the most inventive and experiment-minded architects of the younger generation; and not the least his friendship with Herbert Matter, the highly talented Swiss photographer and graphic artist (Heythum 1).

Knoll Associates was helped considerably by the ways in which the Museum of Modern Art (MOMA) in New York steadily supported the work of Bauhaus artists who had moved to the United States, some of whom were long-time friends and colleagues of the Knolls. Numerous exhibitions and other efforts developed a base of public acceptance essential for the ideas of "modernism" in architecture and furniture design to take hold in America. Commenting on the achievements of Knoll internationally, and recognizing the close, necessary ties of production to design in the furniture the Knolls were putting into the marketplace, Charlotte Heythum writing in 1961 for Deutsche Bauzeitung, applauded, "it is to the credit of the Knoll group to have realized contemporary design for modern living and thought through a production program paralleling these novel concepts" (1).

The interest of MOMA in the “new architecture” may have helped generate the kind of attention for Knoll that led to the couple’s first significant interior design commission. There were a few “enlightened business men interested in trying out ideas that were very logical and based on good design,” remembered Florence Knoll years later, and one of them, Nelson Rockefeller, asked her to design a suite of modern offices for the Rockefeller family at 30 Rockefeller Plaza, “sort of starting at the top,” she said (Knoll Bassett Collection, box 1, folder 2). The project served as a springboard for other high-profile commissions. Once the Rockefeller offices “opened doors in all directions” (Knoll Bassett Collection, box 1, folder 2), the Knolls discovered extraordinary opportunities. Hans Knoll found a way to take advantage of “blocked funds” – American money that could only be spent in Europe following World War II. The State Department designated the dollars for housing staff of the U.S. Information Service, and Knoll, alongside a prefabricated house builder, won the contract to provide furnishings for 90 houses of civil servants in Germany. Florence Knoll designed all the interiors for the project: layout, furniture, colors, and fabrics. In December, 1951, the first German showroom and sales office of Knoll International opened in Stuttgart (Heythum 1).

To produce the Information Service project, the Knolls drove from Paris, to Milan to Stuttgart – confirming contacts as they went and setting up manufacturing opportunities for craftsmen in the war-racked countries of France, Italy, and Germany. Their design goals were so obviously exponents of European modernism that the Knolls, their work, and the work of the designers they already represented

earned quick acceptance. Soon, such names as Franco Albini of Italy and Le Corbusier of France joined Mies and Breuer as international architects designing for Knoll under royalty agreements (Knoll Bassett Collection, box 1, folder 2). By the end of the first year, Knoll International furniture was being manufactured in three countries: Germany, Italy, and the United States. Hans Knoll wanted to press on. Years later, Florence recalled those days, “He was the great empire builder” (Knoll Bassett Collection, box 1, folder 2). In the next few years, Knoll International had ten showrooms in Germany, along with licensees and showrooms that expanded the company’s global reach to 30 countries. Knoll International’s philosophy was to provide “large numbers of people with superior designs that would be industrially produced” (Knoll Bassett Collection, box 3, folder 7), so it was important for the company to aim not just to supply the United States alone, but to expand to cover the whole globe.

The impact of what Florence and Hans Knoll had created together – both on the design industry and how people live and work – would be widespread. But Hans Knoll did not live to see it. As the company’s success soared, during a trip in October 1955 to work on a Knoll International commission for the Cuban Embassy, Hans Knoll was killed, sitting in an open car in a Havana parking lot, when his vehicle was struck by another and burst into flames. He was 41 and Florence was 38. Despite widespread speculation about the future of the company, Florence Knoll added the business operation to her design director role. “I had to take over the whole business.

Until then, I was just involved in the creative part” (Knoll Bassett Collection, box 1, folder 2).

Three years later, in 1958, Florence Knoll married Harry Hood Bassett, a Florida banker, whom she had met while working on the First National Bank of Florida. The Bassetts lived in Florida and kept an apartment in New York, from which Mrs. Bassett directed her companies. Knoll International sales had continued to accelerate, but she did not enjoy the business side of the operation. A year after her marriage, she sold the Knoll Companies – Knoll Associates, Knoll International, and Knoll Textiles – to a large office furniture manufacturer, Art Metal. In 1960, she retired from the presidency, continuing as design director under a consulting agreement. In 1963, she agreed, at the request of Frank Stanton, president of CBS, for whom she had designed offices in 1954, to take on the interior design of the CBS building (1960-1965) designed by Eero Saarinen, after his untimely death. Regarded as her greatest commission, the CBS presidential suite and other executive floors were the most sumptuous executive offices in America at the time (Wilson 56).

In 1965, Florence Knoll retired completely, working on “personal projects,” spending full days in her studio workshop designing the Bassett properties: homes in Vermont and Florida and a 60-foot boat. She described the CBS work as “a crusher,” and said she had no interest in pursuing large projects again. After her relatively brief but intensely demanding career, Florence Knoll Bassett was glad to turn her attention to creating rooms where she felt happy and relaxed, the kind of room that “should reflect the way one lives and wants to live and should be simple and serene so that it

creates an atmosphere, but doesn't demand anything from you," she said (Knoll Bassett Collection, box 1, folder 2).

She was recognized and awarded before and well into her retirement with myriad honors, but her most treasured was the Gold Medal for Industrial Design from the American Institute of Architects (1961). The citation noted that she had "abundantly justified her training as an architect" and concluded with the praise, "Your training, skill and unfailing good judgment have written your name high on the roll of masters of contemporary design" (Knoll Bassett Collection, box 4, folder 10). In 1972, the Louvre mounted "Knoll au Louvre," a retrospective of the work of Florence and Hans Knoll and the company they made together.

Chapter 3

The Planning Unit and the Knoll Look

The partnership between Hans Knoll and Florence Schust was multifaceted. Hans was a born salesman, and his business savvy put Knoll on the map quickly. Florence's taste – described by clients and the media as impeccable – and her unerring sense of design guaranteed the client outcomes from their collaboration. They followed a kind of script during their lives together, carried on by Florence Knoll after Hans' death. In the script, he was the entrepreneurial, outgoing one. She was self-effacing, pressed into the spotlight only when necessary. Together, they charted a fresh course for contract design in America and they introduced it by changing the retail standard – the showroom – into an environment utterly new.

The Knoll showrooms were the focus of the original Planning Unit and the early incarnations of what would come to be called the Knoll Look. “You could walk into a Knoll showroom and see how the furniture worked,” reminisced Richard Schultz. “In the Knoll showroom, you got the sense instantly ‘This is something else’” (Schultz). Frank Stanton, CBS president, said, “I have a clear recollection of the opening of the showroom at 575 Madison Avenue [1950]. It was dramatic” (Izutsu 122). When the first showroom opened, it signaled a real departure from the

design of the past. The showrooms “were important because we had to do a lot of convincing,” recalled Florence Knoll Bassett in 2001. “At the time there were very few clients who were interested in these ideas. They thought they had to have traditional furniture from Grand Rapids [Michigan]. These showrooms were what really convinced them” (Makovsky *Shu U* 97).

In the beginning of the 1940s, the idea of modern furnishings had only just begun to permeate thinking about environments for business. Remembering the time and the efforts of architects who wanted to design with a modern sensibility, Olga Gueft wrote in 1966,

Between 1941 and 1946, the professional could cover the entire market in only two hours. During the first he could visit Dunbar, which had designs by Edward Wormley; Widdicomb, which had T. H. Robsjohn-Gibbings; and Herman Miller, which had Gilber Roohde and Paul Laszlo.

Architects pressed for time skipped this hour and went only to H G. Knoll’s, which had designs by Jens Risom, Hardoy (With Kurchan and Boet), Pierre Jeanneret, Franco Albini, Raph Rapson, George Nakashima, Andre Dupre, Ilmari Tapiovarra, Abel Sorenson, Richard Stein, Eero Saarinen, Hans Bellman, Harry Bertoia and Florence Schust, as well as a small lamp by Noguchi, and a line of fabrics by such people as Viola Grasten, Astrid Sampe and Arne Jacobsen (Itzutsu 99).

The following passage referring to the state of American interior design at the beginning of the 1940s appeared in the book Knoll Design and includes a quotation from Interiors magazine:

“The interiors of the early 1940’s were still dominated by the ‘period’ and ‘antique’ styles, Practically all existing mass-produced furniture,” said *Interiors* (magazine) in its article about Knoll, “caters to a broad public of indiscriminating taste.” The commercial product that pours from furniture mills today is as cumbersome as the old-fashioned sleeping car (Knoll Bassett Collection, box 1, folder 2).

The previous design expression of the American office was blocked by formula and longstanding custom. Florence Knoll developed the Knoll Planning Unit with the idea of designing an office interior in conjunction with the client.

“Before Knoll,” reminisced Richard Stultz in 2004, then paused. “No. I don’t think much existed before Knoll. Businessmen had their wives’ interior decorators do it” (Personal interview). Florence Knoll’s view of the period noted the disconnect between the outside of the building and interiors. Contributing to an article on interior design written for the 1964 edition of Encyclopedia Britannica, she said:

Prior to World War II, most nonresidential interiors were either designed by the architects for the buildings or were not designed at all. More often than not, the building itself was at violent odds with its interior requirements: while the structure might be neo-classical, the functional requirements of the interiors were frequently modern in the extreme, so that either the interior spaces would match the exterior (and thus not function at all), or they would be made to function

reasonably well – in which case the furnishings were not likely to match the style of the building.

This inherent conflict was resolved by a number of pioneer architects in the early part of the 20th century . . . [who] designed and built commercial and industrial structures in which exterior form and interior space were completely integrated, and both served the needs of 20th century building programs.

To achieve this . . . [they] discovered that they had to design the furniture as well as the actual building. As a result, almost all the really significant, early innovations in modern furniture design were carried out by architects. The reason these architects had to design their own interiors down to lighting fixtures and doorknobs was obvious: the ‘interior decorators’ of the time had no knowledge of modern architecture – or, if they had, they were generally out of sympathy with it (Knoll Bassett Collection, box 1, folder 2).

The Knolls shared the conviction that a market could be created for innovative, high-quality, modern furniture. To promote that idea, Florence Knoll took a revolutionary step with Knoll’s Planning Unit, and offered a unique package of original furniture and professional design services to corporate clients. Her successful development of these services made her substantially responsible for the postwar acceptance of modern design by American business. Her work on large-scale projects for clients such as Connecticut General Life Insurance and CBS conveyed the self-assurance and sophistication that exemplifies the best in postwar design in the United States and epitomizes the style of the 1950s.

Florence Knoll Bassett dated the Planning Unit to the period when she was working for Hans G. Knoll Company, before she married Hans and they formed Knoll Associates. She recalled that

The Planning Unit began when I joined Hans Knoll at 601 Madison [Avenue]. As the projects grew three or four designers were hired. In spite of the size of some of the projects like Connecticut General, the group never exceeded six to eight designers. We some how managed to get the job done and on time. I don't think I could have worked with a larger group (Knoll Bassett Collection, box 3, folder 12).

In the beginning, the Planning Unit, located in the penthouse of the five-storied building that housed Knoll Associates at 601 Madison Avenue, was almost entirely an internal function. It started slowly and did not have an active project schedule until the 1950s, with the design of Knoll Furniture showrooms occupying much of its time and resources from 1943-1951 (Tigerman 67). During this time, Florence Knoll developed the approach, a different way of thinking about space and the purpose to which it was put. Integral to the process of design was an analysis of the client's space requirements. In this process, the interior designer became the active agent of a synthesis in which space, furniture, mechanical equipment, choice of color and fabrics, and the selection of art, graphics, and finishing details could all come together.

Then as the boom in post-war office building swelled, the Planning Unit's work expanded. In a 1957 Architectural Forum article, this building boom called for a specialist "in the science of making interior office space work out logically, i.e.

profitably” (Tigerman 68). The Planning Unit developed such specialists, and ultimately completed more than 70 projects and seven showrooms in the United States, as well as scores of showrooms for Knoll International across Europe. Quite a number of the projects received admiring reports in the press, but “dozens went uncelebrated and were silent testaments to the ubiquity of the Knoll look,” commented an article in the Journal of Design History (Tigerman 68). Thousands of projects were done by others using variants of the Planning Unit approach, Knoll furniture, and fabrics, and thousands more using “knock off” furniture, but all contributing to the lasting impact of the Knoll Look.

The Planning Unit’s first big success was Hans Knoll’s office, designed when the company moved to 575 Madison in 1950. In post-war New York’s burgeoning demand for offices, space was at a premium and the challenge of Hans’ office’s small space – only 12 feet by 12 feet – gave Florence Knoll a chance for innovation. She took the office out of the usual squared-off arrangement and set a precedent for a gridded setting that would be followed in executive office design for the next 30 years. She recalled later,

The parallel or L-shaped plan made sense, and it saved square footage. This convinced our corporate clients who were satisfied to move from the diagonal plan, with a solid desk in front and a table behind. Having the storage in a cabinet freed the design to become a conference table. The designs emerged in many shapes – round, oval, boat-shaped and oblong, according to the plan (Makovsky *Shu U* 93).

In the new Madison Avenue space, Planning Unit designers sat in an arrangement of desks with tilting drafting surfaces separated by fabric-wrapped Douglas fir panel dividers which created a small studio for each designer. Typically, seven or eight designers were on staff, assisted by a couple of draftsmen (Tigerman 2).



Fig. 9. Desks for Knoll Planning Unit designers, 575 Madison Avenue, New York, n.d., Courtesy Knoll, Inc. (Tigerman).

Of the Planning Unit team, Florence Knoll said,

In spite of the size of some of the projects, such as Connecticut General, the group never exceeded six to eight designers ... Peter Andes, a P.U. member, called it “Shu U,” as other young designers

were siphoned off by architectural firms who began to start their own interior design divisions. SOM New York, was the first . . . (Makovsky *Shu U* 122).

Thirty years later, when Florence Knoll Bassett had been featured in the New York Times, Peter Andes wrote her a letter:

Seeing you again, if only in the New York Times, was quite a pleasure, for it brought back so many memories of such exciting times of growth and change. In fact it made me think of how I am one of the fortunate graduates of Shu U. You gave us standards of performance and demonstrated a rigorous quest that continue [sic] to inspire (Knoll Bassett Collection, box 3, folder 2).

Knoll Showrooms

The Planning Unit did on a regular basis the work Schust Knoll had been doing when she moonlighted for Hans Knoll. Thinking in terms of architecture, she was trying to relate interior design to the building and the furniture to the interior, as well as to human scale. Even before the showrooms began to attract national attention, the Knoll Planning Unit was described in the May 1945 issue of Arts and Architecture as “the force which integrates all the various related activities of the company, with the objective of placing well designed ‘equipment for living’ within the reach of a large consumer market” (Rae, “Knoll: Portrait of a Corporation” 38). By March 1946, the Planning Unit had come to the attention of Interiors magazine, which described it as a “proving ground for a group of young designers with architectural and engineering background, who refuse to compromise with the taste of

the dictatorial public. A loose collaborative arrangement has benefited both designers and manufacturer” (Gueft 77).

The Knolls used their showrooms and offices to “speak” for them. Clients sometimes had to be persuaded; the modern aesthetic was not universally embraced. Fortunately, “Knoll spoke to an audience of forward-thinking connoisseurs who appreciated the statements an avant-garde might be making but whose preferences were too refined to buy anything ridiculous” (Rouland and Rouland 8). Many clients became believers once they saw those interiors. The showrooms and offices allowed Knoll to demonstrate what they could do with color, fabric, and, of course, furniture.

In 1951, Knoll Associates moved to new headquarters on the fourteenth floor at 575 Madison Avenue in New York, and Florence Knoll directed the redesign of the interior space. An article from Interiors magazine notes that there was a “malicious smacking of lips” over this move (Knoll Bassett Collection, box 1, folder 2). It was anticipated that this was a design challenge the Planning Unit might not be able to handle. The building itself had architectural oddities such as very low ceilings, off-kilter walls, and a view that was no view at all, but only steel and concrete.

Florence Knoll rose to the challenge with stunning results. She had frames of hollow, black tubes built. From these tubes, panels could be suspended down a wall or across a ceiling, tricking the eye into thinking the ceiling floated somewhere above the panels. These panels, some of which were colorful and some transparent, created the dimensions she wanted for each area, and most of them were movable. The hollow tubes also served as conduits for the lighting fixtures. Thick, white, fiberglass

fishnet panels screened out the concrete “views,” while permitting filtered light to enter the space. A black panel was thrown in capriciously, as she loved to play with color. Even the restroom doors, which opened into the showroom, received a novel touch: door handles were removed and the entire wall was paneled. Two bright stripes of color marked the location of hidden finger holds for the doors; until someone actually used the doors, no one knew they were there. To this setting, she added the furniture and accessories. A Mies van der Rohe grouping greeted visitors in the first setting, while a reflecting pool greeted visitors in the next. Each setting had a different treatment: Calder mobiles, sculptures by Bertioia, and paintings by Miro and Klee contributed to the open feeling.

The Knolls were equally fastidious about the design of their own offices. Hans’s office was only twelve feet square in size, but was very striking. It featured a black wall behind the desk, a color Florence chose to highlight Hans’s ruddy complexion, and (golden) bamboo blinds and raw silk curtains to match the color of his hair (Knoll Bassett Collection, box 1, folder 1). Light filtered in from a large side window, giving the office the illusion of much larger space than it actually was. This office was used to educate clients just as much as the showrooms were.

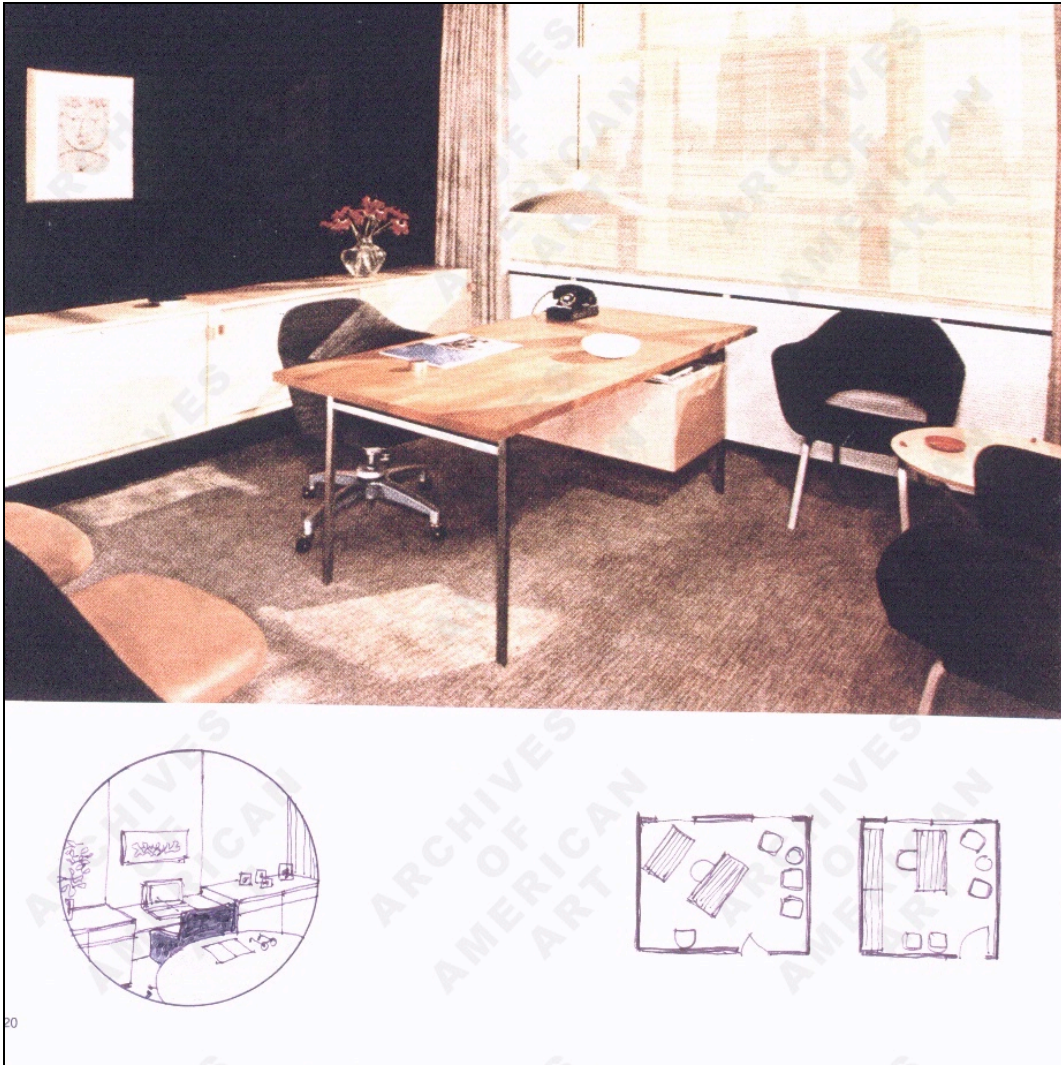
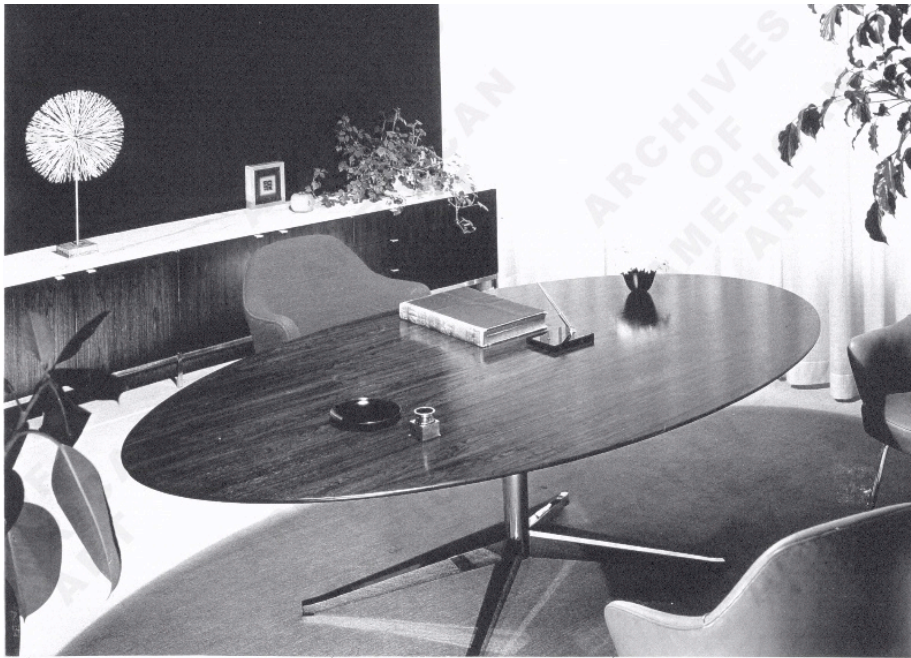


Fig. 10. Hans Knoll's 12' by 12' office at the 575 Madison Knoll headquarters.
(Knoll Bassett Collection, box 1, folder 1, slide 23).



THE EVOLUTION OF THE OFFICE DESK FROM THE 1940s

Fig. 11. Office desk from the 1940s.

According to Florence Knoll, “The parallel or L shaped plan made sense, and it saved square footage. This convinced our corporate clients who were satisfied to move from the diagonal plan with a solid desk in front and a table behind. Having the storage in a cabinet, freed the desk to become a conference table. The desks emerged in many shapes – round, oval, boat-shaped and oblong according to the plan. When computer equipment arrived on the scene, the work space switched to the cabinet behind – a complete evolution of design – which began in the late forties ... “ (Knoll Bassett Collection, box 1, folder 1, slide 24).



Fig. 12. Hans Knoll's office was designed to highlight his complexion. He is flanked by a Bertioia sculpture (Rouland and Rouland 4).

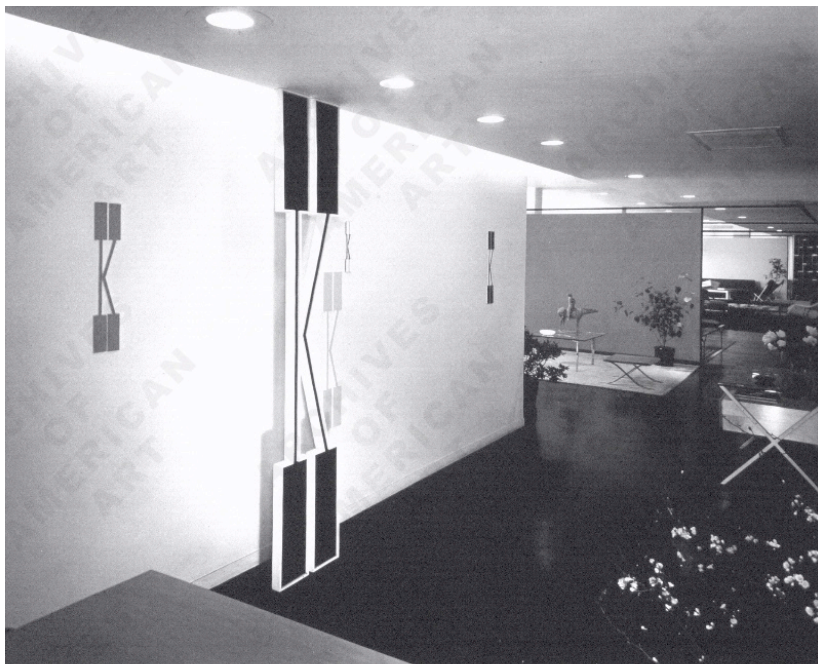


Fig. 13. The Knoll Showroom in New York, 1951.

According to Florence Knoll, “Working with the problems of a poorly proportioned space complicated by two levels of low ceilings and unfortunately placed columns was a serious challenge in the design of our new showroom at 575 Madison Avenue. The answer was a black metal ‘cage’ that delineated and redefined the space. It also supported the colored panels for the display areas. The blue ceiling also within the framework gave the illusion of height to the existing ceiling. The abundance of natural light from the outer walls was softened with fiberglass panels and mesh” (Knoll Bassett Collection, box 1, folder 1, slide 33).

Florence’s office appeared more functional. Fabric samples covered part of one wall, while the windowsill behind her desk contained some of the models and mockups she loved to use. The models included “...a familiar Saarinen chair, a checker boarded marble cube, a sculptured metal cloud by Harry Bertoia, and a bowl of flowers normal size” as described in Interiors magazine (Knoll Bassett Collection, box 1, folder 2).

As Knoll’s business expanded, showrooms were built in cities as diverse as Los Angeles, Stuttgart, Dallas, and Milan. By 1955, Chicago, Detroit, Miami, Boston, Brussels, Stockholm, Zurich, and Toronto all had Knoll showrooms. The one thing they all had in common was the very visual, very colorful Knoll style which was such a fitting backdrop for the furniture the company produced. Some would call it the “Knoll Look.”



Fig. 14. The Chicago Knoll showroom.

According to Florence Knoll, “The Chicago Showroom in the Merchandise Mart was visually the opposite of New York. There was no natural light and the ceilings were high with exposed ducts and pipes with the front glass wall facing the busy corridor. The walls and ceilings were painted in matte black, and the space was delineated with a white frame. A negative to New York’s positive. The lighting accented the displays with pools of light so the surrounding black walls disappeared. The wall panels were of cherry wood or translucent fiberglass with cherry wood frames. The floor was oak. The materials gave warmth and created a special atmosphere within the black void. The showroom was separated from the corridor by a wide white marble chip planter area with solid walnut steps to the entrance” (Knoll Bassett Collection, box 1, folder 1, slide 36).



Fig. 15. The Knoll showroom in San Francisco (Knoll Bassett Collection, box 1, folder 1, slide 38).



Fig. 16. The Knoll showroom in San Francisco.

The showroom in San Francisco, however, was a clear contrast to the New York and Chicago showrooms from the standpoint of the building. The design execution of the program and interior environment carried forward critical elements of the Knoll Look, albeit less formally. According to Schust Knoll, “The 19th Century building purported to have been a broom factory in San Francisco’s commercial area near the bay was a post and beam structure with brick walls from the ballast of a ship. The building was basically simple and a delight to work with. I

loved its straightforward construction. The shoebox shape was divided into pleasant proportions by adding the balcony area. San Francisco's atmosphere suggested something light and airy while the basic structure suggested something informal. A departure from the formal designs of New York and Chicago (Knoll Bassett Collection, box 1, folder 1, slide 39). Years later, Florence Knoll Bassett recalled the major US showrooms:

[New York, 1951] Working with the problems of a poorly proportioned space complicated by two levels of low ceilings and unfortunately placed columns was a serious challenge in the design of our new showroom ... the answer was a black metal "cage" that delineated and redefined the space. It also supported the colored panels for the display areas. The blue ceiling also within the framework gave the illusion of height to the existing ceiling. The abundance of natural light from the outer walls was softened with fiberglass panels and mesh.

[Chicago, 1953] The Chicago showroom in the Merchandise Mart was visually the opposite of New York. ...matte black and the space was delineated with a white frame – a negative to New York's positive. ...The floor was oak. The materials gave warmth and created a special atmosphere within the black void.

[San Francisco, 1954] [We used] a planter box on the balcony instead of a railing. I doubt I would get away with it years later (Makovsky *Shu U* 94).

The showrooms cemented the Knoll reputation and put in place the Knoll Look.

Richard Schultz characterized the way the showrooms worked for Knoll:

Shu produced areas defined by Mondrian-like colored panels. Breathtaking. She did it so well ... you could see how her furniture could fit in, how it could look in your client's environment. ... The difference in Knoll and Herman Miller showrooms was Herman Miller was like a furniture store but Shu would transform a space with her grid and her big blocks of color and her unerring sense of proportion (Personal interview).

From the showrooms came recognition of the Knoll Look, a refined, efficient, elegant modernism, characterized by iconic furniture, beautiful materials, timeless shapes, luxurious textures, and invigorating accents of color in a fundamentally neutral palette. It became the most sought-after look for executive spaces from the mid-1950s to the mid-1970s and continues to define the aesthetic of modernism. It was a look that managed to be at once efficient and comfortable. Tigerman observes,

The Planning Unit ... took formal inspiration from modern architecture, which many perceived as cold and barren, and accommodated the need for visual stimulation by incorporating color and texture into the interior. ... The key elements of the Planning Unit design process were the client presentation tool known as the paste-up and the aesthetic of the Knoll Look (Tigerman 67).

Florence Knoll was the first interior designer to use the client presentation techniques of three-dimensional models and paste-ups, the process of attaching fabrics and other materials to boards to better express the project concepts. While paste-ups were common in fashion and theater set design, she originated using them for interiors, recalling that she "actually started to do this at the Architectural

Association in London and developed it further when the Planning Unit was formed at Knoll” (Knoll Bassett Collection, box 4, folder 20). Of the enduring elements of the Planning Unit approach, the paste-up – or presentation board – is the most widely used, now so commonplace that almost no designers who learn it in school have any idea that Florence Knoll originated it. It was so quickly absorbed into practice that she could see the effect herself. She noted that

It was extraordinary how small swatches of fabrics could convey a feeling of space. The general scale used was ¼” but in special plans we worked in larger scale. I always felt the need to employ this system that eventually was used by design offices as a standard (Knoll Bassett Collection, box 4, folder 20).

The presentation boards were part of the process of programming a space. The scope of services the Planning Unit developed, and still in current practice today, was revolutionary at the time. It began with a study of client operations that were analyzed both in graphic and narrative form. Equipment was cataloged and personnel were surveyed to determine how work was accomplished, how people and departments related to each other, and how traffic flowed. Then a preliminary space plan was developed and the character of the interior spaces created in conjunction with the architect and the client. Florence Knoll said on a number of occasions that it was the spaces that were problematic that she liked best to work with. Architectural Forum reflected in 1957, “Florence Knoll’s prime concern has always been the Knoll Planning Unit, a pilot design group, and she . . . wears this job like a favorite hat. The Planning Unit’s basic task is to demonstrate – to bend the Knoll formula to new

problems and to suggest new ways of handling them” (Knoll Bassett Collection, box 1, folder 2).

The showrooms were perfect exemplars of the Knoll look because the clients were imagined and the programming was the Planning Unit’s use of an essentially open page upon which they could create different compositions of objects, fabrics, color, and light. Even though the Planning Unit primarily designed office spaces, the showrooms seemed almost residential with their groupings of seating in the sculptural furniture of Bertoia, Saarinen, Schultz, Mies, and others.

In 1956, the Planning Unit completed work for Connecticut General Life Insurance Company, its first very large commission, a complex on 230 acres of rural countryside. Service buildings were grouped around a courtyard designed by Isamu Noguchi, and the entire complex was designed by Skidmore, Owings & Merrill (SOM), by architect Gordon Bunshaft. One commentator called it “a turning point both for Knoll and for the American interior design world” (Itzutsu 86). Bunshaft recalled it as a “very happy joint venture,” and SOM continued to work with Knoll on a number of later projects (Knoll Bassett Collection, box 3, folder 19).

The Planning Unit and the furniture that came of Florence Knoll’s own designs and Knoll Associates’ relationships with other designers created the unique aesthetic that was the Knoll Look and the companies – Knoll Associates, Inc., Knoll Textiles, Inc., and Knoll International, Ltd. – flourished. Richard Schultz remembered Florence Knoll saying once, “We were going along doing what we wanted to do and we didn’t know we were making history.” He took the thought a step farther,

marveling that the companies also made money. “The amazing thing was that it survived as a company. Her attitude about product development was ‘we do what we want to do’ – she never looked around and saw what other people were doing” (Personal interview).

In Florence Knoll’s planning, spaces interact in a relaxed but highly rational architectural integration. They are embellished with elegant textiles and accented by vivid color contrasts and artful lighting. She designed much of the furniture her projects required and, although her own designs were frequently cited for awards, she was self-effacing and downplayed the achievement.

“People ask me if I am a furniture designer,” she has said. “I am not. I never really sat down and designed furniture. I designed the fill-in pieces that no one else was doing. I designed sofas because no one was designing sofas” (Larabee and Vignelli 45-46). She referred to her own line of desks, for which she is well known, as the “meat and potatoes” that had to be provided. “Eero and Bertioia did the stars and I did the fill-in I did it because I needed the piece of furniture for a job and it wasn’t there, so I designed it” (Larabee and Vignelli 46). While the work of Saarinen and Bertioia is far more sculptural, it’s impossible to write off Florence Knoll’s work as simply “fill in.”



Fig. 17. Florence Schust Knoll's boat-shaped conference table reveals her architectural eye. Far from a "fill-in" piece, the design is now considered a classic (Knoll Bassett Collection, box 1, folder 2, slide 106).

Among the designers listed by Interiors in February 1954 were Jens Risom, Abel Sorenson, Ralph Rapson, Eero Saarinen, and George Nakashima, but heading the list was Florence Schust Knoll (Morrison 114). Shown on the pages that followed were her units and divisional wall elements for bedrooms and offices: night tables, chests of drawers, room dividers, files, desks, counters, display cases, and the like – all of a harmony and simplicity that belied her characterization of her role as only providing the "fill-in." There, in fact, became visible for the first time an identifiable Knoll style, which was to move away from the Jens Risom style Florence Knoll called "Danish," and toward the Bauhaus approach, furniture more thoroughly integrated with architecture. Her designs departed from Risom's in detail, material, and form. She began to use more metal in the bases of tables and cabinets as well as

detailing to minimalist connections that were concealed, squared, and no longer soft and fluid in their form.

Florence Knoll began work for a client of the Knoll Planning Unit with a series of intensive interviews of client executives and their staffs, going into great detail and evaluating what they really needed, as opposed to their preconceived ideas. There is nothing remarkable about this now; countless professional interior designers routinely provide such design programming services every day. But at the time the Planning Unit began to demonstrate its abilities, they were rare indeed, and it was Florence Knoll who gave them unity.

They were also economically persuasive. “Because of the high cost of building,” she said, “every square foot of space must count. . . . Careful arrangement of the furniture units can result in a significant saving of space” (Larrabee and Vignelli 95). This did not mean an attempt to cram more into a room than it could comfortably contain. “The object,” Florence Knoll insisted, “is not to make rooms smaller simply to reduce cost but to make them the size they reasonably should be to fulfill their function Even in the most economically planned building some of the areas should have a sense of spaciousness for visual counterpoint to a series of small rooms” (Larrabee and Vignelli 96). An office could be made more comfortable and efficient to work in, and appear orderly and large, while at the same time, its overall dimensions could, in fact, be reduced.

As a planner, Florence Knoll had a significant impact on the layout of the modern office. In her showrooms, she indicated how modern design could be adapted

to the home or office. Her work shows that she learned the lessons of industrial design from the Bauhaus, a purity and elegance of form from Mies van der Rohe, and the concept of total design from Eliel Saarinen. The resulting style, so admirably suited to the shift toward a service-based economy that was going on in America during the Knoll heyday from 1945 to 1971, attained a real significance in material culture. The Knoll Look was so pervasive that it has come to symbolize American interior design in the 1950s and 1960s. It reflects the corporate life of America at the time and, in some ways, depicts the American culture of reverence for business. The objective of the Planning Unit was not simply to present proposals for skillfully arranging office furniture of contemporary design, but to put forward suggestions concerning how space might be utilized. For this purpose, it was necessary to formulate proposals that would accurately assimilate the client's wishes and requirements, even though the client might not be aware of exactly what they were. The Planning Unit had a complex understanding of how office work was done – the process, the workers, and the resources. Therefore, the process of designing the workplace not only influenced the physical space, but also how work was eventually completed in it. The Planning Unit's notions about worker behavior and space usage shaped the spaces it designed, eventually influencing the way people worked in those spaces.

The Planning Unit's thorough approach meant that its work involved the coordination of all details relating to the planning (including the use of space,

furniture, and mechanical equipment), the choice of colors and fabrics, and the selection of paintings, sculptures, and graphics.

Today, this synchronization between structure, interior, designer, and client seems typical, but the work of the Planning Unit was groundbreaking. According to design author Maeve Slavin, Florence Knoll and the Planning Unit had a lengthy project to-do list, even after the design concept was accepted by the client:

Study models were constructed and materials were studied; interior and exterior materials were coordinated with the architect. Mechanical, electrical (lighting), acoustical and communications elements were evaluated and integrated into the plan. Engineering drawings and shop drawings were checked. All finishes and furnishings were selected, and recommendations were made for the functional and unobtrusive placement and design of all special equipment. Construction observation services were provided as was installation of all furniture and furnishings. Maintenance manuals were also provided (Knoll Bassett Collection, box 1, folder 2).

The underlying goal of the Planning Unit, of course, was to sell furniture manufactured by Knoll. Certainly this wasn't held out to clients as a priority, but it wasn't hidden, either. The following reference to it appeared in Knoll Design,

The Knoll Planning Unit was described in the May 1945 issue of Arts and Architecture as 'the force which integrates all the various related activities' of the company, with the objective of placing well-designed 'equipment for living' within the reach of a large consumer market (Larabee and Vignelli).

That “equipment for living” was Florence Knoll’s special province, and as the Planning Unit’s activities commenced, Florence became completely responsible for design, and Hans took charge of production and marketing. Besides her development of textiles and furniture, Florence was wonderfully creative in a variety of arenas and was interested in everything, including catalogues and posters. She brought intense critique to everything Knoll, from advertising, textiles, accessories, furniture, entire spaces. “She was a terrific editor,” Richard Schultz recalled, “of design, of ideas. When I left Knoll, I was shocked to find that none of the other furniture manufacturers knew anything about design” (Personal interview).

Florence Knoll’s Crowning Achievement: CBS Headquarters

The Planning Unit participated in several projects and was highly praised for having outstanding talent, but the project that became the most talked about was the interior design project undertaken for CBS from 1961-1965. The president of CBS, Frank Stanton, had stated that companies should “strive for quality of design” (Knoll Bassett Collection, box 1, folder 2). Stanton had attended the Bauhaus as a student during the summer of 1929, and the experience made him a worthy client.

The CBS headquarters was a 38-story building at 52nd Street and Avenue of the Americas in downtown Manhattan. Designed by Florence Knoll’s longtime friend and collaborator Eero Saarinen, the 38-story building was dubbed “Black Rock” for its charcoal gray Canadian granite façade.

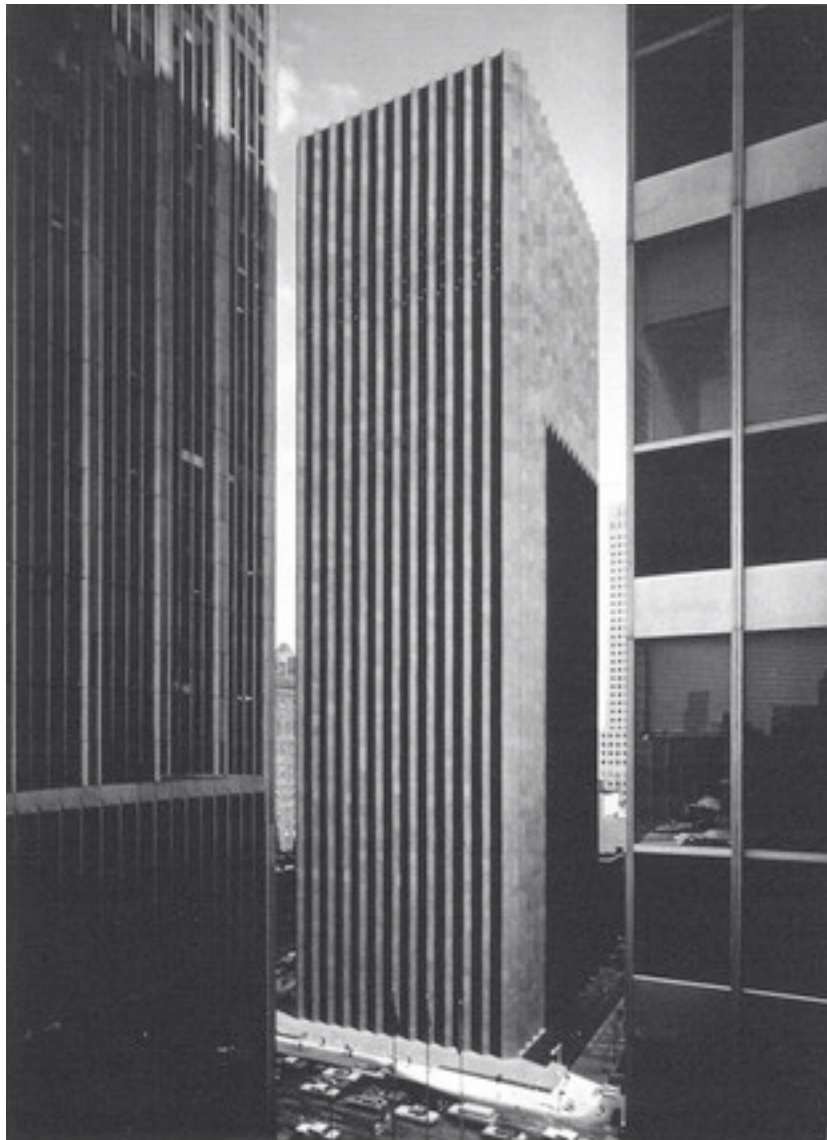


Fig. 18. The exterior of Eero Saarinen's CBS headquarters building in New York (Knoll Bassett Collection, box 1, folder 2, slide 89)

Saarinen used the CBS building to move modern architecture beyond the glass used so extensively in the International Style. The architect imagined the building as

sculpture, but never saw his only skyscraper completed. He died in 1961, four years before the project would be complete.

By this time, Florence Knoll Bassett had already retired and was living in Florida, the Knoll companies sold and her work as a consulting design director for Knoll ending. She took on the CBS work because Eero Saarinen had asked her to in the weeks just before he died, and because of her relationship with Frank Stanton. “I have worked with many wonderful clients,” she said, “and he tops the list” (Makovsky *Shu U 95*).

Knoll Bassett had designed CBS’s executive office suites for Frank Stanton in 1954. Working with a generous budget, her goal had been to eliminate clutter: “... the simpler the background, the easier the thought process” (Knoll Bassett Collection, box 1, folder 2). This is a prime example of the Planning Unit’s influence on how workers completed their tasks in Knoll-designed spaces. Florence Knoll had used credenzas to hide phones and office equipment, and utilized a teak panel wall to store TVs and other mechanical equipment. Her attention to detail was reflected even in the ceiling, as she painstakingly obscured mechanical and lighting systems and related the pattern of the strip-line air conditioning to the plan. She later said, “This was one of the first times that air outlets were considered a design element” (Makovsky, *Shu U 95*).

Although Florence Knoll had worked with Stanton before with fantastic results, Saarinen’s building for CBS proved to be a struggle with design in more ways than one. The CBS building was already under construction in Manhattan. It was an

extremely difficult job for her to successfully make her point while giving life to the ideas of her late friend Saarinen, and listening to the opinion of her client, Stanton. On top of that, she came into the process at a stage when half-finished plans had already been drawn up by other interior designers on Saarinen's team.

Saarinen believed that the architect had to take the responsibility not only for the landscaping and furniture, but for everything else as well, right down to the ashtrays. He considered as a matter of course that the work of designing the interiors for CBS was his own personal responsibility. However, following the architect's unexpected death in 1961, CBS asked Florence Knoll Bassett to devise a design plan for the interiors while remaining faithful to Saarinen's ideas for the building's design. Stanton was well aware that she was on exceptionally close terms with the Saarinen family, and that when he had had dinner with her two weeks before his death, Saarinen had asked her to help design the interiors of the building.

Her responsibility was to devise an integrated plan for the 35 floors of the building. Five years had already passed since the planning process had gotten under way; the CBS staff of systems and facilities analysts had examined everything in detail and had reached the stage where they were just waiting for decisions regarding the floor layout. The basic plans had already been completed by a firm of interior architects by the name of Carson, Lundin & Shaw. Essentially, they had designed a system of metal partitions which accommodated the electrical and communications wiring. The necessary mechanical equipment had already been installed inside the building, with the light switches already fitted into the door jambs.

The job of Knoll Bassett and the Planning Unit was to create a pleasant working environment for the 2700 employees who would work in the building. In addition, she had to design conference rooms, reception and secretarial areas, libraries, projection rooms, and executive offices – a total of 868 individual rooms of differing sizes. In addition, the Knoll team was tasked with making the imposing building work like a fine-tuned machine – which included differentiating the various department locations.



Fig. 19. Views from Florence Knoll Bassett's organizational sketches for CBS (Knoll Bassett Collection, box 1, folder 1, slide 75).

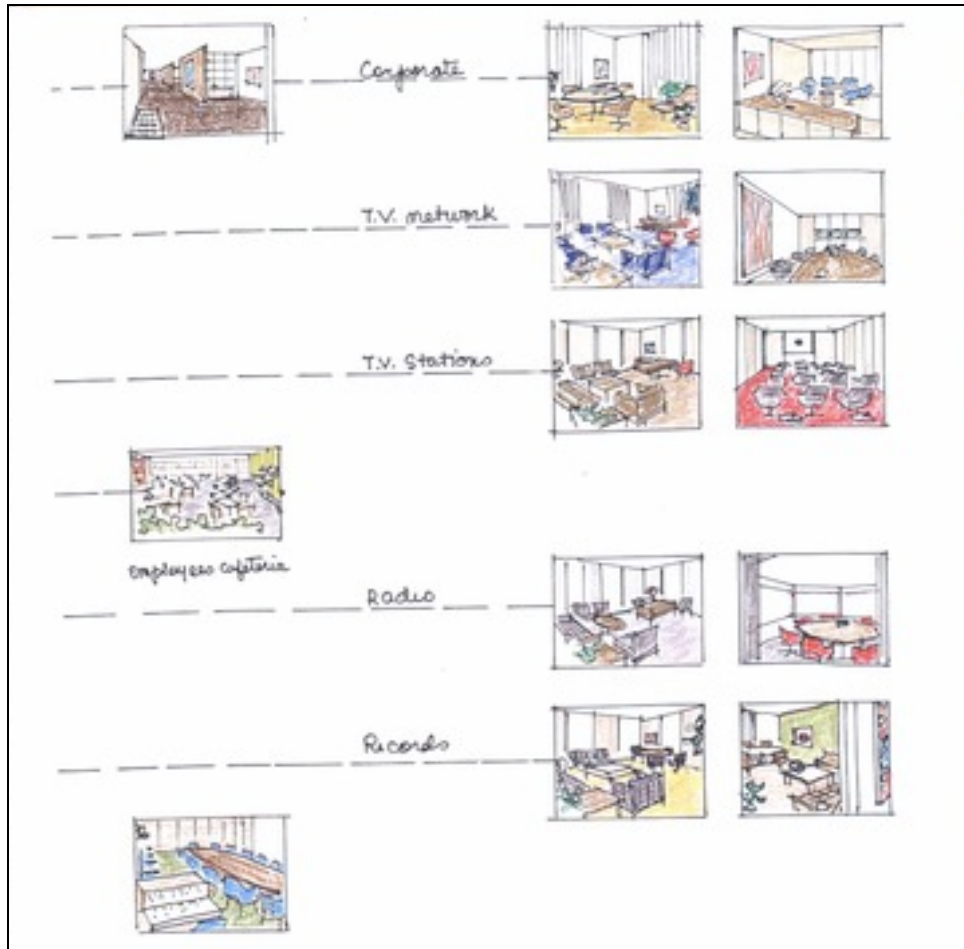


Fig. 20. Views from Florence Knoll Bassett's organizational sketches for CBS (Knoll Bassett Collection, box 1, folder 1, slide 76)

Knoll Bassett drew up plans for the spaces in the individual rooms and designed the furniture for each of them, making selections concerning the fabrics, color schemes, paintings, sculptures, and other decorations. She said, "My real job was the proper assembly of everything" (Knoll Bassett Collection, box 1, folder 2).

There was certainly more to it, but the understatement was typical of Knoll Bassett. In addition to “proper assembly,” she also devised a creative way to differentiate spaces throughout the building, as discussed in a 1967 issue of British magazine Queen:

With an organization as complicated as CBS the problem of sorting out various departments and clearly indicating where they are is a headache in itself: too clear a plan and the offices become completely inhuman, too subtle and everybody gets lost. Mrs. Bassett started by visually isolating the internal communication tower and covering it in grey flannel, as a sort of neutral point on each floor. Each of the thirty-five office floors has a colour-code in one of five colour schemes. The job of floor identification (numbers are not enough) is done by a large strong painting or tapestry hanging directly opposite the lift on each floor (Knoll Bassett Collection, box 1, folder 2).



Fig. 21. Knoll-Bassett designed reception area on the executive floor of the CBS headquarters building (Knoll Bassett Collection, box 1, folder 1, slide 77).

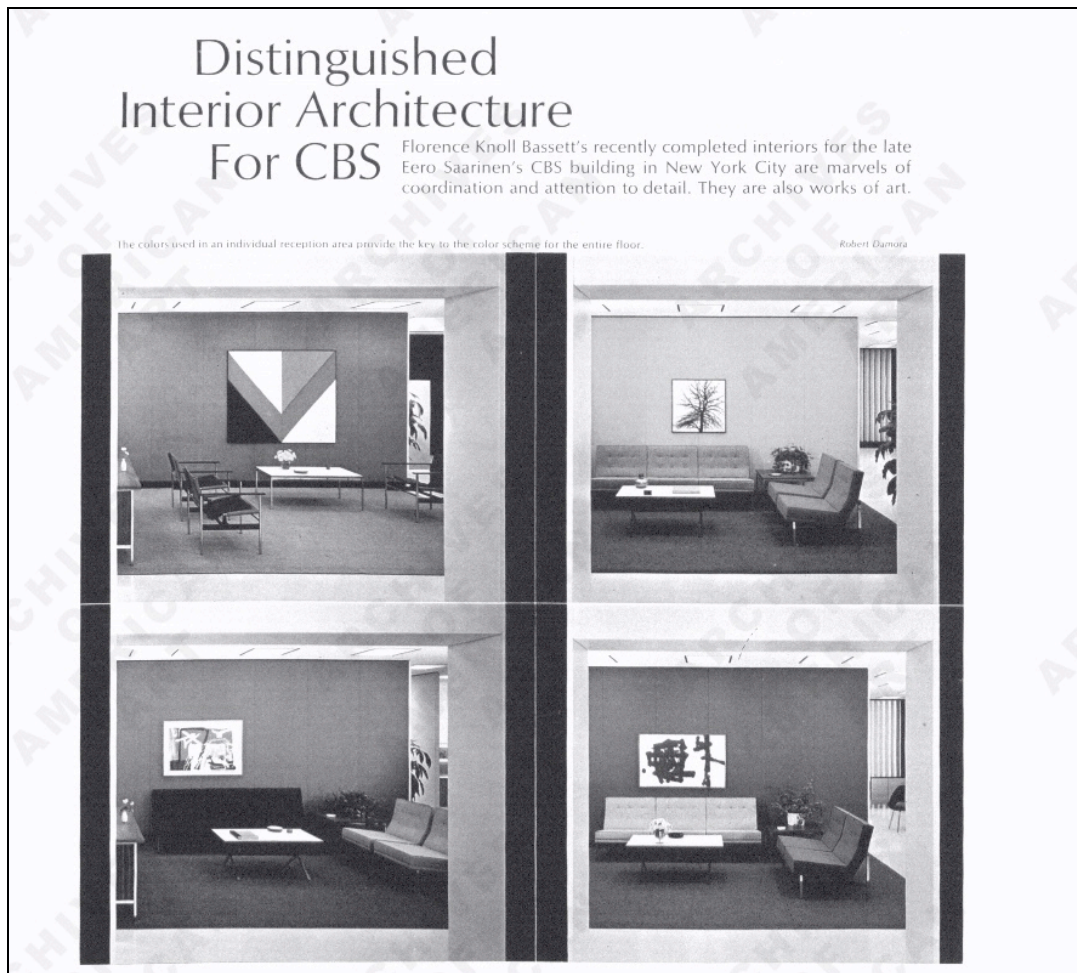


Fig. 22. Unique reception areas greeted visitors to each floor of the CBS headquarters. *Architectural Record* noted, “Florence Knoll Bassett’s recently completed interiors for the late Eero Saarinen’s CBS building in New York City are marvels of coordination and attention to detail. They are also works of art” (Knoll Bassett Collection, box 1, folder 2, slide 81).

The employee cafeteria-lounge, called the 51/20 Club, was an area where Knoll Bassett had some fun. The area featured an oversized mural consisting of words associated with food. That “gastrotypographical assemblage” was created by the CBS design department under the leadership of Lou Dorfsman, director of design at CBS.



Fig. 23. The employee cafeteria at CBS, displaying a collage created by the CBS design department. The space also featured chairs with walnut frames and tables with white plastic tops framed in walnut. This use of wood was designed to harmonize with the walnut paneling in the cafeteria (Knoll Bassett Collection, box 3, folder 22, slide 17).

In addition to livable common areas, Knoll Bassett's team created a tranquil environment where everything had its place, as noted in Architectural Record at the time of the building's opening:

CBS employees now work in a serene environment in which paintings and vases of flowers accent subtly controlled spaces in which all clutter has been carefully tucked away. Television sets, high fidelity equipment and the speakers and control panels which go with them, as well as telephones, switchboards and other electronic paraphernalia, have disappeared into custom-made desks and cabinets or have been unobtrusively placed in the walls. Florence Knoll Bassett is a master of such sleight of hand. She designed the furniture in which some of the

miscellany of office life is concealed, and collaborated with interior architects Carson, Lundin and Shaw in the detailing required to make the rest of it invisible (Knoll Bassett Collection, box 1, folder 2).

The CBS building heralded a move toward more livable office environments, particularly in the executive offices. The traditional heavy wooden desk and leather swivel chair were replaced with table-style desks and Brno chairs. Groupings of upholstered furniture like those found in residential living rooms provided informal, collaborative meeting areas. The American office workspace and workers' expectations would never be the same.



Fig. 24. Frank Stanton's office at CBS (Knoll Bassett Collection, box 1, folder 1, slide 79).



Fig. 25. Frank Stanton's office at CBS. According to Knoll Bassett, "English oak paneled wall contains TV equipment. Air conditioning stripline in the arched ceiling with recessed wall lighting. Multiple use cabinet behind his table desk" (Knoll Bassett Collection, box 1, folder 1, slide 80).



Fig. 26. A reception area and secretarial gallery in the Knoll Bassett-designed CBS headquarters. The glass panels were backlit to give the illusion of daylight (Knoll Bassett Collection, box 1, folder 2, slide 48).



Fig. 27. A reception area and secretarial gallery in the Knoll Bassett-designed CBS headquarters. The glass panels were backlit to give the illusion of daylight (Knoll Bassett Collection, box 1, folder 2, slide 49).

The CBS project had lasting implications for the American workplace, but it also served as a swan song for Knoll Bassett. “That job was a tour de force for her, and I have always felt that she recognized that before others did. It made a spectacular exit line for a brilliant career,” said her assistant, Christine Rae (Larabee and Vignelli 146).

After completing the work at CBS, Florence Knoll Bassett withdrew completely from the Knoll company’s activities. The market was changing significantly, and so was the Knoll company. By 1971, the Planning Unit’s approach

to design had been adapted by the industry. But as a manufacturing company, Knoll stepped back from providing design services, seeing it as somewhat a conflict of interest given that their primary corporate endeavor was manufacturing furniture. When the furniture had been extraordinary and difficult to obtain, as it was in the 1940s, 1950s, and even in the early 1960s, for the Knoll Planning Unit to specify a Knoll design seemed more of a convergence than a conflict of interest. By 1971, the modern look was available from a number of sources and specifying one's own products was a questionable practice. In addition, finding a successor to Florence Knoll Bassett had proven to be a difficult, if not impossible, task. In 1971, the much-revered and long-established Knoll Planning Unit was dissolved.

Chapter 4

Florence Knoll's Impact on the Industry: Moving Toward the Professionalization of Interior Design

Florence Knoll in the History of Interior Design

Over the course of her career, Florence Knoll Bassett trained as an architect and designed buildings, interior spaces, furniture, textiles, and graphics. The way she went about practicing her profession and the success she achieved represent a substantial step toward the professionalization of interior design and reflect changes taking place in the design industry, the office workspace, and American culture as a whole. She was in many ways the perfect example of chance favoring the prepared mind. Florence Schust Knoll was in the right place at the right time. In a post-war society eager for achievement, for new ideas and new goods and services, she had the social connections and status, education and talent to move her work from architecture to interior design and to gain such admiration that she went a long way toward making interior design – and office workplace design in particular – a respectable endeavor worthy of attracting superior designers.

Moreover, she did it as a woman operating in a man's business. The force of Florence Knoll's personality and talent has become legendary. However, a study of

her career and contributions demands an examination of the trends of professionalization of interior design in the twentieth century to realize the context in which she operated and the contributions she made. Conversely, any study of the interior design profession and its evolution would be incomplete without recognition of Florence Schust Knoll and the lasting impact she had on the interior design profession.

No woman was better suited to usher interior design into the realm of professionalization than Florence Schust Knoll. Mildred F. Schmertz wrote a review in the July 1966 issue of Architectural Record entitled “Distinguished Interior Architecture For CBS,” and, under the subheading “The education of a designer,” made the following comments:

[Florence Knoll] is one of a group of architects, designers, painters, sculptors, ceramicists and weavers, which included the late Eero Saarinen, who received their early education at Cranbrook in Bloomfield Hills, Michigan. Cranbrook, at the time, was staffed by artists assembled by the elder Saarinen who was president of the Academy. [Florence was] a developing artist [who] was encouraged and looked after by faculty members, students at the Academy of Art, and by the Saarinen family including young Eero who was studying architecture at Yale. Later she was to enter the Cranbrook Academy of Art, attend the Architectural Association in London and earn her architectural degree at the Illinois Institute of Technology under Mies van der Rohe, ‘Mies taught me to think and organize’, she believes. She learned the principles of furniture manufacture from her late husband Hans Knoll (Knoll Bassett Collection, box 1, folder 2).

Florence Schust achieved a distinguished, if somewhat scattered, architectural education and ultimately a Bachelor of Science degree in architecture from ITT at a time when degrees still were not universally required for architectural practice. She had credentials, contacts, and experience that justified her status as a professional. Even so, she felt obliged to defend that status in a 1964 New York Times article, where she said flatly, “I am not a decorator ... the only place I decorate is in my own house” (Knoll Bassett Collection, box 1, folder 2).

Her career and the work of the Knoll Planning Unit helped the process through which American business began to understand and value the differences in a “decorator” and a “designer” and accelerated the professionalization of interior design. In her article on Florence Knoll in Journal of Design History, Bobbye Tigerman wrote:

A study of Florence Knoll’s career provides an opportunity to consider how interior designers changed the public perception of their field. Knoll defined her professional image in specific ways, describing herself as an ‘architect’ and ‘interior designer’ and eschewing the labels of ‘interior decorator’ and ‘furniture designer’ Knoll’s working method ... equated the importance of interior design with the building’s architecture (61).

This professionalization process began at the turn of the twentieth century, enjoyed marked progress during Knoll Bassett’s career, and continues today.

Looking back over 100 years of interior design, Stanley Abercrombie wrote in 1999:

Interior design was born, grew to maturity, and flourished during the twentieth century. In 1900, interior spaces and their furnishings were designed by architects, by amateurs, or by tradesmen such as cabinetmakers, upholsterers, and drapers; there were no interior designers. In 1999, interior design has become a secure and prosperous profession, with established standards for education, certification, membership in professional organizations, and practice (141).

Living spaces, especially residential spaces, did have some elements of professional design prior to 1900. However, it wasn't considered a professional or skilled endeavor. Design historian Anne Massey noted that the terms "interior designer" and "interior decorator" didn't exist at the turn of the twentieth century; however, use of the term "decorator" dates back to the early eighteenth century (Hildebrandt 76). In the eighteenth and nineteenth centuries, such decorators either worked closely with tradesmen such as cabinetmakers and furniture makers, or they were the tradesmen themselves.

In 1903, Elsie de Wolfe took a new approach. Recently retired from the theatre, de Wolfe had business cards printed to notify fellow New Yorkers that she was available as a designer. She wasn't expressly associated with specific tradesmen, and she marketed her services as those of a knowledgeable and skilled consultant. In 1913, she made another inroad into professionalization by establishing a percentage fee for a project. She demanded a fee of 10 percent of the total project cost for designing the private family rooms on the second floor of the Frick Collection (Abercrombie 146).

Interior design as an enterprise began to pick up momentum. In 1916, Kem Weber established a course in modern interior decorating at the California School of Arts & Crafts. Around the same time, The Association of Interior Decorators was formed. In 1924, Eleanor McMillen opened McMillen, Inc., a firm she referred to as “the first professional full-service interior decorating firm in America” (Abercrombie 148).

Early twentieth century interior design dealt predominantly with surface decoration completed by individuals with social connections and an intuitive eye. No formal training was considered nor expected, much less available. Kem Weber’s course heralded the beginning of a new era of professional training. The development of home economic programs, primarily at state universities, also provided an avenue for training, as decorating a home came to be considered a key to maintaining a comfortable and efficient residence. Many books on homemaking and decorating entered the market, and in 1932, the American Institute of Interior Decorators began publishing The Decorator’s Digest, a periodical that would evolve into Interior Design (Abercrombie 153).

It was this environment that Florence Schust Knoll entered as a young architect. While interior design for residential and even some community spaces was growing in popularity and acceptance, interior design for the office workspace was still the realm of architects and purchasing agents. As a well-educated architect with enviable social connections, Florence Knoll could have pursued architectural work, but opportunities were greater for women in interior design, and, even with her

credentials, she had been given the interior elements of buildings designed by her first employer, Walter Harrison. And certainly falling in love with Hans Knoll and his furniture business led her toward interior design and away from architecture. Her achievement was taking that path and transforming the nature of the work itself, even as she was transforming the workspaces she designed.

Introducing her aesthetic was by itself such a departure from the ordinary. One commentator from Interiors magazine observed that Knoll design “arouses ... a storm of fury among the avowed enemies of modern” (Knoll Bassett Collection, box 1, folder 2). Adding to that her approach to clients accustomed to working with architects on a building’s exterior and purchasing agents for the interior furnishings wasn’t easy, and required a great deal of salesmanship, the great strength of Hans Knoll. But Florence Knoll was no slouch in the sales department herself. Many accounts talk about her force of personality, perhaps best summed up by an observation in World Architecture: “With clients, Florence Knoll was both artistically fluent and economically persuasive” (Knoll Bassett Collection, box 1, folder 2).

Perhaps the introduction of her innovative way to create office environments would not have been successful had Florence Knoll not had the architectural credentials to back it up. There were no professional credentials for interior designers.

Social connections kept untrained decorators and interior designers in business. Elsie de Wolfe marketed her decorating services to New York City society, a world to which she was privy thanks to her theatre background. De Wolfe later married a British lord and moved to Paris, where she continued to network with

people with the means to pay for her services (Abercrombie 151). Certainly relationships were essential for Florence Knoll's client base, too. She said about designing for the Rockefellers that it "didn't hurt," and Frank Stanton, CBS president, was a "tireless advocate ... who recommended the Planning Unit to his colleagues" (Tigerman 68). And her social connections, originally through Cranbrook and the Saarinens, provided entrée into the most elite intellectual and design circles, adding another layer of credibility beyond her education and experience.

Florence Knoll's approach to interior design was what interior designer Michael Tatum now identifies as the responsibilities of interior designers. Tatum argues that in the post-World War II era, interior design's break from architecture resulting from increasing technology and complexity and an increase in the volume of buildings led to the development of specific responsibilities for professional interior designers. These include:

- Abiding by and supporting the facilities program of a workspace,
- Comprehending the scale and detailing appropriate for the interior of a building versus its exterior,
- Understanding human behavior and how and why the interiors of buildings are used as they are,
- Contributing to productivity and environmental satisfaction,
- Having the ability to collaborate with others to create interior environments within a business structure (Guerin and Martin 2-3).

These are extensions of the Planning Unit's approach. In 2004, Carl Magnusson, then executive vice president and director of design at Knoll, called the approach "a 70-year-old idea that has resonance today" (Personal interview) but Florence Knoll never intended to act as guide for other interior designers – she was singular in her focus and intent to grow Knoll Associates, serve clients, and produce outstanding design. Even so, her approach to the work is the industry standard, a key component in interior design education, and contributes to differentiating professional interior designers from decorators more often associated with residential environments.

By the time Knoll Bassett retired completely in the mid-1960s, interior design was a growing industry and emerging from the shadows of architecture and home economics. Professional organizations were developing certifications, and the real estate market and the American economy generally were about to experience unprecedented change.

Professional Organizations and the Rise of Certification

The rise of professionalization in interior design led to the birth of professional organizations and a push for certification within the industry. While interior design groups had existed in one form or another since the 1920s, the early 1970s saw a dramatic increase in the quantity and activity of professional interior design organizations. Between 1970 and 1975, the Foundation for Interior Design Education Research (FIDER, later the Council for Interior Design Accreditation [CIDA]), the

National Council for Interior Design Qualification (NCIDQ), and the American Society of Interior Designers (ASID) were established. The organization of these three groups within five years heralded a new era in how interior design was valued in American society.

- **Foundation for Interior Design Education Research (FIDER)**
Founded in 1970, FIDER was established to develop industry standards for education and “to acknowledge the increasing demands of an emerging profession” (History). Now known as the Council for Interior Design Accreditation (CIDA), the council sets standards for postsecondary interior design education and evaluates and accredits college and university programs.
- **American Society of Interior Designers (ASID)**
Founded in 1975, ASID calls itself “the oldest, largest and leading professional organization for interior designers” (About ASID). A direct descendant of the American Institute of Interior Designers and the National Society of Interior Designers, ASID boasts 40,000 members, 20,000 of whom are practicing interior designers. The society offers the ASID Professional Member credential, which requires passage of the NCIDQ examination and the achievement of a specific number of years of work experience.
- **National Council for Interior Design Qualification (NCIDQ)**
Another descendant of the American Institute of Interior Designers and the National Society of Interior Designers, the NCIDQ was established in 1972. State boards regulate professional standards and administer the NCIDQ examination.

Individual memberships are not available; instead, the organization focuses on the examination that many governmental agencies depend upon for licensing and registering interior designers.

Following the explosion of professional organization development in the 1970s, the interior design industry continued to be impacted by longstanding groups, and also added specialized groups, such as the Organization of Black Designers and the American Society of Furniture Designers. These groups have had particular impact:

- Interior Design Education Council (IDEC)

Founded in 1963, IDEC promotes education and research in the interior design industry. With a membership of educators, interior designers, and scholars, IDEC focuses on developing “a body of knowledge relative to the quality of life and human performance in the interior environment” (Associations).

- International Interior Design Association (IIDA)

In 1994, the Council of Federal Interior Designers, the Institute of Business Designers, and the International Society of Interior Designers voted to merge. The resulting organization, the International Interior Design Association (IIDA), collaborates with IDEC. IIDA has a mission to “enhance quality of life through excellence in interior design and to advance interior design through knowledge, value and community” (Key Facts). The group now boasts 12,000 members, but the creation of IIDA did not bring unity throughout the industry: ASID declined to join the organization (Abercrombie 190).

It's noteworthy that, as the industry continues to grow and struggles to define itself, it still does not have one, universal professional organization. In his prognostications for the future of interior design in 2000 and beyond, Stanley Abercrombie wrote:

Another – and maybe we should call this one a fond hope rather than a prediction – is that surely, *surely*, our professional organizations (including the ASID) will finally complete the process begun five years ago and acknowledge the benefits of unification: benefits to all those now confused and frustrated by a pointless duplication of energy and funds. A pair of rival organizations is not the best model for 21st-century leadership (Abercrombie 198).

Multiple professional organizations – especially rival professional organizations – signal discord and continued growing pains in an industry that has only been considered an industry for a few decades. Warring industry factions are a far cry from home economics departments and untrained decorators of not so long ago. Such industry issues weren't a consideration during Florence Knoll's career. To face economic and regulatory challenges the industry will need to unite.

Societal Changes and the Impacts of Professionalization

Around 1970, the baby boomers entered the marketplace and demanded jobs, houses, and a panoply of durable and non-durable goods. The two-paycheck family was also making its mark on society. Women flooded the job market. The rate of divorce was on the rise, and the single householder family was becoming acceptable.

All these demographic changes were translated into larger consumption demand, which, in turn, exerted further inflationary pressures. Real estate was the next market to develop speculative excesses, caused by the baby boomers. In the 1970s, they reached the age of family formation; it was time to settle down and buy houses of their own. Demand rose and the prices of residential real estate responded. The boom in real estate started on the West Coast, spread from there to Texas, and finally ended up in the Northeast; lasting nationwide more than 25 years (Gayed).

By the mid-1980s, interior designers and architects were beginning to confront the changes in their relationships that had developed as the profession of interior design had grown and defined its own educational, examination and title, and practice experience requirements. In 1990, the American Institute of Architects, the professional association for architects nationwide; the American Society of Interior Designers (ASID), which performed some of the same functions for interior designers; and the Institute of Business Designers began to confront issues related to title legislation. They sought to regulate who could be called an “interior designer” as opposed to practice legislation, which regulates who can practice in a profession. The critical difference between title legislation and practice legislation is in control of the market. A practice definition that is legislated gives and restricts access to the work of a defined market. Architectural licensing legislation is based on a definition of the practice of architecture: only a licensed architect may practice architecture. Title act legislation only restricts what professionals may call themselves as they present themselves to do work, which leaves the market open to others without the title. Any

designer may practice interior design but may not refer to themselves as a “registered interior designer.” At issue was the desire of interior designers to enhance their profession with accredited standards in education and examinations for practice such as the National Council of Interior Design Qualification (NCIDQ) exam, which would be administered by state technical boards similar to the ones that administered architectural licensing.

The adoption, by a number of states, of licensing laws pertaining to the practice of interior design is one of several factors contributing to and reflecting the increasing professionalism of the field. Physicians, nurses, lawyers, engineers, architects, and many other professionals must be licensed to practice their professions. The basis for such legal requirements is the realization that the health, safety, and welfare of their clients are influenced by the skill and responsibility of these professionals. In the past, it was commonly thought that the work of designers dealt solely with the aesthetics of color and ornament and had no impact on issues of health and safety, but modern practice extends well into areas that concern public protection. Fire laws regulating exit routes and safety equipment, lighting requirements that influence ease of vision, and stair and handrail design all involve safety issues, for example. Air quality is affected both by materials in use and systems of ventilation, with clear health implications. Finally, “barrier-free” access through design has been mandated by the Americans with Disabilities Act in 1992, which speaks to an important welfare as well as safety concern.

Licensing laws pertaining to designers are typically of two types: regulations concerning the use of a title (title acts) usually merely restrict the use of the title or term “registered interior designer” to people who have met the requirements of education and experience and have passed the examination. Likewise, those laws concerning practice define the kind of work that can be done only by licensed designers. To become licensed, the professional designer must pass an examination (typically the National Council of Interior Design Qualifications [NCIDQ]) that tests his or her knowledge of such issues. Most licensing laws also specify that some combination of design education and practical experience, essentially an apprenticeship, must be completed before the examination can be taken.

Title laws are generally more liberal in their impact, leaving open the actual work of interior design to any practitioner as long as they do not publicly identify themselves by the restricted title. Practice laws control the profession more precisely, requiring the seal of a licensed designer on the plans and other drawings that will be used for a project. Over a period of time, a progression occurs from the uncontrolled offering of services to title control to the adoption of practice laws:

- Uncontrolled situation: anyone can announce a practice and take on any project offered regardless of qualifications
- Title control: ensures that those who use the title meet some minimal requirements
- Adoption of practice laws: establishes a level of professionalism comparable to that of other licensed professions

Interior design has moved through these phases, with the adoption of practice laws occurring in an increasing number of states. Now more than twenty states have title acts. Legislative action is pending in other states as well.

Commercial interior design flourished and reached a zenith in the early 1980s, when real estate developers were putting up speculative office buildings, predominantly in large metropolitan areas across the United States. Commercial real estate also experienced unparalleled growth. The great service society was accelerating during the 1970s, and the demand for office buildings was on the rise. In major cities, a massive number of new, prestigious buildings were built to meet that surge in demand. Americans built more restaurants, travel agencies, and health spas than ever before. American business convinced itself that those industries would fill the gap left by manufacturing (Gayed 42).

In the late 1980s, a tax bill eliminating tax credits for financial losses incurred in investments was passed into law by the U.S. Congress and caused a dramatic reduction in speculative investment in real estate. Real estate developers went through rapid and dramatic business reversals, from boom to bust within months; some were even pressed to file for bankruptcy (Gayed).

The decline in manufacturing that started in the early 1970s continued and accelerated throughout that decade and into the 1980s. Corporations were challenged by intense competition – both domestic and international – from the Japanese. Falling productivity, rising manufacturing costs, strict laws on pollution control, the relatively inexperienced labor force dominated by baby boomers, and the resistance

of militant unions to compromise or forsake generous benefits contributed to the severe lack of competitiveness that plagued many U.S. industries. Cheap imports and the rush of consumers to buy foreign products, the dumping of goods and raw materials into the U.S. market from all parts of the world and, ineffective, short-term management strategies led to further declines in companies' fortunes (Gayed 45). For example, in 1987 Kroh Brothers Inc., one of the largest speculative office building developers in the Midwest, announced with its bankruptcy filing losses of more than \$700 million and went out of business virtually overnight. Both the New York Stock Exchange, where billions of dollars exchange hands every day, and the Chicago Board of Trade, where hundreds of millions of dollars of option contracts are traded daily, experienced the worst single-day decline in history. On October 19, 1987, the Dow Jones Industrial Average dropped a stunning 508 points, or 23 percent of its value (Gayed 45).

The effects of this kind of reversal on building design and construction were equally dramatic. The fall of the real estate market in the late 1980s exacerbated the professionalization issues between architects and interior designers. To any designer of commercial interiors, what was clear was the radical reduction in work available to support professional practice. Not so clear was why, after a brief period of economic adjustment – as the general business and commercial markets found their way back to their former stability and growth – the professions of interior design and architecture remained depressed for nearly a decade, from 1985 to 1995 (Harmon-Vaughan).

And in that economic depression, what actually accounted for the dissolution of an environment of professional cooperation and collegiality that had existed since the 1940s? It was simple enough on the surface to understand the acrimony the adjusted marketplace created with the intensification of competition between the two disciplines of architecture and interior design. But that didn't adequately explain the architects' resistance – reflected in intense lobbying efforts at state legislatures – to the pursuit of state legislated licensing by interior designers (Harmon-Vaughan).

There are other forces at work in the design professions, adding to professional disruption. One dynamic change is in the craft dimension itself.

All designers with built outcomes communicate with drawings and models as much as with print and spoken communication. Certainly there has long been a connection with the craft of drawing/model making and the act of design, as perceived by the non-professional public. These activities have therefore been invested with value and generally presumed to be the service being consumed. In the past ten years, computer-generated or digitally enhanced imagery has significantly expanded the ability to show the stages of design process. Creativity has always been and continues to be a component of the value exchange between designer and client, but creativity is more mysterious and less measurable than the craft required to visually communicate the results in shaping built form. One of Florence Knoll's breakthrough contributions to interior design was the planning board, or paste-up, which gave clients a visible and tangible connection to the possibilities in their projects. Her capacity to create compelling expressions in these boards was an

extension of the craft dimension of her training and skills. The boards created palpable value.

This linkage between visual communication and value is being or has been dissolved. Designers still rely on visual communication, but it has been devalued by the facility of the digital environment. Therefore, a new value structure will likely replace it. This condition of professional practice has caused and continues to cause intense frustration for designers, many of whom are still uncertain of what has happened (Cuff 28). Most know that the economics of their practices have changed dramatically in the past ten years. Many would attribute this to forces of the marketplace in business or economic terms that do not reflect the fundamental shift in the communication/value relationship.

At the same time, the technical expertise that designers provide has become much more widely accessible and, therefore, has also been somewhat devalued in the marketplace. A classic defense mechanism against this circumstance is a widespread effort by designers to secure technical control through licensing legislation. This process secures a market by restricting the provision of design services to licensed professionals. Architects and engineers have since the late 1940s had licensing laws in effect, referred to as “practice acts,” based on protecting public health and safety. Presently, graphic designers, interior designers, and industrial designers are endeavoring to get their own licensing regulations into law.

In seeking practice acts of their own, interior designers meet with considerable resistance. First, they encounter resistance from architects who now design interiors

without specific training or licenses and would therefore lose part of their practice potential if they were not also licensed in interior design. Second, they elicit skepticism from legislators, who often support the position of architects with whom they have had long-time relationships over regulatory matters in licensing, as well as issues pertaining to development, construction, and economic growth in their states. Without doubt, elected and appointed officials and the designers who petition them would be reluctant to admit that gender issues are defining practice laws, but, in fact, this may well also be the case.

This element of professionalization –licensing -- is central to the “professional” or “professionalized” culture of the practice of architecture, interior design, and related disciplines. This licensing process may even be more formative of the culture of practice than university education. The reason for this possibility is that only since the late 1980’s have states restricted architectural licensing to applicants with specifically defined (accredited by National Architectural Accrediting Board [NAAB]) university degrees. For decades, from the inception of architectural licensing, applicants prepared through mentored studio practice were considered equivalently prepared for examination and licensing to those that had university degrees. Therefore, until very recently (approximately 1970), quite a number of architects never completed university degrees but were still able to secure licenses to practice. (Boyer and Mitgang) In other words, the single most uniform element of professionalization in the seventy years from 1900 to 1970 was the licensing requirement. Licensing has dominated the American culture of architectural practice,

but it is because it has provided significant control of access to the market for consultant services in building design that it has been so coveted by interior designers.

Further examination of the cultural relationship of architecture and interior design must extend beyond the devices of education and licensing that provide status and imprint the respective professional cultures. A method for such examination can be borrowed from material culture precedents. This method usually provides insight into the cultural circumstances of people engaged in vernacular (non-professional) design and production – insight that reveals aspects of the life of both the producer and the user/consumer. In many anthropological/archaeological applications of this method, material artifacts may provide one of the few tangible ways to examine and extrapolate the social and economic relationships in a community.

The methods of studying material culture clearly have application to studying the culture of design, as design is an area of human endeavor where the user and consumer are linked by aspirations, expectations, and resulting decisions that take material form. Material culture studies also have in common with design the reality that many aspects of their study defy analysis based on linguistic models, or even expressed solely in language. Joyce Ice's study of material culture, "Quilted Together," addresses this issue:

The influence of linguistic and literary studies can be seen in the use of terms to discuss material culture. ... References to grammar, dialects, competence, performance, and the power of objects to 'speak' to and about makers and their communities abound. ... Yet while analogies

are useful, they may also be constraining. Dell Upton has written ‘We have not been able to find verbal concepts equal to the things themselves.’

Brooke Hindle poses the question, ‘What is the relationship of linguistic models to the nonverbal, three-dimensional world?’ He answers, ‘Of course, it is a representation or a shorthand. It does not produce a replicated image.’

In appropriating the language of linguistics, we may be blinding ourselves to other sorts of communication. Simon J. Bronner has identified an underlying premise of material culture studies: that objects ‘provide information which supplements, and may be distinct from, written and oral evidence.’ Interpreting the meanings of material objects involves different kinds of information and different ways of comprehending (Ice 218).

Some of the ways in which design functions in human life can only be shown by means other than language (i.e. drawings, models, objects). Any study of the culture of design will draw occasionally upon illustration to link the material elements with explanations of aspects influenced by the study of material culture.

If the methods of material culture are useful to understanding the culture of design, why have they not been used extensively before? Perhaps because designers themselves, and the people who write about them, have felt less than comfortable admitting the vernacular dimension of design, especially interior design. For example, the modern office environment has changed regularly throughout the twentieth

century, for the most part never achieving real design success for the people who worked within it. A useful example of this type of design success can be found in tools, for which the definition of design success looks predominantly at utility as the first order of success, not aesthetics. In parallel, most, if not all, vernacular design is focused by, and on, utility. If one considers the office workplace as a “tool” for performing work, then this approach to evaluating design becomes more understandable. Yet designers – and their clients – continued to work more from design principles rather than from any understanding of material culture or vernacular tradition, as they have struggled to create suitable spaces for work. Kwolek-Folland noted this problem:

Ultimately, the office was not the efficiently divided work environment that managers and employees wanted. Nor was it the personalized space workers attempted to achieve. It was a world that replicated the gender arrangements of private families, where social rituals such as courting occurred. In the process of defining the meaning of corporate work, the participants acted through and on the environment, inventing the complex spatial, temporal, and gender divisions of the modern office (Kwolek-Folland 175).

An even simpler answer to why material culture methods might not have been applied to the culture of design is that, just as interior design struggled with its gender issues, so the study of material culture struggled with similar issues of its own. Ice noted,

During ... the 1960s and early 1970s a new generation of folklore scholars took up the study of material culture, bringing together

models from fields such as linguistics, cultural geography, archaeology, and behavioral psychology. A shift from an object-centered approach to an analysis of the interaction of objects and their makers within community contexts produced more in-depth research. By and large, these works concentrated on male artists and male genres. Women were virtually invisible as research topics, and when they were the focus, there was a blindness to issues of gender exhibited by both male and female scholars (Ice 219).

The model of material culture studies and allowance of the potential importance of the vernacular tradition to design in the workplace could help describe an observable – but largely unspoken – context for studying an important intersection in design culture: the way professionalism and gender issues have made an impact on the places people work. No doubt the vernacular tradition is central to this study. John Kouwehoven’s work on the vernacular tradition highlights this concept. He describes the vernacular tradition as existing outside a historical tradition. Both are “traditions,” and therefore passed along in some aspects, the “historical,” however, involves the selective and interpretative recording for persuasive purposes; the vernacular is driven only by utility, bent on the goal of function – a goal most workplace designers would say they espouse. Kouwehoven argued in Made in America that vernacular tradition is embodied in Shaker objects, in the way their beauty is testament to their rejection of all embellishment, of all artistic pretension (Kouwehoven). Kouwehoven’s thesis about the vernacular could be a mission statement for many modern designers:

The vernacular, Kouwehoven believed, occurs when the artisan creates utterly unselfconsciously, with no sense of working within a historical

tradition, with no allusions to the past, with no attempt at beauty or art for beauty's or art's sake but, rather, out of mere desire for utility. Form in vernacular artifacts always follows function, form being of no particular importance in and of itself. When form follows function, however, beautiful forms do emerge because they are outward manifestations of inner truths (Rockland 299).

Certainly, studying the vernacular tradition does not cover all modern design. Indeed, Rockland warns against that:

An unqualified attachment to the vernacular idea may really be a rather elaborate rationale for utilitarianism. This utilitarianism explains how it was so easy to get, to paraphrase Tom Wolfe, from the Bauhaus to our house – that is, why modern architecture had its greatest practical application in the United States (299).

In fact, the focus of this study would not be to validate utilitarianism, but to study how the modern American workplace has taken the forms it has, influenced by professionalism and gender issues in the culture of design.

A majority of working people in developed nations now spend more time in office environments than in any other environment – more than homes, more than places of worship, study, or leisure. Yet, except in rare instances, the office workplace has never achieved the mix of form and function sufficient to nurture human productivity, much less capability. Any study that furthers a body of knowledge about this aspect of the culture of design can be a useful step to understanding ways to create better built forms for human work. Angel Kwolek-Folland states this simply:

Corporate designers used objects and spatial arrangements borrowed from middle-class domestic architecture to demarcate status in the division between brain and manual workers. The corporate offices of many executives from at least the 1890's through the 1920's replicated domestic spaces within the public, corporate realm (164).

She continues:

The structure and content of buildings, rooms, and streets reveal struggles and compromises over meaning and use and passes on the results of such contests. When space and time become an arena of disagreement, their physical and verbal articulations reveal both underlying cultural assumptions and the process whereby those assumptions are modified. Thus, to the extent that spatial arrangements make manifest the abstract social relations of gender, they provide a unique way to analyze and understand not only the gender systems of a given culture as these systems change over time but also the way gender systems are implicated in the creation of power structures such as status (158).

Examining the culture of design – just how these spaces come to be developed – and its implications on human action and interaction is worthwhile and necessary. Florence Knoll, through her work with the Knoll Planning Unit, was the first to consider the office workspace's influence on how people work and interact. This very material culture of architecture and design led to the formation of Florence Knoll's professional identity, as well as many of her behaviors in practice.

The practice of any design discipline impacts the outcome. Therefore, the culture of practice forms the practitioner, and the outcome forms the end user – in this case, the office workplace worker. Florence Knoll contributed substantially to transferring a culture of practice – influenced by the Saarinens, Mies van der Rohe, and Hans Knoll – to the Knoll Planning Unit, the industry of interior design, and ultimately a profession of largely female designers. This culture of practice also impacted countless office workers. Further studies of the material culture of office workplace design will move towards a greater understanding of the environment and help move office workspaces towards actualized design.

Chapter 5

The Boss's Wife: Florence Knoll and Issues of Gender in Interior Design

The Gendered American Workforce

Any study of the professionalization of interior design begs consideration of gender in design professions and the workplace generally. In fact, examining gender issues may be required for any understanding of work in twentieth century American society. The idea that social structure and social processes are gendered has emerged in diverse areas of feminist discourse and has been reflected in studies of work in general (Acker 145). According to Ava Baron:

... gender colors a myriad of relations of power and hierarchy, including those between employers and workers, men and boys, and whites and blacks, as well as those between men and women. Gender is continually reconstituted as various groups politically contest multiple notions of masculinity and femininity (1).

This ever-evolving sense of difference, competition, power, and gender shapes how Americans work – and what sort of work they do. While gender wage inequality has been a hot topic since women entered the American workforce en masse in the

1970s, studies have shown that this income differential rests on a foundation of gendered work. According to Hanson and Pratt:

The enduring gender wage gap reflects not only different rates of career mobility within particular occupations but also the fact that women and men tend to work in different occupations and industrial sectors ... typically the sectors and occupations filled by women tend to have lower income ceilings, poorer benefits, and less career mobility.

The tendency for women to have different occupations from men is what is referred to as occupational segregation; it is a phenomenon that appears to be remarkably persistent. Historical studies (Gross 1968; Beller 1984; Jacobs 1989) indicate that levels of occupational segregation in the United States were essentially constant from 1900 to 1960 (3).

Feminists have elaborated gender as a concept to mean more than a socially constructed, binary identity and image. This turn to gender as an analytic category is an attempt to find new avenues into the dense and complicated problem of explaining the extraordinary persistence through history and across societies of the subordination of women (Acker 146). Despite shifts in the twentieth century of power exercised by women in many arenas, and the numbers of women practicing in the profession, interior design has remained a profession largely mired in patriarchal models.

By the turn of the twentieth century, women were working for birth control, suffrage, and temperance, and against prostitution. Middle class women flocked to settlement houses to help the poor; they demanded an end to child labor and to corrupt political machines. More and more were taking paying jobs, not in factories,

fields, or other people's homes because they had no other means of support, but in positions that reflected their own interests and skills. In the nineteenth century, most working women had been poor, most often immigrants or blacks employed on farms or as domestic servants. By 1910, 60 percent of working women were native-born whites (Harris 61). As the economy shifted from farm to factory, working women with little education were hired as stenographers or clerks in offices and stores. Better-educated women increasingly became teachers, social workers, nurses, and interior decorators. While most professional women worked in such "female" fields as teaching and social work, many began to enter the "male" fields of medicine, law, architecture, and engineering.

By 1930, 24 percent of American women were in the labor force (1930 Fact Sheet). Nearly 12 percent of the nation's wives worked outside the home and almost a third of working women were married (Antler 161). In part, these women took their cues from working-class women whose movement toward independence and autonomy had begun before the turn of the century. As early as 1900, a fifth of wage-earning women were living apart from their families. Many, from poor backgrounds, had left home for economic reasons or to escape family problems; a few sought to pursue their ambitions, romance, or adventure for a few years before marriage. While these single, working-class women were portrayed as "adrift" in the 1910s, bohemian and intellectual women began to emulate their unconventional behavior. In the 1920s, growing numbers of young, middle-class women, some of them college graduates, followed suit. According to Mary Ryan,

By the 1920s, American culture was electric with declarations of working girls' independence. One modern daughter went so far as to say that she and her peers craved 'the freedom of being orphans for a while.' Among the middle-class ranks of reformers, 'clubwomen' were set off from the younger generation by the label 'college women' whose degrees and job titles replaced the old maternal graces. At the University of California, coeds boasted of being wine-drinking agnostics and answered the rhetorical query, 'Am I the Christian gentlewoman my mother slaved to make me?' with an emphatic 'No indeed' (211).

It is generally understood that women lost opportunities for education and careers during the Great Depression. Between 1929 and 1933, the average family income dropped 40 percent. Many men found second jobs while "their wives stayed home and struggled with what Eleanor Roosevelt called "endless little economies and constant anxieties" (Collins 353). Later, the booming postwar economy led people to marry, have large families, and embrace traditional gender roles. On the one hand, technological innovation, modernization in the professions, universal suffrage, and the great social and political movements of the early twentieth century led to increasing independence and autonomy for women and men. On the other hand, those very developments, combined with massive immigration, social disruption, war, and disorder in cities and in families also contributed to an apparent desire for order and tradition and for simpler, safer-seeming gender roles.

The rise of technology in the early part of the twentieth century certainly seemed likely to free women from many of the burdens of household work. Factories

had already largely replaced home-made products, and households regularly used canned and packaged food and ready-to-wear clothing. Once the Rural Electrification Act (1934) began to make electricity available across the nation, many homes had utility services to support the acquisition of appliances such as stoves, washers, and vacuum cleaners, and, with those came a greater market for interior furnishings. If housewives saved time by using appliances or packaged commodities, they often reallocated it to child care, shopping, or household management, which included “decorating.” (Kron 126)

According to Harris, in a move to counter the potential devaluation of the “housewife,” practitioners of the developing field of home economics worked at eliminating the notion that women were born homemakers. “They portrayed housework as a vital profession with managerial, business, and spiritual elements and a ‘product’ of ‘happy, healthy, useful human beings’” (69). The U.S. Department of Agriculture made the Bureau of Home Economics a government agency, and under the aegis of this agency many universities, particularly land-grant colleges, began offering degrees in home economics. This was the educational location for the beginnings of interior decoration as a profession.

As the process of professionalization advanced in disciplines such as engineering and architecture, this modernization in the professions was making it more difficult to pursue “non-traditional” career paths by creating exclusivity in admission to professional status. In part, this was tied to a backlash against working women in fields where they had made the strongest gains, such as medicine. The

development of many new vocations, such as interior decoration, was construed as a “positive” step toward enabling women to locate in congenial areas of professional employment that would not conflict with the norms of feminine behavior. But it was not a perfect fit. Divisions of labor have associated masculinity with technical skills and femininity with dedication to repetitive tasks. The linkage of masculinity with skill has been an ideological weapon in the exclusion of women from male-dominated jobs. As Acker points out, in

organizational logic, both jobs and hierarchies are abstract categories that have no occupants, no human bodies, no gender ... [the] abstract, bodiless worker, who occupies the abstract, gender-neutral job has no sexuality, no emotions, and does not procreate. ... The absence of sexuality, emotionalism and procreation in organizational logic and organizational theory is an additional element that both obscures and helps to reproduce the underlying gender relations (145).

The technical nature of architecture clearly marked it as a man’s profession. Interior design, on the other hand, seemed like a good “non-traditional” occupation for women, as it applied some skills conventionally considered feminine. Within organizational contexts, women practicing interior design were seen as subservient to the generally male architects who led the practice. An atmosphere of increasing professionalism has brought this dichotomy to inevitable examination and query. The subordinate ranking of women’s jobs – or professions associated primarily with female practitioners – is often justified on the basis of women’s identification with

childbearing and domestic life. They are devalued because women are assumed to be unable to conform to the demands of the abstract job (Acker 152).

This very preliminary historical background concerning the relationship of gender to professions and professionalism generally provides a basis from which speculation about gender and interior design may be constructed. Parallels for this construction exist in the gendered relationship that exists in other professional settings.

Gender in Interior Design

The effects of gender on professions and the relationships between professions are issues which then have ramifications in considering the professionalization process of interior design. Interior decoration as a homemaker's craft was a "gendered" activity and was predominantly the domain of women before it became an occupation or evolved to professional stature. As a component of commercial building activities, however, it was when buildings began to house a much different and varied set of corporate business activities that the endeavor of interior design began to be taken on by women, often women trained, as Florence Schust Knoll had been, as architects. Interestingly, Florence Knoll Bassett's work at CBS made corporate space more humane and residential. Her introduction of couches, coffee tables, and armchairs – similar to settings found in residential living rooms – allowed more comfortable and collaborative meetings. This design both affected change and responded to changes in the character of the work activity.

Prior to that, it was an architectural responsibility, and therefore it was accomplished in commercial projects primarily by men. As a young woman starting out as an architect, Florence Schust was often given interior design projects, as exteriors were considered the work of men. According to a 1984 feature on Florence Knoll Bassett,

... she found a job with Harrison & Abramowitz, the architects of Rockefeller Center and, later, Lincoln Center. She worked on the firm's interior-design projects, to which women architects in those days (and indeed until very recently) were assigned routinely (Knoll Bassett Collection, box 1, folder 2).

It is important to consider gender as an aspect of the professionalization of interior design, indeed, of interior design's very practice. Little has yet been done to document the gender issues in this field, and the nature of design practice does not encourage this kind of examination. Even women writing about design have not tackled these issues specifically. In spite of feminist recognition that hierarchical organizations are an important location of male dominance, some feminists writing about organizations assume that organizational structure is gender neutral. As Acker notes, however, "On the contrary, assumptions about gender underline the documents and contracts used to construct organizations . . ." (Acker 139). There can be little question that the structure of architectural practice is patriarchal. In schools of architecture now, about half the enrolled students are women, yet they graduate to practice in firms already constructed on past assumptions about gender.

Most commercial interior design is practiced within these structures, and gender issues are masked by the façade of equal opportunity now so much a part of appropriate organizational discourse. Interior decoration, largely viewed as a residential enterprise, is recognized to have many more female practitioners (although the “stars” recognized by the media are usually male, like Mario Buatta). Interiors programs in academia continue to attract more female than male students. Interior design and decoration are considered the province of women, in a design world largely governed by men (Guerin).

The Matrix group of feminist architects argues that male architects design spaces that define women with patriarchal values. In Making Space: Women and the Man-Made Environment, the Matrix argues that this sexist language implies that women training to be architects are expected to embrace the patriarchal standards.

Women interior designers practicing with architects are held to these same expectations, perhaps with more strictures. They may talk among themselves about gender issues, but those who continue to work in largely male-dominated architectural practices are making the best of a situation that until very recently has been defined by somewhat limited job opportunities. As there have been economic cycles that create upswings in commercial building nationwide occasionally changing this dynamic, when this occurs design jobs can be hard to fill, and women in the profession have a greater opportunity than ever before to define their circumstances and make change. When this occurs it may also yield valuable insights into the gendered nature of the interior design profession.

Looking at the larger world of work may provide insight into a study of gender in interior design, even though studies of work in general have not been gender neutral, but have looked at work-for-women and work-for men. Roslyn Feldberg and Evelyn Glenn point out that work has been seen as the central social process that links individuals to industrial society and to each other. Work determines daily activities, the rhythm of people's days, the people they meet, and the relationships they form. Work largely defines a person's class and status in the social structure. While issues of work are named as universal ones, the actual study of work has proceeded along sex-differentiated lines (529).

According to Joan Scott in Gender and the Politics of History:

Gendering occurs in the sex segregation of jobs within work organizations that typically locates women in some jobs and men in others. To say that an organization or any other analytic unit is gendered means that advantage and disadvantage, exploitation and control, action and emotion, meaning and identity are patterned through and in terms of a distinction between males and females, masculine and feminine. Gender is not an addition to ongoing processes, conceived as gender neutral. Rather it is an integral part of those processes, which cannot be properly understood without an analysis of gender (no page).

Just as women's cultural code is produced in a context of patriarchy, their expectations, needs, and desires as both designers and consumers are constructed within a patriarchy which prescribes a subservient role to women and therefore a subservient quality to their designs. The women (and their work) who make it into the

literature of design are accounted for within the framework of patriarchy; they are either defined by their gender as designers for users of feminine products, or they are subsumed under the name of their husband, lover, father, or brother.

Furthermore, the “style” of their work is either pre-figured by their training and/or education or falls under the label of traditional and has been especially ignored. An example is the near silence about women’s involvement in the Bauhaus. Although women were trained and taught at the Bauhaus, the vast literature on the subject makes scant reference to any of them. Similarly in America, Marion Mahony Griffin was a significant contributor to the success of Frank Lloyd Wright’s early practice in Oak Park, Illinois. She was the first woman to graduate from MIT’s architectural department and was an incredibly accomplished delineator. Even Wright’s staunchest fans agree that her drawings and their visual quality contributed to securing commissions for Wright that he might not otherwise have gotten. Later, she worked for and married Walter Burley Griffin and assisted him in a similar way. It is generally agreed that her drawings won the commission for the new capital city of Cannaberra in Australia for his practice, and there is considerable conjecture that more of the design for the city was hers than she has been credited for providing (Peisch).

Despite this, Mahony Griffin is often treated as a mere footnote in recent architectural history. A recent book published by the Walter Burley Griffin Society of America attempts to shed light on her contribution. Marion Mahoney and Milliken Place: Creating a Prairie School Masterpiece showcases several private homes

Mahoney designed in Decatur, Illinois. However, her work remains far from the mainstream: the book isn't even available through mass retailers. She is most often cited as an architectural delineator. That diminution underscores Florence Knoll's refusal to be called a "furniture designer," despite the fact that she designed more than half the pieces in Knoll's collection by the time she retired in 1965. Tigerman comments:

By describing her own furniture designs as architectural, she asserted that they were not simply meant for sitting on but contributed to a broader vision about how an interior should function and how it should work with the building's architecture. Furthermore, she did not want her legacy to be the 'anonymous' furniture she contributed to the Knoll line, but the full complement of her work. Since her furniture designs were inextricably bound to the interior design and architecture of the space, the label 'furniture designer' was too narrow to describe her achievements (72).

Although her role as a trailblazer for women in architecture and interior design is obvious, Florence Knoll Bassett is treated with a degree of this same type of contextual praise. Any mention of her work or her contribution to the industry mentions her schooling at Cranbrook and her affiliation with Eliel and Eero Saarinen. Indeed, a 1957 Interiors article by Olga Gueft that called her "a symbol of the modern movement," and "the most inspired catalyst of the avant-garde ... today" also felt entitled to describe her pulchritude even before mentioning her name: "... Hans Knoll met a pretty brunette from Michigan named Florence Schust." Later the same article replayed the story of her upbringing as "she had become a general pet and informally

adopted daughter of Eliel Saarinen, the great modern architect from Finland” (Knoll Bassett Collection, box 1, folder 2). No doubt, her employees and colleagues of later years, some of whom spoke of her fierce critiques and uncompromising demands would have been amazed to think of her as a “pet.”

Despite the fact that her partnership with Hans Knoll was more than a marriage – she was an equal partner in Knoll Associates, founded Knoll Textiles, and was an equal partner in Knoll International – she was always seen in the profession to some extent as the boss’s wife. When Hans Knoll died, the media picked up on the inevitable speculation that an international group of companies would not be able to succeed under the guidance of a woman. “Doubts were expressed as to the company’s ability to survive without its leader but Florence Knoll stepped into the breach,” reported World Architecture in an article co-authored by Sylvia Katz (Knoll Bassett Collection, box 1, folder 2). Looking at the history of Knoll, it is clear that Hans Knoll’s little furniture enterprise bloomed when Florence Schust brought to it her vision for the Planning Unit and her friendships with important designers. Moreover, in the five years after Hans’ death, before her semi-retirement in 1960, Florence Knoll Bassett continued to grow the companies. After her departure, long-time Planning Unit designer Vincent Cafiero described the company as “a boat that had lost its rudder” (Tigerman 70).

With her remarriage to a wealthy banker and subsequent repairing to a studio in her home on an island in Miami, Florida, to work on what she referred to as “personal projects” (Knoll Bassett Collection, box 1, folder 2), all phases of Florence

Knoll Bassett's career can be defined in traditional terms by the influential male company she kept. Separating her own achievements in accounts contemporary and retrospective is difficult.

When Florence Schust was getting her start in the American workplace in the late 1930s and 1940s, working women were relegated to the roles of secretary, nurse, or schoolteacher. Certainly in the world of architecture and interior design, women were few and far between. The 1940 U.S. Department of Commerce census reported 39,958,800 total men in the American workforce. Of those, 5.5% were reported to be professional or semiprofessional workers. This number included 19,540 architects.

The same census reported 11,278,920 women in the workforce, with 1.5% employed as professional or semiprofessional workers. For female workers, the 15 occupations under this heading included actress, librarian, physician and surgeon, social and welfare worker, teacher, and trained nurse or student nurse. Reporting oneself as an architect was not an option for women responding to the 1940 census. The closest occupational categories allowed by the census were "other trained workers," which listed 32,300 women, or "designers and draftsmen," which reported 9,960 women employed in its ranks. This lack of specificity is telling, especially in the context of a report that spends pages classifying married women by their husbands' occupation and income (Employment and Family Characteristics of Women).

For her 2001 book Designing for Diversity: Gender, Race, and Ethnicity in the Architectural Profession, Kathryn H. Anthony found that of 400 architects surveyed

nationwide, 68 percent had seen or heard about gender discrimination in an architectural office and 44 percent had experienced such discrimination personally (1). This was reported sixty years after Florence Schust first made her way in the architectural world. Florence Schust was privileged in many aspects – she was Caucasian, well-educated, and socially and professionally connected to some of the biggest players in the architecture world. However, given the realities of the 1940s workplace, it must be assumed that she was at a disadvantage due to her gender. By her own description her assignments in her early professional experience with Harrison Abramowitz in New York were to provide interior layouts and furniture design rather than the customary entry level architectural assignments.

An article that originally ran in the July 1943 issue of Transportation Magazine provides context on how women workers were viewed and treated in the 1940s. While Knoll Bassett was going head-to-head with male architectural counterparts, male supervisors of women in the era of Rosie the Riveter were given these helpful hints for managing female employees:

- Pick young married women. They usually have more of a sense of responsibility than their unmarried sisters. ... When you have to use older women, try to get ones who have worked outside the home at some time in their lives. Older women who have never contracted the public have a hard time adapting themselves and are inclined to be cantankerous and fussy. It's always well to impress upon older women the importance of friendliness and courtesy.

- Give every girl an adequate number of rest periods during the day. You have to make some allowances for feminine psychology. A girl has more confidence and is more efficient if she can keep her hair tidied, apply fresh lipstick and wash her hands several times a day.
- Give the female employee a definite day-long schedule. ... Numerous properties say that women make excellent workers when they have their jobs cut out for them, but that they lack initiative in finding work themselves.
- General experience indicates that ‘husky’ girls – those who are just a little on the heavy side – are more even tempered and efficient than their underweight sisters.
- Retain a physician to give each woman you hire a special physical examination – one covering female conditions. This step not only protects the property against the possibilities of lawsuit, but reveals whether the employee-to-be has any female weaknesses which would make her mentally or physically unfit for the job.
- Be tactful when issuing instructions or in making criticisms. Women are often sensitive; they can’t shrug off harsh words the way men do. Never ridicule a woman – it breaks her spirit and cuts off her efficiency (1943 Guide).

Florence Schust Knoll hardly had her spirit broken or her efficiency “cut off” by working in a male-dominated industry at a time when female workers – not to

mention female architects – were few and far between. Her long list of achievements as well as the personal accounts of her professional colleagues and social acquaintances lead to the conclusion that she was not confined by the gender issues attendant to interior design at the time, and to a considerable degree yet today, because of several factors: her education; her mentoring by the powerful leaders in design with whom she became acquainted when she was very young; her design talent and business acumen; her considerable personal style and the force of her personality, reported by her contemporaries as strong, focused, and unforgettable. Lewis Butler, who worked at the Knoll Planning Unit, said, “She was a driving force, extremely creative. She could target in on one thing, whether it be fabric, catalogues or furniture development. She had a strong, basic design philosophy” (Knoll Bassett Collection, box 1, folder 2).

Lawrence R. Ryan, who became president of Knoll International in 1980, joined the company as a salesman in the 1950s. He recalled his introduction to Florence Knoll Bassett:

I was brought to New York in 1963 ... at the time of the CBS project. Until then, I didn't know Mrs. Knoll except by reputation. This was a huge job, and she was completely in charge of every phase of it. The thing that struck me then was the awe in which everyone held her. Affection? From where I stood I would have to say not affection. Her objective was to produce absolute perfection. She was very professional, very cool, very self-contained. She had the gift of understanding immediately how to solve a problem, and she became terribly impatient when other, ordinary mortals couldn't operate on the

same level. Then there would be Words. Eventually it would all blow over, and everyone would apologize. She was a great apologizer. But she wasn't what you'd call difficult. She was demanding. She demanded as much from everyone else as she demanded from herself (Knoll Bassett Collection, box 1, folder 2).

Even with the “awe in which everyone held her,” despite her impact and agency, Florence Knoll Bassett was still subject to the gender roles prevalent in American society during her career. A 1964 New York Times article discussed Florence Knoll Bassett's influence on office workspaces in depth. Then the last fourth of the article detailed her home, her clothing, her jewelry, and her personal appearance. Her work habits were discussed in terms of her lunch habits and leisure activities:

Lunch, served on a tray by the pool, takes only half an hour. Then she works until 5:30 or 6, after which there are three sets of tennis and a swim with her husband. ... In New York her days are spent at the Knoll offices and showroom ... if her husband cannot join her she usually lunches alone (Knoll Bassett Collection, box 1, folder 2).

Male architects featured in the New York Times were not asked about lunch habits and a description of the workday certainly would not have been framed by descriptions of how the man spent time with his spouse (although in the twenty-first century, these kinds of questions would be staples for any celebrity professional, man or woman). Florence Knoll Bassett, while breaking new ground as a female designer

and bringing professional cache to interior design, was still subject to the gender roles of the mid-twentieth century.

Design historians play an important role in maintaining assumptions about the roles and abilities of women designers by their failure to acknowledge the governance of patriarchy and its operation historically. As a result, women's design is essentially unrepresented in design history. Women have been involved with design in a variety of ways – as practitioners, theorists, consumers, historians, and as objects of representation. Yet, women's interventions, both past and present, are consistently ignored. The Irish-born designer Eileen Gray (1878-1976) has been defined by her gender as an interior designer (read: feminine designer), despite her work as a furniture designer and architect, that only recently has earned her assessments as “one of the most important women in those fields [whose] work inspired both Modernism and Art Deco” (Eileen Gray). Unlike her contemporary Le Corbusier, Gray saw her work consigned to the so-called decorative arts. The British Design Museum information on Gray is candid:

As a woman, Eileen Gray was denied access to the supportive networks from which her male contemporaries benefited. Neither did she have the advantage of working with a powerful male mentor, like most of the other women who made an impact on early 20th century design, such as Charlotte Perriand with Le Corbusier, then Jean Prouvé; Anni Albers with her husband Josef; or Lilly Reich with Mies Van Der Röhe. Nor did Gray share a trajectory with other designers: either by studying at the same schools such as the Bauhaus in

Germany, or as an apprentice in a studio like Le Corbusier's in Paris (Eileen Gray).

Looking at Gray's career, it is clear that Florence Schust might well have found the same difficulties had she not had the springboard of her connections with male designers from Saarinen to Knoll, and had she not from the beginning of her working life resisted labels.

Some of the gender issues in design propagate, as they do in other arenas, through subtle labeling. The ideological nature of terms such as "feminine," "delicate," and "decorative" should be acknowledged as limiting within the context of design by women, regardless of professional discipline. Attempts to analyze women's involvement in design that do not take issue with gender assumptions and the hierarchy that exists in design will always be troubled.

To educate designers, the preparation of designers, there has to be a set of transferrable principles and a set of processes to be able to educate other designers. There is an inherent presumption that design considered from a theoretical standpoint may be viewed as having a universal quality in process and fundamental principles. Such elements as symmetry, rhythm, balance, and harmony are principles that, as the basis for design decision-making, have a neutral quality in the abstract. A further example is Vitruvius's well-known "triad" of firmness, commodity, and delight from his work The Ten Books on Architecture. This is the first and most famous text in the history of western landscape architecture, architecture, engineering, and town planning. (<http://www.lih.gre.ac.uk/histhe/vitruvius.htm>)

Likewise, process may well follow a series of methodological steps that seem also to have a universal quality. A typical set of steps would be the sequence of programming, schematic design, design development, and construction drawings which provide transferable and universal process to achievement of a design outcome. In the abstract, both the principles and the process are non-gendered. It is within the patriarchal framework of education and practice that these operate in a gendered way.

If most of the people setting up the structure of education – setting the curricula and choosing the content – and leading subsequent practice are men, then these will be framed in a gendered way. For example, the process of interior design before Florence Knoll was a process defined by male architects, who made choices about interiors and presented those to clients as a *fait accompli*. Florence Knoll's revolutionary idea was to engage the client in the process. Her approach "let's ask them," was out of the norm in the design process as practiced by male architects up to that point. There is an assumption that a "masculine quality" in design is normal – geometric as opposed to organic forms, which would be classified more often as "feminine." The outcome of such a position is the assumption that not only is masculine design form normal, but that principles and processes that "feminine" designers might choose are abnormal or of lesser value.

Interior design provides an opportunity for both education and practice to be examined from the radical feminist point of view, with the resulting conclusions providing a guide to reconfiguring both the way designers are schooled and the opportunities they find in the workplace. A non-gendered education and professional

practice may lead to a design outcome in built form that is genuinely “feminine” and non-subordinate. Such an interior space could well provide a workplace that is not simply evaluated on a dominant masculine value system of measuring design but utilizes different measures. The acceptance of such design outcomes could affect the daily lives of a significant number of Americans through changes in their workplaces.

Florence Knoll did not take on a feminist political agenda; she simply did the work of an architect and designer in an occupation almost completely populated by men. From the standpoint of her education and the work that she did, she operated as a man, making sure she fit in with prevailing expectations and customs of behavior. It might be argued that her sense of how to make her way in the world led her to such tactics as the use of men’s suiting fabric as upholstery materials on her early furniture less because she liked the look and, more, because she knew the pieces would “fit” within her male clients’ scale of appreciation. She never wavered in this capacity to provide furnishings and materials that appeared to be on the cutting edge, at the same time that she provided a comfortable margin of recognizable, prevailing taste. Under the influence of her design aesthetic, Florence Knoll perfected a timeless impersonality in the furniture the company manufactured and sold, a spare, geometric, technical elegance that no one ever described as “decorative.”

She has never been quoted as taking a feminist position about her work. She once noted, “I always felt the idea succeeded and it didn’t matter about the sex” (Knoll Bassett Collection, box 1, folder 2). Indeed, she appeared to report without flinching incidents of casual condescension, like the patronizing passing remarks that

allow men to put women “in their place” under the guise of geniality. Florence Knoll Bassett recounted years later, for example, a visit from Frazar Wilde, CEO of Connecticut General Life Insurance. “Frazar came up to see me once at 575 Madison He tripped over my dog on the way in and said, ‘Any woman who has an Old English Sheepdog can’t be all bad.’ It was very amusing” (Makovsky *Shu U* 122).

Yet she injected a substantial feminine perspective into her design and space planning work. For example, in the Planning Unit, in the programming process, she did something men did not do. She interviewed people, men and women, in the workplace about how work “worked” for them. One might well posit that she asked employees in the workplace she was commissioned to design, “What do you need to do your work?” because she was a woman, and it was the kind of question a woman would ask, whereas a man would not, particularly in the office workplace.

Florence Schust Knoll Bassett would not pass a litmus test of feminist politics, professional behavior, or status. She worked within the patriarchal confines of her profession and did not try to change the rules. At the same time, she did not operate in a subordinate role in her professional life. She was both the boss’s wife and the boss.

Not every woman who has wanted to be an interior designer could mirror Florence Knoll’s intense work style, nor could they combine the personality traits and unique opportunities that shaped her career. But her forceful navigation of the male-dominated architecture and design worlds moved forward the progress of professionalization, which has provided women in interior design more opportunities to succeed. While she did have privileged opportunities, Florence Schust Knoll

Bassett's power and influence came mostly from her own education, skill, and cultivated collaborations with the leaders in her chosen field.



Fig. 28. Florence Schust Knoll presenting to an all-male group from client Connecticut General in 1957 (Knoll Bassett Collection, box 2, folder 2, slide 5).

Chapter 6

Knoll After the Knolls: 1965-2008

New Products, New Processes, New Connections

In 1904, Frank Lloyd Wright set the standard for the integration of new architecture, new interiors, and new furniture design with his design for the Larkin Administration Building. Located in Buffalo, New York, this five-story red brick building housed the Larkin Soap Company and boasted many innovations. These included built-in desk furniture, air conditioning, plate-glass windows, and suspended toilet bowls. The building was a remarkable synthesis of function and innovation.

Not until 1960 was there a building that could begin to match Wright's innovation with the Larkin Administration Building. The new example was on Park Avenue in New York: the Union Carbide Building by Skidmore, Owings & Merrill (SOM). An experiment of the modular imaginations of Breuer, Le Corbusier, and Gilbert Rohde, all Union Carbide's structural system, its fenestration, its luminous plastic ceiling panels, its metal partitions, its filing cabinets, and its desks were designed on a single module of 30 inches. Union Carbide was the expression of an ideal to an extreme degree that would never be repeated. The "universal order" of Union Carbide reflected confidence about universal certainties about the nature of

office work (Abercrombie 81). Within the next few years, however, those certainties were challenged by designers who understood what Florence Knoll knew: people who use the office know what would make it better.

Inventor Robert Propst spent his time imagining new types of heart valves, playground equipment, and livestock tagging machines until 1960, when Herman Miller established the Herman Miller Research Corporation in Ann Arbor, Michigan, and appointed Propst its first director. Propst then turned his attention to the office. The Research Corporation assembled a lengthy questionnaire and sent it to office workers. “Who can overhear your phone conversation?” it asked. “Can you take a nap in your office without embarrassment? Can you keep your papers visibly available?” The answers led Propst to an assortment of notions about the office, such as “people like to support their extremities,” “body motion” is related to “mental fluency,” and deep drawers become “vertical paper bottlenecks” (Abercrombie 89).

It was an incarnation of the Planning Unit approach, but with one huge difference: it was pure research, separated from client intent. Designer George Nelson was asked to make Propst’s ideas manifest in an actual product line and, after much collaboration by the two, Herman Miller introduced the first version of Action Office in 1964. Cantilevered from die-cast aluminum legs, the rubber-edged desks had plastic laminate work surfaces that could be covered at night with a roll of canvas or a wood tambour. Other elements included a movable storage unit and a sound insulated “communications center” for telephone and dictaphone use. The design was considered revolutionary, generating attention in the business and general press as

well as in the design magazines. Unfortunately, the reception in the press was more positive than the reception by potential customers. American workers and managers weren't ready to trade their familiar wooden desks for blue (or green or yellow) objects on shiny legs. Action Office was admired but not purchased (Abercrombie 89).

Meanwhile, in Quickborn, Germany, Eberhard and Wolfgang Schnelle, brothers and partners in a management consulting firm, developed a radical idea: the arrangement of office furniture should be planned not according to rank or organization charts but by patterns of communication among workers. The applied outcome of this notion, which they called *Bürolandschaft* ("office landscape"), was that the orderly rows of desks so familiar in almost every office were replaced by clusters of furniture separated by empty spaces, screens, and potted plants. The Quickborner team's first U.S. commission was a floor for the Freon Products Division of DuPont in Wilmington, Delaware (1967). On other floors of the same building, DuPont provided more conventional layouts with ceiling height partitions, and department managers were invited to observe the Quickborner experiment. None chose "office landscape" for their own departments, but, like Action Office, it attracted much favorable attention. Progressive Architecture magazine described it as "an open, unenclosed space with activities swirling to diffusion" and predicted that "office landscape will, incontestably, become firmly rooted" (Abercrombie 89-90).

For office landscaping to be truly functional furniture needed to be lightweight and easily rearranged. Herman Miller went to work to make Action

Office more popular, and Action Office II appeared in 1968, with work surfaces and storage hung on moveable panels.

Others went to work as well: In 1970, Otto Zapf designed the Softline System for Knoll, a seating design that used a frame of steel straps on which “soft” formed cushions were mounted or removed, and it was somewhat successful. Then came one of the most noteworthy furniture systems, developed for the Weyerhaeuser headquarters in Tacoma, Washington. This 300,000 square foot “office landscape” designed by SOM used a furniture system that was a collaboration between SOM’s Charles Pfister and Bill Stephens from Knoll’s Design and Development Group. The system featured interlocking panels that gave the illusion of wood and had a sturdy and warm appearance. In 1973, Knoll began marketing it as the Stephens System (Abercrombie 90). In 1976, Haworth introduced ERA 1, the first prewired modular office panel. From then on, office furniture also became a power source.

From the late 1960s, through the 1970s and into the 1980s, millions of square feet of office space were put under roof. In the late 1970s and throughout the 1980s, office systems proliferated until in 1984, *Arts & Architecture* magazine estimated that there were “over two hundred open office systems on the market.”

In 1962, Congress passed the Revenue Act, which allowed a 10 percent investment credit on personal property with a useful life of seven years. Fixed walls were considered real estate and couldn’t get the credit, but movable panels could, and no doubt this affected the proliferation of the new panel systems almost as much as their functionality. In 1970, Congress passed the Occupational Safety and Health Act,

which led to the establishment of both NIOSH (the National Institute for Occupational Safety and Health, part of the Department of Health and Human Services) and OSHA (the Occupational Safety and Health Administration, part of the Department of Labor). Both these organizations, and others, affect the overall design of interiors, including furniture and office equipment. Federal regulations establish guidelines, specifications, or minimum standards on a host of topics from lighting, materials, and fabrics to environmental acoustics and physical maladies (Abercrombie 93).

In 1980, office design as Florence Knoll had known it underwent another shift with the formation of the National Facility Management Association, which has been known as the International Facility Management Association since 1983. The International Society of Facilities Executives was established in 1989. These organizations supported the new role of the facility manager, charged with purchasing power as well as the supervision of workplace efficiency, safety, security, and productivity. The facilities manager put layers of interaction and decision-making into the client- designer relationship. When Connecticut General's CEO, Frazar Wilde, wanted to talk about his headquarters project, he talked to Florence Knoll. By the mid-1980s, in the same situation, he would have talked to his facilities management staff.

Knoll's "Modernism" Meets the Modern Office Marketplace

In 1955, when Florence Schust Knoll became the president of the Knoll companies – Knoll Associates, Inc., Knoll Textiles, and Knoll International, Ltd. – she continued to oversee the companies' growth and development but she made no secret that she had more interest in the design work of the company and has said that she "left the operations to others" (*Shu U 93*). In 1958, she married Harry Hood Bassett, a client, whom she met in Florida when she accepted a commission to design his bank. She and her husband lived on Sunset Island, near Miami, and kept an apartment in New York, allowing her easy access to the Knoll offices when she was in town. The new Mrs. Bassett was eager to focus on her new life with Bassett, who owned a dairy farm in Vermont, a cattle ranch in Florida, and other properties for which she set about designing homes, barns, and other structures, as well as the interiors for a 60-foot boat. Soon after their marriage, she sold the companies to Art Metal Inc., a large manufacturer of office furniture, but she remained as president and head of the Planning Unit until 1960. For the next five years, she continued working as a consultant for Knoll. Her last major commission was for CBS.

Florence Knoll Bassett's full retirement in 1965 marked the end of an era for Knoll. By that time, the company had design credits that included 250 executive offices for the Alcoa building in Pittsburgh, a 600-room dormitory for the University of Michigan at Ann Arbor, the Art Gallery at Yale University, the Virginia Museum of Fine Arts, the Saarinen building housing CBS, the Rockefeller family offices,

offices of the U.S. Veterans Administration, and U.S. embassies overseas. It was an impressive roster.

In the late 1960s into the early 1970s, Knoll capitalized on its tradition of design successes. According to a retrospective, Knoll Furniture,

The company used a two-pronged approach: create the design and approve it based on the merits of appearance, function, and appeal (or, buy the design if it meets these criteria); then figure out how to produce it. A good example is a line designed by Warren Platner that Florence Knoll had purchased prior to her retirement. As with the Bertoia chairs, Platner's were steel wire. Platner used parallel lines, creating a graceful form, but the pieces were difficult to produce. A special electric welder was developed to conjure up the final product. Another production problem had been solved, but Knoll was about to enter an era when the old methods of manufacture would be replaced by mass production (Rouland 13).

Other furniture designs that were introduced during this time include Richard Schultz's now-legendary "Leisure Collection," designed when Florence Knoll Bassett "called from Florida to say 'There is no good pool furniture anywhere. Can you design some?'" (Richard Schultz personal interview).



Fig. 29. The Richard Schultz outdoor furniture design known as the “Leisure Collection” designed for Florence Knoll.

(<http://www.richardschultz.com/products/1966/index.asp>)

In 1968, Knoll purchased the Gavina Company, a mecca for aspiring European designers. Through the Gavina Company, Knoll acquired the talents of designers like Roberto Sebastian Matta, Tobia Scarpa, Kazuhide Takahama, and Vico Magistretti. Knoll also acquired at this time the license to manufacture designs by Marcel Breuer. Breuer’s Wassily chair (designed in 1925 while at the Bauhaus) was produced in 1969 by Knoll, as well as other designs that defined the look of upscale offices in the early 1970s.

But a design evolution was taking place. The work for Knoll of Andrew Ivar Morrison and Bruce Hannah, with its rounded edges and soft cushions, spoke to a new kind of comfort in corporate space. Even though this was a different vision for Knoll, the design directive of the company had always been to produce excellence in

modern design. As Morrison said about his own work: “Knoll was really the only place to go. Others at the time were still doing green cabinets” (Rouland 13).

By 1973, the open office concept had taken hold. Walls were out and open office spaces were in. Knoll at this time had launched a successful open office line by one of their designers, Bill Stephens, called the Stephens System, the company’s most significant shift toward the future in the decade after Florence Knoll Bassett retired. While other companies were calling their open office systems by names such as Action Office, Knoll continued its tradition of associating the furniture with the designer’s name. The Stephens System was a success in an industry experiencing tough times. Commercial office furniture production plummeted during the early 1980s as companies sought to trim their bottom lines. The expansive days of the 1950s and 1960s for luxurious suites of executive offices and the 1970s’ vast landscapes of employees’ seating and workstations were over.

Knoll’s Changing Ownership

Walter E. Heller, International, Chicago, acquired Art Metal and Knoll in 1967-1968. The company became Knoll International in 1969, taking the name of its overseas division. Ideologically, the 1970s were a difficult time for Knoll. The Planning Unit was disbanded in 1971 and staff morale was affected. Sales were down in 1970-1971. Heller, under a government-ordered divestiture, put Knoll up for sale. Marshall Cogan and Stephen Swid bought the still privately held Knoll in 1977, and it became a division of General Felt Industries, a floor-covering underlayment

manufacturer. Cogan and Swid, experienced as securities analysts, believed they could improve Knoll because they had returned a declining General Felt to profitability. It was destined not to be a fit, as a 1986 letter to Florence Knoll Bassett from a friend suggests:

Dear Shu:

My friend Klaus Nienkamper (a very nice man who runs a very good furniture company out of Toronto, until this year he was the Knoll licensee in Canada, he fired Knoll before they fired him, so he's smart as well as nice). Anyway, Klaus said that when Stephen & Marshall bought Knoll, they organized a meeting in San Francisco for Knoll and General Felt people. One of the GF people came up to Klaus and enquired, "Are you a carpet schlepper or a furniture schlepper?" Klaus later found out that this was Mel Silver, now President of Knoll. Charming guy.

That's all for now. Maeve (Knoll Bassett Collection, box 4, folder 6)

Cogan and Swid made more changes at Knoll, including a move to mass manufacture. General Felt issued stock in Knoll as Knoll International in 1983, taking the company public. Despite increases in open-office products, the overall office furniture industry stumbled during the commercial construction drought of the late 1970s and early 1980s. Although the market would recover, the downturn marked an end to the booming traditional office furniture markets of the mid-1900s when many corporations spared little expense in furnishing their offices. The office furniture industry bottomed out in the early 1980s (Bradley).

Unfortunately, Knoll languished under General Felt's control. Knoll's problems during the 1980s were partially caused by evolving and volatile office-furniture markets. However, they were also the result of decisions made at General Felt. In 1986, General Felt bought back the shares to once again to take the company private. From the initial offering, \$20 million was used to expand the East Greenville facility. New product introductions and increased production capacity allowed Knoll to take advantage of surging office furniture markets during the late 1980s. The industry became increasingly consolidated and competitive during that period, however, and the company was ill prepared to deal with the inevitable slowdown (Bradley).

The office furniture market crashed beginning in the late 1980s and during the early 1990s. New office construction levels plummeted throughout the nation. At the same time, cost-conscious companies began looking for ways to reduce costs, including those related to furnishings. With sales dropping, General Felt began looking for a buyer for Knoll. In 1990, Westinghouse purchased Knoll International; not long before that, Westinghouse had bought out furniture makers Shaw-Walker and Reff Inc. and in 1990, Westinghouse combined Knoll, Shaw-Walker, Reff, and Westinghouse Furniture Systems into a single subsidiary called Knoll Group Inc. The consolidation boosted Knoll's status from fourth to third largest contract office furniture manufacturer in the United States (behind Steelcase and Herman Miller), growing the company largely through government facilities contracts, although it continued to produce its high design lines as well (Bradley).

Lagging furniture markets in effect canceled Westinghouse's efforts to streamline its furniture operations. Frustrated and seeking a narrower definition of its own operations, parent company Westinghouse decided early in 1993 to sell off Knoll Group but had difficulty finding a buyer. New leadership internally revived the company by focusing on core commitments to quality and two goals that reflected the new office furniture environment: affordable products aimed at the larger corporate setting and efforts to reach the small business and individual consumer. In the early 1990s, Knoll converted its contract showrooms into more visible, consumer-oriented sales centers and introduced a new line of stand-alone furniture for the home-office crowd with desks retailing for less than \$1,000. It also introduced several new products geared for ergonomically conscious buyers and increased offerings in its core office environments furniture lines with more convenient and comfortable desks and storage units (Bradley).

Warburg, Pincus Ventures, L.P. bought the Knoll Group from Westinghouse in 1996 for \$565 million and in February 1996, Knoll Group became Knoll, Inc. Subsidiaries of Knoll, Inc. include Knoll Studio, Knoll Extra, Knoll Textiles, and Spinneybeck, a maker of specialty leather coverings. Knoll again went public in May 1997, issuing shares traded on the New York Stock Exchange under the symbol "KNL." For the past 12 years, Knoll has succeeded in a volatile marketplace, holding on to its position as a premier provider of branded furniture and textiles.

Knoll has committed to conserving its fabled past and celebrating the best of modern design in a company museum, located at the East Greenville facility. There, a

48-foot time line of Knoll history stretches across a curved wall and artifacts like a piece of glass from the original Brno House Barcelona table rest in display cases. Some of the models used in the design work are also shown. The furniture exhibited is, for the most part, no longer in production and the displays are rotated periodically. In 2008, Knoll was a \$1.1 billion company still committed to Hans and Florence Knoll's original intent, shaped by the Bauhaus and by their own aesthetic, to provide the marketplace with innovative, affordable and functional furnishings.

Design for the Next Workplace

Florence Knoll Bassett had effectively retired by 1960. Her tour-de-force work for CBS truly was her swan song, and in some ways, for corporate America, the last hurrah of an approach to the world of work. Lines began to shift and instead of a clear “chief executive” who made the company decisions – sometimes right down to the upholstery on the chairs – companies turned to “middle managers” for many decisions. The ranks of these managers swelled M.B.A. degree programs and led to office interiors that did not have big executive suites, but instead managers who sat out with other employees. Roles of men and women in the companies changed, with less clear delineation of men as professionals and women in supporting tasks. Corporations grew enormously in the decades after Florence Knoll Bassett retired and while her influence can be seen in many design approaches and desk systems, the office workplace is increasingly varied (Albrecht).

As the workplace evolved, Knoll furniture and textiles evolved too, but only to a certain extent. Companies like Steelcase and Herman Miller, long accustomed to manufacturing for large-scale projects, were better positioned in many ways – especially their manufacturing processes, long geared for mass production, and their distribution networks – than Knoll to take advantage of the commercial office explosion of the 1970s and 1980s. Although the company competed, and often successfully in that arena, Knoll furniture and design continued to represent “something special” (Bradley).

The company maintained design excellence based on its iconic furniture pieces, its relationships with emerging designers, and the customer service it provided through close contact with architects and interior designers and their clients. It always retained a core business of highly individualized pieces. Renowned furniture designer Carl Magnusson (who had designed Knoll showrooms around the world and founded the Knoll Design Symposium at Cranbrook and the Knoll Museum), Knoll’s executive vice president for design, described the company’s work in 2004 in terms that harken back to the Planning Unit:

People think about our company when they want something special that’s larger than just putting people in a space. I think that really started with the Planning Unit. People love to have things customized – by doing 15 percent special approaches we often get the other 85 percent People want to be in a space that looks like it reflects their value and not their competitors’ ... to get beyond the notion of functionality to real cultural content. Design is function that reflects

cultural content. It costs no more to make it beautiful than to make it ugly (Personal interview).

Kass Bradley, then president of the \$100 million Knoll company, agreed, describing their work in a way that seemed vintage Florence Knoll:

We decide with customers what's needed for their projects. We don't have all the answers when we begin. We look for the answers together. We have a group that does non-standard solutions to customer product. Some become standard solutions when they solve other customers' problems, too. ... I don't think people understand that you can have the best margins and the best on time record in the industry and do what we do. We don't give up quality or service, but we absolutely figure out how to do it [the non-standard order]. It's been part of our culture forever: associates sat around the table and said 'we can do this' (Personal interview).

In addition to the marriage of function to cultural content and the capacity to produce “something special” as a design solution, the Knoll company's work and reputation from Hans and Florence forward were anchored in relationships with the “trade” – architects and interior designers – who most often brought them into a client's projects. Gaines Blackwell, professor of interior architecture in the College of Architecture and Design at Auburn University (Alabama), recalled that when he was completing his formal architectural education, the Knolls were well known to students in schools of architecture on the east coast because Hans and Florence would load up a car with samples and drawings and drive to schools to show them to students and faculty, building interest for their modern sensibility and their furniture,

and cementing relationships that followed the newly minted architects into their practices (Gaines Blackwell, author interview). That intentional connection with clients continued after the Knolls. Carl Magnusson said, “We are professionals dealing with professionals and a professional trust exists between our company and the clients. Our clients understand the value of design and of Knoll products [T]hey understand design as an atmosphere of simplicity, integrity. The Knoll Look doesn’t look like you threw money away” (Personal interview).

The beginning of the Planning Unit in 1943 and the end of the Planning Unit in 1971 bookended the time when Knoll could interface directly with end-user clients. Corporate projects after Connecticut General continued to get bigger; Carl Magnusson called Connecticut General a “quantum leap” into huge spaces and “so much furniture” (Personal interview). Interior design became increasingly a distinct separate department inside big design firms. If Knoll were to be successful selling products, it could not be perceived as a competitor to other interior designers, so it got out of that business and concentrated on product.

Between the closing of the Planning Unit and our [open office] system, Quickborner proved efficiency could be increased. ... [O]ur Morrison Systems was based on the need to have power for data and to add an enormous amount of function. Morrison really changed our company. It gave us distribution, a distribution network that could support multi-national projects. Our dealers could build a business selling Knoll. A key way to explain Knoll from 1965 to the 1990s is distribution. In the beginning of that period, Knoll didn’t know anything about

distribution and then the products themselves started answering the questions (Bradley personal interview).

Throughout the changes after 1965, despite serial ownership and market fluctuations, Knoll remained true to some of the basics left from the founding Knolls. Simplicity, value, good design – these were constants over the years. Another constant was Knoll’s welcome to women in every level of the company. From textile design to sales to executive leadership, Knoll has “attracted well educated women who have a chance to be high earners in a company where they feel well respected,” Carl Magnusson said. “At Spinneybeck, 90 percent of the sales force is women [2004 figure]” (Personal interview).

In 2008, Kass Bradley retired and was succeeded as president and chief operating officer by another female executive, Lynn Utter, formerly chief strategy officer for Coors. Knoll in 2008 relies on the gender-transcending contributions of men and women to continue a company deeply rooted in the aesthetic and planning approach set in place by its founding partners, Hans and Florence Schust Knoll.

Chapter 7

The Legacy of Florence Knoll Bassett

Outside the architectural and interior design communities, the Knolls' story is not widely known. Although auction Web site eBay weekly records thousands of searches for Knoll furnishings, it is safe to say that many of those seekers recognized the Knoll Look and even may know specific pieces to search by name, but would not recognize the name Florence Knoll. Her short career – barely more than 20 years – was remarkably brief in comparison to the reach of her influence.

That influence can be seen today in the design of the modern American office workplace, the focus on design and usability in everyday objects, the rise of interior design as a respected profession, and the increase in numbers of women in the design industry. In 1985, World Architecture dubbed her the “First Lady of the Modern Office” and, while today’s designers would likely bristle somewhat at the “first lady” gender label, no one has quarreled with that premier ranking (Knoll Bassett Collection box 1, folder 2). Any study of her influence substantiates that in development of the modern office environment, she had no equal.

The Office Workspace

The most obvious legacy of Florence Knoll Bassett's career is the American office workspace, changed utterly by the combination of (1) her programming approach; (2) her insistence that all the work in an organization deserved good design – not just the executive suite; (3) her use of color, texture, and line; and (4) her unfailing good taste. In the postwar economy, the office became the daily workplace of more workers than ever before. As American companies began to explore how to systematize that much human energy into predictable productivity and profit, Florence Knoll and the Knoll Planning Unit took a groundbreaking approach to designing office spaces. Instead of furnishing space and expecting people to inhabit it, they studied how the end users of the space would ultimately use it – what tasks they would complete, what tools they would use, the time dedicated to each task – and created an environment designed to suit the specific needs. This dramatic change from the procurement office's "furnishing plans" of offices, which entailed ordering mass quantities of identical desks, chairs, credenzas, and file cabinets, triggered a workplace revolution.

Florence Knoll's custom work was, from the beginning, for influential people and that contributed to her rapid impact. Although every commission represented the particular client, all the work shared common characteristics that within only a decade achieved status and a name: The Knoll Look. The Knoll Look came to symbolize the clean, stylish, modern appearance to which the era aspired. Its lack of ornamentation and use of bold colors and textiles was a dynamic contrast to the heavy, romantic furniture in use both residentially and commercially prior to the war. The clean lines

of Knoll's workplace designs broke away from traditional office furniture. Gone were heavy, two-pedestal wooden desks and cluttered credenzas. In their place were table desks, cabinets that concealed equipment and electronics, and open seating arrangements for collaborative work, clear precursors to the open office landscape and furniture systems so well known today.

The entire approach was fresh, from the way the furniture was arranged to the lighting design to the textile patterns. But the true impact was greater than these tangible changes. Florence Knoll transformed the material culture of the workplace in ways that influence the lives of American office workers across several decades and still resonates today, even though only a few thousand people ever actually worked in offices that Florence Knoll designed herself. However, so innovative were those offices and the process that produced them that they were quickly seen as cutting-edge design – and highly desirable. With Hans Knoll's skills as a showman and salesman, and the extraordinary showrooms showcasing the Knoll Look, it soon became what all offices aspired to be. As World Architecture reported, "... in the years between her first work as an architect in 1941 and her retirement in 1965, she engineered a profound change in the way the offices of American big business should look and function" (Knoll Bassett Collection box 1, folder 2).

This highly desired look was then featured in interior design publications and provided backdrops for pop culture, including movies and television. It became the visual cue for modernity. "The Knoll interior is as much as symbol of modern architecture as Tiffany glass was a symbol of the architecture of the Art Nouveau,"

pronounced Architectural Forum in 1957, even before Knoll design had reached its golden age (Knoll Bassett Collection box 1, folder 2). In director Billy Wilder's Sabrina (1954), the penthouse executive office of Humphrey Bogart is filled with equipment-concealing cabinets and clean-lined furniture clearly inspired by Knoll. Hollywood still considers the Knoll Look the epitome of office svelte – director Barry Sonnenfeld's Men in Black films of 1997 and 2002 used the Knoll Look with furniture from several designers.

From a visual standpoint, Knoll-inspired clean lines and bright colors were everywhere by the late 1960s. From a usability standpoint, its reach was just beginning. By studying the work patterns and use habits of workers at the very beginning of the design process, Knoll Bassett ultimately changed how these workers completed their tasks and spent their workdays. Large, unsightly electronic equipment once took up space on an employee's desk; a change in workspace atmosphere and ease of use occurred when the equipment was hidden in a cabinet until it was needed. Even before efficiency was measured, the appearance of efficiency affected morale. A desire for greater efficiency fit the postwar attitude of the United States. Later nicknamed "the nifty fifties," the decade when Knoll was gaining widespread attention was a time of expanding prosperity and a prevailing sense of innovation and general improvement – of the economy, of technology, and of general living conditions.

Florence Knoll's designs changed not only how people worked but how they felt about their work. After the end of World War II, an evolution was underway in

the meaning of the workplace – and the expectations of the people who filled it. The idea that “the business of America is business” took hold; corporations and the people who worked for them focused less on the value of work itself, as former generations had seen it, and more on the value of work for a particular entity. (Strom) Businesses had different core values; beyond the purpose of the work, they considered the value of working for the company itself. (Albrecht) What did it mean to be part of CBS? How could a worker absorb that meaning, simply by being in the workplace?

Before the now nearly ubiquitous concept of “branding” was anything more than a look for packaging, sometimes reflected in a company’s advertising, Florence Knoll Bassett understood the power of a comprehensive brand. She “got it” that a company and the people who worked there, not to mention the desires of their customers, could be defined by carrying a look and feel through every visible element of that company’s presence. She had done it for Knoll: the products, the furniture, the showrooms, even the personal style of Hans and Florence Knoll themselves conveyed the classy modernity that was Knoll.

When Florence Knoll Bassett did the CBS project, although her own focused work was primarily with the CEO, Frank Stanton, the Planning Unit knew how to do the programming she had devised and they took her design approach company wide. Her programming was all about establishing understanding of the brand. *Do you know where you are in the organization? Do you know what you do in the organization? Do you understand what CBS means? What working for CBS means? What that has to do with your daily work habits and environment? What do you need*

to maximize your contribution? Her genius was that she figured out how to do that – study a company that way – and turn it into material expression of what she learned from a company’s people.

Today, after decades of business thinkers deconstructing and reconstructing organizational behavior in terms of understanding “the mind” of a company, it is hard to remember that in 1960 none of that thinking applied to space. By then, theorists were contemplating how work “worked,” but Florence Knoll Bassett expressed that contemplation wordlessly and powerfully in interior design.

Her designs influenced both residential and commercial interior designers for years to come. The design approach of studying potential outcomes – end-user habits – is today hard to view as novel because it has become a standard part of interior design, taught in professional interior design education, and expected by clients. To imagine today that sixty years ago, unexamined assumptions about end usage were considered enough background for office design seems startling. Knoll Bassett’s approach to the work changed the entire industry of interior design.

She knew she was breaking ground in several arenas, notably bringing avant-garde design into the workplace. But she never considered herself a true furniture designer, stating repeatedly in interviews over time that she had only created the “fill-in pieces” while “star” designers such as Harry Bertoia created the fundamentals of her interiors. However, her legacy includes such eponymous furniture pieces as the boat conference table, a design that allows everyone seated at the table to be seen, as opposed to blind spots of the previously favored rectangular conference table, where

persons in the middle couldn't see the ones near the ends and vice versa without leaning deeply forward or back. Today, the sweeping curves of her boat table design are conference room staples.

Her solutions to the problem of hiding things in plain view became legendary inspirations as well. In many of her offices, she used panels or tubing to obscure electrical wiring or mechanical conduits. It was still visible, but somehow became part of the overall design. Today the popularity of exposed mechanical elements in modern offices, restaurants, and retail spaces points directly to Florence Knoll as the trendsetter.

Florence Knoll's work arranging furniture had lasting impact as well. Before the Knoll approach, the standard furniture arrangement for executive offices usually featured a heavy desk on a diagonal in a corner. Behind that desk was a credenza. Altering this use of space was Florence Knoll's quest. In her offices, desks with file drawers were replaced with open table desks, perpendicular to the wall. Louis M.S. Beal, who worked under Florence Knoll as a designer, recalled years later, "Mrs. Knoll did not tolerate anything on the diagonal" (Knoll Bassett Collection box 1, folder 2). So that everything could have its place, the messy credenza evolved into a cabinet for equipment. And in place of two chairs facing the front of the desk, Knoll Bassett introduced the use of a residential-style sitting area for meetings and collaborative work. This moved the meeting dynamic away from a "host" and guests" ("superior" and "subordinates") to seating selection that encouraged a much richer

range of interaction. This one seemingly simple change transformed the way people worked together in an executive office setting.

Although she designed relatively few large projects, the ones Florence Knoll undertook had a seismic effect, creating a shift in commercial office design and in the evolution of the office workspace. As soon as the CBS building was complete, the change was felt across interior design. Another great example is the Knoll Planning Unit's work for the Weyerhaeuser corporate headquarters in Tacoma, Washington, completed six years after Florence Knoll Bassett had left the industry. Even so, her touch is clearly felt throughout the building.

Designed by SOM, with interior design by SOM, Rodgers Associates, and Knoll International, the Weyerhaeuser building is like a skyscraper on its side: with 360,000 square feet spread across five stories, the building is the equivalent of a 35-story traditional office building. It was specifically designed for an open interior that affords views of the dramatic outdoor landscape from almost anywhere in the building. When the Weyerhaeuser building opened in 1971, it was one of the first major office buildings to feature an open office landscape. This cutting-edge design has its roots in the intended use of the space – an ideal straight out of Florence Knoll's playbook. The Knoll programming approach resulted in a building that communicated the company's meaning as well as the purpose of the work:

The unique design is ... likely the byproduct of George Weyerhaeuser Sr.'s drive to bring open communication and modern management styles to the company. He reportedly told the architects, 'Let's not have our people in ticky-tacky boxes!' Instead he was intrigued by the

newfangled idea of arranging low part partitions and office furniture around traffic patterns to free up relationships between employees (Olson).

Stephen Apking, a partner at SOM, corroborated this account in a 2008 interview:

We ... collaborated with the client on the workplace of their future and went completely to an open environment, which was a big deal in the seventies, and we worked on a new open-landscape office system with Knoll. The client, along with SOM representatives, visited several locations in Europe that had been testing this approach (Makovsky, *An Integrated Effort*).

Knoll Bassett's influence is evident throughout the Weyerhaeuser building. The interactive concept behind the interior design reflects Florence Knoll's assertion that intended use must be at the very foundation of interior design. In addition, the furniture inside the Weyerhaeuser building was specially-designed to maintain a low profile – therefore allowing an open vista throughout the office landscape to connect with the exterior views. This furniture design reflected Florence Knoll's belief in designing specifically for a space instead of making standard pieces work.



Fig. 30. The Knoll-designed interiors for the 1971 Weyerhaeuser headquarters reflect Florence Knoll Bassett's emphasis on usability and environment (Albrecht 47).

The Weyerhaeuser building has stood the test of time. In 2001, it was honored with the American Institute of Architects National 25 Year Award as a building that has proven to be a landmark in American design. Part of this longevity has been in its flexible workspace, which has been able to adapt to changing needs over the decades, even as the architecture of the building stayed the same, according to Architecture Week:

The building has been influential as a landmark in office design. While its open-plan office floors have changed constantly to meet new work

patterns, the building itself has not been substantially modified except to improve energy performance (n1.1).

The interior design of the Weyerhaeuser headquarters reflected a growing emphasis on and awareness of the impact of an office's physical workspace. The end user's experience of the workspace was the prime factor in the Weyerhaeuser building's interior design – reflecting the initial client interviews about tasks and usage that Florence Knoll conducted at the beginning of every design project.

Florence Knoll's emphasis on usage is also reflected in the proliferation of office system designs since 1970, all of them focused on problem solving. Part of the popularity of the open landscape office systems came from the ability to take a system's formula and apply it to the conundrum at hand. This kind of problem solving had been the Planning Unit's "basic task," reported Architectural Forum, "... to bend the Knoll formula to new problems and to suggest new ways of handling them" (Knoll Bassett Collection, box 1, folder 2).

Carried on directly from the Planning Unit's approach, each new design in offices was to solve for the problems not only of mechanics – location of power, scale, and interconnectivity with other work stations – but also for the problems of the user. What does the worker need within reach? What new technologies must be accommodated by the workstation? What psychological/emotional needs must be met by the design? It's an ever-changing puzzle that reconfigures as work habits and technology change. And scale began to play a larger and larger role in how these questions could be answered.

For the most part, as open office systems proliferated, interior architecture – or interior design – focused on companies with hundreds of workstations, not thousands. But really big consumers had thousands of workers. To accommodate the volume, and the inevitable and frequent space-use changes such a population represents, companies began to take the programming function in house, putting it under facilities managers. It was not the future Florence Knoll Bassett had imagined for office design – but her contribution to it is foundational.



Fig. 31. Florence Knoll Bassett designed this secretarial office for the Knoll showrooms at 575 Madison Avenue in New York City. Her caption for this photo dated 1951 reads, “The beginning of office cubicles” (Knoll Bassett Collection, box 3, folder 5, slide 55).

The Perceived Value of Good Design

Florence Knoll Bassett’s influence on interior design is easy enough to see, but her influence reached further. Arguably, she made good design matter to a broad

audience. Florence Knoll helped create a desire for elegant lines, bold colors, and luxurious textures in furniture. A quarter century later, Target further democratized that desire with its invitation to architect/designer Michael Graves to bring “a beautiful mix of function and innovation” to “design for all” (Michael Graves). Florence Knoll sold the idea that good design is just as necessary as basic function. It was her personal belief and reflection of her architectural training, and it was integrated into everything she did, whether it was obscuring electrical components in a ceiling, arranging furniture, or designing furniture pieces. She sold the idea of the importance of design just as she and Hans Knoll sold everything else – with panache. Florence always extolled Hans Knoll as “a fantastic salesman, a brilliant entrepreneur” (Knoll Bassett Collection, box 1, folder 2). But Florence Knoll Bassett was his equal, selling visually rather than verbally. Her showrooms were a powerful sales tool that showcased the Knoll Look, right down to the bathroom doorknobs. And she didn’t hesitate to utilize peer pressure to get corporate clients to embrace the modern Knoll Look. Because one of the Knoll Planning Unit’s first jobs was to design the Rockefeller family offices inside Rockefeller Plaza, she used that as a commission that jump-started her career. Florence Knoll Bassett recalled years later:

What this did for us ... was that when we made presentations to clients and they said, ‘Oh, that’s far too modern for us,’ I could say, ‘Well, it certainly isn’t too modern for the Rockefellers,’ and they would change their minds (Knoll Bassett Collection, box 1, folder 2).

By studying the needs, tasks and habits of an interior’s end users, Florence Knoll created highly functional, high-design spaces and, in doing so, she introduced the

concept that even the most mundane tasks could be improved by good design. It was an idea that started in the 1940s with the actual users of her designs and, with other unmistakably modern design-related influences, such as the signature high-fashion clothing designs of Cristobal Balenciaga (whose designs Florence Knoll Bassett wore), Christian Dior, and Coco Chanel, that trickled into mass media (Knoll Bassett Collection, box 1, folder 2). Postwar Americans craved the items they had missed during wartime shortages and also wanted new things for personal pleasure, from cosmetics to furniture. The demand for work-saving conveniences skyrocketed. The expectations for ease of use and pleasing aesthetics rolled into this demand. Knoll's design and other influences meant consumers were no longer content with goods that were merely functional. The expectation became one of function, ease of use, and pleasing design. This trend can be seen in the rise of "usability concepts" based on user experience, an entire field of inquiry dedicated to studying how people use goods and how they can be made user-friendlier. Studies around "emotional design" show that users perceive aesthetically pleasing goods to be more efficient and effective than less-pleasing goods. This hypothesis appears to be proven on a daily basis by mass retailer Target.

Target sells goods designed by a wide range of architects, interior designers, and clothing designers through its popular marketing initiative that utilizes the tagline "Great design. Every day. For everyone." The idea is affordable high design, and the work of some clothing designers sells out as soon as the collection arrives on the store

floor. The Target Web site even features text espousing the importance of design in all things:

Design isn't just for squares, especially when it comes to innovative packaging solutions that are safer, smarter, more efficient, and include a healthy dose of gorgeous. From a snappy cereal box that keeps your flakes fresh, to a prescription bottle that's easier to read and easier to use, when it comes to great design, beauty is more than skin deep (Design for All).

The popular desire for such “designed” goods has roots in Florence Knoll's insistence on the Bauhaus principle that well-designed goods aren't a luxury or even a privilege – they are a right. She sold her clients highly functional, well-designed workplaces, which were well received and viewed as the industry standard and the design standard of the era. If such design were expected in the office, it was only natural for the expectation to extend quickly to the home and eventually encompass goods and gadgets ranging from electronics to orange juicers. The desire wasn't limited to Americans.

Readers of Canadian Homes & Gardens would have also known, from regular advertising, that the great American firm Knoll was purveying wiry Bertoia chairs and memorable credenzas from a shop uptown at Yonge and Eglinton (“WANT TO COME UP AND SEE MY FLORENCE KNOLL?” a Globe & Mail headline asked over and admiring story about them in 1998) (Holden).

The craving for good design has simply become a cultural expectation of the twenty-first century. One example from hundreds of thousands is a blog named

“COVETING: On wanting modern design, leaner thighs, hip baby clothes, & cool toys – for me and baby.” One blogger craving Florence Knoll furniture wrote that he wanted:

The classic Knoll Studio Credenza. ... Florence Knoll designed this credenza in 1961 and it's still in production today. The old version has leather tab door pulls, but the new ones have stainless steel pulls. I want either version, but only in the maple wood and preferable [sic] with a slate or maple top, although they don't seem to make them with wood tops anymore.

Florence was an architect who had studied under Mies van der Rohe and worked for Marcel Breuer and Walter Gropius. ... According to her biography on Design Within Reach's website..., 'Florence Knoll's own designs are reserved, cool and angular, reflecting her modernist sensibility and perhaps the influence of childhood friend Eero Saarinen. While she is modest about her own accomplishments, it was through Florence that Knoll began to manufacture modern sculptural furniture. ... In 1948, Knoll also acquired the rights to produce Mies van der Rohe's furniture designs,' including his Barcelona chair, one of my very favorite pieces of furniture (The Classic Knoll Studio Credenza).

Part of the power behind Florence Knoll's assertions about the value of design came with credentials. She was well respected because she had enviable social and professional connections to the most highly regarded players in architecture and in business. Her career represented "Florence Knoll's ... triumph ..., the triumph of a creative personality who as a liaison between the architects, their corporate clients

and the intricately involved producers of furniture and interiors [was] the most inspired catalyst of the avant-garde in our [design] field...,” as Interiors magazine described her in 1957 (Knoll Bassett Collection, box 1, folder 2). Therefore, when she opined, her thoughts carried a weight that wouldn’t always be accorded to other architects and certainly not to other female designers.

Florence Knoll’s connections and credentials ultimately helped open the door for professionalism in interior design. As an architect with an enviable professional background, Florence Knoll’s success designing office workspaces signified that interior design was a worthy commercial endeavor. As corporate environments proliferated in the postwar economy, interior design was struggling to find an identity. Self-taught designers often depended on social connections to build their businesses, and state universities taught design in home economics departments because decorating was considered an important homemaking skill. Publications on interior design and articles about design in the general media were increasing in popularity and availability, but the industry was searching for vision, standards, and respect.

The Knoll Planning Unit under the direction of Florence Knoll Bassett ushered in a new era. She was credentialed and well respected, and she demanded that her work be respected as well. In 1984, Craig Miller, a curator at the Metropolitan Museum in New York, spoke about her influence:

Florence Knoll’s importance was as an interior designer and entrepreneur – perhaps the most influential American interior designer of the post War generation. She helped establish the position of the

interior design, as Henry Dreyfus (1904-1972) and Walter Dorwin Teague (1883-1960) had the industrial designer in the preceding quarter-century. ... No American designer since Louis Comfort Tiffany could claim such a mantle (Knoll Bassett Collection, box 3, folder 1).

Professionalization in interior design accelerated thanks to Florence Knoll's involvement. She didn't intend to assist other designers – no one recollecting her career suggests that – but her research-based approach to design proved valuable and has since become the industry standard. It has also become a key component to industry education and as such differentiates professional, trained interior designers from amateur decorators.

Woman in a Man's Business

Much like her role in accelerating professionalism in interior design, Florence Knoll paved the way for female architects and designers as a fortunate adjunct to her own success. As a woman architect and designer, she did what she wanted with her career, attending to the immediacy of being a business partner in Knoll and a designer focused on client needs. She said of herself and her husband, Hans Knoll, "I was happy to work on the perfection of an idea. He was for expansion" (Knoll Bassett Collection, box 1, folder 3). Yet her career was an expansion; opening wider a path for other women in the design industry was a happy byproduct.

Florence Knoll taught by example that women could contribute and compete in the world of design. However, she did so playing by the patriarchal rules inherent

in the male-dominated world of architecture. She didn't attempt to change the standards – she simply succeeded within the male construct of the industry. Katz and Myerson observed:

The story of modern twentieth-century architecture and design has been dominated by men – glorying the machine has been a tediously machismo activity. Yet, remarkably, it was a woman who brought the ideals of the Bauhaus to the corporate interiors of the world's most powerful economy (Knoll Bassett Collection, box 1, folder 2).

Florence Schust Knoll was attractive – even the trade media described her with terms such as “pretty brunette,” “vivacious,” and “charming,” and she was photogenic enough to welcome appearances in trade and general publications. A 1964 New York Times article said, “She is frequently described as stunning or beautiful – terms inspired not so much by rather delicate but slightly irregular features as by an inward radiance and animation. Her intelligence shows” (Knoll Bassett Collection, box 1, folder 2). She had professional and social connections with some of the brightest stars in the world of architecture, and the general benefit of wealth meant that she had an enviable education and training in architecture and design. She also had a singular vision and was known as a very hard worker. Virginia Warren, writing in the New York Times about Florence Knoll Bassett in 1964, shortly after her second marriage, said, “Florence Knoll Bassett leads the kind of life that many women might dream of, if they could dream big enough and were not allergic to work” (Knoll Bassett Collection, box 1, folder 2). In 1981, a former colleague, Peter Andes, wrote her a letter, referencing himself as “one of the fortunate graduates of Shu U.” He went on

to characterize the attributes that beyond anything else made her a success: “You gave us standards of performance and demonstrated a rigorous quest that continues to inspire” (Knoll Bassett Collection, box 4, folder 6).

Florence Knoll’s success and role as a trailblazer for other women was a double-edged sword. Because she didn’t attempt to change the sexist architectural industry but instead made the male-dominated environment work for her, Florence Knoll made no demonstrable progress in changing its patriarchal structure. Women following her lead still had to be observably superior to their male counterparts in order to be afforded equal opportunity.

Florence Knoll’s contribution to equality in the workplace, specifically the architectural and design workplace, was in her demonstration that a woman could contribute meaningfully and influentially in the industry. She did not set out to be a role model, only to do the work she wanted to do, and she found ways to navigate the business landscape so she could succeed. She was a beacon to other women in design, but not necessarily a guide.

In an interesting continuation of accepted workplace role definitions at the time, Florence Knoll never acknowledged her role as a feminist trailblazer. Even long after her retirement, she diverted any talk of gender roles in design and instead directed attention to the work itself.

In the professionalization of interior design and in the continuing efforts of women to be accepted as peers with men in the design industry, the legacy of Florence Schust Knoll Bassett is substantial but interleaved with other achievements and influences.

Clearer is her contribution to design – both in specific incarnations and as a pervasive public awareness. Wilkes Encyclopedia of Architecture sums up her career this way:

It was as an interior architect, designer and planner that her total design made its most lasting imprint on following generations. The applications of design principles to solving the space problems of business and industry became her special sphere. . . . Florence Knoll is credited with originating site presentation techniques using three-dimensional models with actual fabric swatches applied to furniture layout plans. Her consummate professionalism, resulting in a remarkable ability to lead and influence clients to accept her ideas, has become legendary. Fastidious attention to detail allied to a totally visualized functional space scaled to the building module was her signature on a pristine environment, which was efficient, comfortable and beautiful (Knoll Bassett Collection, box 1, folder 2).

In her own estimation, of the many accolades and rewards she received, the one she most valued was the Gold Medal for Industrial Design from the American Institute of Architects (1961) with the citation noting that she had “abundantly justified [her] training as an architect.” The citation’s conclusion effectively sums up what permitted Florence Knoll, her Planning Unit, and her vision for the workplace to make such impact on America and on design for generations after. “Your training, skill and unfailing good judgment have written your name high on the roll of masters of our contemporary design” (Knoll Bassett Collection, box 4, folder 10).

In the end, it all came down to intelligent solutions to problems, design at its best.

Bibliographic Essay on the Influence of Florence Knoll on Design and the American Workplace

Introduction:

Any study of Florence Schust Knoll Bassett, her work, and her influence is complicated by the definitive way she divided her life. From her childhood until 1965, her life was arguably defined by her relationships in the design “world” and her own commitment to design as both a profession and a way of life. In 1965, she retired entirely -- not only from her company, but also from work as a professional designer and from the arena of design, with the exception of residential projects in the context of her marriage to Harry Hood Bassett, a wealthy Florida banker. She cemented the break by going into a kind of post-professional seclusion, refusing nearly all interviews or other contact from media, academics, or even other design professionals.

She made few exceptions, and then only for exhibits that were planned to celebrate her work and permitted her to influence what was exhibited and how it was presented. The last such exhibit was in 2004 at the Philadelphia Museum of Art. The *New York Times Magazine* reported:

For Florence Knoll Bassett, revolutionizing modern corporate design was apparently enough. In 1965, 10 years after the death of her husband, Hans -- the founder of the Knoll Furniture Company -- she left the business and retreated into virtual seclusion. For the next 40 years, she accepted only a few private commissions and refused almost all

interviews and appearances (and for those that she did accept, she required a private jet). But the opening of "Florence Knoll Bassett: Defining Modern," at the Philadelphia Museum of Art on Nov. 17, has jostled Bassett -- the 87-year-old former architect, interior-space planner and furniture designer -- into unexpected action. The show bears her methodical impression, from 11 pieces of furniture that she designed to the photographs of her influential interiors. Kathy Hiesinger, one of the museum's design curators, says that though the Modernist icon refused the first invitation, she has since become tremendously engaged: Bassett even visited to make sure that the paint she selected for the walls was right.

"She's incredibly meticulous -- the list of objects that she sent us is a work of art," Hiesinger says of the neatly illustrated sheet that Bassett sent for the show. "It's Cranbrook-y meticulous," she adds, referring to the famous art and design college that Bassett attended (Muhlke 46).

This effective bifurcation of the long life (in 2008 Florence Knoll Bassett is still living) of an indisputably influential person has made impossible the usual approach to studying a person's professional life. Her career did not have the typical trajectory -- rise, shine, influential twilight -- that can be seen in careers of most significant architects and other designers. Nor is there the study potential to be found in a promising career cut short by early death and therefore ripe for interpretation without rebuttal. Florence Knoll Bassett has continued to be on the periphery of possible

discussion, able to join in when it suited her, as the gift to the Smithsonian of her papers and the Philadelphia exhibit experience made clear.

As a result, any study of Florence Schust Knoll Bassett, her work as a space planner and furniture designer, and her influence on design and on the workplace, will find resources to be divided into four areas of information:

1. The Knoll Bassett Collection in the Archives of American Art at the Smithsonian Institution, Washington, D.C. This collection showcases Florence Knoll as she wished to be known, using private papers, memorabilia, and media reports selected by the designer herself.
2. Contemporary and retrospective commentary on Florence Knoll's work as a space designer and as the design presence behind the success of the Knoll companies. This body of information comprises popular, professional and academic media, mostly celebration or chronicle, with occasional analyses. Most commentary on her effect on the American workplace is found here.
3. Contemporary and retrospective commentary on Florence Knoll's furniture and textile design. This comprises a relatively sparse body of information with surprisingly little critique available. Florence Knoll appears to have escaped much recorded judgment of her furniture and textile design by peers or design critics. Her furniture design is viewed as a testament to Modernism and continues to earn mention wherever discussion arises

around a certain vogue for using mid-20th century furniture in contemporary decorating (e.g. “Stairway to the Stars,” Interior Design May 2007).

4. Study and reflection on Florence Knoll’s influence on interior design as a profession and on the impact of gender in the practice of interior design. Occasional brief mentions occur in some of the material available in resource media, including exhibit catalogs, but very little has been written about Florence Knoll in this regard. Beyond Bobbye Tigerman’s article in the Journal of Design History and this dissertation, no work of any length is available. This is the area where Florence Knoll Bassett’s decision to remove herself from the development of interior design as a profession is most felt. She has resisted any opportunities, including direct questions, for discussion of these topics.

A fifth area in which many of the extant views about Florence Knoll, her work and influence may be found is in what might be seen as an oral “Knoll apocrypha.” This is the body of stories, recollections and lore that began when Hans and Florence Knoll were design celebrities and it has continued through the years. Participating in orally passing along and interpreting elements of the Knoll “story” have been peers, clients, colleagues, media observers, employees, competitors, other designers, design aficionados, academics, and even customers, as the Knoll company distribution

network included manufacturers' representatives who presented products to furniture specifiers – designers and architects – and a dealership network where consumers could actually purchase merchandise. All these intersections of interest in Knoll products and therefore in the Knolls themselves produced discussion, some of it informed by direct access (people who worked for Florence Knoll) and most fed by hearsay.

Certainly this is how legendary characters become legends in any endeavor, but in the case of Florence Knoll, the apocryphal dimension was enlarged by her choice to live just outside the design “world” for so many years, not so far removed that she did not correspond with or entertain some visitors, but not enough inside the conversations about design to shape them directly. That’s why interviews with people who worked with Florence Knoll (in this study Kass Bradley, Richard Schultz and Carl Magnusson) or who have observed over a career in interior design the effect on practicing designers and designers-in-training of Florence Knoll’s persona and work (Beth Harmon-Vaughn) are important. Because these “witnesses” to Florence Knoll’s life and legacy will retire and/or eventually become unreachable, it is increasingly important for anyone who wants to carry forward inquiry into this field to document their recollections and secure any material references.

Topic Discussion:

Although Florence Knoll’s furniture pieces – both the originals and replicas – and the Knoll Look command an ongoing place in the design marketplace, her lasting impact

in other design arenas is less categorical and therefore more stimulating to pursue. The change she brought to the *process* of interior design is her lasting contribution, and the space planning elements of that (such as programming, presentation boards, and client collaboration) are reasonably well documented. More theoretical, but still the subject of written commentary, is the way in which the Knoll Planning Unit approach to design helped revolutionize the workplace itself, shifting emphasis to how people at work understood their own space needs and responded to workplace environments.

Resources for these discussions and for study are to be found primarily in the interior design press, such as Interiors, and in some more scholarly journals, although academic periodicals devoted to interior design are relatively few. References in architectural publications to Florence Knoll's work and influence are scarce. Less remarked upon and perhaps more intriguing is the influence Florence Knoll exerted on the professionalization of design and her impact on gender roles in the profession. When this author began inquiry in 1998 into designers who had affected the process of professionalization in interior design, no published discussion of Florence Knoll in this role was to be found. Only one such discussion (Tigerman 2007) has been published since. Among designers in informal conversation, especially female designers, Florence Knoll's impact is acknowledged and appreciated (Harmon-Vaughn and Bradley), but formal study, if it is underway, has not yet reached publication.

Resources:

Persons who wish to pursue understanding Florence Schust Knoll Bassett's life, work and influences will find useful assistance in information that can be productively grouped into four areas where bibliographic materials can be described and located. Almost all pertinent resources can now be accessed on the Web; even the holdings at the Smithsonian are now web-accessible (although the researcher is then denied the pleasure of handling Florence Knoll's archived memorabilia, which is still permissible if one visits the collection). Some printed material consists of books, a number of them private editions not in wide circulation, which can be found in the Knoll Museum at company headquarters in East Greenville, Pennsylvania, where research access can be arranged through company representatives.

The Knoll Bassett Collection in the Archives of American Art at the Smithsonian Institution, Washington, D.C. In 2000, Florence Knoll Bassett made a gift to the Smithsonian Institution of what the Archives of American Art curators described as a "selective collection." This collection showcases Florence Knoll as she wished to be known, using private papers, memorabilia, and media reports selected by the designer herself. In a rare interview in 2001, Mrs. Bassett explained why she decided to give the papers to the Smithsonian:

I got a letter from them years ago asking whether I would like to give them my papers. All those years, I didn't know what they were talking about. So when other institutions began asking, I found that old letter and decided to go with them. . . .

I did it because I wanted to put my career at Knoll in context. The coffee-table Knoll book really jumps all over the place and doesn't really give the development of the company (Makovsky).

The collection measures approximately 2.5 linear feet and dates from 1932 to 2000, selectively documenting Florence Knoll Bassett's education and her career at Knoll Associates, Inc. from the 1940s until her resignation in 1965, in addition to personal design projects and other activities after leaving the company. The introduction to the collection as cataloged in the Archives describes it as

an important source of information on the development of interior architecture and design from the 1940s to the 1970s, chronicling the Knoll mission to synthesize space, furniture, and design by creating interiors based on practical use, comfort, and aesthetics.

The collection documents the growth of Knoll's international reputation for its modern furnishings and interiors and the impact of a business philosophy that encompassed design excellence, technological innovation, and mass production. The material includes a chronology of Knoll Bassett's career; a portfolio of sketches, drawings and designs; photographs of Knoll Bassett and others; subject files containing sketches and photographic material; letters from friends, colleagues, clients and others; awards received by Knoll Bassett throughout her career; and printed material.

Much of the material is annotated with historical and biographical notes written by Knoll Bassett, which provide invaluable contextual information for the materials found therein. The notes are dated 1999 in the Container Listing, under the assumption that they were written by Florence Knoll Bassett as she was arranging her archival papers.

Before she donated her papers, Florence Knoll Bassett selected materials and organized them in portfolios and color-coded files, then designed four containers – covered in Knoll textiles – for them. Curators have respected her presentation:

Because the method of arrangement in itself provides insight into Knoll Bassett's style and creativity the collection has been minimally processed with the addition of acid-free materials for preservation reasons and the transcription of labels, which may, over time, become detached. The original order of the collection has been retained throughout.

The collection was organized into what Bassett termed "storage units," the first container being divided into three units and the collection as a whole being divided into six units. Knoll Bassett supplied a detailed inventory of the contents of each container and the subjects represented in each portfolio or folder. Subject headings from this inventory have been used in the Series Description/Container Listing. Knoll Bassett also supplied a vita summarizing her career and copies of this, and her original container inventory are enclosed with the collection and can be consulted at AAA's research center in Washington D.C.

The collection is arranged as seven series, representing the categories into which Knoll Bassett organized the material, with the exception that Letters and Awards are presented as two series. Most of the items in Series 1 to 4 are presented as portfolios in spiral-bound notebooks and the remainder of the collection is organized

in folders. If one works from the collection on site, the materials are loose in the folders. On the Internet, each piece is presented as a numbered slide.

Series 1: Biographical Material, 1932-1999 (Box 1; 1 portfolio)

Series 2: Selected Publications, 1946-1990, 1999 (Box 1; 1 portfolio)

Series 3: Drawings, Sketches, and Designs, 1932-1984, 1999 (Boxes 1-2; 2 portfolios)

Series 4: Photographs and Printed Material, 1956-1997, 1999 (Box 2; 1 portfolio)

Series 5: Subject Files, circa 1930s-1999 (Box 3; 1.0 linear ft.)

Series 6: Letters, circa 1930s-2000 (Box 4; 7 folders)

Series 7: Awards, 1954-1999 (Box 4; 6 folders)

Contemporary and retrospective commentary on Florence Knoll's work as a space designer and as the design presence behind the success of the Knoll companies. This body of information comprises popular, professional and academic media, mostly celebration or chronicle, with occasional analyses. Most direct commentary on her effect on the American workplace is found in these materials. Access to many materials can now be found in on-line searches, either directly or by going into particular publications' archives (such as the New York Times).

Commentary about Florence Knoll's work and her professional impact was largely in the general press, especially during the 1950s and 1960s, the heyday of the Knoll companies and the Knoll Look. Some design periodicals followed her work; very little published scholarly attention has yet been paid to Florence Knoll and her

influence. More may come as design historians and analysts consider the impact of mid-twentieth century Modernism on twenty-first century design.

In the past 10 years, there has been relatively little published work about Florence Knoll's professional life. The two lengthy pieces in Metropolis at the turn of the century represented an intersection of opportunity (Mrs. Bassett granted a very rare interview) and timeliness – a millennial look back at a twentieth century icon and her legacy. Current mentions of Florence Knoll are more about her furniture than her broader work.

Contemporary and retrospective commentary on Florence Knoll's furniture and textile design. This relatively limited body of information includes little analysis or critique, a circumstance unusual in a field where second-guessing the design decisions of others is almost a sport. Florence Knoll's furniture appears to have met less with critical acclaim for individual pieces, at the time when she was designing them, than a kind of admiring acceptance or even reverence for the furniture and textiles as part of a setting or a larger "look."

Today Florence Knoll's furniture and textiles appear steadily in what might be called "design-seekers" commentary: examples in print and electronic consumer articles, with layouts of chic residences and offices, design-oriented web sites, blogs and sales/auctions. Even now, her furniture and textiles elicit description but no real critique. And most discussions are mercantile. In fact, the number of mentions of her furniture now outweighs reflective studies of her space planning or general design

impact. Ironically, 60 years after she said that she never wanted to be known as a furniture designer, Florence Knoll is often remembered as one.

Study and reflection on Florence Knoll's influence on interior design as a profession and on the impact of gender in the practice of interior design.

Florence Knoll Bassett never encouraged public conversation about her influence on other designers and certainly not on other women in the design workplace (or anywhere, for that matter). She shut down any interviewer who began such conversations, so there is little published record of her thoughts on these issues. Occasional mentions appear in general or design periodicals suggesting such influence, but there are no studies. Bobby Tigerman's 2007 article in the Journal of Design History is the first published commentary of length on this subject.

Scholars and analysts have considered the larger subject of professionalization; examining the development of particular professions is probably the best way to build conclusions about the subject as a whole. A push toward professionalization of interior design has occurred mostly during the 30-year professional career of this author, and the assertions in this work are to some large degree based on experience and on investment of time and experience in efforts to secure licensure in state legislatures.

Likewise, some of the observation of gender roles in interior design has come through the author's decades of professional practice, involvement in professional associations, and teaching in a design environment. Very good academic studies and

very interesting popular assessments of women in the workplace have been published in the years since Florence Knoll began her education and her work life. Some are listed here and this is one area where a considerable body of material exists beyond what was consulted. Certainly, the literature that centers on gender issues can provide texture and context to the study of Florence Knoll. Yet she is rarely discussed as an example of a woman breaking workplace barriers, even though she did and female designers today know and admire her achievements. She has been more a point of recognition and near legendary reference than a subject of scholarly work. There is yet substantial opportunity to study Florence Knoll Bassett in this context.

Works Cited

- “1930 Fact Sheet: How the Nation Has Changed Since the 1930 Census.” U.S. Census Bureau. 17 Oct 2008
<www.census.gov/pubinfo/www/1930_factsheet.html>.
- “1943 Guide to Hiring Women.” Savvy & Sage Sept/Oct. 2007: 15.
- Abbott, Andrew. The System of Professions, Chicago: The University of Chicago Press, 1988
- Abercrombie, Stanley. “Design Revolution: 100 Years That Changed Our World.” Interior Design Dec. 1999: 141-198.
- Abercrombie, Stanley. “Office Supplies: evolving furniture for the evolving workplace”. On the Job: Design and the American Office. New York: Princeton Architectural Press, 2000. 16-29.
- “About ASID.” American Society of Interior Designers 8 July 2008
<www.asid.org/about>.
- Achilles, Rolf. Mies Van Der Rohe: Architect as Educator (Exhibition Catalogue). Chicago: University of Chicago Press, 1986.
- Acker, Joan. “Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations.” Gender and Society 4 (1990): 139-145.
- Albrecht, Donald, and Chyrsanthe B. Broikos. “Introduction.” On the Job: Design and the American Office. New York: Princeton Architectural Press, 2000. 16-29.

- Anthony, Kathryn H. Designing for Diversity: Gender, Race, and Ethnicity in the Architectural Profession. Board of Trustees, University of Illinois: 2001.
- Antler, Joyce. The Educated Woman and Professionalization. New York: Garland, 1987.
- “Associations.” Council for Interior Design Accreditation. 8 July 2008 <
www.accredit-id.org/associations.html>.
- Baron, Ava. “Gender and Labor History: Learning from the Past, Looking to the Future.” Ed. Ava Baron. Work Engendered: Toward a New History of American Labor. Ithaca: Cornell University Press, 1991.
- Blackwell, Gaines. Personal interview. 17 October 1999
- Bowser, Wayland. “Redefining Design Education” The Journal of Architectural Education (Winter 1983) pp.12-15
- Boyer, Ernest L. and Lee D. Mitgang. Building Community, Princeton: The Carnegie Foundation, 1996
- Bradley, Kass. Personal interview. 16 April 2004.
- “The Classic Knoll Studio Credenza.” Coveting. 26 Aug. 2008
<http://coveting.blogspot.com/2004_12_01_archive.html>.
- Collins, Gail. America’s Women: Four Hundred Years of Dolls, Drudges, Helpmates, and Heroines. New York: HarperCollins, 2004.
- Cuff, Dana. Architecture: The Story of Practice. Cambridge: MIT Press, 1995.
- “Design for All: Target.” Target. 13 July 2008
<http://www.target.com/b/ref=in_br_display-ladders/601-4592276-2176113?ie=UTF8&node=16317011>.

- Efland, Arthur D. A History of Art Education. New York: Teachers College Press, 1990.
- “Eileen Gray.” Design Museum Collection. 26 Aug. 2008
<<http://www.designmuseum.org/design/eileen-gray>>.
- “Employment and Family Characteristics of Women.” U.S. Census. 1940. U.S. Census Bureau. 17 May 2008
<www2.census.gov/prod2/decennial/documents/41236810p1_ch5.pdf>.
- “Enduring Beauty at Weyerhaeuser.” ArchitectureWeek.com. 10 Jan. 2001: n1.1.
Architecture Week. 12 July 2008
<http://www.architectureweek.com/2001/0110/news_1-1.html>.
- Feldberg, Roslyn L., and Evelyn Nakano Glenn. “Male and Female: Job Versus Gender Models in the Sociology of Work.” Social Problems 26 (1979) 524-538.
- Ferebee, Ann. A History of Design from the Victorian Era to the Present. New York: Van Nostrand Reinhold, 1970.
- Fiely, Megan Elisabeth. Within a Framework of Limitations: Marianne Stengell’s Work as an Artist, Designer and Weaver. Diss. Bowling Green State U, 2006.
<<http://www.ohiolink.edu/etd/view.cgi?acc%5Fnum=bgsu1143405799>>.
- Gayed, E. S. The Challenge of a Generation: Beyond the Crash of ‘87. New York: NY Institute of Finance, 1989.
- Gueft, Olga. “Florence Knoll and the Avant Garde.” Interiors Mar. 1946: 77.
- Guerin, Denise A. and Caren S. Martin. “The Career Cycle Approach to Defining the Interior Design Profession’s Body of Knowledge.” Journal of Interior Design 30 (2004): 1-22.
- Harmon-Vaughan, Beth. Personal interview(s)

- Harris, Anita. Broken Patterns. Detroit: Wayne State UP, 1995.
- Heythum, Charlotte. "Ten Years: Knoll International in Germany." Trans. Else Stone. Deutsche Bauzeitung Oct. 1961: 1-8.
- Hildebrandt, Henry. "The Rise of a Profession: the Evolution of Interior Design." NeoCon 2001. Spec. issue of Perspective (2001): 74-81.
- "History." Council for Interior Design Accreditation. 8 July 2008 <www.accredit-id.org/history.html>.
- Holden, Alfred. "Are You Modern or Borax?" Taddle Creek. 26 Aug. 2008 <http://www.taddlecreekmag.com/modern_or_borax>.
- Hubbard, Bill Jr. A Theory for Practice, Cambridge: The MIT Press, 1996
- Ice, Joyce. "Quilted Together". Delhi, NY: Delaware County Historical Association, 1989
- Izutshu, Akio. "A Profile of Hans and Florence Schust Koll" trans. Brian Harrison The Bauhaus: A Japanese Perspective". Tokyo, Japan. Kajima Institute Publishing Co., Ltd, 1992
- Jones, Susan Henshaw. "Foreword." On the Job: Design and the American Office. New York: Princeton Architectural Press, 2000. 16-29.
- "Key Facts." International Interior Design Association. 8 July 2008 <www.iida.org/i4a/pages/index.cfm?pageid=161>.
- Kirkham, Pat. "Furniture History." Ed. H. Conway. Design History: A Students' Handbook. London: Allen & Unwin, 1987. 58-85.
- Knoll Bassett Collection. Archives of American Art. Smithsonian Institution, Washington, D.C.

- Kouwehoven, John. Made in America. Newton Centre, Mass: C. T. Branford, 1948
- Kron, Joan. Home-psych: The Social Psychology of Home and Decoration. New York: Potter, 1983.
- Kuhn, Thomas S. The Structure of Scientific Revolutions, Chicago: The University of Chicago Press, 1970
- Kwolek-Folland, Angel. "The Gendered Environment of the Corporate Workplace, 1880-1930." The Material Culture of Gender, The Gender of Material Culture. Ed. Katherine Martinez and Kenneth L. Ames. Winterthur: Henry Francis du Pont Winterthur Museum, 1997.
- Larrabee, Eric, and Massimo Vignelli. Knoll Design. New York: Abrams, 1981.
- Magnusson, Carl. Personal interview. 16 April 2004.
- Makovsky, Paul. "An Integrated Effort." MetropolisMag.com. 16 Jan. 2008.
Metropolis Magazine. 12 July 2008
<www.metropolismag.com/cda/story.php?artid=3115>.
- Makovsky, Paul. "Shu U." Metropolis Magazine. July 2001. 91-97.
- Matrix. Making Space: Women and the Man-Made Environment. London: Pluto, 1984.
- "Michael Graves: Design for All." Target. 26 Aug. 2008
<<http://www.target.com/gp/browse.html?node=1060502>>.
- Miller, Craig. Curator "The Cranbrook Show". Metropolitan Museum of Art 1984, (Knoll Bassett Collection. Box 2, Folder 1)
- Morrison, Harriet. "Who's Who in Interior Design." Interiors Feb. 1954: 114.

- Olson, Sheri. "Weyerhaeuser Headquarters Lauded." Encyclopedia.com. 22 May 2001. Seattle Post-Intelligencer. 12 July 2008 <<http://www.encyclopedia.com/doc/1G1-74912159.html>>.
- Paton, Nic. "Work From Home and Save \$38bn." Management-Issues.com. 23 June 2008. Management-Issues. 12 July 2008 <<http://www.management-issues.com/2008/6/23/research/63202-7055.asp>>.
- Peisch, Mark L. The Chicago School of Architecture: Early Followers of Sullivan and Wright, London: Phaidon Press, 1964
- Pommer, Richard and Christian Otto. Weissenhof 1927 and the Modern Movement in Architecture, Chicago: University of Chicago Press, 1991
- Pulos, Arthur J. The American Design Adventure 1940-1975, Cambridge: The MIT Press, 1988
- Rae, Christina. Knoll au Louvre (Exhibition Catalogue). New York: Chanticleer, 1971. 115.
- . "Knoll: Portrait of a Corporation." Arts and Architecture May 1945: 38.
- Rockland, Mae Shafter. "The Work of Our Hands". New York: Schocken Books, 1973
- Rouland, Steven, and Linda Rouland. Knoll Furniture 1938-1960. Atglen: Schiffer, 1999.
- Ryan, Mary P. Mysteries of Sex: Tracing Women and Men Through American History. Chapel Hill: University of North Carolina Press, 2006.
- Schultz, Richard. Personal interview. 16 April 2004.

Schultz, Richard, internet web site,

<http://www.richardschultz.com/products/1966/index.asp>

Scott, Joan. Gender and the Politics of History. New York: Columbia University Press, 1988.

Stein, Nicholas. "Office Fantasies of the Future." Money.CNN.com. 6 Mar. 2000.

Fortune Magazine. 12 July 2008

http://money.cnn.com/magazines/fortune/fortune_archive/2000/03/06/275280/index.htm

Strom, Sharon Hartman. Beyond the Typewriter: Gender, Class, and the Origins of Modern American Office Work, 1900-1930. Chicago: University of Illinois Press, 1992: 34

Tigerman, Bobby. "I am not a Decorator: Florence Knoll, the Knoll Planning Unit and the Making of the Modern Office." Journal of Design History 20 (2007): 61-74.

Vastokas, Joan M. "Are Artifacts Texts? Lithuanian Woven Sashes as Social and Cosmic Transactions." The Socialness of Things, Essays on the Socio-Semiotics of Objects. Ed. Stephen H. Riggins. Berlin: Mouton de Gruyter, 1994. 343.

Vitruvius's The Ten Books on Architecture

(<http://www.lih.gre.ac.uk/histhe/vitruvius.htm>)

Walker, John A. Design History and the History of Design. London: Pluto, 1989.

Williamson, Roxanne K. American Architects and the Mechanics of Fame, Austin, TX: University of Texas Press, 1991

Wolfe, Tom. From Bauhaus to Our House, South Yarmouth, MA: John Curley & Associates, 1981

List of Works Consulted

Books

Abbott, Andrew. The System of Professions, Chicago: The University of Chicago Press, 1988

Abercrombie, Stanley. "Office Supplies: evolving furniture for the evolving workplace". On the Job: Design and the American Office. New York: Princeton Architectural Press, 2000. 16-29.

Achilles, Rolf. Mies Van Der Rohe: Architect as Educator, Chicago: The University of Chicago Press (Exhibition Catalogue 1986)

Albrecht, Donald, and Chyrsanthe B. Broikos. "Introduction." On the Job: Design and the American Office. New York: Princeton Architectural Press, 2000. 16-29.

Anscombe, Isabelle. A Woman's Touch, Women in Design from 1860 to the Present Day, New York: Viking Penguin Inc., 1984

Antler, Joyce. The Educated Woman and Professionalization, New York: Garland Publishing, 1987

Barry, Peter. Beginning Theory, New York: Manchester University Press, 1995

Bayley, Stephen. Commerce and Culture, London: Fourth Estate Ltd., 1989

- Beaudreau, Bernard C. Mass Production, the Stock Market Crash, and the Great Depression, Westport Connecticut: Greenwood Press, 1996
- Bergmann, Barbara R. The Economic Emergence of Women, New York: Basic Books, 1986
- Bernstein, Paul. American Work Values, Their Origin and Development, Albany, New York: State University of New York Press, 1997
- Blaser, Warner. Holabird & Root (Roche) 1880-1992 - Chicago Architecture, Boston: Birkhauser, 1992
- Bledstein, Burton J. The Culture of Professionalism, New York: W. W. Norton & Co. Inc. 1976
- Boyer, Ernest L. and Lee D. Mitgang. Building Community, Princeton: The Carnegie Foundation, 1996
- Cheng, Cliff (ed.). Masculinities in Organizations. Thousand Oaks, California: Sage Publications, 1996.
- Cockburn, Cynthia. In the Way of Women: Men's Resistance to Sex Equality in Organizations. Ithaca, N.Y.: ILR Press, 1991.
- Clark, Robert J. Design in America – The Cranbrook Vision 1925-1950, New York: Harry N. Abrams Inc., 1983
- Condit, Carl W. The Chicago School of Architecture. Chicago: The University of Chicago Press, 1964

- Connely, Willard. Louis Sullivan As He Lived: The shaping of American Architecture. New York: Horizon Press Inc., 1960
- Cronon, William. Nature's Metropolis. New York: W. W. Norton & Co., 1991
- Cuff, Dana. Architecture: The Story of Practice, Cambridge: The MIT Press, 1995
- DeVitis, Joseph L. and John M. Rich. The Success Ethic, Education and the American Dream, Albany, NY: State University of New York, 1996
- Domer, Dennis. The Life of Alfred Caldwell, Baltimore: Johns Hopkins University Press, 1997
- Dworkin, Martin S. Dewey on Education, New York: Teachers College Press, 1959
- Efland, Arthur D. An History of Art Education, New York: Teachers College Press, 1990
- Ewen, Stuart and Elizabeth Ewen. Channels of Desire, Mass Images and the Shaping of American Consciousness, Minneapolis: University of Minnesota Press, 1992
- Ferebee, Ann. A History of Design from the Victorian era to the Present, New York: Van Nostrand Reinhold Company, 1970
- Gayed, E. S. The Challenge of a Generation: Beyond the Crash of '87, New York: New York Institute of Finance, 1989

- Glass, Judith (ed.) Encountering the Glass Ceiling: Gender, Values, and the Structure of Work. Los Angeles: Institute of Industrial Relations, University of California, 1995
- Gregersen, Charles E. Dankmar Adler: His Theatres and Auditoriums. Athens, OH: Swallow/Ohio University Press, 1990
- Grese, Robert E. Maker of Natural Parks and Gardens-Jens Jensen, Baltimore: Johns Hopkins University Press 1992
- Hanson, Susan, and Geraldine Pratt. Gender, Work, and Space. London: Routledge, 1995
- Harris, Anita M. Broken Patterns, Detroit: Wayne State University Press 1995
- Harris, Barbara. Beyond Her Sphere: Women and the Professions in American History, Westport, Conn: Greenwood Press, Inc. 1978
- Hiesinger, Kathryn B. Design Since 1945, Great Britain: Balding+Mansell, Wisbech, Combs, 1983
- Hillesheim, James W. and George D. Merrill. Theory and Practice in the History of American Education, Washington, D.C.: University Press of America, 1980
- Hillesheim, James W. Intellectual Foundations of American Education: Locke to Dewey, Lawrence, KS: University Press of Kansas, 1993
- Hines, Thomas. Burnham of Chicago: Architect & Planner. New York: Oxford University Press, 1974

- Hoffman, Donald. The Architecture of John Wellborn Root. Baltimore: Johns Hopkins University Press, 1973
- Hubbard, Bill Jr. A Theory for Practice, Cambridge: The MIT Press, 1996
- Izutshu, Akio. "A Profile of Hans and Florence Schust Koll" trans. Brian Harrison The Bauhaus: A Japanese Perspective". Tokyo, Japan. Kajima Institute Publishing Co., Ltd, 1992
- Jacobs, Jerry A. (ed.) 1995. Gender Inequality at Work. Thousand Oaks, California: Sage Publications.
- Johnson, Terence J. Professions and Power, London: The Macmillan Press Ltd, 1972
- Kanter, Rosabeth M. Men and Women of the Corporation, New York: Basic Books, 1977
- Kao, John. The New Business of Design, New York: Allworth Press, 1996
- Kessler-Harris, Alice. A Woman's Wage: Historical Meanings and Social Consequences. Lexington,: University Press of Kentucky, 1990
- Kessler-Harris, Alice. Out to Work, New York: Oxford University Press, 1982
- Kirkham, Pat. "Furniture History." Ed. H. Conway. Design History: A Students' Handbook. London: Allen & Unwin, 1987. 58-85.
- Kouwehoven, John. Made in America. Newton Centre, Mass: C. T. Branford, 1948

Kuhn, Thomas S. The Structure of Scientific Revolutions, Chicago: The University of Chicago Press, 1970

Landau, Sarah B. P.B. Wight-Architect, Contractor, Critic-1838-1925, Chicago: Art Institute of Chicago, 1981

Larrabee, Eric. Knoll Design, New York: Harry N. Abrams, Inc. 1981

Larson, Magali S. The Rise of Professionalism, Berkley, CA.: University of California Press, 1977

Licht, Walter. Industrializing America, Baltimore: The Johns Hopkins University Press, 1995

Losman, Donald L. and Shu-Jan Liang, The Promise of American Industry, An Alternative Assessment of Problems and Prospects, New York: Quorum Books, 1990

Margolin, Victor. The Idea of Design, Cambridge: The MIT Press, 1995

Margolin, Victor. Design Discourse, Chicago: The University of Chicago Press, 1989

Martinez, Katharine and Kenneth L. Ames, The Material Culture of Gender, The Gender of Material Culture, Winterthur, Delaware: Henry Francis du_Pont Winterthur Museum, 1997

Matrix. Making Space: Women and the Man-Made Environment. London: Pluto, 1984.

Miller, Craig. Curator "The Cranbrook Show". Metropolitan Museum of Art 1984,
(Knoll Bassett Collection. Box 3, Folder 1)

Miller, Daniel. Material Culture and Mass Consumption, New York: Basil Blackwell Inc., 1987

Mills, Albert J. and Peta Tancred. Gendering Organizational Analysis. Newbury
Park, California: Sage Publications, 1992.

Minow, Newton N. and Craig L. Lamay. Abandoned in the Wasteland, New York:
Hill and Wang, 1996

Mitchell, C. Thomas. New Thinking in Design, New York: Van Nostrand Reinhold,
1996

Mugerauer, Robert. Interpreting Environments, Austin: University of Texas Press,
1995

Ortner, Sherry B., Harriet Whitehead. Sexual Meanings: The Cultural Construction
Gender and Sexuality , New York: Cambridge University Press, 1981

Palmer, Jerry and Mo Dodson. Design and Aesthetics a Reader, London and New
York: Routledge, 1996

Peisch, Mark L. The Chicago School of Architecture: Early Followers of Sullivan and
Wright, London: Phaidon Press, 1964

Pommer, Richard and Christian Otto. Weissenhof 1927 and the Modern Movement in
Architecture, Chicago: University of Chicago Press, 1991

Pulos, Arthur J. The American Design Adventure 1940-1975, Cambridge: The MIT Press, 1988

Rae, Christine. Knoll au Louvre, New York: Chanticleer Press, Inc. (Exhibition Catalogue 1971)

Riggins, Stephen H. The Socialness of Things, Essays on the Socio-Semiotics of Objects, Berlin: Mouton de Gruyter, 1994

Riley, Denise. "Am I that Name?", Universtiy of Minnesota, Minneapolis, 1988

Ritzer, George. The McDonaldization of Society, Thousand Oaks, CA.: Pine Forge Press, 1996

Robbins, Bruce. Secular Vocations, New York: Verso, 1993

Rose, Margaret A. The Post-Modern and the Post-Industrial, Cambridge: Cambridge University Press, 1991

Scott, Joan. Gender and the Politics of History, New York: Columbia University Press, 1988

Smith, C. Ray. Interior Design in 20th-Century America, New York: Harper & Row, 1987

Sparke, Penny. As Long as It's Pink, The Sexual Politics of Taste, London: Pandora, 1995

Strom, Sharon Hartman. Beyond the Typewriter: Gender, Class, and the Origins of Modern American Office Work, 1900-1930. Chicago: University of Illinois Press, 1992

- Swerdlow, Amy and Hanna Lessinger. Class, Race, and Sex: The Dynamics of Control. Boston, Ma.: Barnard College Women's Center, 1983
- Tomaskovic-Devey, Donald. Gender and Racial Inequality at Work: The Sources and Consequences of Job Segregation. Ithaca, N.Y.: ILR Press, 1994
- Theodore, Anthena, ed. The Professional Woman, Cambridge, Mass: Schenkman Publishing Co., 1971
- Trachtenberg, Alan. The Incorporation of America: Culture and Society in the Gilded Age, New York: Hill & Wang, 1982
- Turak, Theodore. William LeBaron Jenny: A Pioneer of Modern Architecture. Ann Arbor: UMI Research Press, 1986
- Turner, Fredrick. Tempest, Flute, & Oz-Essays on the Future, New York: Persea Books, 1991
- Twombly, Robert C. Frank Lloyd Wright: His Life and His Architecture. New York: John Wiley & Sons, 1979
- Walby, Sylvia. Patriarchy at Work: Patriarchal and Capital Relations in Employment. Minneapolis: University of Minnesota Press, 1986
- Walker, John A. Design History and the History of Design, London: Pluto Press, 1989
- Williams, Christine L. Gender Differences at Work: Women and Men in Nontraditional Occupations. Berkeley: University of California Press, 1989.

Williamson, Roxanne K. American Architects and the Mechanics of Fame, Austin: University of Texas Press, 1991

Witz, Anne. Professions and Patriarchy, London: Routledge, 1992

Wolfe, Tom. From Bauhaus to Our House, South Yarmouth, MA: John Curley & Associates, 1981

Journals

“1943 Guide to Hiring Women.” Savvy & Sage (Sept./Oct. 2007): 15

Abercrombie, Stanley. “Design Revolution: 100 Years That Changed Our World.” Interior Design (Dec. 1999): 141-198.

Acker, Joan. “Class, Gender, and the Relations of Distribution.” *Signs*, Vol. 13, No. 3(1988): 473-497

Acker, Joan. “Hierarchies, Jobs, bodies: A Theory of Gendered Organizations.” Gender and Society Vol. 4, No. 2 (June 1990):139-158

Acker, Joan. 1992. “Symposium: Gendered Institutions, From Sex Roles to Gendered Institutions.” Contemporary Sociology, 21: 565-69

- Acker, Joan, and Donald R. Van Houten. "Differential Recruitment and Control: The Sex Structuring of Organizations," in Albert J. Mills and Peta Tancred (eds.), Gendering Organizational Analysis, Newbury Park, CA: Sage Publications: 1992 Reprinted from 1974), 15-30
- Ahrentzen, Sherry and Linda N. Groat. "Rethinking Architectural Education: Patriarchal Conventions & Alternative Visions from the Perspectives of Women Faculty," Journal of Architectural and Planning Research, Vol.9 No.2 (Summer, 1992) pp.95-112
- Bennett, Judith M., "Feminism and History," Gender & History, 1:3 (Autumn 1989) pp.251-272
- Bowser, Wayland. "Redefining Design Education," The Journal of Architectural Education (Winter 1983) pp.12-15
- Boyd, Monica, Mary Ann Mulvihill, and John Myles. 1995. "Gender, Power, and Postindustrialism." in Gender Inequality at Work, Jerry A. Jacobs (ed.), Thousand Oaks, California: Sage Publications: 178-206
- Brookes, Colin. "Relationships of Theories and Practice in Art and Design Teaching," The Journal of Art & Design Education, Vol. 11 No.2 (1992) pp. 155-165
- Brown, Kathleen M. "Brave New Worlds: Women's and Gender History," William & Mary Quarterly, 3rd series, 50 No.2 (April 1993) pp.311-328
- Dutton, Thomas A. "Design and Studio Pedagogy," The Journal of Architectural Education (Fall 1987) pp. 16-20

- England, Paula (et. al). "The Gendered Valuation of Occupations and Skills: Earnings in 1980 Census Occupations." Social Forces, 73(1) (September 1994.): 65-99
- Feldberg, Roslyn L. and Evelyn Nakano Glenn. "Male and Female: Job Versus Gender Models in the Sociology of Work." Social Problems, Vol. 26, No. 5 (June 1979):524-538
- Gerson, Judith M. and Kathy Peiss. "Boundaries, Negotiation, Consciousness: Reconceptualizing Gender Relations." Social Problems, Vol. 32, No. 4 (April 1985): 317-331
- Gueft, Olga. "Florence Knoll and the Avant Garde." Interiors Mar. 1946: 77.
- Guerin, Denise A. and Caren S. Martin. "The Career Cycle Approach to Defining the Interior Design Profession's Body of Knowledge." Journal of Interior Design 30 (2004): 1-22.
- Hartmann, Heidi. "Capitalism, Patriarchy, and Job Segregation by Sex." in Women and the Workplace: The Implications of Occupational Segregation, Martha Blaxal and Barbara Reagan (eds.) Chicago: The University of Chicago Press, 1976, 137-170
- Hewitt, Nancy. "Beyond the Search for Sisterhood: American Women's History in the 1980's" in Du Bois, Ellen Carol, and Vicki L. Ruiz (eds.), Unequal Sisters: A Multicultural Reader in U.S. Women's History, pp.1-19
- Heythum, Charlotte. "Ten Years: Knoll International in Germany." Trans. Else Stone. Deutsche Bauzeitung Oct. 1961: 1-8.

- Hildebrandt, Henry. "The Rise of a Profession: the Evolution of Interior Design." NeoCon 2001. Spec. issue of Perspective (2001): 74-81.
- Makovsky, Paul. "Shu U." Metropolis Magazine. July 2001. 91-97.
- Margolin, Victor. "A Decade of Design History in the United States 1977-87," The Journal of Design History. Vol.1 No.1 (1988) 51-71
- Morrison, Harriet. "Who's Who in Interior Design." Interiors Feb. 1954: 114.
- Pacey, Philip. "'Anyone Designing Anything?' Non-Professional Designers and the History of Design" The Journal of Design History, Vol. 5 No. 3 (1992) pp.217-225
- Pierce, Jennifer L. "Reproducing Gender Relations in Large Law Firms: The Role of Emotional Labor in Paralegal Work." in Working in the Service Society, Cameron Lynne Macdonald and Carmen Sirianni (eds.), Philadelphia: Temple University Press, 1996: 184-219
- Preston, Jo Anne. "Gender and the Formation of a Women's Profession: The Case of Public School Teaching." in Gender Inequality at Work, Thousand Oaks, California: Sage Publications: 1995
- Rae, Christina. Knoll au Louvre (Exhibition Catalogue). New York: Chanticleer, 1971. 115.
- . "Knoll: Portrait of a Corporation." Arts and Architecture May 1945: 38.

Reskin, Barbara F. and Catherine E. Ross. "Jobs, Authority, and Earnings Among Managers: The Continuing Significance of Sex." in Gender Inequality at Work, Thousand Oaks, California: Sage Publications: 1995

Rose, Sonya O.. "Gender at Work: Sex, Class, and Industrial Capitalism." History Workshop: A Journal of Socialist History, Vol. 21 (1986):113-31

Rosenberg, Janet, Harry Perlstadt, and William R. F. Phillips. "Now That We Are Here: Discrimination, Disparagement, and Harassment at Work and the Experience of Women Lawyers." Gender & Society, Vol. 7, No. 3 (September 1993), 415-433

Tigerman, Bobbye. "'I am not a Decorator:’ Florence Knoll, the Knoll Planning Unit and the Making of the Modern Office." Journal of Design History 20 (2007): 61-74.

Wharton, Amy and Sharon Bird. "Stand by Your Man: Homosociality, Work Groups, and Men’s Perceptions of Difference." in Masculinities in Organizations, Thousand Oaks, California: Sage Publications: 1996

Williams, Christine L. "The Glass Escalator: Hidden Advantages for Men in the ‘Female’ Professions," Social Problems, Vol. 39, No. 3 (August 1992.): 253-267

Special Collections

Knoll Bassett Collection. Archives of American Art. Smithsonian Institution, Washington, D.C.

Personal Interviews

- Blackwell, Gaines. Personal interview. 17 October 1999.
- Bradley, Kass. Personal interview. 16 April 2004.
- Magnusson, Carl. Personal interview. 16 April 2004.
- Schultz, Richard. Personal interview. 16 April 2004.
- Harmon-Vaughan, Beth. Personal interviews. 1981 thru 2006

Internet Resources

- “About ASID.” American Society of Interior Designers 8 July 2008 <www.asid.org/about>.
- “Associations.” Council for Interior Design Accreditation. 8 July 2008 <www.accredit-id.org/associations.html>.
- “The Classic Knoll Studio Credenza.” Coveting. 26 Aug. 2008 <http://coveting.blogspot.com/2004_12_01_archive.html>.
- “Design for All: Target.” Target. 13 July 2008 <http://www.target.com/b/ref=in_br_display-ladders/601-4592276-2176113?ie=UTF8&node=16317011>.
- “Eileen Gray.” Design Museum Collection. 26 Aug. 2008 <<http://www.designmuseum.org/design/eileen-gray>>.

“Employment and Family Characteristics of Women.” U.S. Census. 1940. U.S. Census Bureau. 17 May 2008
<www2.census.gov/prod2/decennial/documents/41236810p1_ch5.pdf>.

“Enduring Beauty at Weyerhaeuser.” ArchitectureWeek.com. 10 Jan. 2001: n1.1.
Architecture Week. 12 July 2008
<http://www.architectureweek.com/2001/0110/news_1-1.html>.

Fiely, Megan Elisabeth. *Within a Framework of Limitations: Marianne Stengell’s Work as an Artist, Designer and Weaver*. Diss. Bowling Green State U, 2006.
<<http://www.ohiolink.edu/etd/view.cgi?acc%5Fnum=bgsu1143405799>>.

“History.” Council for Interior Design Accreditation. 8 July 2008 <www.accredit-id.org/history.html>.

Holden, Alfred. “Are You Modern or Borax?” Taddle Creek. 26 Aug. 2008
<http://www.taddlecreekmag.com/modern_or_borax>.

“Key Facts.” International Interior Design Association. 8 July 2008
<www.iida.org/i4a/pages/index.cfm?pageid=161>.

Makovsky, Paul. “An Integrated Effort.” MetropolisMag.com. 16 Jan. 2008.
Metropolis Magazine. 12 July 2008
<www.metropolismag.com/cda/story.php?artid=3115>.

“Michael Graves: Design for All.” Target. 26 Aug. 2008
<<http://www.target.com/gp/browse.html?node=1060502>>.

Olson, Sheri. "Weyerhaeuser Headquarters Lauded." Encyclopedia.com. 22 May 2001. Seattle Post-Intelligencer. 12 July 2008
<<http://www.encyclopedia.com/doc/1G1-74912159.html>>.

Paton, Nic. "Work From Home and Save \$38bn." Management-Issues.com. 23 June 2008. Management-Issues. 12 July 2008 <<http://www.management-issues.com/2008/6/23/research/63202-7055.asp>>.

Schultz, Richard.

<http://www.richardschultz.com/products/1966/index.asp>

Stein, Nicholas. "Office Fantasies of the Future." Money.CNN.com. 6 Mar. 2000.
Fortune Magazine. 12 July 2008
<money.cnn.com/magazines/fortune/fortune_archive/2000/03/06/275280/index.htm>.

Vitruvius's The Ten Books on Architecture

(<http://www.lih.gre.ac.uk/histhe/vitruvius.htm>)

List of Figures

Fig. 1. A drawing by Eiel Saarinen of the Cranbrook campus (Knoll Bassett Collection, box 3, folder 1, slide 5).	39
Fig. 2. View from Garden', design for a house, Florence Schust, 1939 (Cranbrook Archives #5467-3).	42
Fig. 3. Knoll advertisement referring to ideas similar to those from the Bauhaus (Izutsu 65).....	49
Fig. 4. The "Barcelona Chair" designed by Mies van der Rohe for the German Pavilion at the 1929 Barcelona Exposition (Rouland and Rouland 80).	50
Fig. 5. Hans Knoll and Florence Schust Knoll in an undated photograph (Knoll Bassett Collection, box 1, folder 1).	51
Fig. 6. A Jens Risom-designed chair (Knoll Bassett Collection, box 1, folder 2, slide 8).	53
Fig. 7. Eero Saarinen's Womb chair became such a design icon that it was featured in the 1962 Easter issue of the <u>Saturday Evening Post</u> (Knoll Bassett Collection, box 1, folder 3, slide 24). ..	54
Fig. 8. Harry Bertioia's wire chairs (Knoll Bassett Collection, box 1, folder 1, slide 49).	55
Fig. 9. Desks for Knoll Planning Unit designers, 575 Madison Avenue, New York, n.d., Courtesy Knoll, Inc. (Tigerman).....	67
Fig. 10. Hans Knoll's 12' by 12' office at the 575 Madison Knoll headquarters.....	71
Fig. 11. Office desk from the 1940s.	72

Fig. 12. Hans Knoll’s office was designed to highlight his complexion. He is flanked by a Bertioia sculpture (Rouland and Rouland 4).	73
Fig. 13. The Knoll Showroom in New York, 1951.	73
Fig. 14. The Chicago Knoll showroom.....	75
Fig. 15. The Knoll showroom in San Francisco (Knoll Bassett Collection, box 1, folder 1, slide 38).	76
Fig. 16. The Knoll showroom in San Francisco.	77
Fig. 17. Florence Schust Knoll’s boat-shaped conference table reveals her architectural eye. Far from a “fill-in” piece, the design is now considered a classic (Knoll Bassett Collection, box 1, folder 2, slide 106).	83
Fig. 18. The exterior of Eero Saarinen’s CBS headquarters building in New York (Knoll Bassett Collection, box 1, folder 2, slide 89).	88
Fig. 19. Views from Florence Knoll Bassett’s organizational sketches for CBS (Knoll Bassett Collection, box 1, folder 1, slide 75).	91
Fig. 20. Views from Florence Knoll Bassett’s organizational sketches for CBS (Knoll Bassett Collection, box 1, folder 1, slide 76).	92
Fig. 21. Knoll-Bassett designed reception area on the executive floor of the CBS headquarters building (Knoll Bassett Collection, box 1, folder 1, slide 77).....	93
Fig. 22. Unique reception areas greeted visitors to each floor of the CBS headquarters. <i>Architectural Record</i> noted, “Florence Knoll Bassett’s recently completed interiors for the late Eero Saarinen’s CBS building in New York City are marvels of coordination and attention to detail. They are also works of art” (Knoll Bassett Collection, box 1, folder 2, slide 81).	94
Fig. 23. The employee cafeteria at CBS, displaying a collage created by the CBS design	

department. The space also featured chairs with walnut frames and tables with white plastic tops framed in walnut. This use of wood was designed to harmonize with the walnut paneling in the cafeteria (Knoll Bassett Collection, box 3, folder 22, slide 17).....	95
Fig. 24. Frank Stanton’s office at CBS (Knoll Bassett Collection, box 1, folder 1, slide 79).....	96
Fig. 25. Frank Stanton’s office at CBS. According to Knoll Bassett, “English oak paneled wall contains TV equipment. Air conditioning stripline in the arched ceiling with recessed wall lighting. Multiple use cabinet behind his table desk” (Knoll Bassett Collection, box 1, folder 1, slide 80).	97
Fig. 26. A reception area and secretarial gallery in the Knoll Bassett-designed CBS headquarters. The glass panels were backlit to give the illusion of daylight (Knoll Bassett Collection, box 1, folder 2, slide 48).	98
Fig. 27. A reception area and secretarial gallery in the Knoll Bassett-designed CBS headquarters. The glass panels were backlit to give the illusion of daylight (Knoll Bassett Collection, box 1, folder 2, slide 49).	99
Fig. 28. Florence Schust Knoll presenting to an all-male group from client Connecticut General in 1957 (Knoll Bassett Collection, box 2, folder 2, slide 5).	150
Fig 29. The Richard Schultz outdoor furniture design known as the “Leisure Collection” designed for Florence Knoll (http://www.richardschultz.com/products/1966/index.asp).	158
Fig. 30. The Knoll-designed interiors for the 1971 Weyerhaeuser headquarters reflect Florence Knoll Bassett’s emphasis on usability and environment (Albrecht 47).....	177
Fig. 31. Florence Knoll Bassett designed this secretarial office for the Knoll showrooms at 575 Madison Avenue in New York City. Her caption for this photo dated 1951 reads, “The beginning of office cubicles” (Knoll Bassett Collection, box 3, folder 5, slide 55).	179

**Florence Shust Knoll's Furniture Designs
as Produced by the Knoll Furniture Company**

Appendix A

Arm Chair
43 1946-1949
Florence Knoll
W26", D23.5", H30". Fully upholstered. Also
available with leather upholstery. Wood frame
in clear birch or hard maple in natural finish.



Stacking Stool
75 1950-1970
Florence Knoll
Diam. 13", H18". Birch wood top with
bent rod iron legs with baked white
enamel. Later production available with
laminated top in black, white, or maple.
Photo Courtesy of the Knoll Museum.



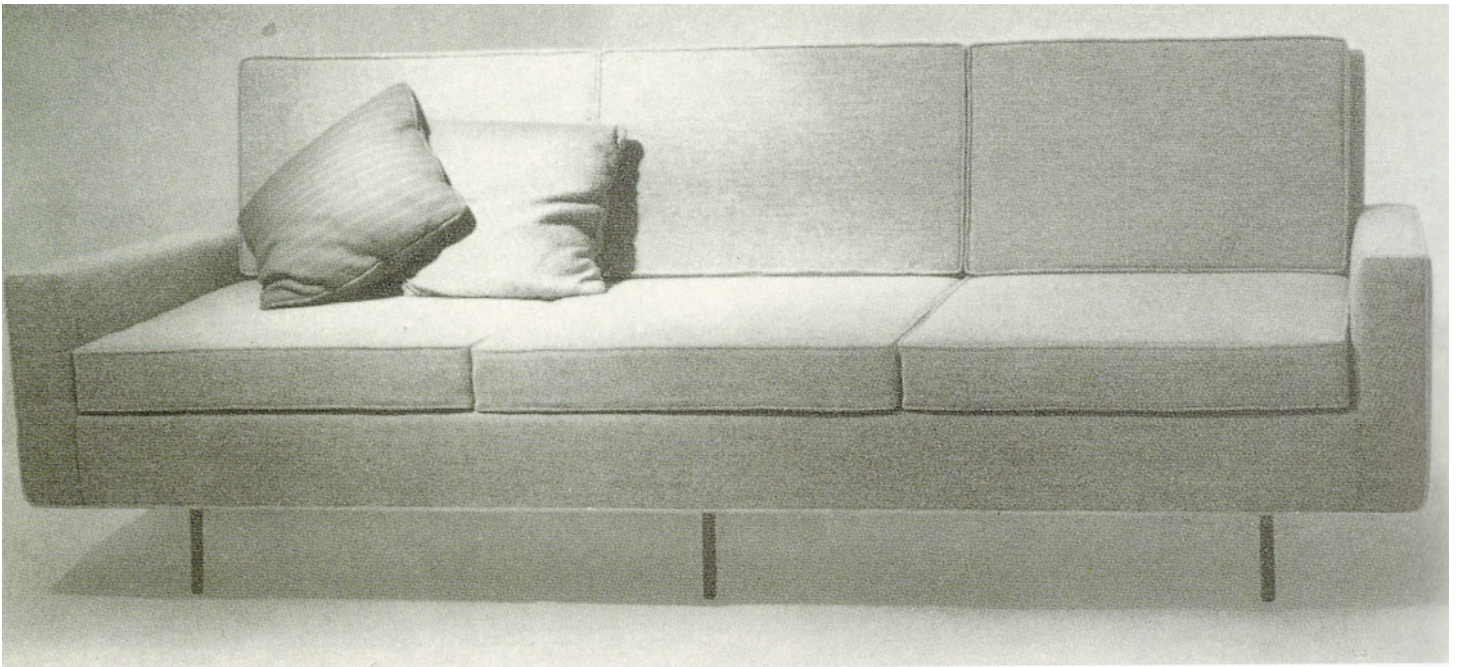
Swivel Arm Chair
84 -BC 1956-1964
Florence Knoll
(Center) W26.75", W26.75", H33.25"-36"
Max. Aluminum base, brushed chrome finish,
other finishes available.

Swivel Arm Chair
84 WS 1956-1964
Florence Knoll
(Left) W26.75", W26.75", H33.25"-36" Max.
Walnut base, available in a variety of finishes.

Arm Chair
84 ULB 1956-1964
Florence Knoll
(Lower right) W26.75", D26.75", H32.5".
Walnut or teak veneer legs, available in a
variety of finishes.



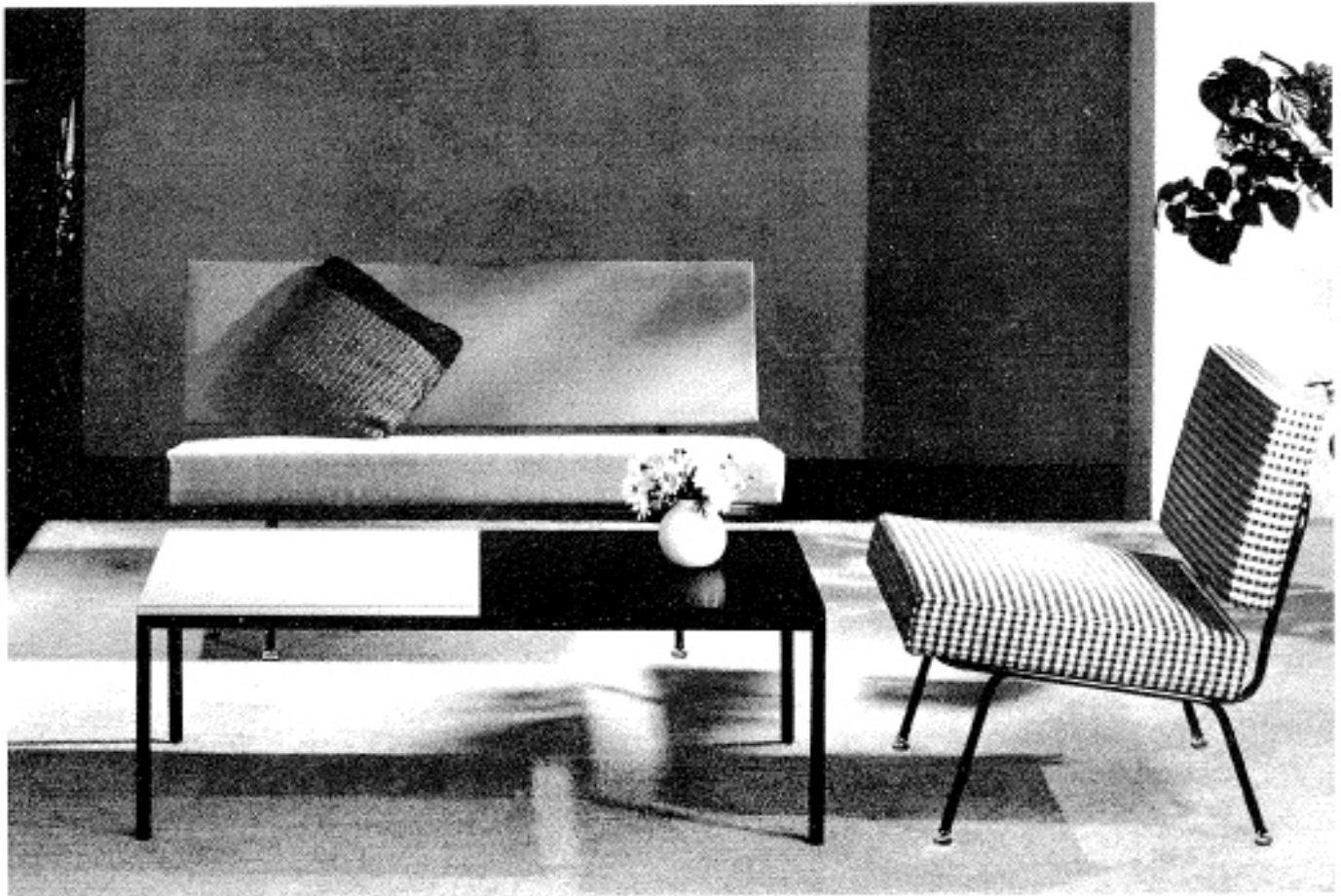
Arm Chair
25 BC 1949-1970
Florence Knoll
W30", D31", H30". Steel legs, brushed
chrome finish. Other finishes available.



Sofa
26 BC 1949-1970
Florence Knoll
W90", D31", H30". Steel legs, brushed chrome finish. Other finishes
available.



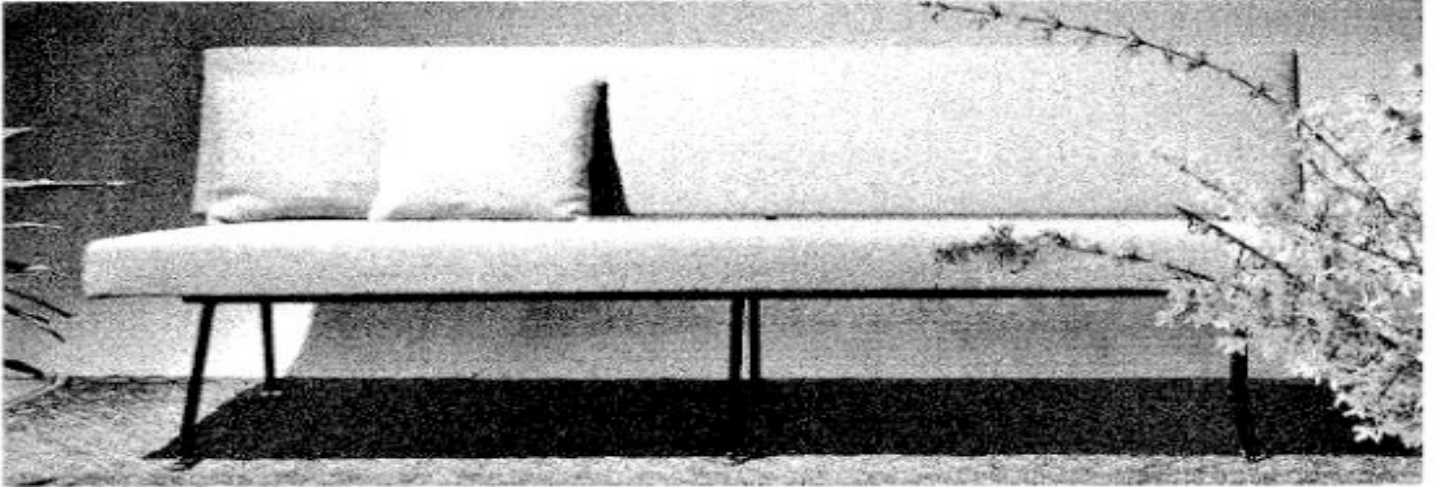
Settee
27 BC 1949-1970
Florence Knoll
W63", D31", H30". Steel legs, brushed chrome finish. Other finishes available.



Chair
31 1954-1968
Florence Knoll
W24", D27", H29". Tubular steel base with black finish. Brushed
chrome or polished chrome finishes available.

Settee
32 1954-1968
Florence Knoll
W48", D27", H29". Tubular steel base with black finish. Brushed
chrome or polished chrome finishes available.
Also shown: 307 1/2 Coffee Table.

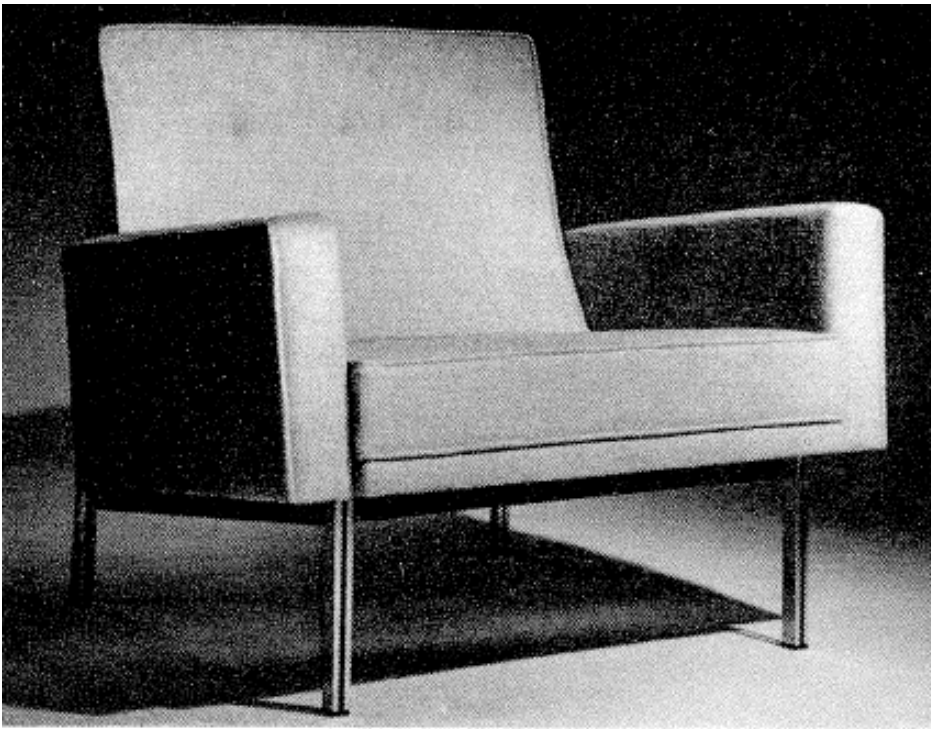
Below:
Sofa
33 1954-1968
Florence Knoll
W72", D27", H29". Tubular steel base with black finish. Brushed
chrome or polished chrome finishes available.



Parallel Bar System Lounge Chair
51 1955-1973
Florence Knoll
W24", D31", H30". Steel base with brushed
chrome and black finish. Other finishes
available.



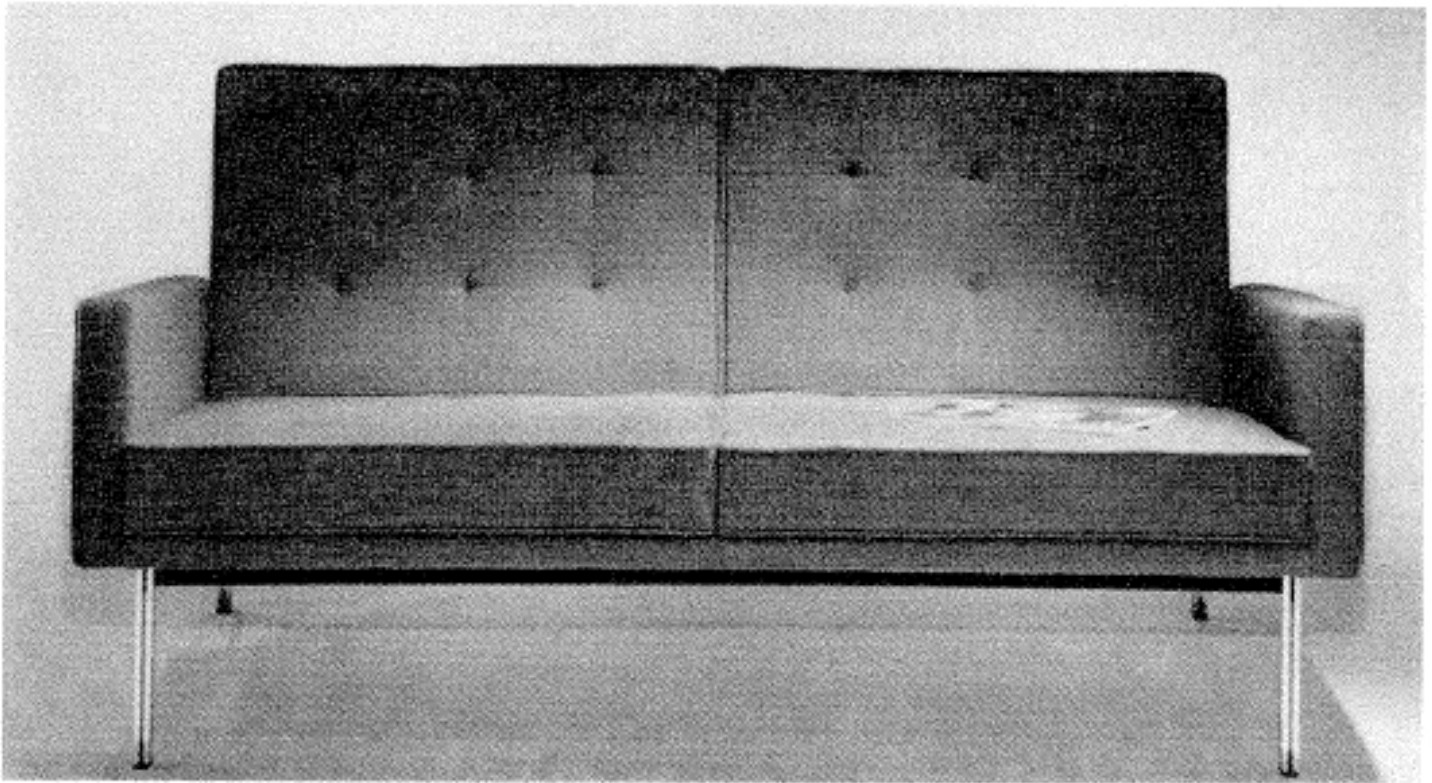
Parallel Bar System Sofa
53 1955-1973
Florence Knoll
W84", D31", H30". Steel base
with brushed chrome and black
finish. Other finishes available.



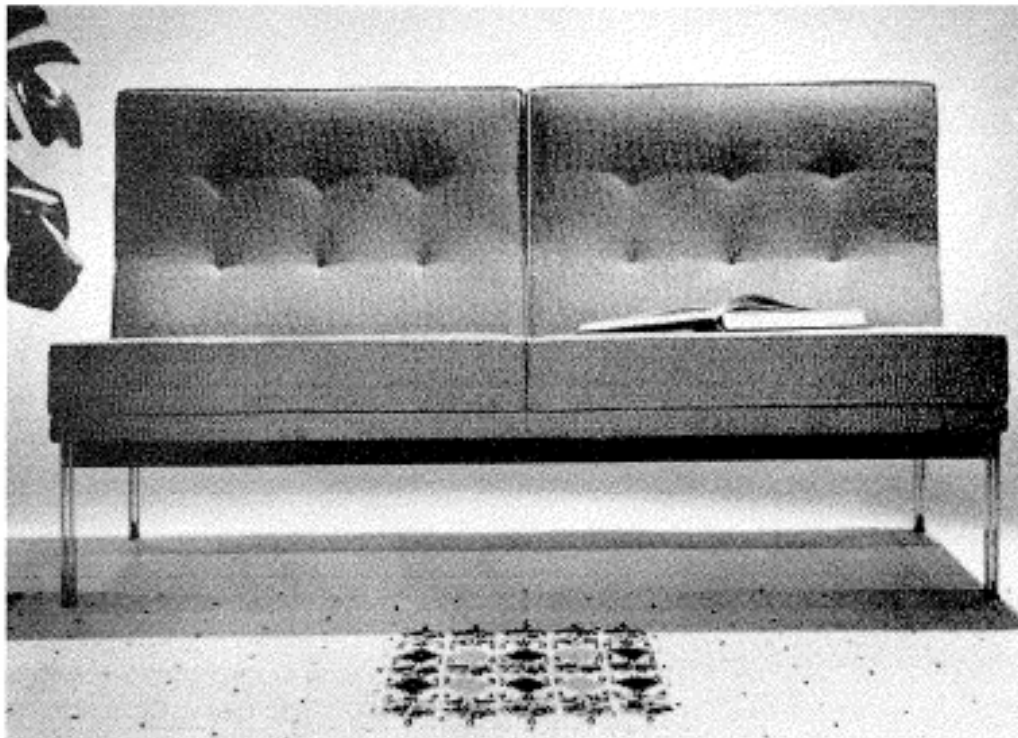
Parallel Bar System Arm Chair
55 1955-1973
Florence Knoll
W29", D31", H30". Steel base with brushed chrome
and black finish. Other finishes available.



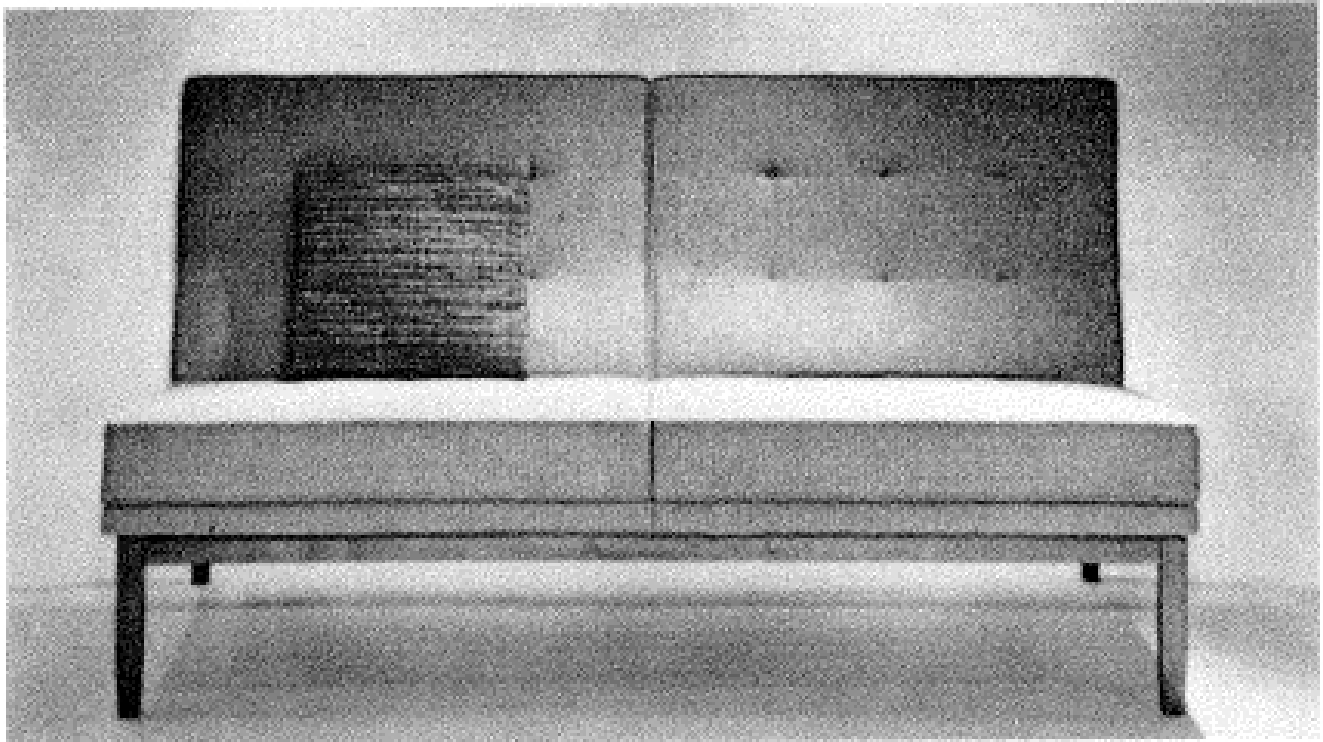
Parallel Bar System Sofa
57 1955-1973
Florence Knoll
W89", D31", H30". Steel base with brushed
chrome and black finish. Other finishes available.



Parallel Bar System Settee
56 1955-1973
Florence Knoll
W61", D31", H30". Steel base with brushed chrome and black finish.
Other finishes available.



Parallel Bar System Settee
52 1955-1973
Florence Knoll
W56", D31", H30". Steel base with
brushed chrome and black finish.
Other finishes available.



Settee
52 W 1955-1973
Florence Knoll
W56", D31", H30". Walnut base available in a variety
of finishes. Also available as 52 T in teak.



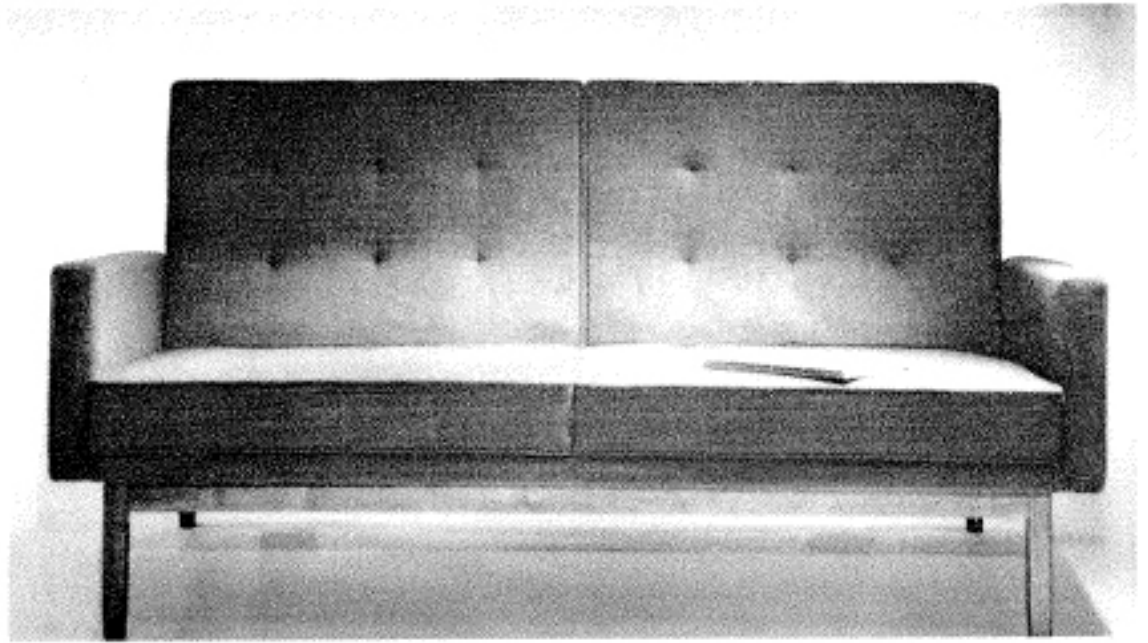
Lounge Chair
51 W 1955-1973
Florence Knoll
W24", D31", H30". Walnut base available in a variety
of finishes. Also available as 51 T in teak.



Sofa
57 W 1955-1973
Florence Knoll
W89", D31", H30". Walnut base available in a
variety of finishes. Also available as 57 T in teak.



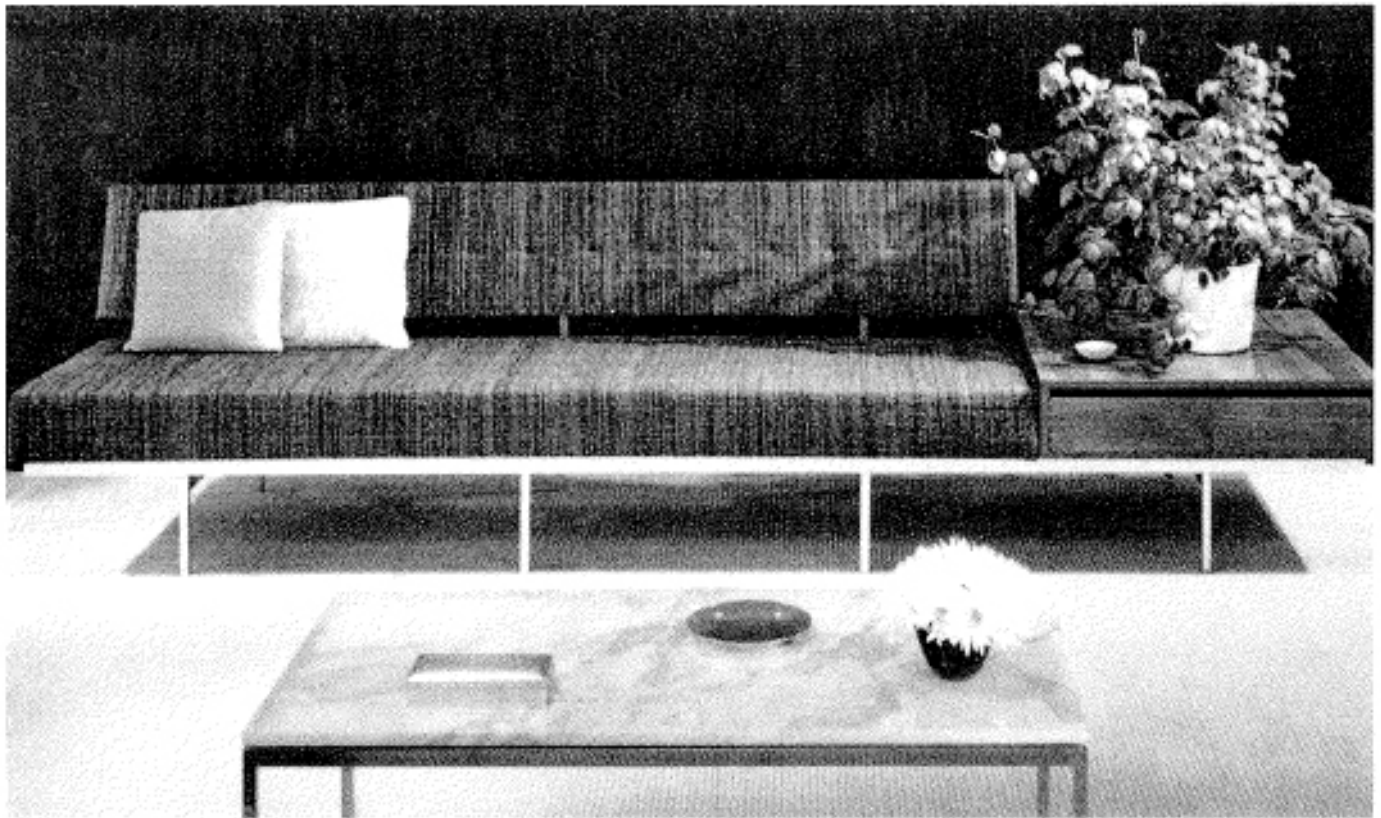
Sofa
53 W 1955-1973
Florence Knoll
W89", D31", H30". Walnut base available in a variety
of finishes. Also available as 53 T in teak.



Settee
56 W 1955-1973
Florence Knoll
W61", D31", H30".
Walnut base available in a
variety of finishes. Also
available as 56 T in teak.



Left:
Arm Chair
55 W 1955-1973
Florence Knoll
W29", D31", H30" Walnut base available in a
variety of finishes. Also available as 55 T in teak.



Sofa

578 1954-1970

Florence Knoll

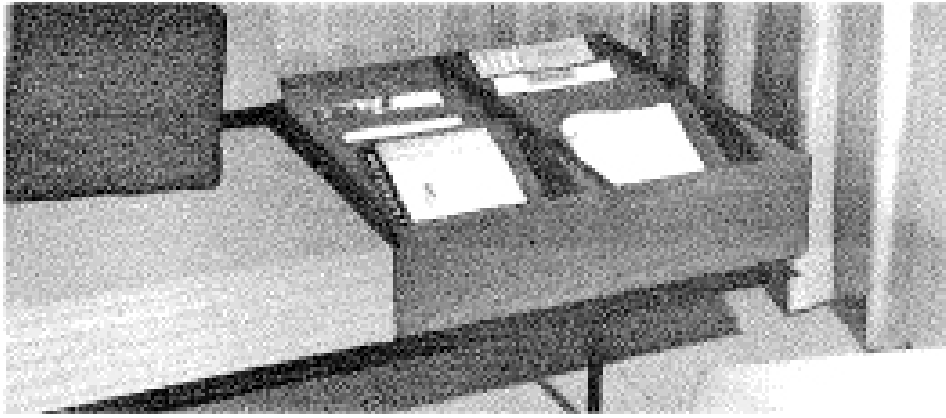
(Not shown) W120", D28.5", H30". Square tubular steel base, black finish. Other finishes available. Same as 575 but sofa only. Also available as 2578BC with brushed chrome legs and 2578PC with polished chrome legs.

Sofa

575 1954-1970

Florence Knoll

W120", D28.5", H30". Square tubular base with black finish. Other finishes available. Walnut end case with drawers. Available in a variety of finishes. May be mounted right or left. Also available as 2575 with polished chrome legs.



Sofa

576 1954-1970

Florence Knoll

W120", D28.5", H30". Square tubular steel base, black finish. Other finishes available. Walnut end case with magazine rack. Also available as 2576BC with brushed chrome legs and 2576PC with polished chrome legs.

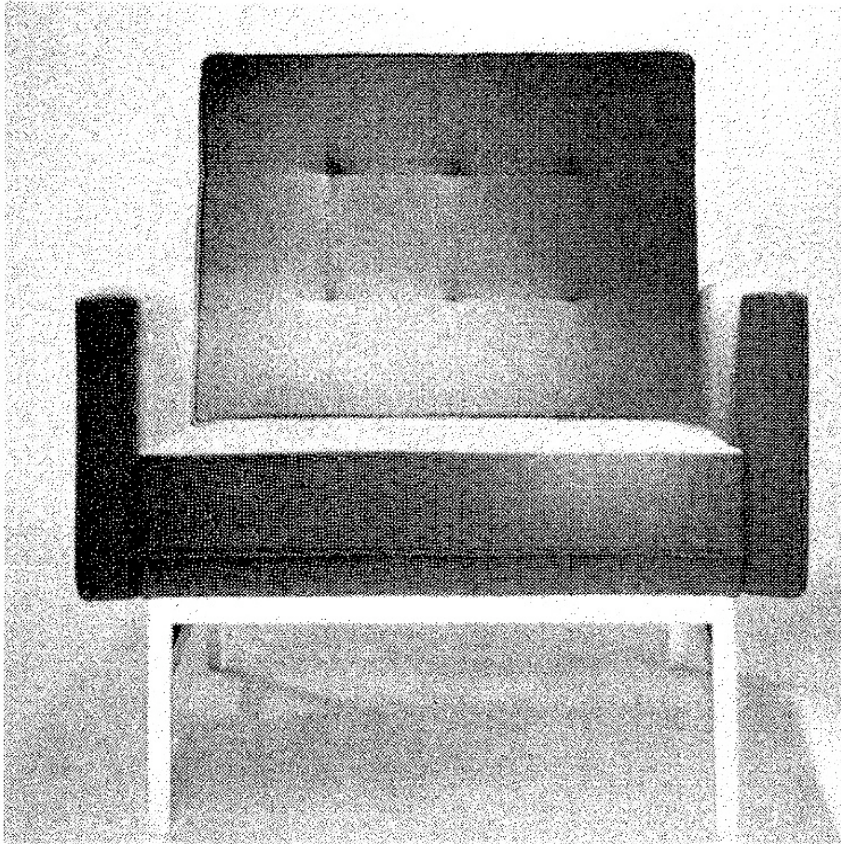


Sofa

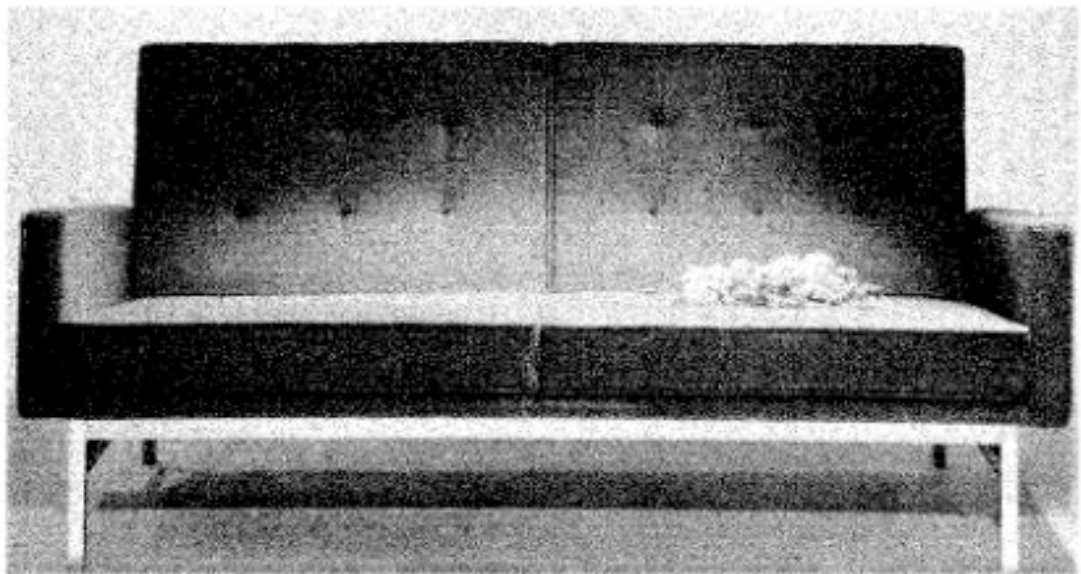
2577 BC 1954-1970

Florence Knoll

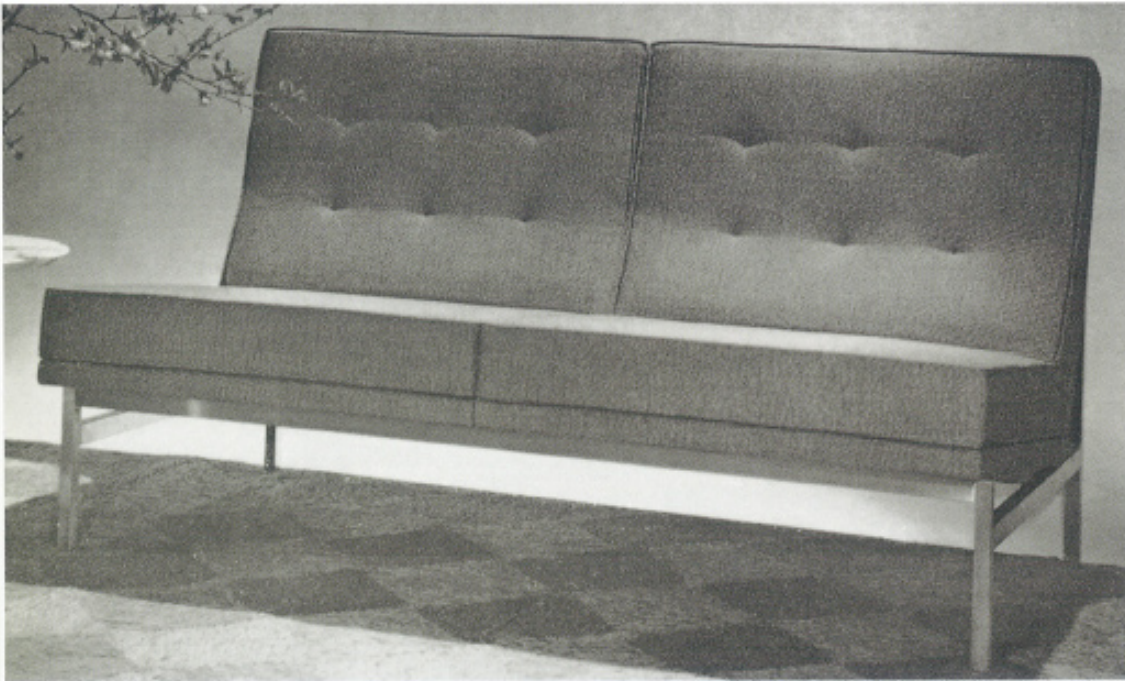
W120", D28.5", H30". Square tubular steel base, polished chrome finish. Other finishes available. Walnut open end case with glass top. Also available as 577 with black metal legs and 2577PC with polished chrome legs.



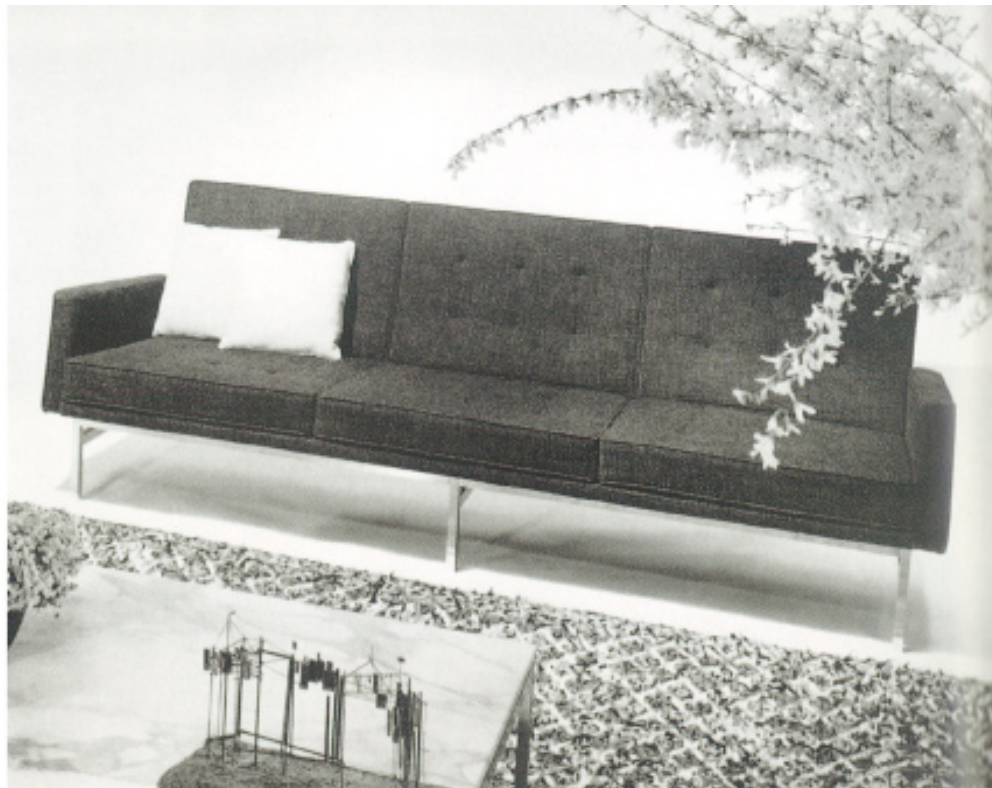
Arm Chair
2555 1955-1976
Florence Knoll
W29", D31", H30". Square tubular steel base ,
brushed chrome finish. Other finishes available.



Settee
2556 1955-1976
Florence Knoll
W61", D31", H30". Square tubular steel base ,
brushed chrome finish. Other finishes available.



Settee
2552 1955-1976
Florence Knoll
W56", D31", H30". Square tubular steel base ,
brushed chrome finish. Other finishes available.



Sofa
2557 1955-1976
Florence Knoll
W89", D31", H30". Square
tubular steel base , brushed
chrome finish. Other finishes
available.

Lounge Chair
2551 1955-1976
Florence Knoll
W24", D31", H30". Square tubular steel
base , brushed chrome finish. Other
finishes available.

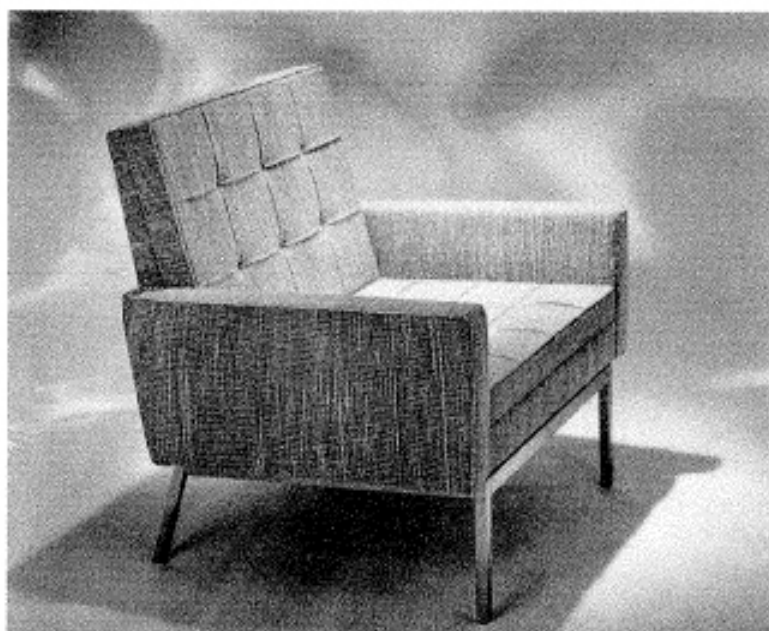


Sofa
2553 1955-1976
Florence Knoll
W84", D31", H30". Square tubular steel base , brushed chrome finish
Other finishes available.



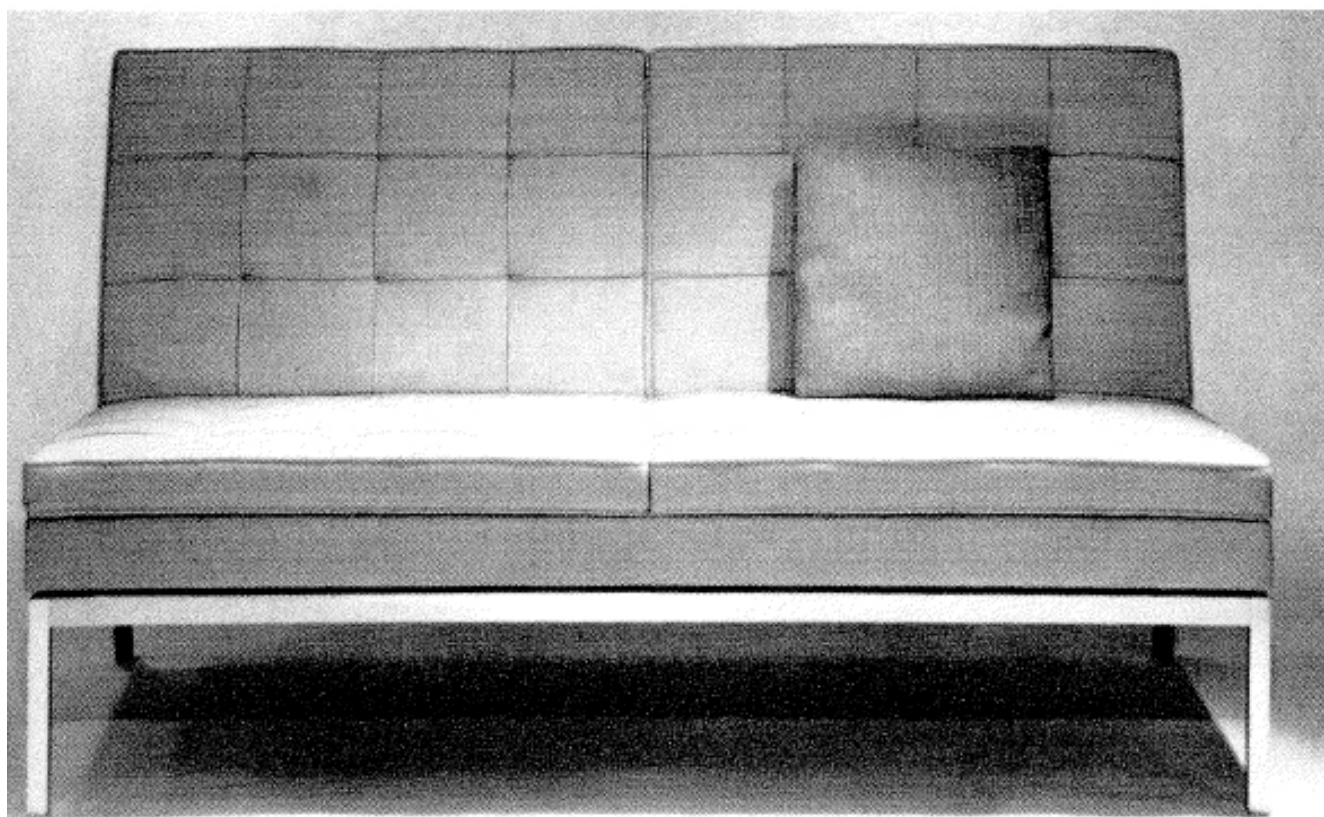
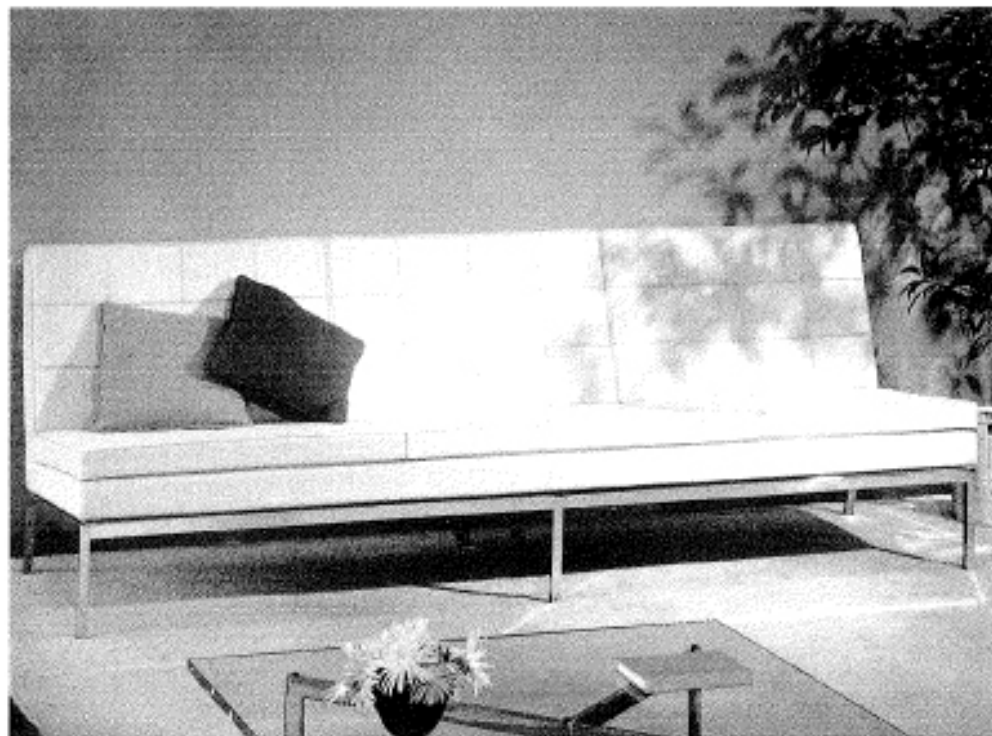
Lounge Chair
65 1958-1975
Florence Knoll
W28", D30", H31.5". Square tubular steel base,
brushed chrome finish. Other finishes available.

Sofa with Arms
67 A 1958-1973
Florence Knoll
W90", D30", H31.5". Square tubular steel base,
brushed chrome finish. Other finishes available.
Also shown: 2518RW Coffee Table, 2514MC End Table



Arm Chair
65 A 1958-1973
Florence Knoll
W34", D30", H31.5". Square tubular steel base,
brushed chrome finish. Other finishes available.

Sofa
67 | 1958-1975
Florence Knoll
W90", D30", H31.5". Square tubular
steel base, brushed chrome finish.
Other finishes available.

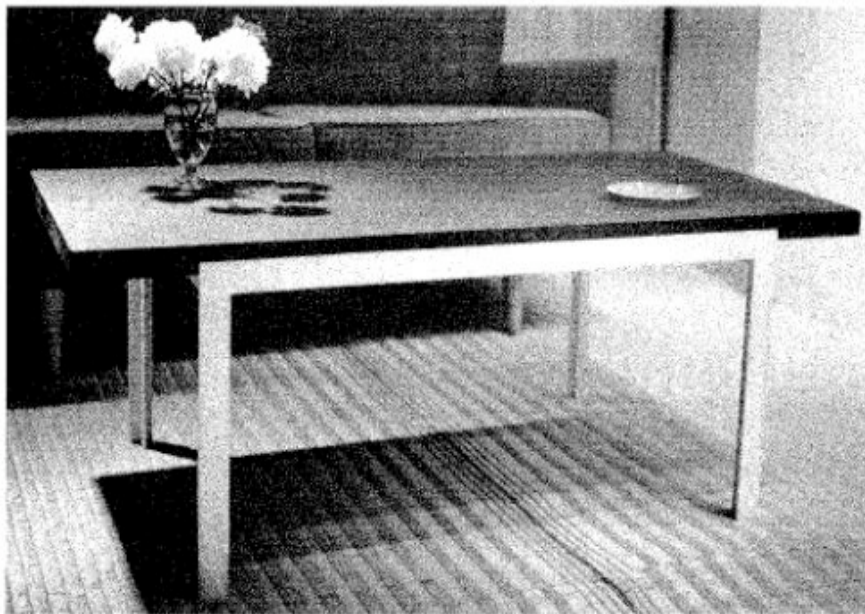


Settee
66 | 1958-1975
Florence Knoll
W56", D30", H31.5". Square tubular steel base,
brushed chrome finish. Other finishes available.

Left:
Extension Table
112 1948-1949
Florence Knoll
W36", 54", H28", Extends to 72" with two leaves.
Birch top with walnut legs, natural finish.
Also shown: 130 Chairs.



Below:
"T" Angle Conference or Dining Table
300 1950
Florence Knoll
Dimensions unknown. Steel "T" angle base available
in a variety of finishes. Wood or plastic top, available
in a variety of finishes.

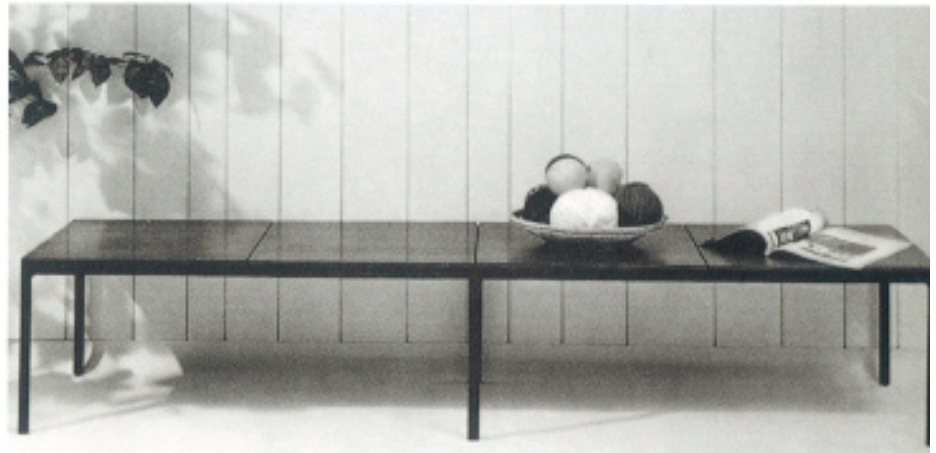


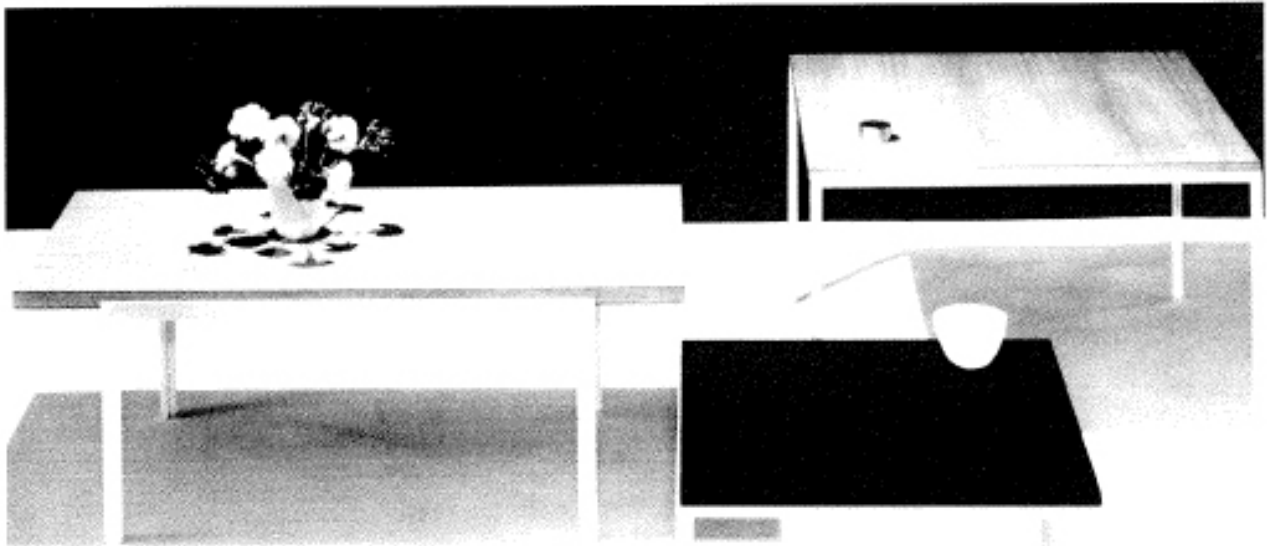
Above:
"T" Angle Coffee Table with Slate Top
115 1950-1951
Florence Knoll
W45", D22.5", H17". Steel "T" angle
frame with slate top. Also available with
teak wood top.



Left:
 "T" Angle Dining Table
 309 1952-1970
 Florence Knoll
 W34.5", D34", H28". Black, white, or
 woodgrain plastic top. Steel "T" angle base
 in a variety of finishes.
 Also shown: 148 Stacking Chair introduced
 in 1961.

"T" Angle Bench
 332 1956-1971
 Florence Knoll
 W80.5", D20", H15.5. Walnut top, available in a
 variety of finishes. Steel "T" angle base, black
 finish. White and other finishes available. Also
 available in 40", and 60" lengths.



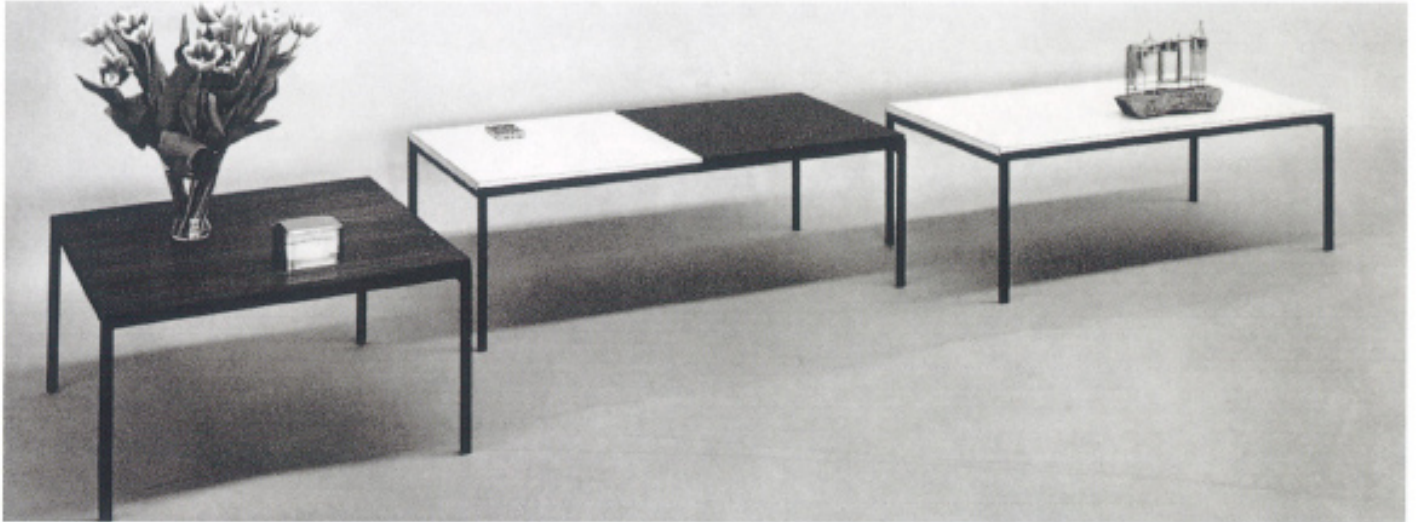


Above:
 "T" Angle Coffee Table
 306 1952-1968
 Florence Knoll
 W45", D23", H16". Black, white, or
 woodgrain plastic top. Steel "T" angle base in
 a variety of finishes.

"T" Angle End Table
 304 1952-1970
 Florence Knoll
 W24", D24", H16". Black, white, or
 woodgrain plastic top. Steel "T" angle base in
 a variety of finishes.

"T" Angle Corner Table
 305 1952-1970
 Florence Knoll
 W30", D30", H19". Black, white, or
 woodgrain plastic top. Steel "T" angle base in
 a variety of finishes.

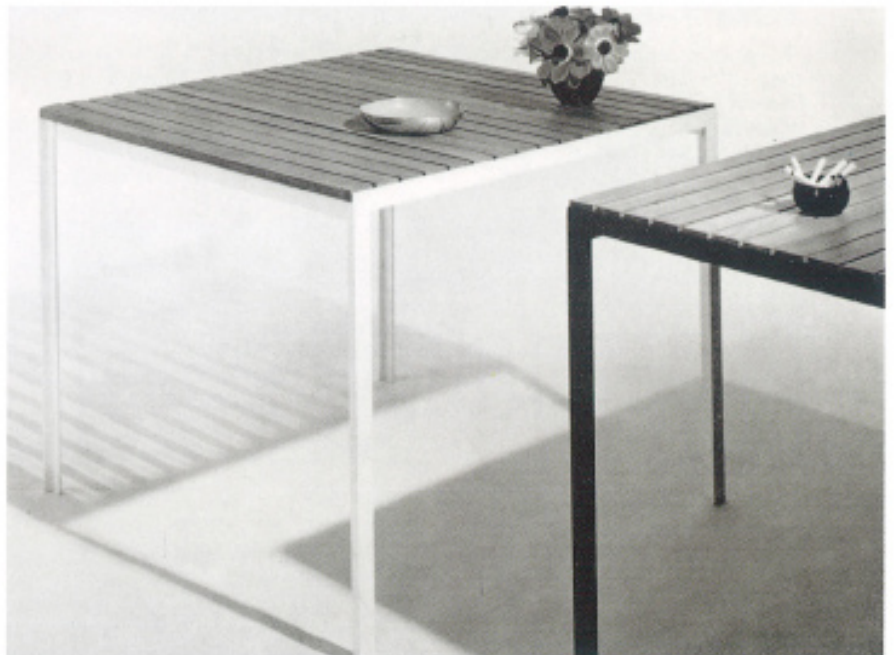
Left:
 "T" Angle Extension Table
 310 F2 1954-1965
 Florence Knoll
 W34.5" extends to 48", D34", H28". Steel
 "T" angle base in a variety of finishes. Plastic
 top available in a variety of finishes.
 Also shown: 72UPC Chairs.



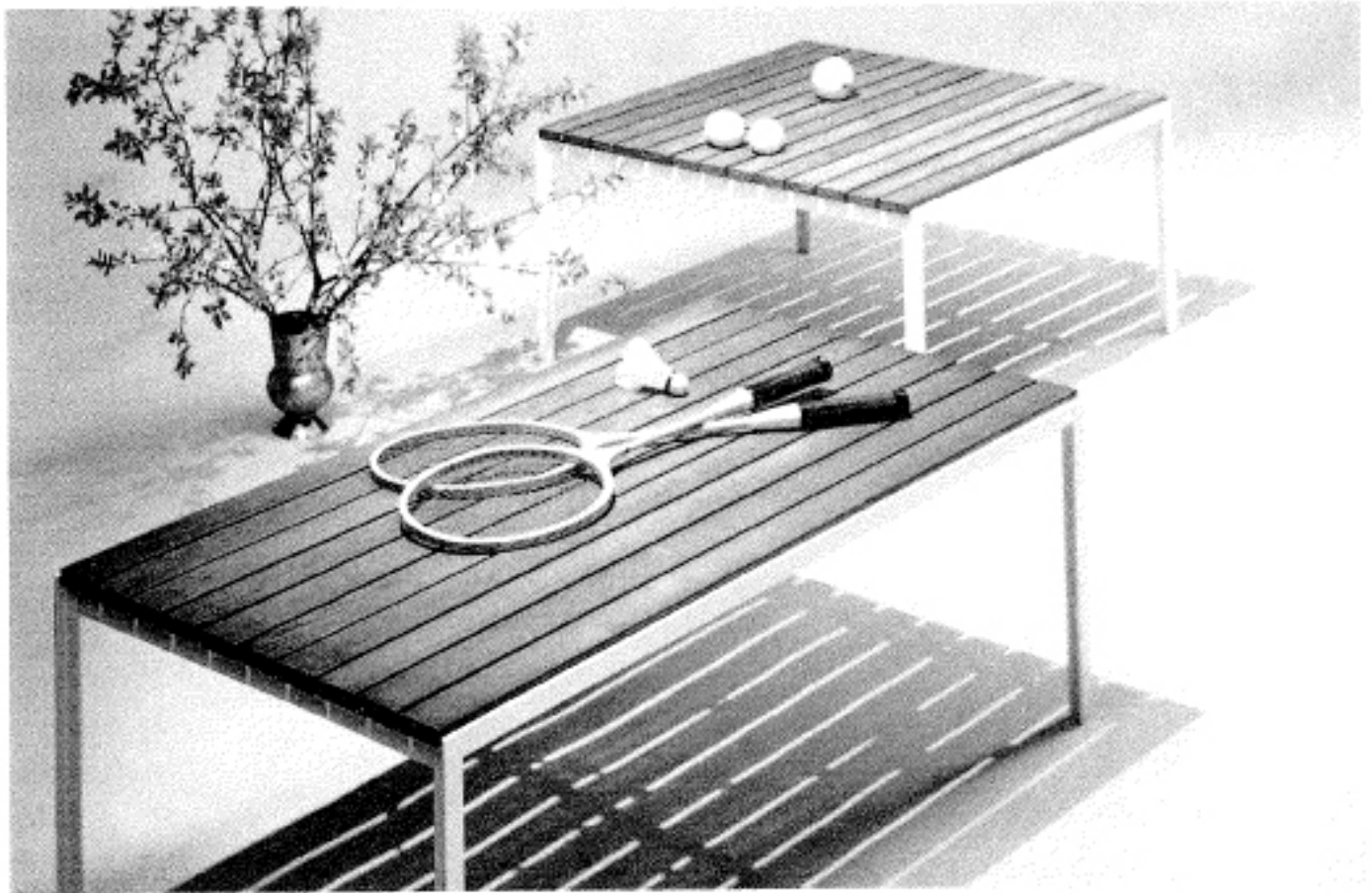
Above:
 "T" Angle End Table
 308 1952-1970
 Florence Knoll
 W30", D30", H16". Black, white, or woodgrain plastic top. Steel "T" angle base in a variety of finishes.

"T" Angle Coffee Table
 307 1/2 1952-1970
 Florence Knoll
 W48", D24", H16". Half black, half white plastic top. Steel "T" angle base in a variety of finishes.

"T" Angle Coffee Table
 307 1952-1970
 Florence Knoll
 W45", D23", H16". Black, white, or woodgrain plastic top. Steel "T" angle base in a variety of finishes.



"T" Angle Outdoor Slat Dining Table
 309 S 1958-1964
 Florence Knoll
 W34.5", D34", H28". Steel "T" angle base, available in various outdoor finishes. Redwood slat top.



"T" Angle Outdoor Slat Coffee Table
308 S 1958-1964
Florence Knoll
W30", D30", H16". Steel "T" angle base, available in various outdoor finishes. Redwood slat top.

"T" Angle Outdoor Slat Coffee Table
307 S 1958-1964
Florence Knoll
W45", D23", H16". Steel "T" angle base, available in various outdoor finishes. Redwood slat top. 304, 305, 308 are also available with redwood slat tops for outdoor use.

Parallel Bar Coffee Table
405 1955-1968
Florence Knoll
W42", D24", H16.5". Base, cross leg
steel bar, brushed chrome and black
finish. Polished 7/16" plate glass top.



"Parallel Bars" Round Coffee Table
404 1955-1968
Florence Knoll
Diam. 42", H15". Parallel bar steel base, brushed chrome and
black finish. Teak or walnut top, available in a variety of finishes.
Photo Courtesy of the Knoll Museum.



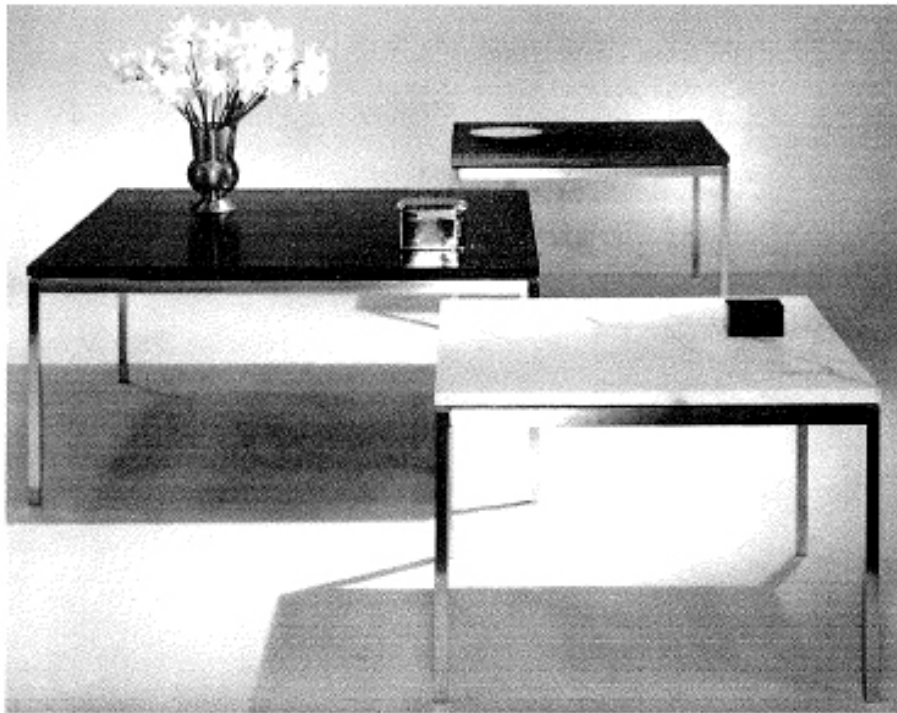
Conference Table
 580 1952-1956
 Florence Knoll
 W40", L8', H28.5". Boat-shaped wood top in choice of maple, walnut, teak, cherry, or other by special order. Metal base with black oxide or black lacquer finish. Available in size from 8' to 26' long. Also available as 580 T1 with solid maple or walnut base, natural finish.
 Also shown: 71 Arm Chairs.



Boat Shaped Conference Table
 1581 1958-1976, 1987-1998
 Florence Knoll
 W40", L9'9", H28.5". Boat-shaped wood top with beveled edge, in walnut or other by special order. Metal base with chrome finish. Base also available with black lacquer finish. Available in size from 8' to 26' long.
 Also shown: 71UPC Arm Chairs.



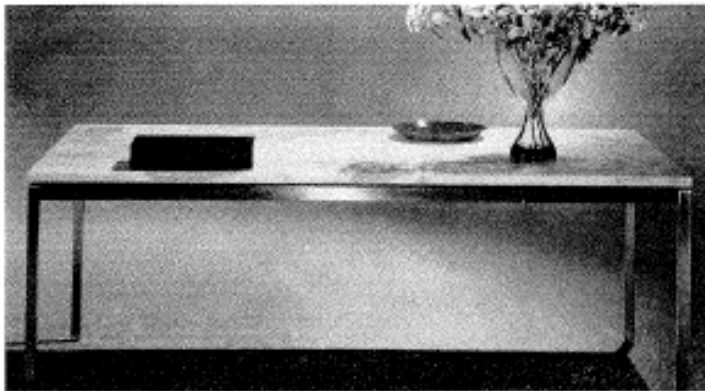
Boat Shaped Conference Table
3581 1958-1976
Florence Knoll
W40", L9'9", H28.5". Boat-
shaped wood top with beveled
edge, in walnut or other by special
order. Walnut base available in a
variety of finishes. Available in size
from 8' to 26' long.
Also shown: 71 Arm Chairs.



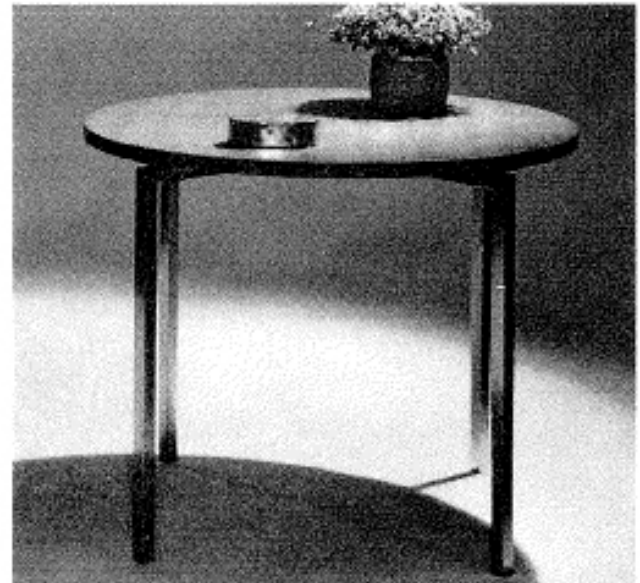
Coffee Table
2518 RW 1958-1975
Florence Knoll
(Center) W36", D36", H17". Square tubular base, brushed chrome finish. Other finishes available. Rosewood top available in a variety of finishes and materials, including teak, cremo marble, and white marble with grey vein.

End Table
2510 WV 1958-1976
Florence Knoll
(Top) W24", D24", H17". Square tubular base, brushed chrome finish with black steel angle spacers. Other finishes available. Walnut top available in a variety of finishes and materials, including teak, rosewood, and white marble with grey vein.

End Table
2514 MC 1958-1976
Florence Knoll
(Bottom) W27", D27", H17". Square tubular base, brushed chrome finish. Other finishes available. Cremo marble top available in a variety of finishes and materials, including teak, rosewood, and white marble with grey vein.



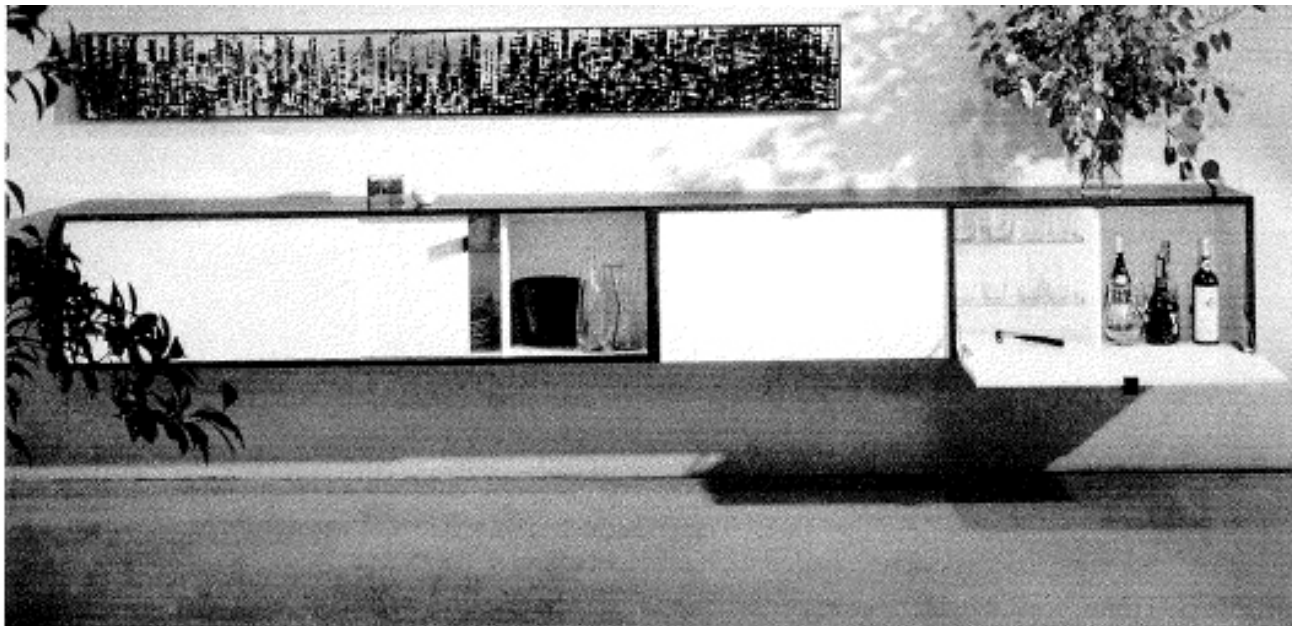
Coffee Table
2511 MC 1958-1976
Florence Knoll
W45", D23", H17". Tubular base, brushed chrome finish. Other finishes available. Cremo marble top. Top available in a variety of finishes and materials, including teak, rosewood, and white marble with grey vein.



Side Table
2562 T 1958-1976
Florence Knoll
Diam 25", H14". Square tubular steel base with brushed chrome finish. Teak top, available in a variety of finishes and materials, including walnut, cremo marble, rosewood, and white marble with grey vein.



Cabinet
 120 1947-1949
 Florence Knoll
 W72", D15", H32.25". Birch cabinet with natural finish. Inside white enamel.
 Base walnut finish. Three adjustable wood shelves, two adjustable glass shelves.
 Saddle leather pulls. Also shown: 654 Chair.



Hanging Cabinet
 123 W-1 1947-1973
 Florence Knoll
 (Left) W72", D15.25", H17.75". Walnut or birch case available in a variety of finishes. White lacquered sliding doors, available in a variety of finishes. White lacquered interior with three adjustable wood shelves and two adjustable glass shelves.

Hanging Cabinet
 121 W-1 1947-1973
 Florence Knoll
 (Right) W72", D15.25", H17.75". Walnut or birch case available in a variety of finishes. White lacquered drop doors, available in a variety of finishes. White lacquered interior with three adjustable wood shelves and two adjustable glass shelves. Saddle leather pulls.



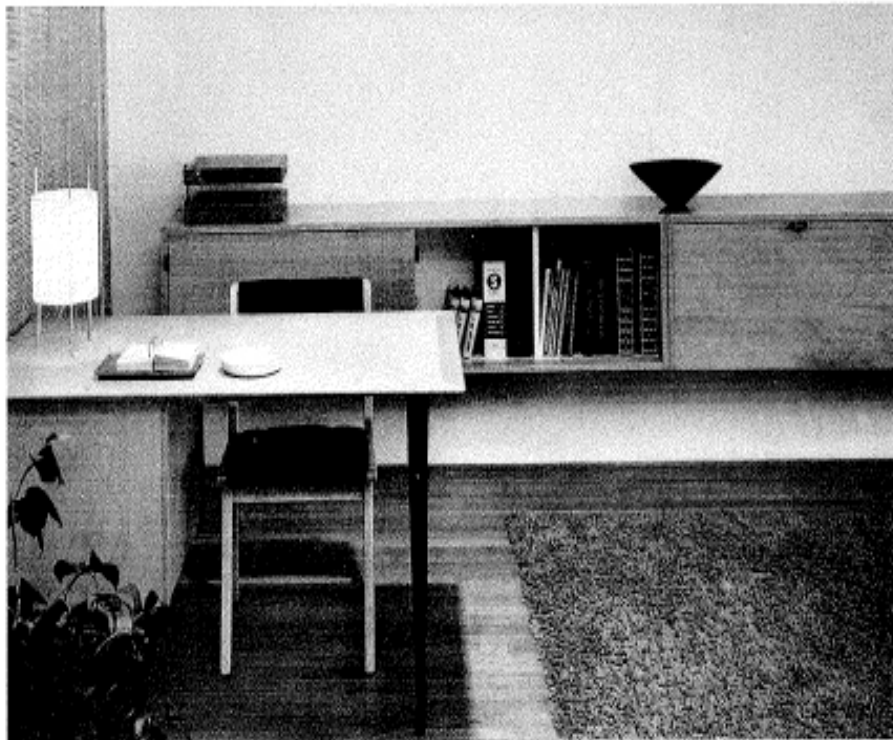
Hanging Cabinet

121 1947-1973

Florence Knoll

W72", D15.25", H17.75". Birch or maple case available in a variety of finishes. Drop front doors. Inside white enamel. Three adjustable wood shelves, two adjustable glass shelves. Saddle leather pulls.

Also shown: 654U Chair, 198 Hardoy Chair, N11 Table, and 700 Daybed.

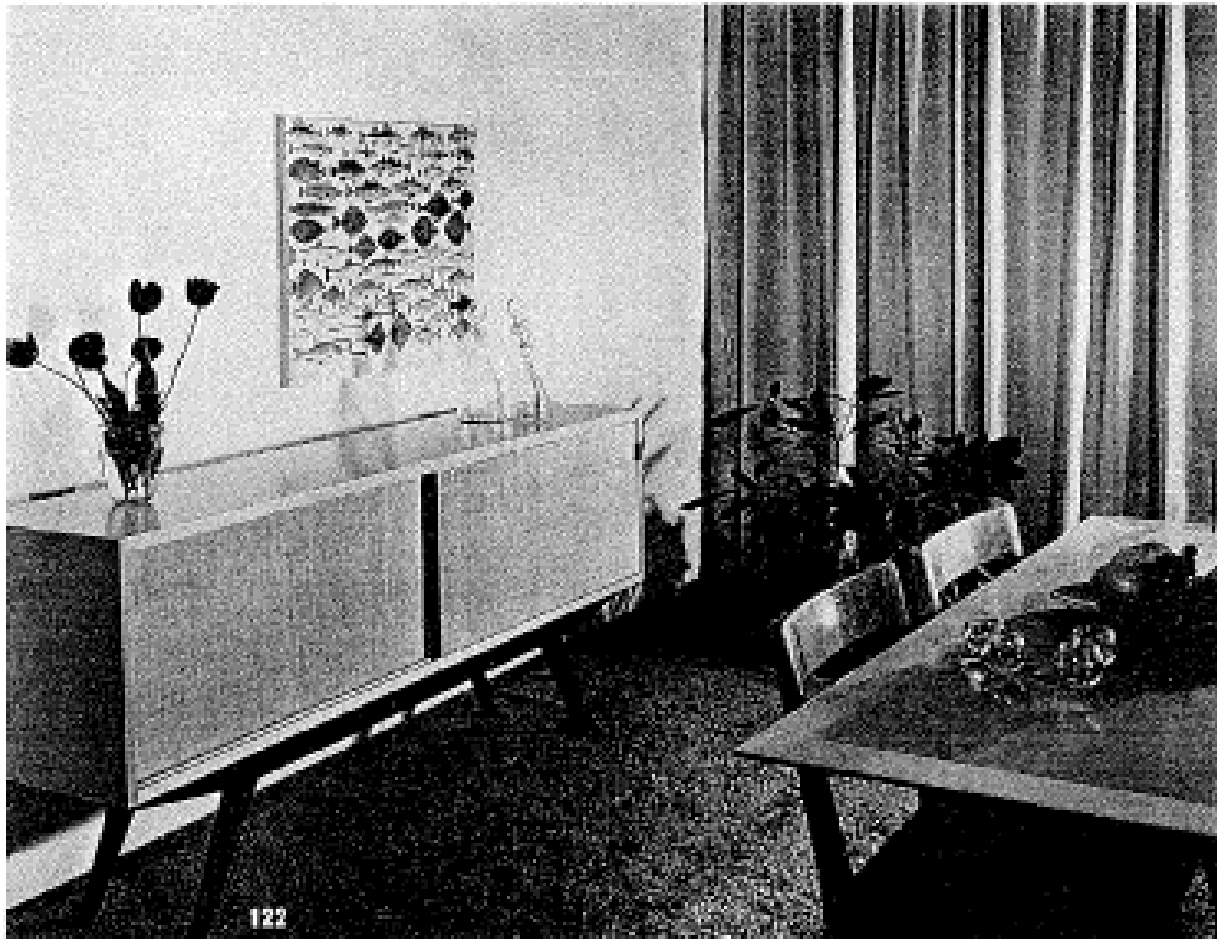


Hanging Cabinet

123 1947-1973

Florence Knoll

W72", D15.25", H17.75". Birch or maple case available in a variety of finishes. White lacquered interior with three adjustable wood shelves and two adjustable glass shelves.

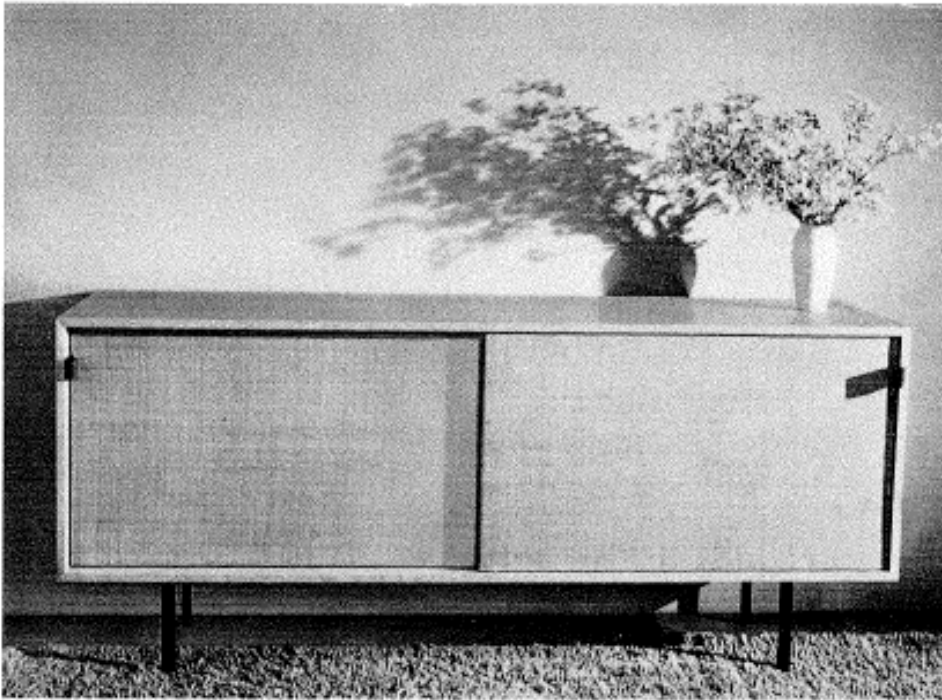


Cabinet

122 1947-1949

Florence Knoll

W72", D15", H32.25". Birch or maple cabinet with natural finish. Sliding doors covered in "Pandanus". Inside white enamel with three adjustable wood shelves, two adjustable glass shelves. Base finish walnut. Saddle leather pulls.



Sideboard
 116 1948-1964
 Florence Knoll
 W72", D18", H31". Case in birch, maple, walnut, or ebonized. Inside white lacquer finish. Felt lined silver drawer seven adjustable shelves. Caned sliding doors with saddle leather pulls. Tubular steel legs with black finish. Legs also available in polished or brushed chrome.

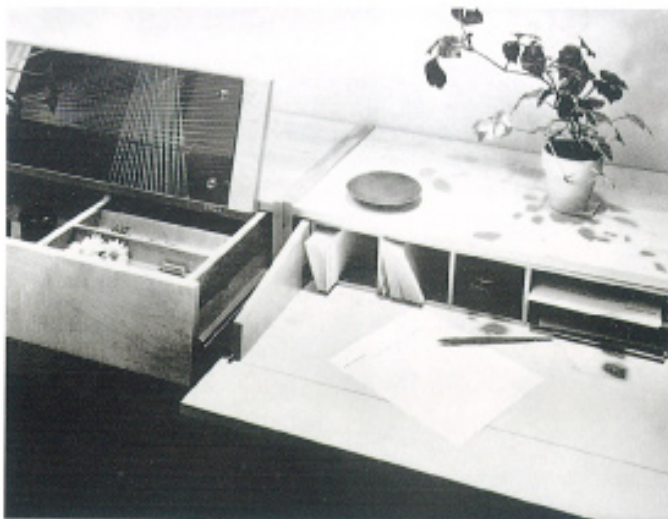


Cabinet
 540 1952-1978
 Florence Knoll
 (Right) W36", D17.75", H27.5". Square tubular steel legs, black finish. Other finishes available. Shown in walnut, available in a variety of woods and finishes. Four adjustable wood shelves. Available in a hanging version 20" high. Optional file and tray drawers and sliding dictating machine shelf available.

Cabinet
 541 1952-1983
 Florence Knoll
 (Left) W72", D17.75", H27.5". Square tubular steel legs, black finish. Other finishes available. Shown in walnut, available in a variety of woods and finishes. Eight adjustable wood shelves. Also available as 542 WV - 46" wide. Both are also available in a hanging version 20" high.



Above:
 Luggage Rack and Chests
 128 1950-1956
 Florence Knoll
 W108", D18", H33.25". Birch chests rest on wooden bench with tubular metal legs and webbed top section. Available in a variety of finishes. Contract only.
 Also shown: 130 Chair.



Left:
 Chest with Desk Compartment
 130 1950-1956
 Florence Knoll
 (Right) W33", D18", H33.25". Contract only.

Chest with Dressing Table Compartment
 129 1950-1956
 Florence Knoll
 (Left) W33", D18", H33.25". Contract only.



Chest
125 1948-1956
Florence Knoll
(Not Shown) W 36", D18", H28". Three drawer birch chest with natural, standard walnut, or ebony finish. Birch legs available with natural, standard walnut, or ebony finish. Also available in maple.

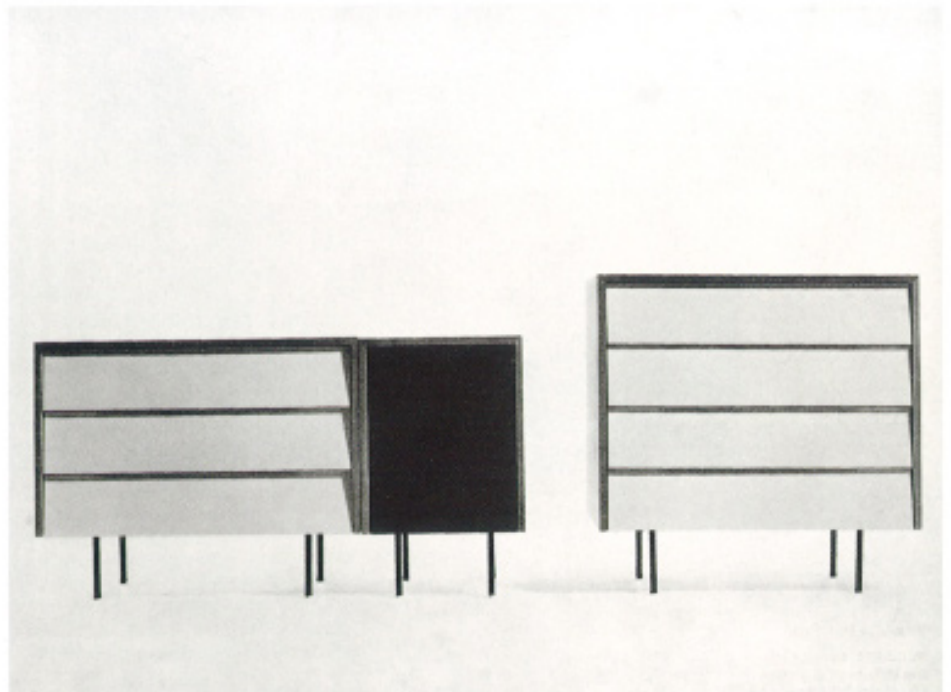
Chest
126 1948-1956
Florence Knoll
W36", D18", H34.75". Four drawer birch chest with natural, standard walnut, or ebony finish. Birch legs available with natural, standard walnut, or ebony finish. Also available in maple.

Chest
127 1948-1956
Florence Knoll
(Not Shown) W 18", D18", H28". Three drawer birch chest with natural, standard walnut, or ebony finish. Birch legs available with natural, standard walnut, or ebony finish. Also available in maple.

Chest
137 1953-1956
Florence Knoll
(Left) W 18", D18", H28". Chest case available in birch natural, standard walnut, or ebony finish. All drawer fronts black or white finish. Also available in maple. Metal legs with black finish.

Chest
135 1953-1956
Florence Knoll
(Center) W 36", D18", H28". Chest case available in birch natural, standard walnut, or ebony finish. All drawer fronts black or white finish. Also available in maple. Metal legs with black finish. Also available as 155, two three drawer chests on a single base.

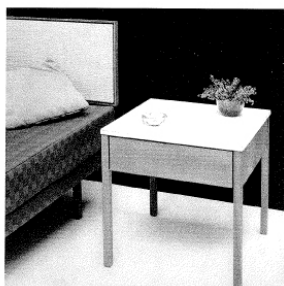
Chest
136 1953-1956
Florence Knoll
(Right) W36", D18", H34.75". Chest case available in birch natural, standard walnut, or ebony finish. All drawer fronts black or white finish. Also available in maple. Metal legs with black finish.





Suspended Vanity
 329 - I 1960-1973
 Florence Knoll
 (Center) W28", D19.5", H4.5". Walnut front, available in a variety of finishes. White plastic top, available in a variety of finishes. Separate tray insert available. Also available as 329-2 with walnut top.
 Also shown: 62 Ottoman.

Four Drawer Chest
 324 - I 1960-1973
 Florence Knoll
 (Left and Right) W36", D19.5", H29.25". Walnut case and drawers with satin aluminum pulls, available in a variety of finishes. White plastic top. Available in a variety of finishes.



Left:
Bed Table
 227 - I 1956-1959
 Richard Schultz
 W19.5", D19.5", H18". Teak case and drawer, available in a variety of finishes. White plastic top available in a variety of finishes.

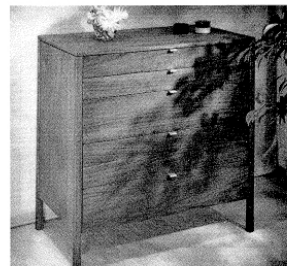
Below:
Three Drawer Chest
 323 - 2 1960-1973
 Florence Knoll
 W36", D19.5", H29.25". Walnut case and drawers with satin aluminum pulls, available in a variety of finishes. Walnut top. Available in a variety of finishes. Also available as 323-1 with white plastic top.



Four Drawer Chest
 325 - I 1960-1973
 Florence Knoll
 W36", D19.5", H36.5". Walnut case and drawers with satin aluminum pulls, available in a variety of finishes. White plastic top. Available in a variety of finishes. Also available as 325-2 with walnut plastic top.



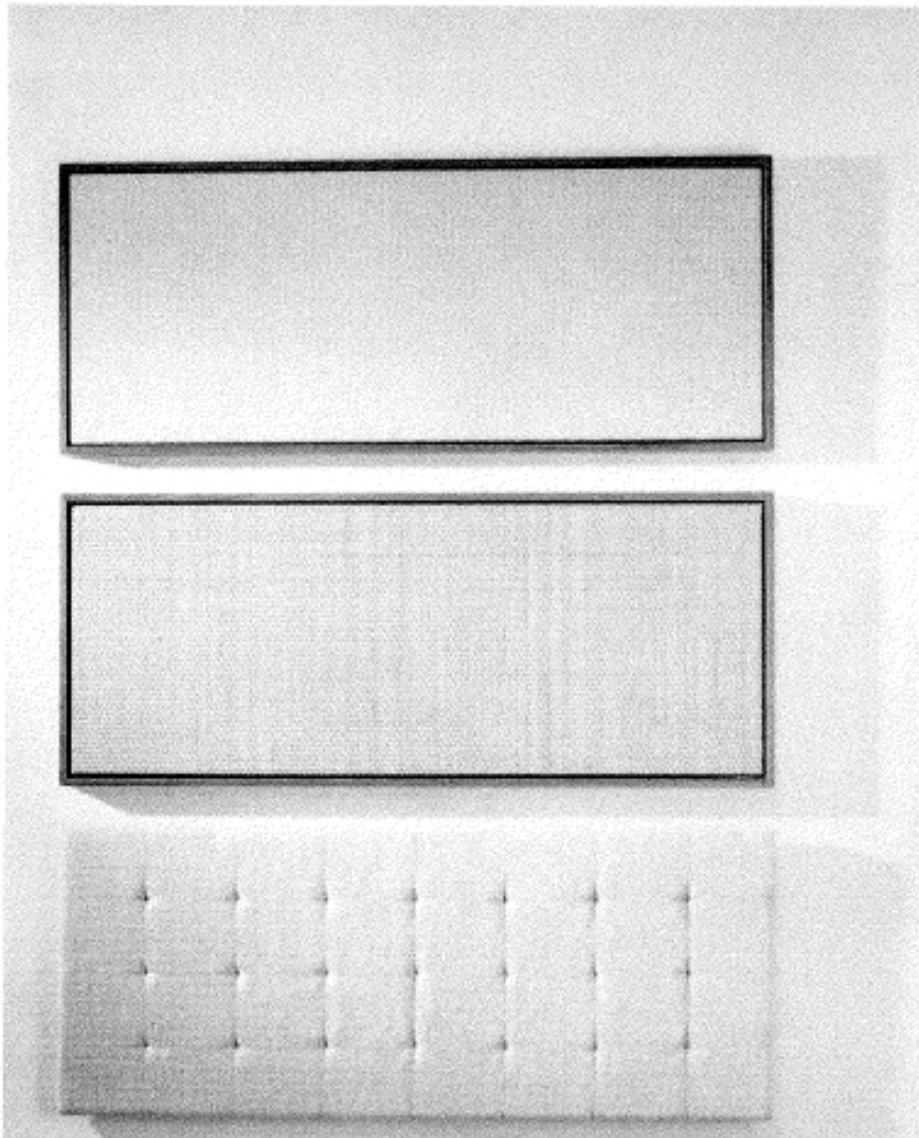
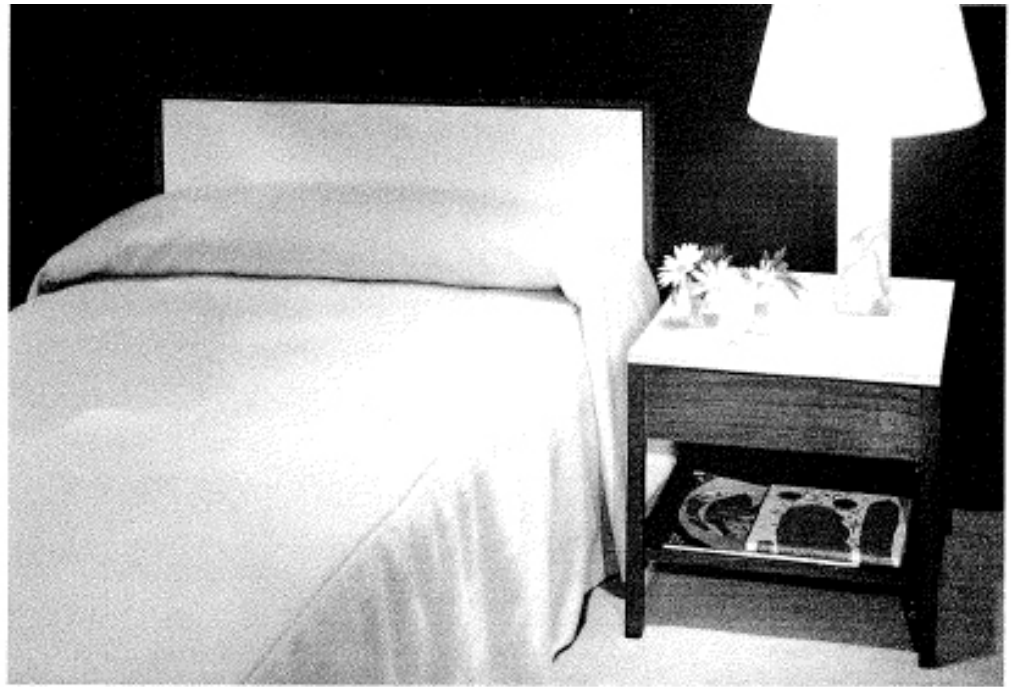
Four Drawer Chest
 324 - 2 1960-1973
 Florence Knoll
 W36", D19.5", H29.25". Walnut case and drawers with satin aluminum pulls, available in a variety of finishes. Walnut top. Available in a variety of finishes.



Five Drawer Chest
 326 - 2 1960-1973
 Florence Knoll
 W36", D19.5", H36.5". Walnut case and drawers with satin aluminum pulls, available in a variety of finishes. Walnut top. Available in a variety of finishes. Also available as 326-1 with white plastic top.

Bed Table
 327-IS 1956-1973
 Florence Knoll
 W19.5", D19.5", H18". Walnut
 case, drawer, and shelf, available
 in a variety of finishes. White
 plastic top available in a variety
 of finishes. Bed table also
 available without shelf as 327-I.
 Also available as 327-2S with
 walnut top.

Headboard
 740 WP 1956-1968
 Florence Knoll
 W40", H29.5". Walnut frame,
 white plastic panel. Caned or
 plastic panels available. Beds and
 headboards available in other
 widths.



Headboard Series
 740 1956-1970
 Florence Knoll
 W40", H16". 740WE, Walnut frame,
 fabric covered panel. 740WC, Walnut
 frame, caned panel. 740F, Fully uphol-
 stered. 740WP (not shown) Walnut
 frame, white plastic panel. All head-
 boards available in 55" and 81" widths
 and equipped with mounting brackets.



Above:
Executive Desk
13 W 1947-1951
Designer unknown
W78", D36", H29". Walnut with natural finish.
Also available as 13 birch plywood with walnut
legs. Also shown: 44S Swivel Chair.

Left:
Double Pedestal Desk
16 1947-1951
Florence Knoll
W64", D30", H29". Birch plywood with walnut
legs. Natural finish. Also available as 16W all
walnut. Available with center modesty panel.
Also shown: 4B Chair.



Single Pedestal Desk
15 1947-1960
Florence Knoll
W50", D28", H29". Birch plywood with walnut legs. Natural finish.
Also available as 15W all walnut. Photo Courtesy of the Knoll Museum.



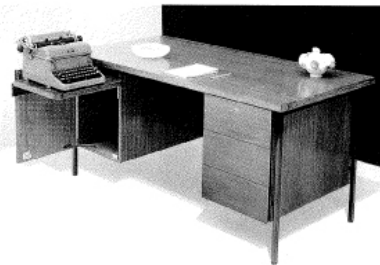
Double Pedestal Desk
1503 E 1955-1983
Florence Knoll
W76", D36", H29". Square tubular steel base, brushed chrome finish. Black finish available. Case and drawers ebonized finish, also available in maple or walnut. Top plastic walnut, available in a variety of finishes. Available as right or left single pedestal desk. Also available with wood base.



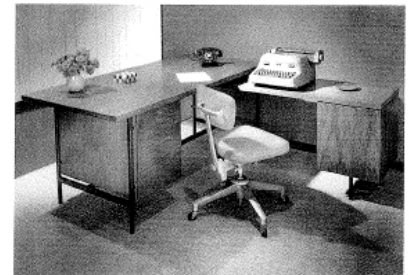
Small Executive Desk
1517 1955-1983
Florence Knoll
W76", D36", H29". Square tubular steel base, black finish. Also available in brushed chrome finish. Maple case and drawers natural finish, also available in maple or ebonized. Maple plastic top, other finishes available. Also available with wood base. Also shown: 542 Cabinet and 72 Swivel Chair.



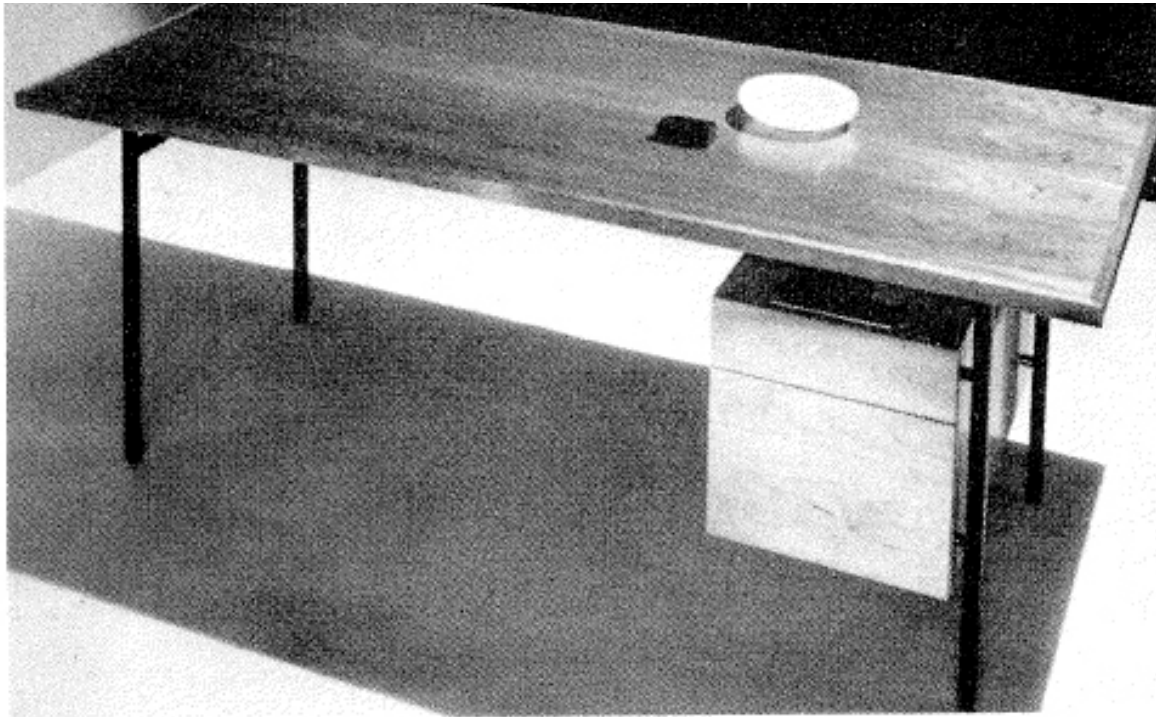
Small Executive Desk
1513 WR 1955-1983
Florence Knoll
W66", D32", H29". Square tubular steel base, black finish. Brushed chrome finish available. Walnut case and drawers, also available in maple or ebonized. Walnut plastic top, available in a variety of finishes. Also available with wood base.



Double Pedestal Secretarial Desk
1523 W 1955-1960?
Florence Knoll
W60", D30", H29". Square tubular steel base, black finish. Also available in brushed chrome finish. Walnut case and drawers, also available in maple or ebonized. Walnut plastic top available in a variety of finishes. Also available with wood base.

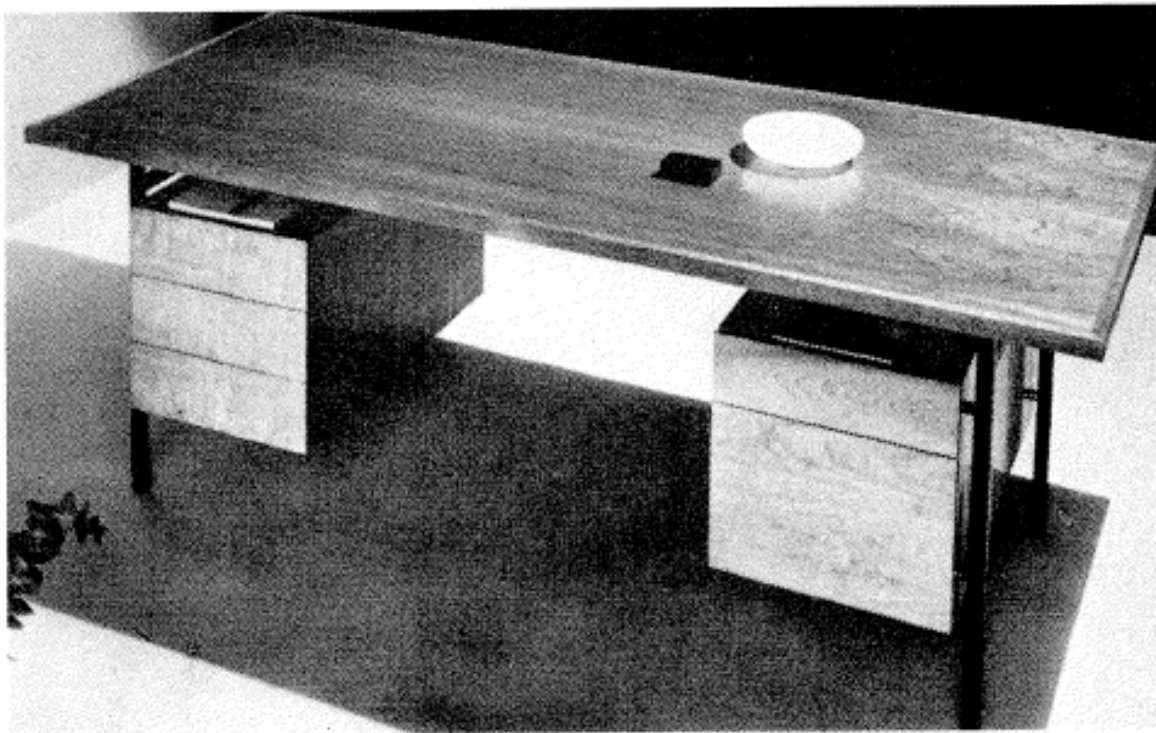


Double Pedestal L-Shaped Secretarial Desk
1543 W 1955-1983
Florence Knoll
Main Desk- W66", D32", H29". Typewriter Platform- W43.5", D19.25", H26.25". Square tubular steel base black finish. Brushed chrome finish also available. Walnut case and drawers also available in maple or ebonized. Walnut plastic tops available in a variety. Also shown: 76 Secretarial Swivel Chair.



Large Executive Desk
503 D-BM 1952-1955
Florence Knoll
(Not Shown) W76", D36", H29". Birch Realwood top with one small drawer with pencil tray. Metal base with black finish. Also available with walnut top or top and drawer.

Large Executive Desk
503 B-BM 1952-1955
Florence Knoll
W76", D36", H29". Birch Realwood top with one pedestal. Metal base with black finish. Also available with walnut top or top and pedestal.



Large Executive Desk
503 A-BM 1952-1955
Florence Knoll
W76", D36", H29". Birch Realwood top with two pedestals. Metal base with black finish. Also available with walnut top or top and pedestals.