FURNITURE DESIGN

JIM POSTELL

Foreword by John Pile

Furniture Design

Jim Postell

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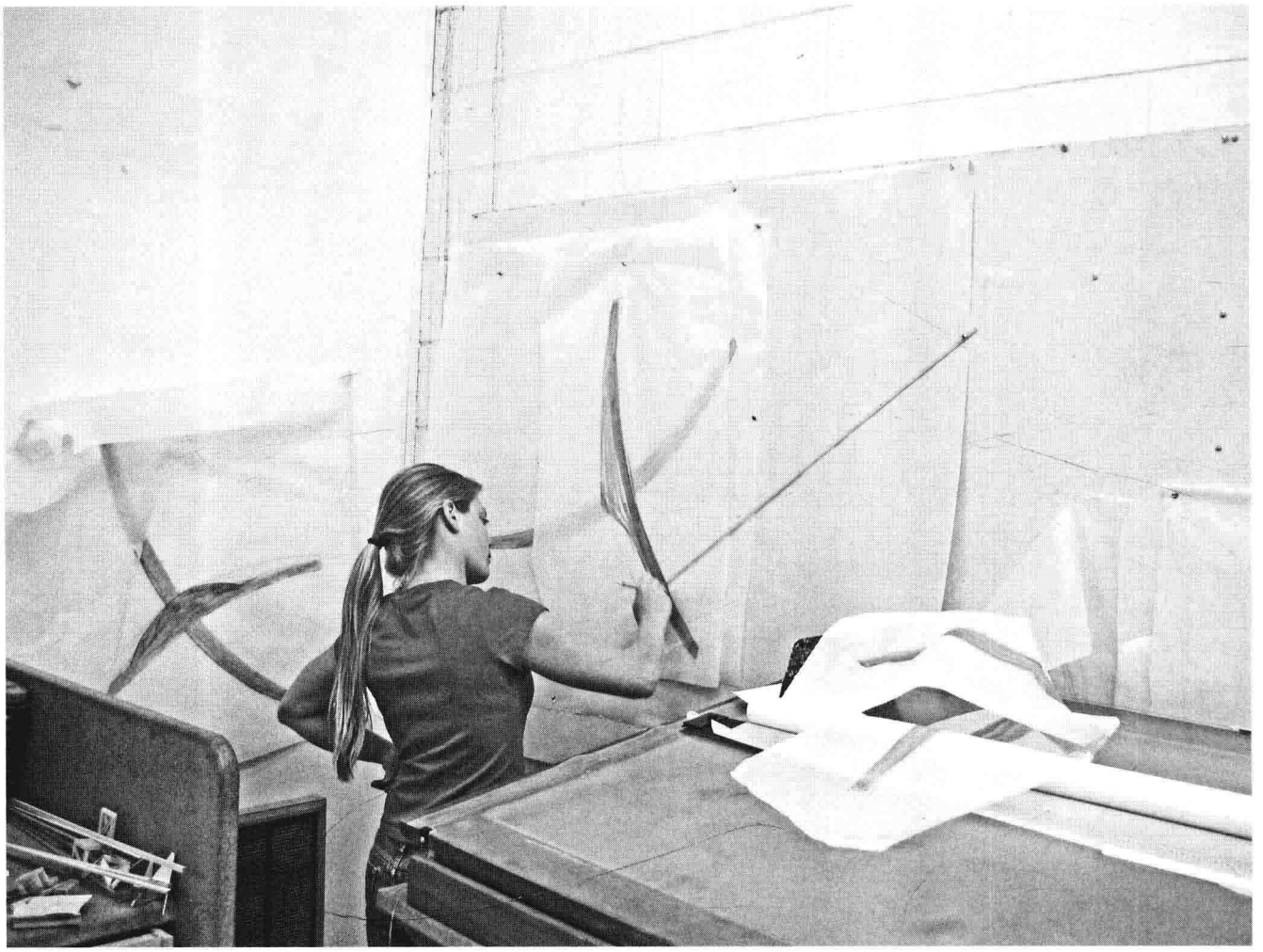


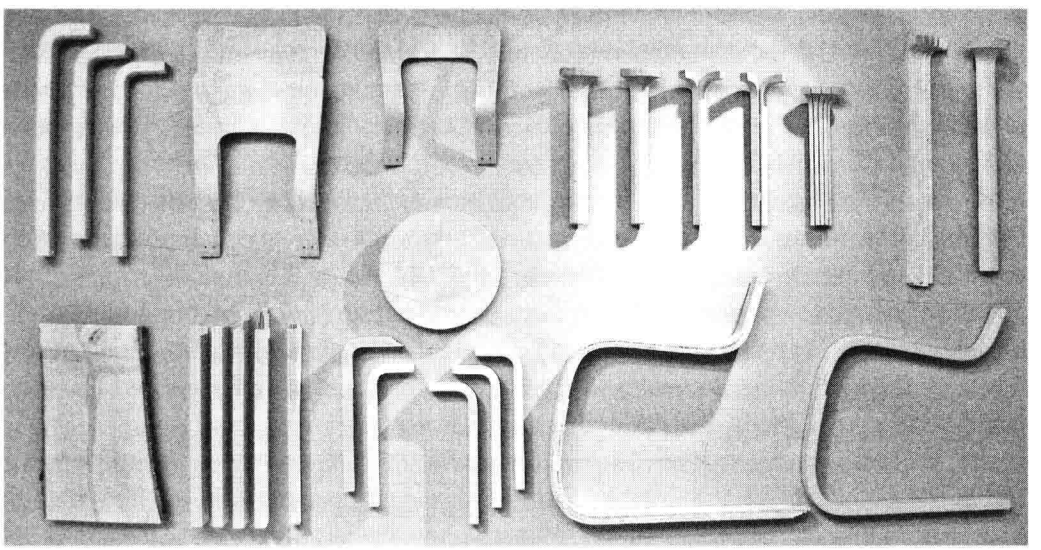
DIS Scandinavian Furniture Design workshop. Drawing and sketching at full scale. *Photo: courtesy Erik Skoven, DIS.*

Preface

ALVAR AALTO AND FRANK LLOYD WRIGHT were architects who integrated custom furnishings into their spaces and buildings. Interior designers such as Eva Maddox and John Saladino are renowned for their skill in blending textures and furnishings with interior space. Henry Dreyfuss and Bill Stumpf were industrial designers who considered ergonomics and industrial fabrication processes in their furniture designs. Woodworkers and artisans such as Sam Maloof and Pierluigi Ghianda create furniture with remarkable handcraft and finish. Consider for a moment the qualities and viewpoints brought to furniture design by these individuals and their unique disciplines. There are pronounced differences in the way architects and interior designers create a sense of place by designing and selecting furniture, in the way industrial designers seek to resolve industrial fabrication processes in design, and in the way artists are trained in their craft. Many individuals and disciplines contribute to the body of knowledge of furniture design.

Consider the influence that structural forces, material properties, the surrounding environment, and ergonomics have on furniture design. Reflect upon the historical, cultural, political, and societal conditions revealed by the way people sit, rest, work, and play, or the human factors research upon which furniture designers rely. Many factors should be considered when designing furniture. Most are situated within personal and professional frames of reference.

This book is written as a comprehensive survey, as a resource to give the reader a deeper understanding and provide knowledge and inspiration for designing and making furniture. It is organized into 10 chapters:



Experiments with bent and laminated wood—furniture components for the Paimio Sanatorium and the library in Viipuri, Finland. Designed by Alvar Aalto. *Photo courtesy Jim Postell.*

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- Chapter 1, *Introduction to Furniture Design,* outlines basic relationships between furniture and design.
- Chapter 2, *Function and Social Use,* introduces fundamental notions of function (intended purpose) and categories of social use.
- Chapter 3, *Form, Spatial Organization, and Typological Orders,* addresses a range of physical and spatial characteristics in furniture design.
- Chapter 4, *Furniture Case Studies,* presents 21 furniture studies organized in chronological order.
- Chapter 5, *Furniture Design Theory,* delves into the nature of furniture design, focusing upon aspects of structural integrity and composition, how furniture works and feels, and notions of beauty and aesthetics.
- Chapter 6, *Design,* presents an overview of design principles and focuses upon the phases, processes, skills, and ethics of designing furniture.
- Chapter 7, *Materials,* outlines a broad palette of materials and discusses material properties relative to furniture design.
- Chapter 8, *Fabrication,* discusses ways of fabricating furniture, with an overview of hand tools, power tools, and digital tools.
- Chapter 9, *Professional Practice and Marketing,* covers professional aspects related to the practice, marketing, and business of designing furniture.
- Chapter 10, *Historical Overview,* highlights how societies have thought about, designed, fabricated, and used furniture up to the present.

Designing furniture relies upon judgment and technical information linked to several professional and academic disciplines. The breadth and depth of knowledge necessary to design, select, fabricate, and arrange furniture in space is extensive. This book draws upon this knowledge and, in doing so, reaches out to students, faculty, and professionals in several fields.

It is difficult for some individuals to acknowledge furniture design as a stand-alone profession or even as a vocation because it is intertwined with many established disciplines. It is a challenge to formulate a collective dialogue about furniture design because different disciplines approach design and fabrication from unique perspectives.

Look back to the time when *interior design* was an emerging field and consider its historical beginnings. One can determine that interior design developed from several fields, the work of key individuals, unique professional practices, and established academic programs. The fields of architecture, design, fine arts, and the decorative arts, in conjunction with the professional practices of James Adam (1732–94) and Robert Adam (1728–92), Elsie de Wolfe (1856–1950), and Florence Knoll (b. 1917) would likely receive recognition for influencing the emergence of interior design as a professional design discipline.

In the 1950s, *industrial design* began to emerge as a discipline. Consider the work of Norman Bel Geddes and Raymond Loewy, as well as the influence that industrial fabrication processes and mass production have had upon the field of furniture design.

It is important to acknowledge the collective influence architects, interior designers, industrial designers, and fine artists have had upon the professional and academic stature of *furniture design,* but one also needs to consider the important roles that fabricators, engineers, and human factor researchers have played as well.

It is the author's hope that this book will be useful as a survey textbook for students and faculty alike, and will serve as a resource for designers, fabricators, and individuals interested in furniture and design.

Acknowledgments

THERE ARE MANY INDIVIDUALS to acknowledge for their contribution and support in writing this book. I want first to thank Paul Drougas, acquisitions editor at John Wiley & Sons, with whom I have worked closely over a 2-year period. Paul and the team at Wiley have done a remarkable job of guiding this project from conception to publication.

My wife, Florine, has been encouraging and supportive throughout the entire process of writing and has edited several drafts. My parents, Brad and Carol, and my mother-in-law, Inge, have provided support as well.

I am fortunate to teach at the College of Design, Architecture, Art, and Planning at the University of Cincinnati. DAAP is composed of many design disciplines and has a long history of cooperative practice providing students with professional internships in firms across the country and around the world. DAAP provides a collaborative environment in which faculty and students have provided support while I was writing this book. I am grateful for the contributions of a number of faculty, including G. Thomas Bible, Ann Black, Gil Born, Brian Davies, Gülen Çevik, Ericka Hedgecock, Nnamdi Elleh, Bradley Hammond, Soo-Shin Choi, John Stork, and Craig M. Vogel.

Specifically, I want to convey my appreciation to the following DAAP colleagues: Patrick Snadon, Jeff Tilman, Elizabeth Riorden, Ray Laubenthal, and Jerry Larson, as well as Eva Frederiksen, Ole Gormsen, Erik Krogh, and Jens Overbye from Danmarks Designskole in Copenhagen, Denmark, for their contributions to Chapter 10.

Nothing travels far without theory, and I appreciate the insights of David Saile and Gordon Simmons. David and I have discussed theory for years; his thinking about built form and culture has inspired my experiential outlook toward design.

Designing and making furniture are core subjects of this book. I value the input from my colleague David Lee Smith in Chapter 6, as well as the contributions of Jeff Arnold, Steve Mickley, Jonathan Bruns, and DAAP Shop Superintendent Jim Berns to Chapters 7 and 8. Special acknowledgment is due to Michael Toombs, a colleague with whom I have taught and collaborated on many furniture design commissions and whose input has significantly improved the book in general and Chapters 7 and 8 in particular. I have learned a great deal about woodworking, craft, and fabricating high-end case goods and casework from Michael, and have grown as a designer from our collaborative experiences.

This book is written for students working in the fields of furniture design, architecture, interior design, industrial design, and fine art. Inspiration for writing it developed from years of teaching human factors and contemporary furniture design at DAAP. During the past 2 years, I have worked closely with many students to complete the manuscript, and I am particularly indebted to Nora Luehmann, who digitally modeled (using FormZ) the majority of the furniture studies in Chapter 4. Sylbester Yeo helped model furniture studies in this chapter as well, and I appreciate the precision and detail of their work. Matthew Althouse, Mehmet Ziya Cetik, Peter Chamberlain, Nicole Desender, Ryan Newman, Ian

Ramous, Carly L. Snyder, and Chris Sommers have also contributed to the book in a variety of ways. Greg Bleier, an alumnus of the School of Architecture and Interior Design, edited several manuscript drafts. I am grateful for everyone's contribution and help in producing this survey on furniture design.

Images are critical for any book on furniture design. I wish to thank Julia Bryan, Peter Chamberlain, Lauren Farquhar, Ben Meyer, Chris Sommers, John Stork, and Will Yokel for use of their images. I am especially appreciative of Scott Hisey of the Cincinnati Art Museum, Linda Baron of Herman Miller, David Bright of Knoll, Inc., Jeanine Holquist of Steelcase, Renee Hytry of the Formica Corp., Michelle Nirenberg and Tom Revelle of Humanscale, Malene la Coeur Radmussen of Rud. Radmussen, Erik Skoven, and Bjørli Lundin of DIS, and Tina Taul of GUBI for their permission to use many remarkable images.

Generally, textbooks do not have a foreword, but I am pleased that John Pile agreed to write one. His books on modern furniture and interior design are marked by a balance of technical information and thoughtful insight about design, which are supported by great images. John has had a remarkable career as a teacher, author, and practitioner—always with focus on *design*. He has contributed significantly to the study of furniture design and interior design and was influential in the development of this book.

Writing this book has sparked a desire to reread the works of David Pye, Ralph Caplan, Galen Cranz, Ernest Joyce, Ezio Manzini, and Edward Lucie-Smith. It has also been a time to discover new books such as *Materials and Design* by Mike Ashby and Kara Johnson. Writing is somewhat related to rewriting, that is, analyzing and synthesizing the thoughts of others and expressing them in a personal way. I would like this book to complement those already on the shelves and inspire students to better understand the comprehensive and extensive nature of designing and making furniture.

Foreword

THE FIELD OF FURNITURE DESIGN is strangely diverse. It does not have a well-established definition and is not regularly studied in colleges or universities.

It is also odd to remember that most of the world's population does not make use of furniture except, perhaps, for a few stools or benches. Western civilization, however, beginning thousands of years ago, has become addicted to the use of furniture of the most varied sort. In the modern world, we are in touch with furniture at almost every moment. We sit in chairs, work and eat at tables, sleep in beds, and are hardly ever out of sight of a number of furniture items, for better or for worse.

Furniture is now produced and distributed for homes, for offices, for schools, for hospitals, and for every other situation in which people are to be found. In spite of this near glut of furniture, the sources of the designs that are so ubiquitous are obscure. Most furniture now comes from factories, but the designs factories produce are generally anonymous, the work of staff that exists mostly to develop variations on earlier designs whose origins are lost.

There are, of course, some exceptions. Most historic furniture can be traced to cabinetmakers such as Chippendale and Sheraton or to architect-designers such as the Adam brothers, but these are rare exceptions mostly to be found only in museums and auction galleries. In the modern world, we know the names of the designers of those special creations we call *classic:* Eames, Breuer, Mies van der Rohe, Bertoia, Rietveld, and Le Corbusier. If we look into the backgrounds of these famous figures, we find that they were not trained to be furniture designers. They were architects, sculptors, or, in some instances, industrial or interior designers. When they turned to furniture, they had to rely on their background knowledge of structure, materials, human body mechanics, and the many other issues that relate to successful furniture design.

Design history is full of examples of many efforts by distinguished designers that have fallen by the wayside, while a few highly successful designs have come from unexpected sources—one thinks of the Rowland stacking chair, the Pollack office chair, or the Noguchi coffee table. Efforts to establish some form of training for designers who wish to work on furniture have not met with much success. A brief course in furniture design is offered in some interior and industrial design programs, but architectural training is too demanding to include even limited exposure to the field. Some schools with major programs in furniture design are oriented toward craft techniques and train master woodworkers who produce a single, one-of-a-kind effort demonstrating craftsmanship but offering little to the broader world of furniture. In the end, it must be admitted that furniture design is generally self-taught, whether the learner is also a craftsperson, architect, sculptor, or layman.

To turn at last to this book, we find an author determined to give aid to the would-be furniture designer, whatever professional background or lack of professionalism that person may have. In this one volume, we can confront issues of function, materials, structure,

production techniques, and whatever philosophical and theoretical matters may have a bearing upon the realities of furniture.

Although many books deal with furniture (as this book's bibliography can attest), most are histories, picture books, or studies for collectors. Very few even touch on furniture *design* as a process, a skill, or a matter for serious study. Here we have a book determined to make up for the furniture design shortage. It is hard to imagine a more complete and comprehensive coverage of this neglected subject brought up-to-date with such tireless effort!

John Pile

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