

# CHAIRS: PERCEPTIONS OF SUITABILITY FOR PRIVACY AND INTERACTION

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*It is proposed that commonly understood meanings exist which determine the appropriate use of furniture for various types of activities. The present study tests the hypothesis that: 1) soft, flexible, supportive chairs are perceived as suitable for private activities, and 2) hard, rigid, nonsupportive chairs are perceived as suitable for public activities. A class of 208 female students, homogeneous in age and career interests, was used to ascertain perceived appropriateness of six types of chairs for specific activities. Classification was determined by showing line drawings of six chairs representing three dimensions of design: soft-hard, rigid-flexible, support-non-support. Activities were classified as either private (solitary, intimate and reserved) or public (group). Ratings were obtained for the perceived comfort and suitability of the different chairs for specified public and private activities. Analysis of variance was used to ascertain differences in perception of appropriateness of the chairs for each activity and differences in perception of the comfort. Two-factor analysis of variance indicated that the dimension of hard-soft as related by the drawings interacted significantly with the other characteristics of style in determining suitability of the chairs for all public and private activities. Correlation coefficients indicated a significant positive relationship for perception of comfort with suitability for all private activities, and a significant negative relationship for perception of comfort with suitability for public or group activities.*

Furniture is used to organize our spaces, and to communicate types of activities considered appropriate for an area (Barker, 1968; Goffman, 1959; Hall, 1959; Norberg-Schulz, 1971). Fur-

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niture has specific forms and purposes that everyone understands. Chairs are to be sat upon and for that purpose have a seat, a back for support and legs or a base to hold the sitter at a distance from the floor. Beyond that, there are differences in the materials, finishes and lines of chairs which are designed to be used in different rooms of a house. Describing styles of chairs used

over the centuries in the United States, Bishop (1972:12) claimed that "each chair is representative of the way of life, the social structure, and the related customs of the period in which it was created." On the other hand, he noted a persistence in the use of certain materials and shapes through the generations.

Specific forms are related to the context of use (Alexander, 1964). If chairs have been moved from one room to another, we have little difficulty in re-assigning the chairs to the proper place. Everyone distinguishes among a kitchen chair, a dining chair, a living room chair, an office chair, etc. Chairs are related to location during use, i.e., context in terms of physical area. It is also possible that chairs have specific forms that relate to their use in the context of social relationships. If so, do we know which chair is right for developing or maintaining a close relationship with another individual, and which is right for exerting influence in a group situation?

The purpose of this paper is to explore the relationships among selected chair characteristics, perception of comfort and perceived suitability of chairs for certain activities.

#### **Nature as a Source of the Meaning of Lines**

The form, or design of a chair can be represented by a grouping of lines. Lines have perhaps acquired a shared set of meanings through association with natural forms (Arnheim, 1954, 1966; Gilbert & Kuhn, 1939). Vertical lines seen in trees and towers are associated with tallness, aspiration, and dominance while horizontal lines seen in plateaus and lakes are serene or restful. Diagonals indicate movement, for example, climbing up a hill. Curves are considered graceful and gentle; but frustration and irritability occur when too many different curves exist within one context.

Rocking chairs with curved and diagonal lines are graceful and give the impression of movement even when unoccupied. In large, massive, easy chairs a variety of lines are combined with the strong vertical lines of a high backed chair

balanced by the gentleness of curved lines in the padding of the arms and seat. Characteristics inherent in the appearance of chairs may be a factor in the selection of certain chairs for specific activities. Through the "language of lines," the chair we select from a variety of alternatives may convey a message to others about our mood or intentions.

#### **Social Interaction in the Context of the Environment**

Barker's term "behavior settings", suggests that certain types of interaction are determined by specific environmental settings, (Barker, 1968). Behavior is influenced by the environment insofar as certain elements are required in the setting for a given behavior to occur. For example, in an interior living space furniture exists; and therefore, as part of the environment, the furniture influences behavior.

In addition to verbal language, people communicate with the body in gesture, posture, and position, and with the arrangement and selection of things. Both body and things are used to illustrate feelings and moods, and to establish boundaries and position in relationships. The use of the environment to communicate can be conceived of as an extension of the self (Hall, 1959). Posture, perhaps influenced by the chair used during an interaction, communicates degree of liking for another person (Mehrabian, 1969, 1971). Bodily attitudes of dislike are characterized by either very pronounced or very little relaxation. The "whole person" is a melting together of many levels of functioning which occur simultaneously. "Internalized, cognitive, affective states are joined with overt verbal behaviors . . ./which/are, in turn blended with a network of non-verbal behaviors—fidgeting, postural shifts, looking behavior—and use of the environment such as interpersonal distance, chairs and tables" (Altman & Taylor, 1973: 124).

Two people selecting seats in a room may limit the topics of comfortable conversation according to the distance between the chairs. Hall (1966) viewed the space around a person as enclosed in

invisible bubbles of varying diameters which are entered as a function of the closeness of a relationship. These zones are defined by the different patterns of behavior which tend to occur within them. The distances identified by Hall are: intimate—up to 18 inches; personal—from one and one-half to four feet; social, consulting—four to twelve feet; and public—12 to 25 feet. For example, two persons seated in chairs approximately eight feet apart are not likely to converse comfortably on personal topics. On the other hand, two persons seated in chairs only three to four feet apart might find it difficult to maintain a conversation at a social consulting level. Traversing distance zones should occur more readily in a close relationship, permitting exchange of a greater variety of nonverbal cues. Altman and Taylor (1973) suggested that as a process of social penetration proceeds, there is a reduction of normative barriers and easier accessibility to all distance zones.

Performance of social roles requires that spaces must be arranged and maintained so that they are role enabling. According to Gross and Stone (1964), poise, identity and maintenance of confidence are essential for performance of role requirements. Poise requires the performer's control over self and situation including: spaces, props, equipment, clothing and body. If we have poise, then we have knowledge that will enable us to walk into a room and select a proper chair in a location suitable for the performance of our role in that situation, and additionally leave the correct chair available for the other participant in a given interaction. Failure to select the appropriate chair may preclude the fulfillment of the requirements of the role.

#### **Selection of Chairs in Structuring the Environment**

Environmental structuring by the "anticipatory selection" of seating in a given area delimits the range of behaviors apt to occur in that setting (Altman & Taylor, 1973). To be role enabling, furniture must permit the coordination of verbal and non-verbal communication systems. For ex-

ample, it would be difficult to assume the moderately relaxed postures associated with messages of liking from either a three-legged stool or a bean bag chair. Although one cannot relax if furniture is uncomfortable, it may not always be appropriate to be comfortable when seated (Branton, 1969; Le Carpentier, 1969; Schackel, Chidsey & Shipley, 1969). Discussing an issue, getting something done, i.e., instrumental activities, generally require alertness and some degree of tension rather than relaxation.

Chairs with flexibility, e.g., rocking chairs, may usurp some of the control a person intends to exert in a situation. During a tense conversation, one may want to be protected against accidental movement due to the chair's flexibility; but motion of a chair can be beneficial in providing tension release or "side-involvement." Periodic remissions may be necessary for the continuance of an intense interchange (Goffman, 1963). Chairs that surround the individual such as high wing-backed styles tend to provide a degree of insulation desirable for some solitary and intimate activities.

If certain settings, or arrangements of furnishings determine the extent to which roles can be performed, then there must exist a shared set of perceptions concerning the suitability of specific pieces of furniture for certain types of interaction. Characteristics of chairs can be classified on dimensions such as "hard-soft", "supportive-nonsupportive", (e.g. high or low backed) or "flexible-rigid" (e.g. stationary or rocker base). Does a particular combination of characteristics in a chair convey a non-verbal message if selected for a specific interaction? Relationships can be thought of in terms of placement on continuums or dimensions of "close-distant" or "expressive-instrumental" while activities might be classified as "private-public" or "solitary-group". If chairs convey a message, then certain chairs should be perceived as more appropriate than other chairs for specified types of activity.

### Procedure

It is hypothesized that chairs that are soft, supportive and flexible are perceived as comfortable and suitable for private activities. Chairs that are hard, nonsupportive and rigid are not perceived as comfortable, but are appropriate for public activities.

Line drawings of six chairs were made to represent three dimensions: soft-hard, flexible-rigid, and support-nonsupport (see Figure 1). Curved lines were used to represent softness in the padding of the chair and flexibility or movement of rockers. The curved lines in a skirt at the base of a chair also suggest the motion of a swivel rocker. Straight lines were used to convey rigidity while support was indicated by the height of the lines. Three line drawings represented soft chairs, and three—hard chairs. Two of the drawings illustrated the flexibility of a rocker while the other four were rigid or stationary. Nonsupport was indicated by two low-backed chairs while the four high-backed chairs were considered supportive.

### Rating Scales

Activities to be rated were classified as public or private. The categories used to describe private activities were those basic states of privacy (Westin, 1967) considered as being applicable to home settings (Marshall, 1973): solitude, intimacy and reserve. Public activities considered were those that might occur in a home setting during group meetings. These categories could also represent different stages of the social penetration process (Altman & Taylor, 1973). The specific items rated by the respondents included for solitary activities: watching TV or reading a book; intimate: talking to someone who has made you very happy or sharing confidential information with a friend; reserved: talking to someone who has hurt your feelings or getting acquainted with someone you just met; and group: taking part in a group dis-

ussion or eating lunch at a group meeting. Two forms were prepared which included one item from each category of activity, asking for ratings of all six chairs on a five point scale (poor=1 to excellent=5) in terms of suitability for each activity. According to Schackel, Chidsey, and Shipley, (1969), no better measure for assessing chair comfort than numerical rating scales has been made available. Both forms also included a simple zero to three rating scale for measuring perception of each chair as "comfortable."

### Respondents

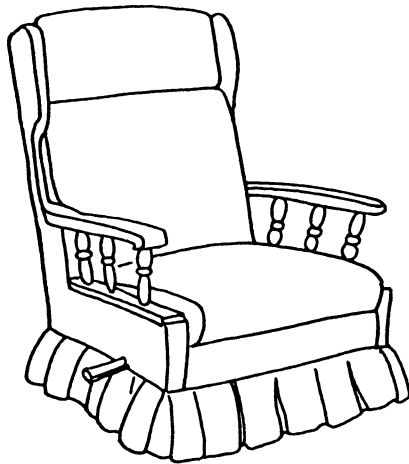
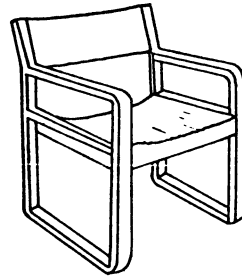
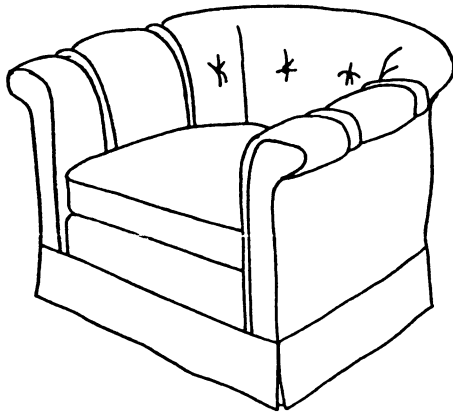
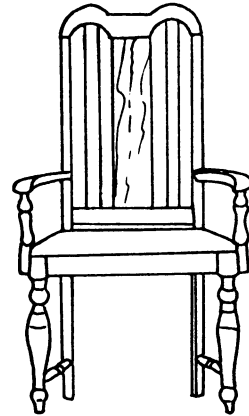
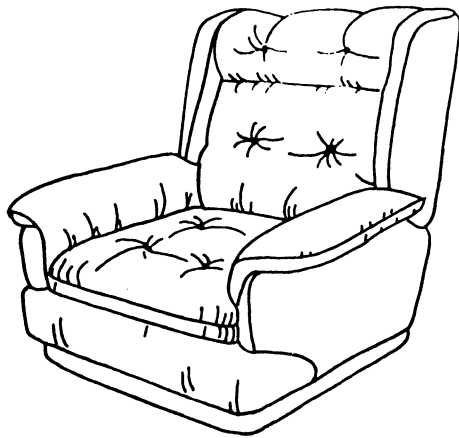
A class of female students enrolled in an introductory course in home economics was selected to serve as respondents. This group was homogeneous in age and career interest. Assuming that shared perceptions are culturally determined, a homogeneous group was desired at the exploratory stage of studying the perceptions of appropriateness of chairs for specific activities. Each form was completed by 104 students—a total of 208 responses.

### Findings

Analysis of variance of student ratings support the hypotheses that: chairs that are soft, supportive and flexible are perceived as comfortable and suitable for private activities; and chairs that are hard, nonsupportive and rigid are perceived as not comfortable, but appropriate for public activities. For activities classified as private, which included both solitary and one-to-one interactions (intimate and reserved), the softest appearing, high-backed chair on a stationary base was rated highest; the hard, high-backed stationary chair was rated lowest (see Table 1). For group and public activities hard, stationary chairs were rated higher than any of the soft chairs indicating that hardness and rigidity were the most desirable characteristics. Soft chairs and rockers were least desirable for public activities.

Differences in suitability of chairs for various activities cannot be explained in terms of any one dimension. Two-factor analysis of variance

Figure I. Line drawings used in Determination of Suitability and Comfort.



**TABLE 1**  
Ratings of Line Drawings of Chairs for Specific Activities

Activity	Correlation with Comfort Rating	Chair Characteristics						F ratio
		Soft			Hard			
		Stationary		Rocker		Stationary		
		High Back	Low Back	High Back	Low Back	High Back	Low Back	
<b>Solitary</b>		<b>Mean Ratings</b>						
WatchTV	.79°	4.8	3.1	4.0	3.1	1.8	1.0	267.5°
Read a book	.77°	4.7	3.3	3.9	3.0	1.8	1.2	223.3°
<b>Intimate</b>								
Happy	.68°	4.4	2.9	2.9	3.0	2.0	1.3	115.7°
Confiding	.60°	4.2	2.6	2.8	2.9	2.2	1.4	97.1°
<b>Reserved</b>								
Feelings hurt	.57°	3.9	2.8	2.7	2.6	2.1	1.6	56.8°
Getting acquainted	.46°	3.6	3.0	2.7	2.6	2.6	1.8	32.6°
<b>Group</b>								
Discussion	-.21°	2.1	2.3	1.9	1.7	3.2	3.0	34.7°
Eating lunch	-.26°	1.9	1.6	1.7	1.3	2.9	2.9	60.4°

\*  $p \leq .001$

**TABLE 2**  
Analysis of Variance for Chair Characteristics  
Rated for Specific Activities

Chair Characteristics	Source	df	Type of Activities			
			Solitary	Intimate	Reserved	Group
			MS	MS	MS	MS
Soft-Hard		1	1210.3°	431.7°	247.7°	116.3°
Style		2	101.1°	23.8°	.9	94.8°
S-HXS		2	225.6°	250.4°	104.1°	64.3°
Error		1242	.8	1.0	1.1	1.0

°  $p \leq .01$

showed significant interaction effects of the soft-hard dimension with chair style for all activities (see Table 2). The interaction of chair characteristics of style with the soft-hard dimension accounted for more of the variance in ratings for intimate activities (41 percent), reserved activities (25 percent), and group activities (17 percent) than either dimension considered alone. Perceptions of appropriateness for specific activities apparently were not based on a single factor such as the soft-hard dimension. Although 48 percent of the variance for solitary activities was explained by the soft-hard dimension, 27 percent was accounted for by the interaction of both factors.

Students rated the line drawings of each chair in terms of their perception of comfort. All soft chairs were rated as more comfortable than the hard chairs (see Table 3). However, the high-

TABLE 3  
Comfort Ratings of Chairs

Chair	Comfort Rating	
	Mean	Standard Deviation
Soft		
Stationary		
High-backed	2.815	.576
Low-backed	1.796	1.147
Rocker		
High-backed	1.777	1.061
Hard		
Rocker		
High-backed	1.498	.983
Stationary		
Low-backed	.512	.783
High-backed	.024	.152

n=208 female students  
F=289.0, df, 5/1242, p .001

backed rocker received a much higher rating than the other chair styles in the hard group. As hypothesized, soft chairs were perceived as more comfortable than hard chairs.

Correlations of ratings of suitability for activities with ratings of "comfortable" further support the hypotheses. Appropriateness of chairs for all private activities correlated positively ( $p < .001$ ) with ratings of "comfortable" (see Table 1). Suitability for group activities was negatively related to ratings of

### Discussion

A chair described as "comfortable" appears to be one that offers some opportunity for interaction with its occupant. It is in some way flexible or responsive to shifts in position. Such a chair provides momentary relief from the intensity of an interpersonal interaction, an excuse for shifting attention away from the other person, but without risk of bringing in, intentionally or accidentally, another individual who may change the nature of the interaction. The "comfortable" chair may offer solace and support in the form of tactile stimulation as the sitter leans back or redistributes weight to sink further into the chair, or it may provide for the release of tensions through gentle rocking motion initiated by the occupant. The notion of comfort appears to incorporate softness and flexibility. Although hard, rigid chairs are not rated as comfortable or viewed as appropriate for solitary or one-to-one activities, they are preferred for group activities.

The drawings of the three chairs considered to illustrate softness varied in degree. For example, the chair considered most suitable for solitary and one-to-one activities might be described as very soft in comparison to only moderately soft for the other two upholstered chairs. In this case, softness and flexibility in terms of potential interaction with the chair may be overlapping characteristics. More accurate assessment of the influence of these characteristics would require greater care in preparing the line drawing

representations or the use of objective measures to compare with subjective measures.

The data collected from an homogeneous group indicated shared perceptions of the relationships between chair characteristics and activities to be carried on from a chair (role performance). This finding poses more questions than it answers. Does the person in the chair get placed in the role seen as appropriate for the occupant of that chair regardless of the person's intent? Do we indicate our intended relationship with another individual by the chair we select? Is it "wrong" to be comfortable in front of more than one person? At group meetings, is the person in the comfortable chair excluded from the group? Effective role performance may include as a first step the selection of the right chair for the occasion. As Gross and Stone (1964) pointed out, poise is control over self and situation.

If two people are seated in chairs considered to be appropriate for intimacy in the relationship does intimacy develop? Conversely, if there are no chairs available for intimate interaction over an extended period of time, does a previously established intimate relationship disintegrate? What happens in a marriage if there is only one chair appropriate for confiding personal information? Persons normally sit for purposes that may be quite unrelated to the shape and properties of the seat. They do not seek comfort for its own sake, but rather for the pursuit of other purposes (Branton, 1969).

In conclusion we believe that the setting or arrangement of furnishings may well have direct effects on the role performance of the persons who use it. Although chairs can be classified by dimensions such as hard-soft, supportive-nonsupportive, flexible-rigid, the interaction effects between these dimensions for all activities showed that characteristics of individual chairs cannot be easily separated, but in some way are combined to give meaning to the selection of a particular chair.

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