1

Introduction to Furniture Design

DICTIONARY AND ENCYCLOPEDIC sources use words like *accessories, equipment,* and *movable objects* to define furniture.[1] Words can describe the performance and physical characteristics of furniture, but those who design, make, and use furniture know that furniture design extends far beyond dictionary or encyclopedic definition. Furniture design concepts lead to the production of useful items that result in **tactile** experiences (Figure 1.1). In nearly every case, furniture is something people experience through direct human engagement. In addition, one's understanding and knowledge of furniture evolves with use and over time.

Designing furniture relies on intuition, judgment, design skills, engineering principles, and knowledge in a broad range of disciplines helpful with problem solving. Designing furniture requires inspiration, a concept or idea, and the commitment to give pleasure to those who use it.

The inevitable shift from designing furniture to fabricating furniture generates an appreciation for both the obvious and subtle ways in which *making* can influence the design process. Through the process of making furniture, one will learn about hand, power, and digital tools, material properties and working methods, assembly processes, and the time required to finish a project. Fabricating furniture demands precise skill and workmanship and often results in a sense of craft for those directly involved in the process. Making furniture does not necessarily guarantee an ability to design furniture, but it will result in an expanded knowledge of materials, tools, and joinery, which in turn generates a broader appreciation and respect for furniture design.

Furniture design is deeply rooted in the human condition. It is a social science that belongs to the humanities, an applied art that draws upon many design disciplines, and is dependent upon a working knowledge of materials and fabrication techniques. It is a holistic and interdisciplinary field of study.

Figure 1.1 The Knit chair in use. Designed by Emiliano Godoy (2004). This chair was awarded a Bronze Leaf at the International Furniture Design Competition Asahikawa 2005 in Asahikawa, Japan. *Photography courtesy of John Curry, GODOYLAB, 2005.*

Before delving into the nature of furniture design, consider the terms *furniture* and *design* and reflect upon the fundamental and symbiotic relationships bound in the meaning and etymology of these two words.

FURNITURE

> **furniture**
> • *noun* **1.** the movable articles that are used to make a room or building suitable for living or working in, such as tables, chairs, or desks. **2.** the small accessories or fittings that are required for a particular task or function: *door furniture.*[2]

By many accounts, furniture includes a broad range of moveable objects organized in four main categories:

- Human body support devices (Figures 1.2 and 1.3)
- Surfaces and objects to support various activities (Figures 1.4 and 1.5)
- Storage and display pieces (Figures 1.6 and 1.7)
- Spatial partitions[3] (Figures 1.8 and 1.9)

Furniture pieces are designed and fabricated to assist in the many ways people sit and rest, work and play, organize or display items, and partition space. This view suggests a broad utilitarian framework, in which *function* is perceived to be the primary intended purpose of furniture. Although function, utility, and social use are important aspects of the performance of furniture, rarely does function alone inspire great design. Furniture design draws upon ideas of beauty, principles of design, theory, material properties, fabrication technologies, business economies, environmental design matters, and the surrounding spatial context in which it is placed, all of which are integral and intertwined with function, utility, and social use. Considerations that influence what we think about and feel regarding furniture design include:

- Aesthetics (the meaning of form)
- Historical precedent (examples from the past)
- Principles of design (i.e., unity, harmony, hierarchy, spatial order)

- Function and social use (ergonomics, comfort, proxemics)
- Design processes (sketching, iterative overlays, model studies, digital modeling, full-scale working prototypes, collage assemblies)
- Material (classification, characteristics, properties, availability, cost)
- Fabrication processes (hand, power, digital)
- Environmental design matters (sustainability, renewable materials, off-gassing)
- Surrounding context (the spatial setting for furniture)
- Professional practice (economic, legal, and business decisions)

A goal in designing furniture is to consider all design aspects in a comprehensive and integrated manner, while maintaining focus and critical engagement upon the primary concepts and ideas that inspire design.

Figure 1.2 Reclining with the chaise longue at Villa Savoye, Poissy, France. *Photography by Stephan Dober, 2011.*
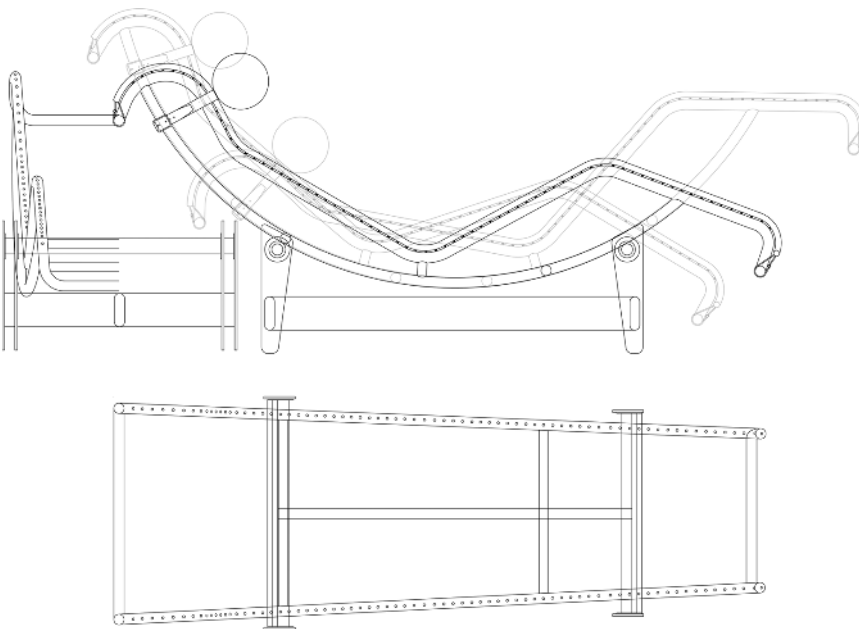
Figure 1.3 Plan side and front views of chaise longue (known as LC/4) designed by Charlotte Perriand, Pierre Jeanneret, and Charles-Édouard Jeanneret (Le Corbusier) (1928–1929). Originally manufactured in chrome-plated steel, fabric, and leather by Thonet Frères, Paris, then by Cassina, Italy since 1965. 22¼ inches wide; 63 inches deep; 28¾ high (56.5 cm wide; 60 cm deep; 73 cm high). *Drawing by Ashley Hermann, 2006, courtesy of Jim Postell.*

Figure 1.4 Outside café tables and chairs, Paris, France. *Photography copyright © William A. Yokel, 2005.*

Figure 1.5 Drawing table, designed by Robert Mallet-Stevens (1927) for professional use in his Paris office. Made with tubular metal, poplar wood, and hard lacquer paint. *Photography by Jim Postell, 2011.*

Figure 1.6 Case goods (cabinet and bookcase) designed by Mogens Koch, fabricated by Rud. Rasmussen (since 1932), Copenhagen, Denmark. *Photography courtesy of Rud. Rasmussen, Denmark, 2006.*

Figure 1.7 Cabinet, designed by Ettore Sottsass (1948–1949). Made with lacquered wood and brass-plated tubular steel. *Photography by Jim Postell, 2011.*

Utilitarian considerations can channel the development and refinement of design ideas but rarely inspire them. Utility is grounded by specific categories of social use, associated with the broader classifications of building and zoning nomenclature. In this book, categories of social use include:
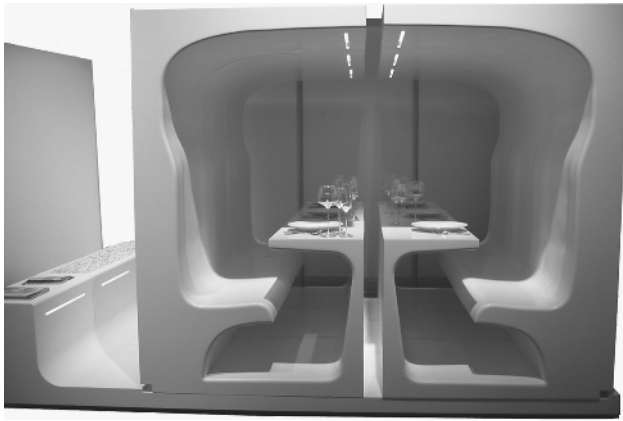
Figure 1.8 Furniture as space–space as furniture. Dupont Corian exhibit, designed by SOM, 2005. *Photography by Brian F. Davies, 2004.*
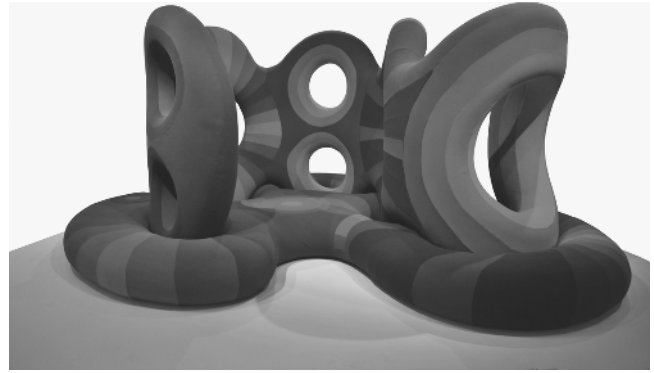

Figure 1.9 Living Sculpture in nine components, designed by Verner Panton (1970–1971). Made using mass-polyethylene, with an internal armature supported by expanded polystyrene foam, upholstered in wool. Overall size: 86 inches wide; 201 inches deep; 169 inches high (220 cm wide; 510 cm deep; 430 cm high). Fabricated by Mira-X. *Photography by Jim Postell, 2011.*

- Health care
- Hospitality
- Institutional
- Office
- Recreational
- Religious
- Residential
- Retail
- Storage

Broad categories of social use are dependent on particular activities and affected by specific circumstances, which are nearly always influenced by place, occupancy, and time. As an example, day care furniture is a specific type of furniture cross-linked with institutional and residential categories. A law firm is a specific type of office classification, as is an accounting firm or a telemarketing company. Furniture for a Catholic church, a Jewish synagogue, or Islamic mosque, falls under a liturgical classification. These factors and circumstances are discussed in Chapter 2.

The word *furniture* is derived from European verbs, nouns, and adjectives. The French verb *fournir* means "to furnish." Furniture provides a place setting for work, rest, and play. It also contributes to the ambiance and style of interior space (Figure 1.10). Furniture provides people with desired items and necessary equipment that complement and complete interior space.

The Latin adjective *mobile* means "movable," which is an important characteristic of furniture. The French *meubles*, the Turkish *mobilya*, and the Danish *møbel* all translate into the English word *furniture.* Freedom from the physical structure of a building provides designers with an opportunity to create spatial relationships between movable elements and built-in

Figure 1.10 The dining table and chairs (with retractable leaves) complement the recessed circular soffit and surrounding millwork in Eliel Saarinen's residence at Cranbrook Academy, Bloomfield Hills, Michigan. *Photography by Jim Postell, 2009.*

components. The creation of spatial relationships through the size, location, and orientation of furniture pieces places furniture design within the disciplines of architecture and interior design.

Spatial order and spatial organizations include:

- Grid: a regular tessellation that divides space into a series of contiguous cells, which can then be used for spatial indexing purposes. Grids can be generated from square or rectangular cells, triangular, circular, or, hexagonal formations.
- Linear: relating to, consisting of, or using lines in form or in spatial sequence.
- Centralized: drawing spatial relationships into, around, or toward a central area or point.
- Radial: elements radiating out from a central area or point. (spiraling or swirling) in a circular, lineal, or spiral path.
- Cluster: a small group of elements gathered closely together (Figure 1.11).

Though furnishings are nearly always freestanding and movable, some pieces challenge the conventional **paradigm** by being mechanically attached to a floor, wall, or ceiling (see Figures 1.12 and 1.13) and therefore lose the characteristic of their mobility. In either scenario, interior space is made complete through the size, location, orientation, and surface treatment of tangible built-form and intangible use.

Figure 1.11 Clustered furnishings within the Salon Théâter, (Appartements Napoléon III), Musée du Louvre. *Photography by Jim Postell, 2011.*

Figure 1.12 Built-in manicure stations at Alverno Salon and Spa, Cincinnati, Ohio. The storage units and manicure stations are mechanically attached to the floor and wall, enabling internal and continuous space for electrical power and air return ducts. *Designed by Jim Postell, 2003. Photography copyright © Scott Hisey, 2004.*

Figure 1.13 Built-in and tiled reclined seating in the master bathroom at Villa Savoye, Poissy, France. Designed by Le Corbusier (1928). *Photography by Jim Postell, 2011.*

Architecture embraces the art and design of building. It is site dependent and site responsive. Many architects have designed custom furniture pieces to complement their buildings and complete their interior spaces. Alvar Aalto, Antoni Gaudí, Charles Rennie Mackintosh, Eugène Vallin, and Frank Lloyd Wright were architects who routinely sought to accomplish this goal. Furniture can contribute significantly to its architectural setting, designed and fabricated as one-of-a-kind pieces, specifically to complement and complete a room, space, or landscape (see Figure 1.14).

Industrial design is a relatively young discipline with mass production and mass customization as its primary focus and disciplinary theme. Furniture design provides opportunity for exercising these core values and, therefore, finds itself aligned with the discipline of industrial design. Digital fabrication techniques, workmanship, assembly processes, and packaging are important to both industrial design and furniture production because of the shared dependence each discipline has with mass production and mass customization. Furniture pieces that are designed, fabricated, and branded as industrial design products include ergonomic task chairs, folding tables, and modular shelving units. These products are designed to have identical or deliberate quantitative outcomes resulting from industrial production technologies and are not conceived as site-specific furnishings. Renowned designers, whose furniture designs are dependent on mass-production and mass-customization technologies include Achille Castiglioni, Antonio Citterio, Bruce Hannah, Philippe Starck, and Bill Stumpf (see Figure 1.15).

Art, as a process, is steeped in the creation of making things. More often than not, artwork produced by an artist reveals, among other qualities, *the mark of the maker.* Furniture aligns itself with and is marketed as fine art when the nature of craft and craftsmanship (workmanship of risk) is revealed through the process of making. Furniture, when considered a work of art, results from personal skill and subjective judgment in the production and fabrication of a one-of-a-kind piece. Furniture pieces made by Ron Arad, Wendell Castle, Émile Gallé, Sam Maloof, George Nakashima, and Andrea Zittel have been exhibited in galleries and museums and the pieces made by their own hand are marketed as fine art (see Figure 1.16).

Figure 1.15 Richard III, designed by Philippe Starck (1982–1984), manufactured by Baleri Italia as a single shell molded structure in rigid polyurethane and finished with polyurethane enamel in metallic silver. 36¼ inches wide; 32¼ inches deep; 36 inches high (92 cm wide; 82 cm deep; 91.5 cm high). *Photography by Jim Postell, 2011.*

Figure 1.14 Eugène Vallin, salle à manger (dining room), Musée de l'Ecole de Nancy. *Photography by Jim Postell, 2011.*

Figure 1.16 Chair by its Cover, Zig-Zag, designed and fabricated by Ron Arid (1989–1990). *Photography by Jim Postell, 2011.*

Figure 1.17 M2L Showroom in Washington, D.C., (2007) designed by Robert M. Gurney. *Photography by Maxwell MacKenzie, courtesy of M2L.*

Buying, selling, and marketing furniture is a business. Sales are influenced, in part, by the display of furniture in a particular setting (i.e., store, showroom, ad, journal, book, exhibit, or web site). Price, quality, function, aesthetics, historical context, and branded appeal also influence sales. As a business, furniture is carefully marketed through specific venues with consideration towards the competition and broader market demand for similar products. Furniture companies such as Cassina and Knoll invest heavily into carefully designed environments to display their furniture product line. Furniture businesses follow suit. From Paustian in Copenhagen to M2L in New York, Boston, and Washington; to the office furniture showrooms in Chicago's Merchandise Mart; to Voltage in Cincinnati, high-end furniture showrooms play an important role not only in providing an environment in which to display and sell furniture and furnishings but also to inform the public and give voice to furniture design in a larger historical, societal, and cultural context.

M2L is a business dedicated to modern design. Started in 1985, the company has showrooms in New York, Boston, and Washington, D.C. M2L is a source for high-end residential and office furniture, whose designs span the twentieth century and include collections from many modern masters, such as Josef Hoffmann, Eileen Gray, and Marcel Breuer. M2L's showroom in Georgetown's Design District provides a modern setting among turn-of-the-century industrial warehouses. The furniture showroom is designed as a beautiful, minimal white interior space, providing an environment best suited to display the collection of furniture and furnishings available through M2L (Figure 1.17).

DESIGN

design
- *noun* **1.** a plan or drawing produced to show the look and function or workings of something before it is built or made. **2.** the art or action of producing such a plan or drawing. **3.** underlying purpose or planning: the appearance of design in the universe. **4.** a decorative pattern.
- *verb* **1.** conceive and produce a design for. **2.** plan or intend for a purpose.[4]

One can think of design as *structured play.*[5] It's a process resulting from creative thinking, intuitive judgment, and hard work. As a process, design develops through a working method that is shaped by technical information, informed by theory, and dependent on communication skills. Design ideas develop within a conceptual and contextual framework and are dependent on the operations and abilities of the designer's hand and head.

The design process utilizes both the right and left hemispheres of the brain. The left side of the brain processes information in a linear manner, working from part to whole relationships. It takes pieces of information and organizes them in a logical order, then it draws conclusions. The left-brain person would enjoy making schedules and planning the fabrication of furniture. The right side of the brain, however, processes from whole to parts, holistically. It starts with the big picture, not with specific details. The right-brain person wants to see, feel, or touch furniture. Thus furniture designers who can activate both sides of the brain often enhance the design process, furthering the considerations of conceptual, structural, functional, tactile, aesthetic, spatial, economic, and cultural needs and desires, all at the same time.

The word *design* is distinct from the word *project.* While design entails processes of inquiry and methods for exploring and synthesizing ideas (Figure 1.18), a project is the coherent resolution of purpose and presence (Figure 1.19). At some point in time, design efforts will transform into projects. A project can be revealed in a drawing, model, working prototype, or fabricated work. It's not the medium that distinguishes a design from a project; rather, it is the presence of resolved and synthesized aspects, clarity of idea, function, purpose, and, very often, the intent to make real.
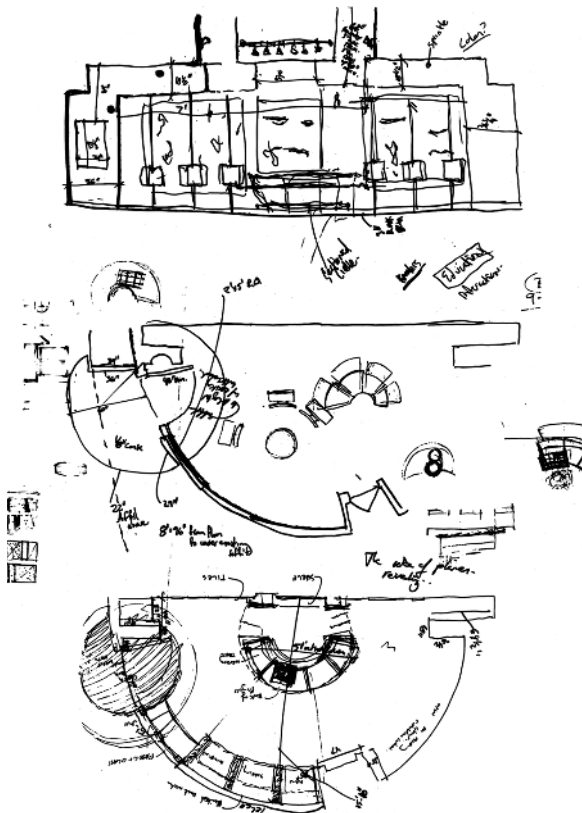
Figure 1.18 Hand sketching in the initial phase of design—exploring spatial relationships with furniture, Children's Chapel, Cincinnati Children's Hospital Medical Center. *Design sketch by Jim Postell, 1994.*

Figure 1.19 Children's Chapel, Cincinnati, Ohio—fabricated and installed furnishings by Heartwood Furniture Company, 1995. *Photography by Michael Toombs, 1995.*

The words *design* and *designate* are derived from the Latin verb *designare. Designare* translates "to mark out," taken from *de*, "of," and *signare*, "to mark," or the noun *signum*, "a mark or sign."[6] The Italian word for project is *la progettazione,* referring to the planning stage between design and fabrication. *Il progetto* translates into "the plan." The word *design* is sometimes used to mean "the plan" and can imply planning or intending for a purpose.

At the core of designing furniture is a body of knowledge and the skills necessary to integrate the tangible and intangible aspects that become furniture. Tangible aspects include:

- Materials (characteristics, workability, and finish qualities)
- **Fabrication** processes (tools, performance, quality, and limitations)
- Resources (time, money, and access to equipment and supplies)

Intangible aspects include:

- The program (intention, purpose, function)
- Theory and history (inquiry, rationale, precedent)
- Ergonomics and proxemics (designing for a set of activities, within the limits of the human body and the study of how people communicate in and through space)
- Knowledge about the human body and the human condition
- The design process
- Marketing and branding strategies
- Professional practice

Designers can build upon their understanding of the present and be better equipped to foresee into the future when they have gained insight from the successes and failures, processes, and aspirations of others in the past. Look carefully at the design and fabrication processes from the past. Consider the innovative use, available materials, the joinery, and aesthetics, all of which can inform and inspire new furniture designs.

Design skills include the ability to graphically communicate and physically model ideas. Though technical instruction can be taught, design skills need to be exercised and will improve with experience. Furniture designers need to learn how to design, sketch, draw, draft, make study models, and use computer programs, while simultaneously developing a working knowledge about materials, fabrication techniques, and the human body, when they actively design furniture. In regard to the skills and knowledge necessary to design furniture, experience in both designing and making furniture is perhaps the best teacher a student can have.

FURNITURE + DESIGN + (X) = FURNITURE DESIGN

The primary intention of combining the terms *furniture* and *design* together is to articulate an emerging discipline in the combined synthesis of the two terms. The phrase *furniture design* establishes a framework for an emerging discipline that is comparable to interior design, industrial design, fashion design, or graphic design—a discipline that is co-dependent with other allied design fields and, yet, one that has a core body of knowledge. It is an area of study that extends beyond the summation of furniture and

design. It combines the arts and sciences, business and marketing strategies, and design and fabrication processes. It engages furniture as tangible objects, materials, and built-form, as well as part of a larger history of design; informed by research, ideas, developed by design processes, theory, utility, comfort, use, and aesthetics.

Furniture design needs to be practiced in order to be fully appreciated; however, some aspects can be studied, learned, and taught. Designers, educators, fabricators, industrial entrepreneurs, museum curators, and writers have developed an enormous body of knowledge about furniture design. This body of knowledge is available to the public through books, journals, museum and gallery exhibits, and web sites. A growing number of universities and colleges offer courses in furniture design—many within art, industrial design, interior design, and architecture programs. Generally, the course content and student learning outcomes from furniture offerings address the following areas of research and inquiry:

- History (societal and cultural themes)
- Human factors (anthropometrics, ergonomics, and proxemics)
- Humanities (psychology, sociology, human perception)
- Theory (inquiry, research methods, aesthetics)
- Design (processes, phases, paradigms)
- Skills (drawing, model making, digital design and fabrication)
- Materials (characteristics and performance)
- Fabrication processes (means and methods—hand, power, digital techniques)
- Professional practice

Research methods can focus one's inquiry within the vast body of knowledge of furniture design. Through the process of gathering, organizing, and analyzing information, a stage is set for producing innovative work. Research can inform ideas and clarify specific knowledge about furniture design. It can enlighten designers and fabricators in ways to resolve technical matters regarding material properties, fabrication processes, marketing strategies, and business planning. There are scores of books, journals, reports, professional organizations, academic institutions, web sites, furniture companies, showrooms, and galleries available to the designer today, and a wide range of professional practice venues, to support one's study of the field of furniture design.

Within the broader study of the humanities, areas of research include:

- Human perception/psychology/behavior science
- Sociological/cultural inquiry
- Anthropometrics/ergonomics/proxemics
- Social use/notions of place-making and dwelling
- Business identity/branded environments

One can study economic, legal, and business matters in tandem with material and technical aspects of fabricating furniture. Research methods can channel and inform relationships between broad areas of inquiry and more focused studies in specific areas. They can also expand focused inquiry into broader, more complex understandings.

There are, essentially, two primary approaches to research methods:

- Empirical studies (learning by doing)—i.e., designing, drawing, making, testing. Generally, an inductive approach—working from concrete realities into general ideas.

- Scientific methods (systematic and quantitative)—i.e. gathering information, organizing data, and statistical analysis. Generally, a deductive approach—working from ideas and concepts down to concrete realities.

There is a third approach that is reflective in nature, involving the study of precedent, the writings of others, or investigating design processes. (These approaches tend to be more scientific than empirical.)

Themes and streams of research inquiry include:

- Theory (human factors, ergonomics, proxemics, comfort, social use)
- Design (processes, methods, techniques)
- Material research
- Fabrication technologies
- Professional practice
- History

Themes and streams are akin to the braids of a rope—they are interdependent on one another and collectively strengthen the totality of one's research or inquiry.

Data Visualization: Mapping Data from Research

Maps, line graphs, Venn diagrams, matrixes, and charts are common methods used to graphically visualize research-based data. Recently, data visualization has developed in several directions:

- Theoretical
- Methodological
- New technological areas

Advances include the development of a grammar of graphics, deeper understanding of human perception and implications for graphical layout, better approaches to visualizing multidimensional data, and organizing large data sets.

Consider some of the ways one might map or visualize information related to furniture design. One can compare the relative strength of various glues or the relative cost to manufacture comparable chairs. One could diagram the global production centers and look at the exportation / importation values regarding furniture sales broken down by country and by year. One could look at the ads in specific journals and analyze the type or spatial context of the furniture shown within the ads. However the approach, researching furniture design involves the gathering, organizing, and analyzing of information, most of which can be gathered, ordered, synthesized, and presented through a variety of graphic techniques, which include:

- Venn diagrams
- Charts (pie, bar, graph)
- Two- or four-axis models
- Matrixes
- Lexicons

Venn Diagrams
Venn diagrams indicate relationships between classifications and interrelated subsets drawn as simple, closed curvilinear shapes (Figure 1.20). As an example, consider a Venn diagram that graphically indicates the professional and disciplinary relations engaged in
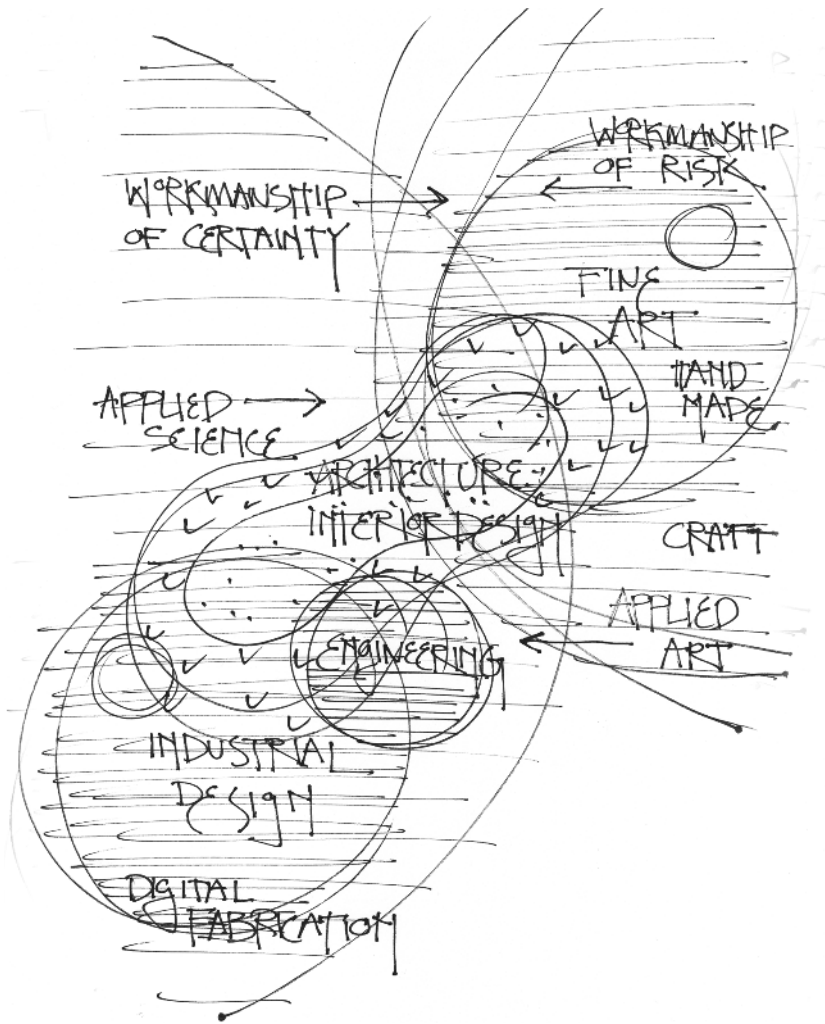
Figure 1.20 Venn diagram indicating shared and dependent relations among the disciplines of Art, Industrial Design, Engineering, Architecture, and Interior Design. High technologies (workmanship of certainty) stem from the left side of the diagram, while lower technologies (workmanship of risk) stem from the right side. *Diagram by Jim Postell, 2011.*

furniture design. Notice how the diagram sets a framework for the shared relationships and influences between the individual subsets by the size, location, and spatial relationships of the curvilinear shapes.

Charts, Two- or Four-Axis Models, and Matrixes

A chart, two- or four-axis model, or matrix can indicate quantitative and qualitative relationships within a general or specific framework. An example of a two- or four-axis model might indicate the number and concentration of expensive/inexpensive furniture pieces relative to a cross-axis indicating volume of sales or some other quantitative measure (see Figures 1.21, 1.22, and 1.23).

Furniture design research is often applied, realized through design and fabrication venues. Designers utilize human factors research and anthropometric data in the design of chairs. This engages a scientific method working from assumed principles within the constraints of quantitative data (Figure 1.23). Designers also explore and experiment with
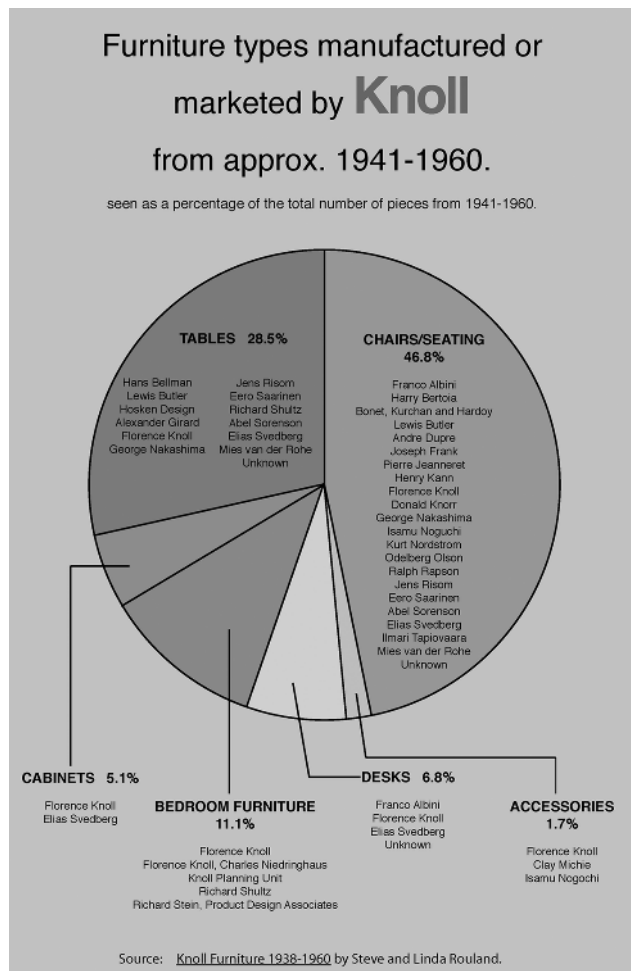
Figure 1.21 Pie chart indicating the concentration of social use and furniture types of advertisements in *Interior Design* magazine from 1970 to 2005. *Illustration by Alice Zhang, 2007, courtesy of Jim Postell.*

	1970	1975	1980	1985	1990	1995	2000	2005
CHAIRS	25%	36%	25%	31%	29%	37%	40%	45%
SOFAS	21%	22%	21%	17%	10%	10%	14%	17%
BEDS	7%	8%	11%	5%	6%	4%	4%	6%
DESKS	7%	10%	12%	11%	17%	14%	12%	10%
TABLES	20%	17%	12%	14%	22%	18%	10%	12%
OFFICE CHAIRS	2%	2%	5%	2%	12%	14%	14%	8%
STORAGE	18%	5%	14%	20%	4%	3%	6%	2%
TOTAL ADS	84	58	104	105	58	27	58	64

(DATA FROM JANUARY ISSUE EACH YEAR)
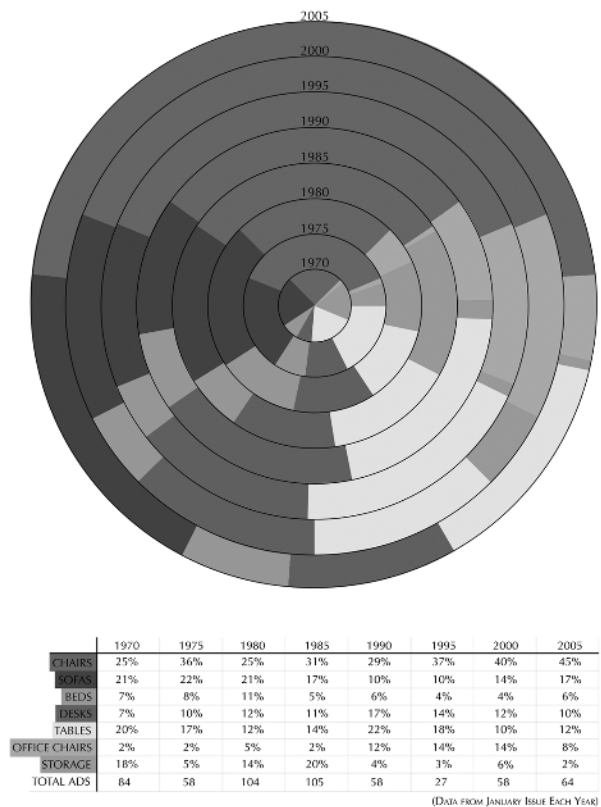
Figure 1.22 Pie chart indicating the concentration of furniture types manufactured by Knoll between 1941 and 1960. *Illustration by Cynthia Fels, 2006, courtesy of Jim Postell.*

Figure 1.23 Integrating Human Factors Research in the design process: images and design of Slat chair by Matt Puhalla (2006).

	Myself	50%ile	97.5%ile	2.5%ile
Seat Height	18	17	18.5	15.6
Seat Depth	18	18	20.1	17.2
Seat Width	16	13	14.9	11.7
Back Rest Height	25	25	26.8	22.9
Lumbar Height	9	9.5	10	9

Armrest Height No Armrest

Backrest Angle 20 Degrees applies to all percentiles

Seat Angle 10 Degrees applies to all percentiles

all units are Inch
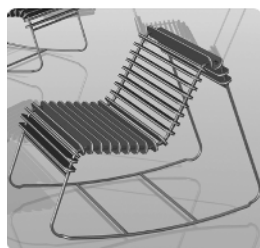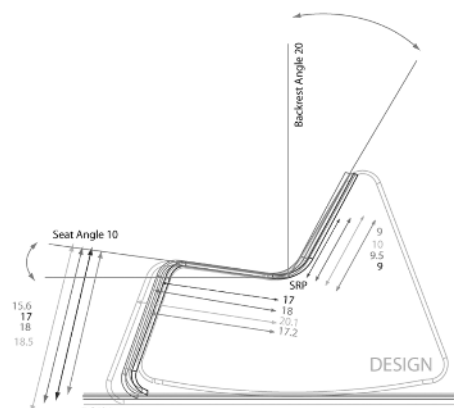
materials and fabrication techniques rather inductively. Through the process of experimenting with materials and methods of fabrication, designers can discover fascinating applications and opportunities for utilizing materials to achieve innovative performance in design (Figure 1-24).

Mapping information can indicate relationships between fixed and variable conditions and help to visualize data within the constraint of an established framework such as time, place, or cost.

Lexicons

A **lexicon** is a collection of words or terms that relate to a branch of knowledge, discipline, or part of a specific population or subset. The discipline of furniture design includes a broad collection of subheadings, ranging from:

- Technical (i.e., jointer, rabbet joint, PVA glue, closed cell, roto-mold)
- Descriptive (i.e., luster, knock-down, symmetrical)
- Process focused (i.e., sketching, injection mold, digital fabrication)
- Social use (i.e., hospitality, office, residential)
- Theoretical (i.e., ergonomic, lumbar lordosis, **haptic sensation**)

Historical (i.e., **cathedra**, **credenza**, **ébéniste**, modern)

A broad lexicon of terms exists within each of the distinct categories outlined in the preceding list. Furniture styles are generally broken down by periods such as **Queen Anne***, Georgian, Modern,* and *Post-Modern.* Most furnishings are described by their social use (i.e., residential furniture, outdoor furniture, nursery furniture, office furniture, etc.). Designers utilize an exclusive vocabulary of terms (aka *design-speak*), which include *parti, iteration, enfilade, unity*, and *dichotomy.* Historians understand words like *cathedra,* **voyeuse***,* and *coffer.*

A lexicon can be organized or visualized in a number of ways. Terms can be grouped, listed alphabetically, defined, mapped, analyzed, and used in context. Lexicons are useful in organizing the parameters for pointed, focused, design inquiry.

The lexicon shown in Figure 1.25 delineates synthetic intersections of social use and formal composition. The lexicon is an attempt to organize furniture pieces into discrete components, which include physical, spatial, and functional headings. The organization of a lexicon is generally less important than the process and discoveries that transpire
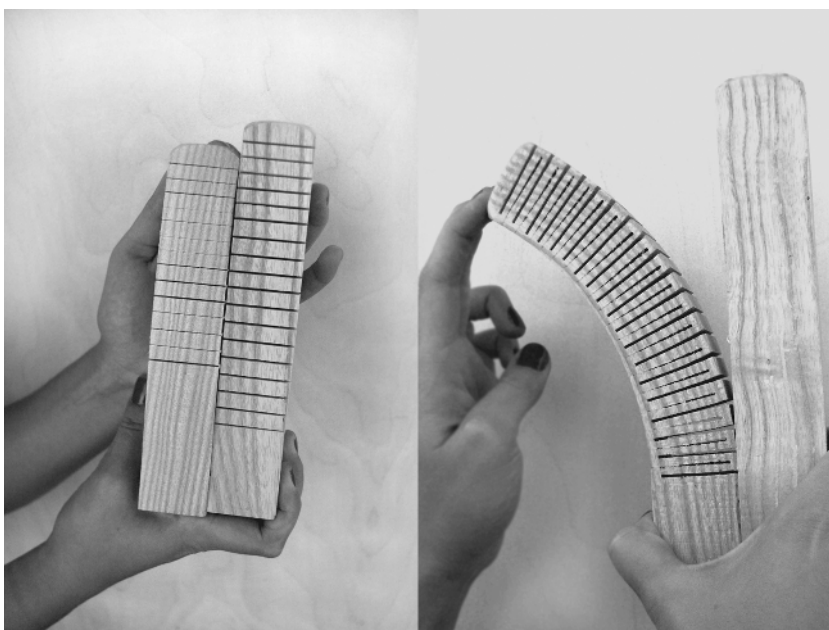
Figure 1.24 Success in experimenting with an innovative technique of cutting wood in order to achieve a resilient, spring-like quality in the wood. *Photography and design by Mary Dickerson, (2011).*

		Form					Spatial Organization					Typological Orders					
		Angular	Composite	Curvilinear	Orthogonal	Sectional	Centralized	Radial	Clustered	Grids	Linear	Assemble/Disassemble	Built-in	Freestanding	Inflatable	Transform	Movable
Human Body Support	Sitting																
	Resting																
	Sleeping																
Activities	Eating																
	Playing																
	Reading																
	Typing																
	Working																
	Writing																
Containing Items	Displaying																
	Organizing																
	Storing																
Defining Space	Enclosing Space																
	Partitioning Space																
Social Use	Healthcare																
	Hospitality																
	Institutional																
	Multi-Use																
	Office																
	Residential																
	Religious																
	Retail																
	Storage																

Figure 1.25 Furniture design lexicon. *Lexicon by Jim Postell, 2006.*

through its conception, development, and resolution. As an exercise, consider completing the lexicon or determine other organizational approaches that establish boundaries and constraints to categories and typologies of furniture.

The primary goal for many furniture designers is to create designs that improve upon existing products or to provide entirely new designs that deliver new ways to work, rest, or play. In doing either, designers broaden the world through fresh and personal points of view.

As a tangible reality, furniture is composed of materials and finishes, held together by engineered joinery, and experienced physically and spatially. Furniture is also composed of intangible aspects that reveal ideas about comfort, ergonomics, proxemics, cultural meaning, social status, use, spatial organization, and aesthetics. These intangible aspects serve as a basis for theory. Not all dimensions are measurable, and neither are details limited to physical characteristics. It is imperative to consider tangible and intangible aspects concurrently when designing and making furniture.

Before we delve into the intangible aspects of theory, let's first consider the broader **taxonomy** of function and social use categories within a cultural and societal framework, followed by the more descriptive and measurable characteristics of built-form.

ENDNOTES

1. The terms *movable* and *equipment* are used to describe furniture in the following sources: *Webster's Illustrated Contemporary Dictionary* (Encyclopedic edition, J. G. Ferguson Publishing Company, Chicago, 1988); *The American Heritage Dictionary of the English Language,* 4th edition (Boston, MA: Houghton Mifflin Company); *The Compact Oxford English Dictionary,* revised edition (Oxford: Oxford University Press, 2003); and www.dictionary.com.
2. *The Compact Oxford English Dictionary,* revised edition (Oxford: Oxford University Press, 2003).
3. The organization of furniture using typological categories is a common approach. Edward Lucie-Smith, in *Furniture: A Concise History* (London: Thames and Hudson, 1993), outlines four headings, "the first of which responds to the idea of function stating one can sit on a piece of furniture (stools, benches, and chairs); or else one puts things on it (tables and stands); sleeps or reclines on it (beds and couches); or uses it for storage (chests and wardrobes)" (p. 8).
4. *The Compact Oxford English Dictionary*.
5. *Structured play* is a phrase that faculty have used to describe the activity of design in the First Year Design Studio in the School of Architecture and Interior Design, College of DAAP at the University of Cincinnati.
6. *The Compact Oxford English Dictionary*.