

FIRST IMPRESSIONS OF OFFICE RECEPTION SPACES: COMMUNICATING
SYMBOLIC MEANINGS THROUGH DESIGN ELEMENTS AND FURNISHING
ARRANGEMENTS

By

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Abstract of Thesis Presented to the Graduate School
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My study examined specific influences that design elements and arrangement of furnishings within office reception areas might have on first impressions held by visitors. My study was conducted to contribute to the growing literature on the importance of office design (especially of reception areas) on individual's impressions of organizations. Based on Ornstein's study and suggestions made by the ecological perceptions and information-processing approaches, the following hypotheses were developed and tested: (1) consideration and control will underlie participants' impressions of companies as a result of viewing slides of reception area designs, (2) participants will have different impressions of the office spaces represented based on the design elements and arrangements of furnishings, and (3) participants will show a preference for working in firms that appear more considerate than controlling.

My general study approach involved briefly showing the participants slides of 8 different office reception areas. Reception area photographs were obtained from

commercial designers and published books. Three judges with expertise in design were instrumental in systematically assessing and selecting the appropriate photographs for the study. Study participants included 102 graduate students. Participants were shown 8 different office reception area slides and were asked to indicate their first impressions of these companies by completing 12 semantic differential scales for each slide. Additionally, the students were asked to indicate (on a 9-point scale) how much they would like to work for the company represented in the photograph.

Hierarchical cluster and factor analysis revealed that the students distinguished 2 dimensions of meaning (consideration and control) connoted by the slides of the office reception areas. According to the ANOVAs and post hoc analyses, students formed different impressions of consideration and control across the 8 companies represented. Moreover, it was found that the students clearly preferred to work for the firms they found considerate based on their first visual impression.

Further research is required to examine the influence of design elements and arrangement of furnishings in office reception areas on individual's impressions of companies. My study empirically validates the notion that the design of an office reception area—including elements such as form, architectural finish materials, and furniture arrangements—communicates meanings about companies and influence first-time visitors' impressions.

CHAPTER 1 INTRODUCTION

My study examined the influences that the design of individual office reception areas may have on impressions held by first-time visitors. Eight carefully selected slides of interior spaces with a variety of design elements and arrangements of furnishings were assessed in terms of how they communicated meanings to respondents. Meaning defined here is “nonverbal communication from the environment to people” (Rapoport, 1990, p. 178). Thus far, very little attention has been dedicated to examining the meanings communicated by office design, especially reception areas (Goodrich, 1986; Ornstein, 1992). Meanings conveyed by office environments, particularly, reception areas where visitors first come into contact with most companies, may be an important determinant of their initial impressions of a company (Ornstein, 1989b, 1992).

Corporate image is defined as “the way organization members believe others see their organization” (Hatch & Schultz, 1997, p. 358). Yee & Gustafson (1983) believe that the company’s image is born at the entrance and reception area. According to Gifford (1997), most companies are aware that the impression of an organization depends, in part, on visitor impressions of reception areas. Additionally, Ornstein (1989a, p.145) found that “objects commonly found in reception areas influence impressions.” Thus, most designers intentionally attempt to create specific impressions through their design, particularly in reception areas (Gifford, 2002). However, designers, because they lack research to guide their actions, may not clearly understand the meanings that individual design elements or arrangements may convey to the public.

To understand individuals' impressions of the slides of office reception areas, a convenience sample of 102 graduate students in a University classroom setting was identified. The methodology of using slides of office reception areas is consistent with other studies in which the connotative meanings and individuals' impressions were examined (Ornstein, 1992). Specifically, Ornstein studied how the arrangement of furniture, presence of artwork, plants, floral arrangements, and magazines connote meanings that college students and business executives used in forming impressions about companies (Ornstein, 1992). However, her research did not clearly examine how the three-dimensional shape of the space on its form, lighting quality, color contrasts, and architectural finish materials convey meanings and influence people's impressions of organizations. To help designers understand and predict which meanings are conveyed by particular design elements in reception areas, my study had a twofold intention: a) to include companies that are representative of high-end corporate interiors; and b) to expand the number of design elements included in a series of slides evaluated by research participants.

Purpose

My study examined specific influences that selected design elements and furniture arrangements within reception areas may have on first impressions held by outsiders. My study focused on the following variables: forms (organic vs. orthogonal); lighting quality (bright, moderate, and dim); colors (high, moderate, and low contrasts); finish materials of floors and walls (soft vs. hard); presence of artwork/plants/flowers; and arrangement of furnishings (informal seating arrangements that facilitate interaction vs. formal ones that do not). These variables were selected based on their relevance to various design elements and principles recommended by different scholars (Ching, 1996; Malnar &

Vadvarka, 1992; Pile, 1988). Hence, my study (1) evaluated dimensions of meaning underlying general impressions of companies based on the viewing of slides of office reception areas, and (2) determined whether these dimensions are a salient enough basis for people to use to differentiate among companies.

Research Hypotheses

Two of study's hypotheses are derived from Ornstein's (1992) findings. Her study used slides of office reception areas and found that two dimensions of meaning (consideration and control) are connoted by various types of physical symbols (e.g., artwork, plants, and flowers) and furniture arrangements. According to Gifford (2002, p. 363), consideration is defined as "warmth, comfort, ease, and goodness of communication." On the other hand, control can be defined as "order, stability, and rigidity" (Gifford, 2002, p. 362). Furthermore, Ornstein (1992) found that there was a relationship between a person's impressions of consideration and their liking to work for that firm. Specifically, the participants preferred to work for the firms they perceive as considerate (Ornstein, 1992).

Another hypothesis was derived from the suggestions made by the ecological perceptions (Gibson, 1979) and information-processing (Schnieder & Schriffrin, 1977) approaches. Specifically, my study tested two contrasting theoretical perspectives. According to the ecological perceptions approach:

The placement of objects in the environment physically allows for or affords only certain types of behaviors. For example, a large reception desk placed very near the front of a reception area physically blocks passage to the rest of the room thus allowing only limited freedom of movement and access. Based on these allowances or affordances, it is suggested that people form impressions. In this case, the restricted movement and access may translate into impressions of an organization where there is a lot of control and minimal autonomy (Ornstein, 1989b, p. 416).

This theory suggests that the “symbols themselves afford people useful information that should remain constant regardless of the context” (Ornstein, 1986, p. 225). On the other hand, the information-processing approach by Schnieder & Schriffrin (1977) proposes that “people process information about the environment and form cognitive schema consistent with their prior experiences” (Ornstein, 1992, p. 88). This theory suggests that “the various elements of office design are imbued with meanings and images as a result of individuals’ repeated contact with these objects in varied contexts” (Ornstein, 1989b, p. 416). For example, Duffy (1969) believes that wood office furniture suggests higher status than metal furniture. As people come to associate wood furniture with high ranking executives, the wood office furniture comes to connote higher status. Likewise, the informational-processing approach proposes that “symbols should take on different meanings under different circumstances” (Ornstein, 1986, p. 225).

Ornstein’s seminal work established that design elements in the reception areas convey meaning. Exactly how design elements “communicate” with a visitor is not well understood, but the literature reviewed here pertaining to the ecological perceptions and information-processing approaches has indicated how visitors may derive meaning from design elements. Thus, my study re-tested Ornstein’s (1992, p. 88) 2 hypotheses, with a new and different set of slides and different research participants. My third hypothesis was based on Ornstein’s (1992) overall findings. Specifically, hypothesis 1 posits that consideration and control will underlie participants’ impressions of companies as a result of viewing slides of reception area designs. Using suggestions made by the ecological perceptions and information-processing approaches, hypothesis 2 asserts that participants will have different impressions of the office spaces represented based on the design

elements and arrangements of furnishings. Finally, based on Ornstein's (1992) overall findings, hypothesis 3 is that participants will show a preference for working in firms that appear more considerate than controlling.

Assumptions

Several assumptions underlie my study. First, it is assumed that many designers attempt to convey a company's image through office design, especially in reception areas. This assumption is based on the literature that suggested reception areas are often designed specifically to create certain impressions (Steele, 1973; Ornstein, 1992). Second, it is assumed that all of the reception area photographs used in my study, which were obtained from recently published books showcasing contemporary interior design, represented high-end corporate interiors. In order to test this assumption, a panel of experts systematically reviewed the photographs and confirmed that all of the photographs were comparable. Finally, it was assumed that the graduate students who were the research participants in my study have enough life experiences to register meaningful evaluations of the spaces under review.

Significance

Office design can communicate important impressions that may influence the recruitment of managerial and secretarial staff (Klein & Ritti, 1980). Similarly, the office environment "may be very influential in communicating the firm's image and purpose to its customers" particularly within service organizations (Bitner, 1992, p. 57). Furthermore, Bitner (1992, p. 61) assumed that customers come "to a particular service organization with a goal or purpose that may be aided or hindered by the setting." As a result, the study of the influence of the office design, especially public spaces such as

reception areas “on impression formation seems vital to a more complete understanding of both how and what people learn about organizations” (Ornstein, 1992, p. 86).

Few studies in the literature have provided evidence as to what impressions may be conveyed when the designers attempt to use specific elements of office design as a means of “impression management” (Ornstein, 1989b, p. 411). Furthermore, Ornstein (1989b, p. 417) asserted that “the processes through which various facets of office design come to convey messages and influence impressions have received little attention in the office design literature to date.” Even though Ornstein’s suggestion occurred more than 15 years ago, there remain relatively, a small number of studies that have examined how people assign meanings to environmental design elements and how the relative weight of each design element impacts on individual’s impressions of an organization.

Although there are repeated claims about the meanings that certain finish materials such as wood vs. stone flooring connote (Bitner, 1992; Davis, 1984; Jarmel, 2003), there are hardly any empirical studies (Danko, 2000; Ridoutt, Ball, & Killerby, 2002) to identify what these meanings are and if there are any patterns. Furthermore, there are many claims that colors communicate meanings and influence impressions of companies (Jarmel, 2003; Duffy, 1990), but few provide empirical evidence (Ornstein, 1989b) to support their claims. Very few studies (Hendrick, Martyniuk, Spencer, & Flynn, 1977) specifically focused on impressions resulting from differences in lighting quality and brightness (Ornstein, 1989b). Additionally, not much is understood about symbolic meanings communicated by architectural forms and layout of furnishings and how it influences overall first impressions of a corporate setting.

My study aims to contribute to the empirical foundation which designers may use to make decisions about the impressions conveyed by design elements and arrangements of furnishings. Hence, the results of my study will offer insights into the meanings underlying certain furniture arrangements and design elements in reception areas.

According to Moleski & Lang (1986, p. 14), “the selection of design features must be consistent with the culture of the company and should be appropriate to the messages it wants to convey.” Hence, this research will also help business managers and corporate planners to select design elements that are consistent with the culture of their company and identify the appropriate messages that an organization wants to convey in the minds of clients, visitors, and the potential recruits to the company. According to Ornstein (1989b, p. 422), this kind of information may be useful for managers who want to “create certain impressions in the minds of employees, clients, and other outsiders.”

Delimitations

Each of the 8 photograph used in my study was selected from published books showcasing contemporary corporate interior design. The companies that were represented in the photographs were located within the United States, such as California, Colorado, Texas, and New York. One of the companies was located in Seoul, Korea. All of the companies had 25 or more employees. Therefore, the sizes of the firms were medium to large companies.

My study excluded architecture/interior design/landscape architecture students as research participants, since designers tend to perceive the environment differently than non-designers. For example, according to Gifford (2002), architects and designers view their designs differently from those who will occupy the designs. Since one of the major

goals of my study was to help designers understand users' (non-designers') impressions, non-design students were specifically included.

CHAPTER 2

IMPRESSION MANAGEMENT THROUGH WORKPLACE DESIGN

Corporations and other major organizations take great care in decisions about all facets of their organization. Obviously this applies to the products and services offered, but the corporate symbols (ranging from letterhead, logos, to architecture) which represent the organizations are also scrutinized intensely. Consequently, the design of an organization's offices is potentially an important component of the organization's overall image. The purpose of my study was to examine how particular design elements and furniture arrangements within office reception areas influence the first-time visitor's perceptions of an organization. According to Gifford (2002, p. 21), environmental perception is "the initial gathering of information." Environmental perception "includes the ways and means by which we collect information through all our senses" (Gifford, 2002, p. 21).

There is a growing literature on the influence of office design on the impressions of occupants and visitors to offices. Steele (1973, 1986) and Steele & Jenks (1977) have repeatedly indicated that the design of an organization's offices is important in influencing people's impressions of the organization. Likewise, Ornstein (1989a, p. 145) claimed that office design not only influences attitudes and behaviors, "it also influences impressions through the conveyance of symbolic messages; that is, different elements of office design connote messages and images that people then use in forming impressions about the company." Becker (2004, p. 4) also believes that "the physical cues of the office send environmental messages." Becker & Steele (1995) and Ornstein (1986,

1989b, 1992) have also argued that people form first impressions of organizations based on the design of the reception areas.

The following chapter presents a review of the literature regarding: (1) two theoretical perspectives that explain how visitors may derive meaning from design elements; (2) specific design elements that influence perception; (3) perception of control conveyed by office design; (4) perception of consideration conveyed by office design; (5) an importance of understanding users' perceptions; and (6) conclusion.

Theoretical Background

Before discussing specific messages that were found to be communicated by various facets of office design, 2 theoretical perspectives must be reviewed. According to Ornstein (1992), "the conceptual suggestions and empirical findings that placement of furnishings influences impressions suggest that this dimension serves a symbolic function by connoting meanings and images about organizations" (p. 87). She further distinguished between two contrasting theories which predict how placement of furnishings is translated into meaningful information. One view is offered by the ecological perceptions approach identified by Gibson (1979). Ornstein (1989b) claimed that this theory "provides one explanation for the manner in which the physical setting can come to have meaning for people" (p. 416). Specifically, Gibson (1979) indicated that "elements of the physical environment afford opportunities for certain types of behaviors. Based on these affordances, it is suggested that people form impressions of the importance, desirability, and acceptability of the behavior" (Ornstein, 1992, p. 87). According to this theory, "certain arrangements of cues give the perceivers direct, immediate perceptions of the environment" (Gifford, 2002, p. 29). For instance, informal seating arrangements, such as chairs placed at a right angle facilitate social interaction,

whereas formal seating arrangements, such as chairs placed back-to-back discourage social interaction (Gifford, 2002; Ornstein, 1992). Thus, the arrangement of chairs may imply “something to the perceiver about the importance of communication in this setting” (Ornstein, 1992, p. 87). “This theory may best explain how the physical arrangement of the office comes to take on meanings that are used in forming impressions” (Ornstein, 1989b, p. 416).

The other way in which “layout of furnishings may come to act as a symbol is suggested by the information-processing approach to perception” (Ornstein, 1992, p. 88). Ornstein (1989b, p. 416) indicated that this theory “helps explain how elements of the office come to acquire meanings.” The information-processing approach identified by Schneider & Schiffrin (1977), proposes that “people process information about the environment and form cognitive schema consistent with their prior experiences” (Ornstein, 1992, p. 88). Schema is defined as “active organization of past reactions or past experiences, which must always be supposed to be operating in any well adapted, organic response” (Retrieved from <http://blue.csbs.albany.edu:8000/730/week5.html>). “This also helps explain how style of furnishings and other physical symbols may come to serve a symbolic function. In these cases the objects themselves are imbued with meanings and images as a result of individuals’ repeated contact with these objects in varied contexts” (Ornstein, 1992, p. 88).

Specific Design Elements That Influence Perception

Given that perceptions of an organization are communicated by design elements, the literature has also addressed specific design features which influence perception. For example, Duffy (1990) intuitively assumed that colors and materials are essential elements in corporate image projection, both to visitors and employees. Similarly, Yee &

Gustafson (1983) believed that materials can make a significant difference in establishing corporate image. Furthermore, they indicated that “softness of the materials lets visitors know whether this is a formal, strictly business office or a more informal, comfortable type of place” (Yee & Gustafson, 1983, p. 163). Moreover, Bitner (1992, p. 66) believed that quality of materials used, artwork, and floor coverings in the environment “can all communicate symbolic meaning and create an overall aesthetic impression.” In an unpublished study (cited by Ornstein, 1989b), Ornstein used slides of office reception areas to examine business executives’ impressions of organizations. Essentially, she found that style of furnishings and color schemes contributed to executives’ impressions of organizations (Ornstein, 1989b).

Davis (1984) believed that the physical environment within an organization is composed of physical structure and symbolic artifacts. Davis defined physical structure as the “architectural design and placement of furnishings in a building that influence or regulate social interaction” (Davis, 1984, p. 272). On the other hand, “symbolic artifacts are aspects of the physical setting that individually or collectively guide the interpretation of the social setting” (Davis, 1984, p. 276). For example, symbolic artifacts include type and style of furnishings, type of flooring materials, and the color of the walls. Davis argued that these items (physical structure and symbolic artifacts) “all tend to communicate information about the organization and the people who work there” (Davis, 1984, p. 277).

Perception of Control Conveyed by Office Design

In the design of offices, many companies attempt to convey a specific corporate image. Various scholars (Jarmel, 2003; Gifford, 1997, 2002; Ornstein, 1989a, 1989b) and researchers (Ornstein, 1986, 1992) suggested that the method by which positive

impressions are created vary in two important ways. One view is that in order to create a positive impression, conveying a message of control (order, stability, and rigidity) is important (Gifford, 1997, 2002). Similarly, Jarmel (2003) claimed that in law offices, they use their office space to convey an image of power and control. Thus, “the space can become a critical influence in gaining leverage in negotiations” (Jarmel, 2003, p. 20).

Messages can convey control by the display of corporate flags, official seals, logos, and emblems (Gifford, 1997, 2002). Gifford’s claim is supported by various empirical studies. For example, Ornstein (1986) showed various reception area drawings to the university students and found that certain office props (e.g., flags, pictures of organizational leaders, and logos) influenced impressions of the organization. Specifically, she found that impressions of the degree to which an organization is structured and allows for employee autonomy were influenced by the presence of authority symbols, such as flags, pictures of organizational leaders, logos, and restrictive signs (Ornstein, 1986). Furthermore, Ornstein’s findings were supported by Goodsell’s research. Even though Goodsell (1977) did not assess people’s impressions, he visited various offices and found that different types of organizations manipulated aspects of the physical setting to promote a particular professional image. Specifically, he found that authority organizations, such as state drivers licensing agencies, police stations, displayed props such as photographs of organizational leaders, flags, logos, and seals in their reception areas (Goodsell, 1977).

People not only form impressions based on the office props (e.g., flags, logos and seals) but also on design elements such as style of furnishings. In an unpublished study (cited by Ornstein, 1989b), Ornstein showed slides of office reception areas to a group of

executives and found that traditional and early American furnishings conveyed a message of stability and structure. Although Ornstein (1989b) does not validate her claim with empirical evidence, she argued that furniture arrangement such as placement of reception desk within the company's reception area can convey impressions of control. For instance, according to Ornstein (1989b), "a large reception desk placed very near the front of a reception area physically blocks passage to the rest of the room thus allowing only limited freedom of movement and access" (p. 416). She believed that in this case, the restricted movement and access may translate into impressions of an organization indicating there is considerable control and minimal autonomy (Ornstein, 1989b). In summary, studies and literature show that office props (e.g., flags, logos, and pictures of organization leaders) and also, style and layout of furnishings can be used to convey an image of control to first-time visitors.

Perception of Consideration Conveyed by Office Design

To create a positive impression, conveying a message of consideration (warmth, comfort, ease and goodness of communication) is important for organizations (Gifford, 1997, 2002). Specifically, Gifford indicated that a message of consideration is conveyed by plants, art, magazines and furniture arranged in a sociopetal manner (e.g., furnishings that allow for greater ease of communication, such as the chairs set at right angles) in the reception areas (Gifford, 1997, 2002). Gifford's claims were supported by other empirical studies (Goodsell, 1977; Ornstein, 1986, 1992). For example, by actually visiting various offices, Goodsell (1977) found that service organizations displayed a large number of elements, such as plants, artwork, magazines, and upholstered seating to make visitors feel comfortable. Thus, Goodsell's findings suggest that the style of furniture might have an affect on impressions.

In an unpublished study (cited by Ornstein, 1989b, p. 419), Ornstein showed slides of office reception areas to a group of business executives and found that “modern furnishings with softer edges send messages about flexibility, warmth, and comfort.” In a follow up study, Ornstein (1992) showed slides of office reception areas to a group of students and executives. Specifically, she found that upholstered couches send message of consideration (Ornstein, 1992). Thus, Ornstein’s results are consistent with Goodsell’s findings that upholstered furnishings connote messages about comfort. Moreover, Ornstein (1992) also found that arrangements of furnishings that allow for greater ease of communication (e.g., seating arranged at right angles) were perceived as more comfortable than arrangements that make communication difficult or tense (e.g., chairs placed directly facing one another). Overall, Ornstein’s studies suggest that furniture arrangements (seating arranged at right angles) and furniture style, (soft materials, such as upholstered furnishings) pictured in the reception areas connote meanings of comfort or consideration.

A study by Ridoutt et al. (2002) provided more specific information about how materials are related to perceptions. They investigated the symbolic meanings communicated by wood when it is used in office interiors. Specifically, they showed color photographs to the students to examine their impressions of companies. There was overwhelming preference by participants to work for organizations displaying wood in their interior office environment. Adjectives such as energetic, personal, and comfortable were used by participants in the study to describe the organizations where wood were used in the interior spaces.

Danko (2000, p. 1) used a “qualitative research method called narrative or life stories in combination with a traditional case study approach” to explore the role of design in supporting strategic leadership initiatives related to recruitment and retention. Specifically by conducting face-to-face interviews with the executive level recruit, she found that an individual’s “first tangible evidence of corporate culture came through materials and finishes which signaled a climate of open communication” (p. 16). For example, she noted that extensive use of glass and modern woods produce strong positive first impressions of an unpretentious culture (Danko, 2000). Likewise, Duffy (1990) also believed that materials such as wood and fabrics convey warmth.

The color of the room has been investigated to determine whether the color variable makes a difference in impressions. For example, in an unpublished study (cited by Ornstein, 1989b), Ornstein used slides of office reception areas and found that executives perceived office reception areas with blue color tones comfortable, while brown and wheat colors were perceived as the least comfortable. These results are corroborated by other empirical studies (Eysenck, 1941; Sharpe, 1974), suggesting that “blue tones are frequently identified as the most soothing and calming of the primary and secondary colors” (Ornstein, 1989b, p. 419).

Although Yee & Gustafson (1983) did not provide any evidences to show impressions of the visitors, they provided an example of a company’s headquarters that were redesigned to create an image of comfort. Specifically, they pointed out that the interior architect used predominately red office colors with warm-toned paintings, textured fabrics, and soft, well-cushioned seating (Yee & Gustafson, 1983). Furthermore,

they acclaimed that these elements were all designed to allow the visitor to “feel welcome and comfortable, and encourage interaction” (Yee & Gustafson, 1983, p. 163).

Although a small number of studies have specifically focused on impressions conveyed from differences in lighting, there is evidence that the amount and type of lighting influences impressions (Ornstein, 1989b). For example, upon entering the same room with different lighting arrangement, Flynn, Spencer, Martyniuk, and Hendrick (1973) found that impressions of spaciousness, friendliness, and pleasantness were affected by changes in a room’s lighting. Similarly, Hendrick, Martyniuk, Spencer, and Flynn (1977) used slides of a room with different lighting arrangement and also found that impressions of spaciousness, friendliness, and pleasantness were affected by changes in a room’s lighting. Particularly, these researchers (Flynn et al., 1973; Hendrick et al., 1977) found that people reported more positive impressions of spaciousness, friendliness, and pleasantness when peripheral wall lighting was used, rather than overhead diffuse lighting. Moreover, by using slides of a room, Hendrick et al. (1977) found that when the type of lighting is held constant (e.g., overhead diffuse lighting), brighter illumination (100 footcandles), it resulted in reported impressions of more spaciousness, friendliness, and pleasantness than did darker illumination (10 footcandles). Overall, the literature reviewed here provides support for the claim that office props (e.g., plants, artwork, and magazines), style and arrangement of furnishings, materials, colors, and lighting can be effectively used to convey a message of consideration within organizations.

Importance of Understanding Users’ Perceptions

Although meanings are an integral part of the design concept, Rengel (2003) believes that not many designers are aware of their role in conveying meanings through design. Furthermore, in order to communicate meanings through design, designers need

to understand how design elements are interpreted by people. However, there is relatively little research to help designers predict how their designs will be interpreted by the user's perspective. Hence, scholars have cited the need for further research. For example, Rapoport claimed that meaning generally, and specifically users' meaning, has tended to be neglected in the environment-behavior studies, yet it is of central importance to understanding user's perceptions (Rapoport, 1990).

To communicate an image, the sender of the message must understand the visual language of those receiving it. Therefore, the analysis has to include knowledge of what meanings various users, that is staff, management, investors, consumers, and the public, give to environmental design elements (Moleski & Wang, 1986, p. 14). Thus, understanding how people perceive or assign meanings to various design elements within a natural setting of an office reception area could help designers and corporate planners to predict human responses to the design features. Moreover, study of meanings could help designers to understand the symbolic and aesthetic characteristics of design features when designing office environments.

Conclusion

In conclusion, many studies have supported the notion that office props, such as flags, logos, artwork, plants, and flowers connote meanings that individuals use in forming impressions about organizations. However, few studies have examined the meanings connoted by different facets of office design, and how these affect an individual's impression. This is an area where those writers in the field have offered many seemingly excellent "ideas" but few have provided empirical data with supporting evidence that can clarify how various design features and elements connote meanings that people use in forming impressions about companies. Studies that offer evidence show that various design elements, such as style of furnishings, arrangement of furnishings,

architectural finish materials, colors, and lighting influence individual's impressions.

Despite a promising start, more research is needed to test the specific meanings connoted by different design elements and arrangements of furnishings and their relationship to first-time visitor's impressions about organizations.

CHAPTER 3 RESEARCH METHODOLOGY

My study examined whether or not the design elements and arrangements of furnishings within office reception areas connote meanings that people use in forming impressions about companies. To identify the salient design elements and arrangements of furnishings for first-time office visitors, the study approach involved presenting slides of 8 different companies' reception areas to the study sample. These research participants indicated their first impressions of these companies by completing 12 semantic differential scales for each slide. Additionally, they were asked to indicate on a 9-point scale, how much they would like to work for the company represented in the photograph.

The photographs of office reception areas used in this research were obtained from commercial designers and published books. The photograph selection process involved an expert panel who were instrumental in selecting the appropriate photographs for the study. Specifically, a four-stage process was used to select the study photographs. In stage 1, 79 photographs were collected from the designers and published books. Stage 2 involved developing a scale to identify elements and principles of design in all photographs. During stage 3, the researcher systematically reviewed the photographs using this scale and judged 28 photographs to be appropriate for the next stage. Finally, stage 4 involved a panel of experts systematically reviewing photographs using the same scale developed in stage 2 to select the 8 photographs for the main study. This chapter

specifically describes each of these 4 stages, as well as a pilot study, participant sampling, procedures, and limitations.

Environmental Sampling

In order to assess how design elements and furniture arrangements within office reception areas influence individual's impressions, the research participants were shown color slides of office reception areas for 2 minutes. According to Power (1978), photographs and color slides have been used successfully by researchers to simulate real scenes. Additionally, this method of examining meanings connoted by various facets of the interior environment via slides has been used in numerous empirical studies (Campbell, 1979; Hendrick, Martyniuk, Spencer, & Flynn, 1977; Ornstein, 1992).

The focus of my study was reception areas. This area of the office environment was chosen for several reasons. First, an individual's initial impression of a company is most likely to be formed while waiting in a company's reception area (Ornstein, 1992). Second, reception areas are often carefully designed to send specific desired messages (Ornstein, 1992; Steele, 1973; Stimpson, 1988). Third, the reception/waiting area is the primary control area for any office. It is where visitors first come into contact with most organizations and is an important determinant of their initial impressions of companies (Ornstein, 1992). For the present study, a 4 stage process was followed to select appropriate reception area photographs for the study.

Stage 1

In stage 1, numerous photographs of office reception areas were collected from 2 sources: (1) professional design firms in the Southeast United States, and (2) published corporate interior design books. The process of obtaining photographs from design firms was initiated via a letter which was sent to 13 professional designers who serve on the

Advisory Board for the Department of Interior Design at the University of Florida. These designers were invited to participate in my study by providing photographs from office reception areas that they had recently designed. Four design firms responded and submitted a total of 41 photographs of office reception areas.

The researcher also selected 38 photographs from four different corporate interior design books (Yee, 2001; Abercrombie, 1998; Abercrombie, 1997; Slatin, 2001). Specifically, the photographs that showed both reception area desk and the waiting area furniture were selected for my study. To use these photographs from corporate interior design books, a letter requesting permission and listing specific photographs was sent to 2 publishers of corporate design books. Specifically letters were sent to a publisher at the Visual Reference/Retail Reporting Publications and also to a publisher at the Edizioni Press Publications, to request permission to use these photographs. Permission was obtained from the Visual Reference/Retail Reporting Publications to use 31 photographs from three of their books, which include the following: Yee (2001), Abercrombie (1998), and Abercrombie (1997). For one of the books originally published by Edizioni Press, it was learned that The Switzer Group owned the copyright of the photographs from Slatin (2001). Therefore, permission to use the 7 photographs from Slatin (2001) was obtained from the president of the Switzer Group.

Stage 2

At the conclusion of stage 1, 79 photographs had been selected. However, the photographs selected differed on several dimensions which were not relevant to the present study but which nevertheless could influence viewer perceptions of organizations. For example, the photographs of the specific reception areas chosen in stage 1 did not come from organizations similar in size and industry. Hence, the purpose of stage 2 was

to develop a scale to control for possible influences of dimensions such as spatial evaluation (e.g., quality) and contemporary/traditional style (e.g., furniture, artwork, detailing). In addition, there was a need to control for various design principles such as spatial relationships (e.g., proportion and spaciousness) and unity (e.g., similar design style, cohesiveness) within these reception areas (Table 3-1). However, design elements, such as forms, lighting quality, color contrasts, finish materials, presence of artwork/plants/flowers, and furniture arrangements were systematically manipulated (Table 3-1).

Table 3-1. List of the dimensions that were controlled and the variables that were systematically manipulated (independent variables)

Dimensions that were controlled	Variables that were systematically manipulated (independent variables)
Spatial evaluation (e.g., quality, expensiveness)	Lines and shapes/form (organic vs. orthogonal)
Spatial relationships (e.g., spaciousness, proportion)	Lighting quality (dim, moderate, bright)
Unity (e.g., similar style)	Color (low, moderate, high contrast)
Contemporary/traditional (e.g., furniture, artwork, detailing)	Finish materials (soft vs. hard materials) Artwork, plants, and flowers (present vs. absent) Seating arrangement (informal vs. formal)

The goal of stage 3 was to select photographs while controlling for spatial evaluation, spatial relationships, unity, and contemporary/traditional style. A second goal of stage 3 was to systematically assess the photographs with respect to the following dimensions: forms (organic vs. orthogonal), lighting quality (bright, moderate, and dim), color (high, moderate, and low contrasts), the finish materials of floors and walls (soft vs. hard), presence of artwork/plants/flowers, and also arrangement of furnishings (informal seating arrangements that facilitate interaction vs. formal ones that do not). Therefore,

stage 2 involved developing a different scale for judging the photographs. To accomplish these goals, semantic differential scales were created and used for the purpose of judging the photographs (Table 3-2). According to Tagg (1974), visitor impressions of differences between rooms can be measured with the semantic differential scales. These items within the semantic differential were selected based on their relevance to various design elements and principles (Ching, 1996; Malnar & Vodvarka, 1992; and Pile, 1988) and their use in other empirical studies (Acking & Kuller, 1972; Hogg, Goodman, Porter, Mikellides, & Preddy, 1979; and Hendrick et al., 1977).

Table 3-2. The 23 semantic differential scales developed in stage 2 for selecting the study photographs

The 23 semantic differential scales
<ul style="list-style-type: none"> ▪ Expensive-Inexpensive ▪ Fine-Substandard ▪ High quality-Low quality ▪ Spacious-Cramped ▪ In Proportion-Out of Proportion ▪ Unitary-Chaotic ▪ Similar Style-Eclectic ▪ Uncluttered-Cluttered ▪ Contemporary furniture-Traditional furniture ▪ Contemporary artwork-Traditional artwork ▪ Contemporary detailing-Traditional detailing ▪ Curved lines-Straight lines ▪ Organic furnishings-Orthogonal furnishings ▪ Organic architectural elements-Orthogonal architectural elements ▪ Bright lighting-Dim lighting ▪ Widows-Absence of windows ▪ Concealed light fixtures-Exposed light fixtures ▪ Low contrast color scheme-High contrast color scheme ▪ Informal seating arrangement-Formal seating arrangement ▪ Conversational seating arrangement-Airport seating arrangement ▪ Seating arrangement facilitates social interaction-Seating arrangement discourages social interaction ▪ Artwork, plants, and flowers significantly present-Absence of artwork, plants, and flowers ▪ Soft materials-Hard materials

Stage 3

After gathering 79 photographs of office reception areas from published books and from individual designers, stage 3 involved a systematic review of the photographs by the researcher. In selecting photographs, the following dimensions were kept consistent in all of the photographs: spatial evaluation, spatial relationships, contemporary/traditional style, and unity. However, the following independent variables were systematically manipulated: forms (organic vs. orthogonal), lighting quality (bright, moderate, and dim), colors (high, moderate, and low contrasts), finish materials of floors and walls (soft vs. hard), presence of artwork/plants/flowers, and furniture arrangements (informal seating arrangements that facilitate interaction vs. formal ones that do not). Using a series of 23 semantic differential scales developed in stage 2 (See Appendix A), the researcher judged the 79 photographs. More specifically, the researcher reviewed each of the 79 photographs and completed 23 semantic differential scales for each photograph.

The semantic differential scales were scored from 1 to 3 for each scale (1 indicates high quality, in proportion, unitary, and contemporary space, organic forms, bright lighting, low contrast colors, soft materials, presence of artwork/plants/flowers, and informal seating arrangements). Scores were then summed across the scales. Since there were 3 semantic differential scales under the categories of spatial evaluation, form, and seating arrangement, these scores ranged from 3 to 9 (Table 3-3). Furthermore, as there were 2 semantic differential scales under the categories spatial relationships and unity, these scores ranged from 2 to 6 (Table 3-3). Moreover, because there were 4 semantic differential scales under the categories of contemporary/traditional styles and lighting/color evaluation, these scores ranged from 4 to 12 (Table 3-3). Finally, since

there was only one semantic differential scale under the categories artwork/plants/flowers and materials, these scores ranged from 1 to 3 (Table 3-3).

Table 3-3. The 23 semantic differential scales under 9 different categories

Spatial Evaluation	<ul style="list-style-type: none"> ▪ Expensive-Inexpensive ▪ Fine-Substandard ▪ High quality-Low quality
Spatial Relationships	<ul style="list-style-type: none"> ▪ Spacious-Cramped ▪ In Proportion-Out of Proportion
Unity	<ul style="list-style-type: none"> ▪ Unitary-Chaotic ▪ Similar Style-Eclectic
Contemporary/Traditional	<ul style="list-style-type: none"> ▪ Uncluttered-Cluttered ▪ Contemporary furniture-Traditional furniture ▪ Contemporary artwork-Traditional artwork ▪ Contemporary detailing-Traditional detailing
Lines and Shapes/Form	<ul style="list-style-type: none"> ▪ Curved lines-Straight lines ▪ Organic furnishings-Orthogonal furnishings ▪ Organic architectural elements-Orthogonal architectural elements
Lighting and Color Evaluation	<ul style="list-style-type: none"> ▪ Bright lighting-Dim lighting ▪ Widows-Absence of windows ▪ Concealed light fixtures-Exposed light fixtures ▪ Low contrast color scheme-High contrast color scheme
Seating Arrangement	<ul style="list-style-type: none"> ▪ Informal seating arrangement-Formal seating arrangement ▪ Conversational seating arrangement-Airport seating arrangement ▪ Seating arrangement facilitates social interaction-Seating arrangement discourages social interaction
Artwork/Plants/Flowers	<ul style="list-style-type: none"> ▪ Artwork, plants, and flowers significantly present-Absence of artwork, plants, and flowers
Materials	<ul style="list-style-type: none"> ▪ Soft materials-Hard materials

Next, the scores for the spatial evaluation, spatial relationships, unity, and contemporary/traditional categories were summed. Since there were 11 semantic differential scales, these scores ranged from 11 to 33. The scores that ranged from 11 to

21 were considered to be expensive, high quality, spacious, in proportion, unitary, and/or contemporary in style. On the other hand, the scores that ranged from 22 to 33 were considered to be inexpensive, low quality, cramped, out of proportion, chaotic, and/or traditional in style. Therefore, the photographs that had scores that ranged from 22 to 33 were excluded. This process resulted in 28 photographs that were high in quality, proportionate, unitary, and contemporary in style, but varied in forms, lighting quality, color contrasts, finish materials, presence of artwork/plants/flowers, and arrangements of furnishings.

Stage 4

The final stage (stage 4) of the photograph selection process involved a panel of judges with expertise in design. During this phase, the goal was to further reduce and refine the photographs to be included in the study. This process resulted in the selection of 8 photographs from the 28 photographs selected in stage 3. Specifically, degrees of similarity of spatial evaluation, spatial relationships, unity, and contemporary style but variety of architectural forms, lighting quality, color contrasts, finish materials, presence of artwork/plants/flowers, and arrangements of furnishings within the photographs were determined by the expert panel. The judges included one interior design faculty member and two interior design PhD students at the University of Florida. Using the same 23 semantic items from the semantic differential scales used previously in stage 3 (See Appendix A), each of the three judges was asked to rate each of the photograph on these scales.

The responses from a panel of three judges to the semantic differential scales were scored from 1 to 3 for each scale (1 indicates high quality, in proportion, unitary, and contemporary space, organic forms, bright lighting, low contrast colors, soft materials,

presence of artwork/plants/flowers, and informal seating arrangements). Scores were then summed across the scales. The scores for the spatial evaluation, spatial relationships, unity, and contemporary/traditional categories were added for each of the three judges. Since there were 11 semantic differential scales, these scores ranged from 11 to 33. The scores that ranged from 11 to 21 were considered to be expensive, high quality, spacious, in proportion, unitary, and/or contemporary in style. On the other hand, the scores that ranged from 22 to 33 were considered to be inexpensive, low quality, cramped, out of proportion, chaotic, and/or traditional in style. The responses from the judges indicated that 2 of the photographs had scores higher than 22. Therefore, those 2 photographs were excluded from the study. In the other 26 photographs, the scores for the spatial evaluation, spatial relationships, unity, and contemporary/traditional dimensions were low (under 21), which meant that these photographs were high in quality, in proportion, unitary, and contemporary in style.

Next, the scores for the lines and shapes/form, lighting/color evaluation, finish materials, artwork/plants/flowers, and seating arrangement categories were summed for each of three judges. Since there were 12 semantic differential scales, these scores ranged from 12 to 36. The scores that ranged from 12 to 24 were considered to have organic forms, bright lighting, low contrast color scheme, soft materials, presence of artwork/plants/flowers, and/or informal seating arrangements. On the other hand, the scores that ranged from 25 to 36 were considered to have orthogonal forms, dim lighting, high contrast color scheme, hard materials, absence of artwork/plants/flowers, and/or formal seating arrangements. After the scores for the form, lighting/color evaluation, finish materials, artwork/plants/flowers, and seating arrangement categories were

summed for each of three judges, the next step involved adding the three scores (total scores for the 3 judges). These scores ranged from 36 to 108. The photographs with lower scores meant that all of the three judges thought the photograph had organic forms, bright lighting, low contrast color scheme, soft materials, artwork/plants/flowers present, and/or informal seating arrangements.

The findings of Hendrick et al., (1977), Ornstein (1992), and Goodsell (1977) suggest that design elements such as bright lighting, soft materials, presence of artwork/plants/flowers, and informal seating arrangements used in interior office environment/reception areas convey a message of consideration. However, it was intuitively assumed that the organic forms and low contrast color scheme convey a message of consideration. On the other hand, the photographs with higher scores meant that the three judges thought the photograph had orthogonal forms, dim lighting, high contrast color scheme, hard materials, absence of artwork/plants/flowers, and/or formal seating arrangements. Ornstein (1992) found that presence of artwork/plants/flowers and use of deep pile carpeting in the reception areas were seen as less controlling by the students and the business executives. Hence, Ornstein's (1992) findings suggest that absence of artwork/plants/flowers and hard materials (absence of soft materials) in office reception areas can convey a message of control. For my study, orthogonal forms, dim lighting, high contrast color scheme, and formal seating arrangements were intuitively assumed to convey a message of control. Therefore, the photographs that had the lowest and the highest scores were included in the study. During this phase, it was decided that the researcher would exclude the photographs that had daylighting. Since the amount of daylight coming into the interior space effects the light level in the interior, daylighting

was left out of the study. Therefore, 6 photographs that had windows to the exterior were excluded from the study.

Based on the judges' evaluations, 8 photographs that were either low or high in the dimensions of form, lighting/color evaluation, finish materials, artwork/plants/flowers, and seating arrangement were selected to be used for the study (Figures 3-1 through 3-8). These photographs were similar in quality, spatial relationships, unity, and contemporary style, but varied in the degree of architectural forms, lighting quality, color contrasts, finish materials, presence of artwork/plants/ flowers, and arrangements of furnishings.

Since all of these photographs were taken by professional photographers, the quality of the photographs is excellent. The photographs focus on the general interiors of the reception areas including walls, floor finish materials, and reception area furniture (e.g., reception area desk and waiting area furniture). However, none of the photographs include windows, any information that would disclose the identity of the corporation pictured, or people. After the 8 photographs were selected, the researcher contacted the individual copyright holder for each of the 8 photographs and obtained written permissions to use the photographs in the study. The 8 photographs were then included in a PowerPoint presentation.

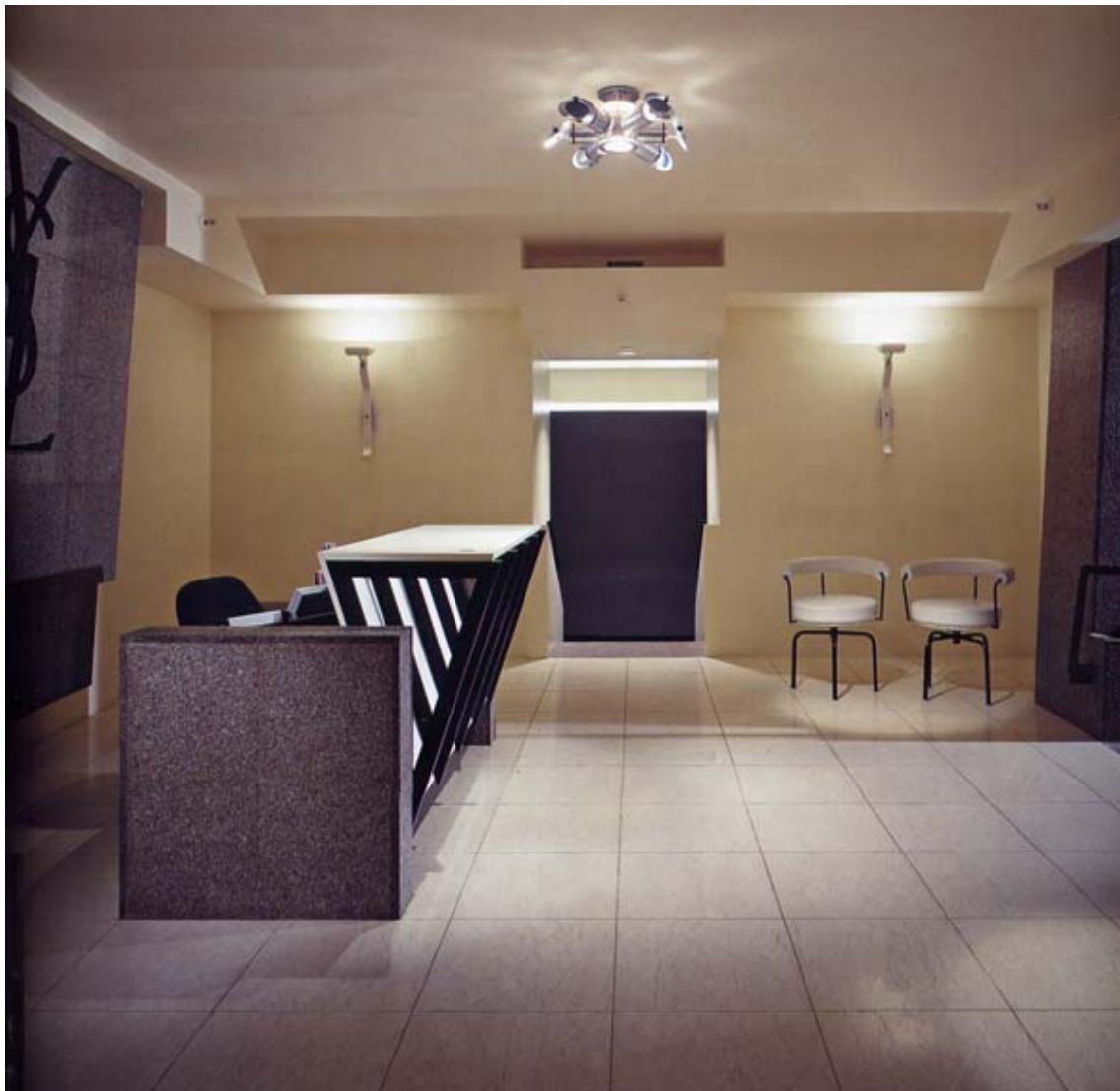


Figure 3-1. Reception area slide 1. From *Design as an Understanding of the Business Environment: The Switzer Group*, by P. Slatin, 2001, p. 31. Copyright 2001 by The Switzer Group. Reprinted with permission of The Switzer Group.



Figure 3-2. Reception area slide 2. From *Corporate Interiors. No. 4*, by R. Yee, 2001, p. 391. Copyright 2001 by the Visual Reference Publications. Reprinted with permission of the Visual Reference Publications.



Figure 3-3. Reception area slide 3. From *Corporate Interiors. No. 4*, by R. Yee, 2001, p. 184. Copyright 2001 by the Visual Reference Publications. Reprinted with permission of the Visual Reference Publications.



Figure 3-4. Reception area slide 4. From *Corporate Interiors. No. 4*, by R. Yee, 2001, p. 99. Copyright 2001 by the Visual Reference Publications. Reprinted with permission of the Visual Reference Publications.

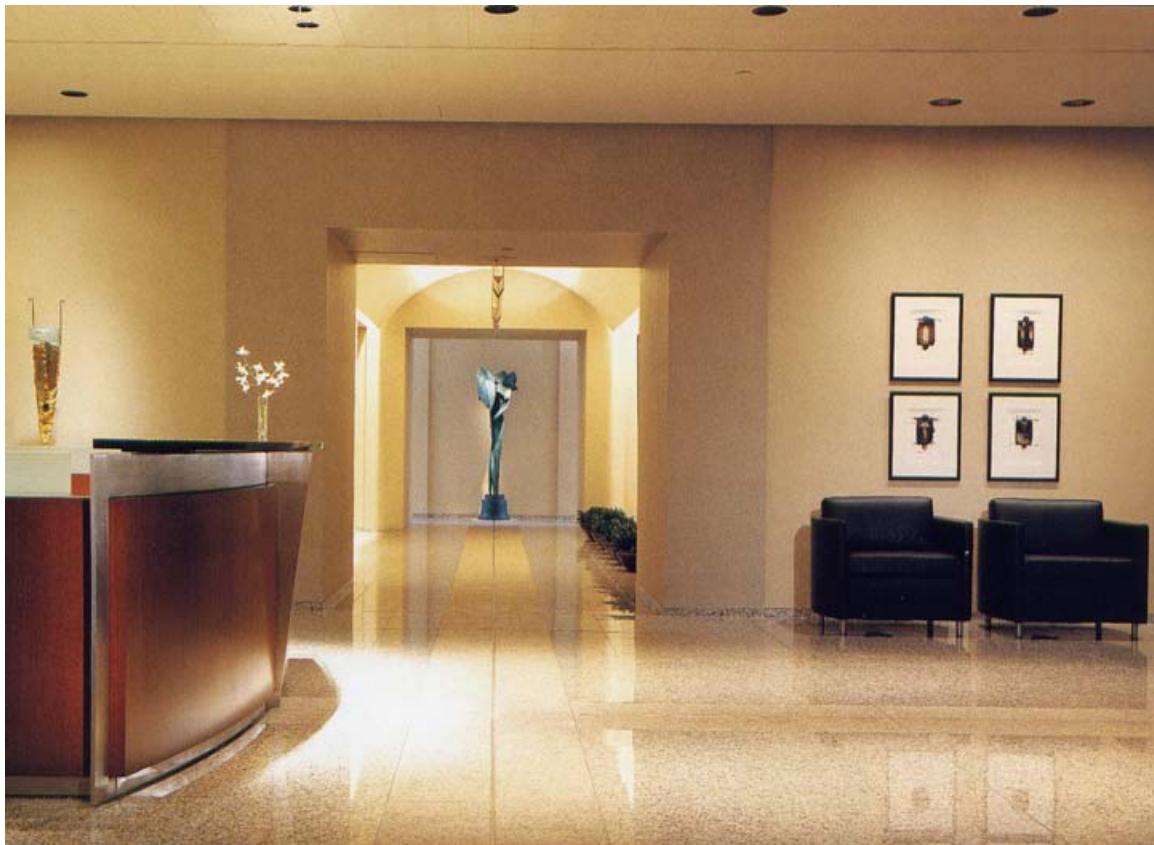


Figure 3-5. Reception area slide 5. From *Corporate Interiors: Corporate Interiors Design Book Series No.1*, by S. Abercrombie, 1997, p. 244. Copyright 1997 by the Retail Reporting Corporation. Reprinted with permission of the Retail Reporting Corporation.



Figure 3-6. Reception area slide 6. From *Corporate Interiors. No. 4*, by R. Yee, 2001, p. 78. Copyright 2001 by the Visual Reference Publications. Reprinted with permission of the Visual Reference Publications.



Figure 3-7. Reception area slide 7. From *Design as an Understanding of the Business Environment: The Switzer Group*, by P. Slatin, 2001, p. 22. Copyright 2001 by The Switzer Group. Reprinted with permission of The Switzer Group.



Figure 3-8. Reception area slide 8. From *Corporate Interiors. No. 4*, by R. Yee, 2001, p. 418. Copyright 2001 by the Visual Reference Publications. Reprinted with permission of the Visual Reference Publications.

Pilot Study

A pilot study was conducted 10 days before the main study for the purpose of testing and evaluating the procedures and questionnaires. The preliminary study took place during an undergraduate course in the Marriages and Families (Sociology 2430) at the University of Florida. The researcher arranged with the professor to solicit students to voluntarily participate in my study. After obtaining consent, students were asked to participate in a study of reception area design during the last 15 minutes of a regularly scheduled class. Students who agreed to participate remained in the classroom. Feedback from participants in this preliminary study indicated that aspects of the instructions for the semantic differential scales and the formatting of the questions were confusing. Therefore, for the main study, the researcher reformatted the questions and clarified the instructions for the semantic differential scales. The data collected from this preliminary study are not included in the main study.

Participant Sampling

The study sample consisted of 102 University of Florida graduate students both at the masters and PhD level. These students were enrolled in an ETD (Electronic Thesis and Dissertation) workshop for January 23, 2005, from 1:00pm to 4:00pm. The researcher arranged with the ETD workshop instructor to allow students to voluntarily participate in my study during the workshop. After obtaining consent, students were asked to participate in a study of reception area design for 15 minutes during the beginning of the workshop. Participants who agreed to participate remained in the classroom. Before the study, students were provided with no information about reception area design or environmental influences on impressions. The students ranged in age from 24 to 56 with a mean of 31 years of age. Fifty four percent of the students were female.

Fifty six percent of the students were PhD students. Fifty two percent of the students had prior work experiences in a large company or an office with 30 or more employees.

These students had prior work experiences, ranging from a month and a half to twenty years. The study excluded 5 current design students since designers have been shown to perceive the environment differently than the general public (Gifford, 2002).

Procedure

Students were shown 8 slides of office reception areas and were asked to record their impressions of the companies shown by choosing a point on each of 12 semantic differential scales (See Appendix B). According to Ornstein, the semantic differential scales are useful tools for gaining understanding of the connotative meanings that impact individual's impressions of organizations (Ornstein, 1992). Additionally, these scales have been repeatedly used in other empirical studies that investigated symbolic messages connoted by various facets of the environment (Evans & Wood, 1980; Hendrick et al., 1979; Ornstein, 1986, 1992; Ridoutt et al., 2002).

Eight photographs of office reception areas were shown to the students using a PowerPoint slide presentation. Each of the 8 slides was presented to the students as a group. Each slide was shown for about 2 minutes. Students were not aware of the companies' identities represented in the slides nor were they informed of the industry in which these companies operated. Packets containing 12 semantic differential scales were distributed to the students and they were told that the 8 slides of reception areas would be presented. Following Ornstein (1992, p. 91), students were asked to imagine themselves sitting "in these reception areas waiting for a job interview. They were further instructed to think about what it might be like to work for these organizations." While each slide was presented on the screen, students completed the 12 semantic differential scales.

Specifically, the following adjective pairs were used: Rigid – Flexible, Tense – Relaxed, Rewarding – Unrewarding, Orderly – Chaotic, Pleasant – Unpleasant, Positive – Negative, Impulsive – Deliberate, Approving – Disapproving, Prohibitive – Permissive, Personal – Impersonal, Good – Bad, and Comfortable – Uncomfortable. These adjective pairs in my study were selected based on: (1) their use in a previous study evaluating impressions of organizations (Ornstein, 1992), (2) their use in similar research studies (Ornstein, 1986; Ridoutt et al., 2002), and (3) the empirical research that recommends the dimensions of activity, evaluation, and potency are important in understanding environmental connotations (Mehrabian & Russell, 1974; Ornstein, 1992; Russell & Snodgrass, 1987; Russell & Steiger, 1982; Ridoutt et al., 2002).

The 12 semantic differential scales provided students with a range of choices to record their impressions of these companies. Students were told to imagine they were waiting for a job interview and asked to convey their impressions based upon the reception area design. The 7-point array within each of these semantic differential scales varied from very closely related, quite closely related, slightly related, to neutrally related. In addition, students were asked to indicate on a separate 9-point scale (arranged as: 1=dislike extremely, 5=neither like nor dislike, 9=like extremely) how much they would like to work for the companies whose reception areas were shown in the 8 photographs (See Appendix B). These 9-point scales were below each of the semantic differential scales. Other information such as their gender, year of birth, highest education level completed, college major, and finally, prior work experience(s) in a large company were requested from each respondent (See Appendix B).

Limitations

Even though use of photographic slides offers a convenient and practical method of data collection, there are some general limitations related to this method. Although numerous studies in environmental psychology have affirmed the validity of the general method used here (i.e., using slides as substitutes for actual environments), there are some weaknesses to these instruments (Heft & Nasar, 2000). For example, it is possible that slides may influence people's impressions in some ways different from the actual experience of visiting an office (Ornstein, 1992). Since my study utilized slides of office reception spaces, it only assessed visual impressions. Thus, my study did not examine if physical stimuli, such as noise, temperature, and smell of the office environment influence individuals' impressions. Furthermore, since my study only included 8 office reception areas, this is another limitation to this thesis. Moreover, since the only source of information provided in my study is the reception areas, "it may take on greater salience in influencing impressions than it would in an everyday context" (Ornstein, 1992, p. 106).

Additionally, "the ability to describe first impressions of the organizations was constrained by the fact that they can only be expressed in terms of the adjective checklist provided" (Ridoutt et al., 2002, p. 35). Nevertheless, the 24 adjectives chosen for my study were used in other empirical studies (Ornstein, 1986, 1992; Ridoutt et al., 2002) and were "thought to provide sufficient choice of meaningful terms" (Ridoutt et al., 2002, p. 35). Furthermore, my study only included the students' impressions of the companies. According to Ind (1990), not all of the audiences (various users) will interpret an office environment in the same way. Thus, the results of my study will only pertain to the symbolic meanings communicated by design elements and arrangement of furniture by

these graduate students. Since the participants in my study were graduate students, this is another limitation. Specifically, the results of my study only apply to masters and doctoral graduate students. However, one of the main advantages of using graduate students was that the graduate students have greater life experiences than the traditional undergraduate students.

CHAPTER 4 FINDINGS

The purpose of my study was to examine any influences that design of individual office reception areas may have on impressions held by first-time visitors. To test the 3 hypotheses, various statistical analyses were conducted. Specifically, in order to evaluate the first hypothesis, that consideration and control underlie participants' impressions of companies as a result of viewing slides of reception area designs, hierarchical cluster and factor analysis were conducted. In order to test the second hypothesis that the students will have different impressions of the office spaces represented based on the design elements and arrangements of furnishings, Analysis of Variance (ANOVA) was conducted, followed by Student-Newman-Keuls post hoc multiple comparison tests. Finally, in order to test the third hypothesis, that students will express a greater desire to work for the firms that appear more considerate than controlling, Spearman-Brown rank-order correlations were used. The following chapter specifically describes each of these analyses.

Two Dimensions of Meaning Underlie Students' Impressions: Consideration and Control

Two different analyses were conducted in order to evaluate the hypothesis 1 that consideration and control underlie participants' impressions of companies as a result of viewing slides of reception area designs. First, student responses to the semantic differential scales were analyzed using hierarchical cluster analysis. From this analysis, 2 possible methods for grouping the items emerged. The data pointed to either a 3 or 2

well-defined groups. Specifically, 3 different groups or clusters were within a rescaled distance of 3 (Figure 4-1). One cluster of items from the semantic differential included Unpleasant-Pleasant, Negative-Positive, Bad-Good, Disapproving-Approving, and Unrewarding-Rewarding. A second cluster of items included Rigid-Flexible, Tense-Relaxed, Prohibitive-Permissive, Uncomfortable-Comfortable, and Impersonal-Personal. Finally, the third cluster of closely related items included Chaotic-Orderly and Impulsive-Deliberate.

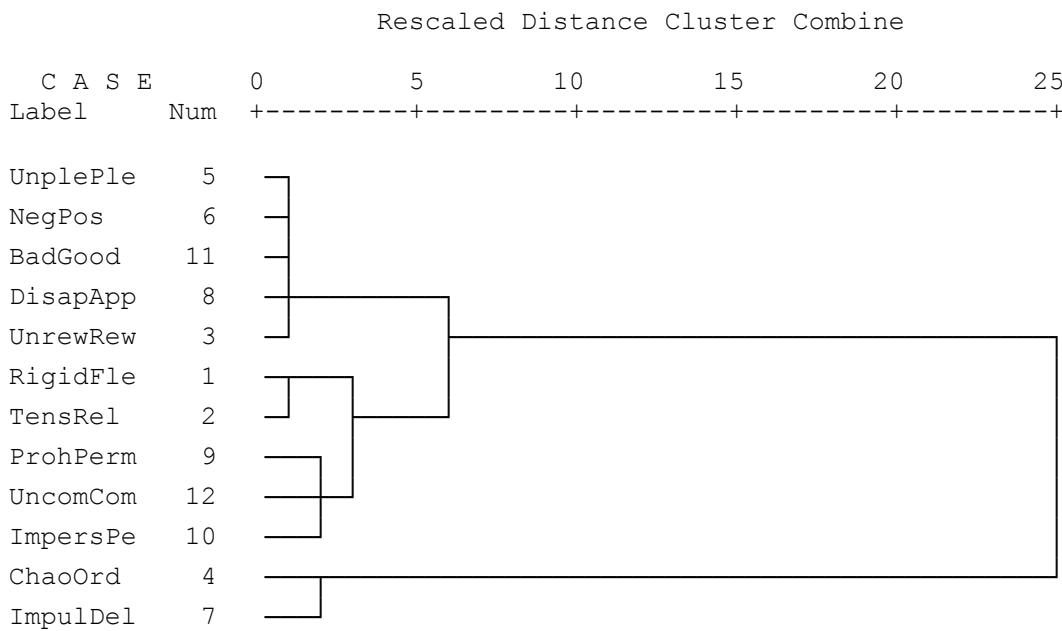


Figure 4-1. Hierarchical cluster analysis

Using slightly different criteria, 2 different groups or clusters were within a rescaled distance of six. The first cluster included the following semantic differential scales: Unpleasant-Pleasant, Negative-Positive, Bad-Good, Disapproving-Approving, Unrewarding-Rewarding, Rigid-Flexible, Tense-Relaxed, Prohibitive-Permissive, Uncomfortable-Comfortable, and Impersonal-Personal. On the other hand, the second cluster included Chaotic-Orderly and Impulsive-Deliberate. Since the rescaled distance was only about 3 distances apart between the initial 3 groups, and the next 2 groups, it

was decided that the initial 3 groups can be made into 2 groups. Therefore, the scales (Unpleasant-Pleasant, Negative-Positive, Bad-Good, Disapproving-Approving, and Unrewarding-Rewarding) and scales (Rigid-Flexible, Tense-Relaxed, Prohibitive-Permissive, Uncomfortable-Comfortable, and Impersonal-Personal) were combined into one major group. Thus, this finding supported the first hypothesis that 2 dimensions of meaning underlie students' impressions of companies pictured.

The semantic differential scales for each of the 8 firms were separately analyzed using factor analysis via SPSS. Since the purpose of my study was to find dimensions of meaning underlying students' impressions of companies, factor analysis was conducted for each office reception area slide. Thus, principle component analysis was used to extract the factors. From the factor analysis, it was found that only the first 2 factors were significant. Specifically, overall analysis of the Scree Plots indicated that there were 2 factors (Tables 4-1 and 4-2). Varimax rotation was used to enhance relationships between the variables and the significant factors. Hence, this analysis, in addition to the cluster analysis, grouped the semantic differential scales into 2 different factors. Furthermore, the groupings of the variable were also consistent between the 2 analyses. Therefore, the factor analysis provided additional support that there are 2 major factors (consideration and control) that underlie students' impressions.

The factor analysis indicated that the first factor accounted for an average of 51% of the variance. According to Ornstein (1992, p. 99), this factor "may best be described as a dimension of organizational consideration." Items loading highly on this factor included the following: Unpleasant-Pleasant, Bad-Good, Negative-Positive, Disapproving-Approving, Uncomfortable-Comfortable, Prohibitive-Permissive, Unrewarding-Rewarding, Tense-Relaxed, Impersonal-Personal, and Rigid-Flexible. All

of these semantic differential scales had high factor loadings with factor one (consideration factor). According to Ornstein (1992, p. 99), “this factor represents an evaluative dimension similar to that found in much environmental research” (Mehabian & Russell, 1974; Osgood, Suci, & Tannenbaum, 1957; Osgood, 1969). Thus, this factor shows organizations that are pleasant, good, positive, approving, comfortable, relaxed, and permissive. Therefore, it seems to be best described by organizational consideration (organization that is considerate of people).

Table 4-1. Factor loadings for consideration

Slide #	Factor 1							
	1	2	3	4	5	6	7	8
Unpleasant-Pleasant	.80	.64	.90	.69	.89	.84	.88	.78
Bad-Good	.79	.70	.90	.81	.83	.80	.86	.87
Negative-Positive	.78	.65	.88	.85	.88	.87	.90	.88
Disapproving-Approving	.77	.78	.87	.84	.79	.85	.79	.82
Uncomfortable-Comfortable	.72	.85	.86	.84	.75	.73	.90	.84
Prohibitive-Permissive	.61	.74	.75	.67	.77	.76	.79	.80
Unrewarding-Rewarding	.59	.81	.84	.83	.80	.79	.84	.82
Tense-Relaxed	.56	.80	.73	.82	.74	.73	.80	.82
Impersonal-Personal	.56	.81	.67	.75	.74	.70	.81	.79
Rigid-Flexible	.49	.70	.61	.75	.69	.63	.76	.75
Chaotic-Order	.09	.08	.14	.16	.08	.14	.07	.12
Impulsive-Deliberate	.05	-.08	-.08	-.05	-.27	-.23	-.12	-.08
Variance	38%	47%	54%	52%	53%	51%	58%	56%

Note: Bolded items represent higher factor loadings that were considered in making judgments pertaining to number of factors and the meaning of each factor

The second factor accounted for an average of 15% of the variance. The items with high loadings on this factor included Chaotic-Order and Impulsive-Deliberate. These 2 semantic differential scales had high correlation with factor 2. Following from Ornstein (1992, p. 99), this factor can “best be described as a dimension of organizational control.” Organizational control was selected as the name for this factor, since it best reflected the organization that is orderly and deliberate, therefore, has a lot of control over the

employees. Based on Ornstein (1992, p. 99), “this factor looks much like the dimension of dominance” identified by various researchers (Osgood et al., 1957; Osgood, 1969; Russell, Ward, and Pratt, 1981).

Table 4-2. Factor loadings for control

Slide #	Factor 2							
	1	2	3	4	5	6	7	8
Unpleasant-Pleasant	.10	.58	.05	.42	.00	.04	-.01	.20
Bad-Good	-.03	.46	.12	.16	-.09	-.03	-.07	.17
Negative-Positive	.05	.52	.09	.27	.02	-.02	.00	.14
Disapproving-Approving	.01	.38	-.02	.15	-.13	.06	.01	.15
Uncomfortable-Comfortable	-.33	.23	-.16	-.04	-.07	-.18	.05	-.02
Prohibitive-Permissive	-.38	-.06	-.27	.05	-.24	-.30	-.07	-.17
Unrewarding-Rewarding	.01	.31	-.02	.19	-.01	.13	.07	.17
Tense-Relaxed	-.22	.04	-.43	.06	-.05	-.16	-.03	-.22
Impersonal-Personal	-.48	.00	-.34	-.02	-.15	-.36	-.11	-.25
Rigid-Flexible	-.49	-.01	-.54	-.12	-.30	-.32	-.06	-.32
Chaotic-Order	.86	.78	.81	.86	.86	.87	.85	.80
Impulsive-Deliberate	.80	.85	.82	.72	.84	.81	.83	.81
Variance	18%	20%	54%	52%	14%	15%	12%	14%

Note: Bolded items represent higher factor loadings that were considered in making judgments pertaining to number of factors and the meaning of each factor

Additionally, an overall factor analysis was conducted, without specifying each of the firms. Overall, it was found that there were high positive relationships between the semantic differential scales and the 2 factors. Specifically, the first factor accounted for 57% of the variance. Items loading highly on this factor included the following: Unpleasant-Pleasant, Bad-Good, Negative-Positive, Disapproving-Approving, Uncomfortable-Comfortable, Prohibitive-Permissive, Unrewarding-Rewarding, Tense-Relaxed, Impersonal-Personal, and Rigid-Flexible. On the other hand, the second factor accounted for 16% of the variance. Items loading highly on this factor included Chaotic-Order and Impulsive-Deliberate.

Students Would Form Different Impressions of Consideration and Control Across the 8 Companies Represented

Based on the finding that 2 different messages (consideration and control) were communicated by the slides of office reception areas, further analyses were conducted to support the second hypothesis that the students will have different impressions of the office spaces represented based on the design elements and arrangements of furnishings. The scales were reorganized so that the adjective with more favorable or positive connotations was on the right most end of the scale and the remaining adjective with more negative connotation was on the left side of the scale. Responses to the semantic differential scales were scored from 1 to 7 for each scale (7 indicates the greatest amount of consideration and control). Scores were then summed across each scale, so that research participants each had a score for consideration and a score for control. Since there were 10 semantic differential scales that were highly correlated with consideration, the consideration scores could range from 10 to 70 for each of the 8 reception area slides. On the other hand, since there were 2 semantic differential scales that were highly correlated with control, the score for control could range from 2 to 14. Each set of scores was analyzed using one-way repeated-measures ANOVA to test whether the reception area photograph had an effect on the score.

Like Ornstein (1992), a significant main effect was found for ratings of consideration: $F=58.871, p<.001$. To determine exact differences in students' ratings of the consideration of the 8 office reception area slides, the Student-Newman-Keuls post hoc tests were performed. There was great differentiation by the students in their impressions of these 8 slides (Table 4-3). Two of these companies were perceived as much more considerate (slides 4 and 2) than the other six. However, slide 4 was

perceived as more considerate than slide 2. In addition, 3 slides (slides 3, 5, and 1) were perceived to be inconsiderate.

Table 4-3. Mean scores for factor 1 (consideration) and factor 2 (control)

#	Descriptions of reception area	Mean score for factor1	Group for factor1	Mean score for factor2	Group for factor2
1	Orthogonal design elements (e.g., walls and a reception area desk) with stone finish on the reception area desk and floor. Two ivory chairs are placed next to each other. Lighting level is moderate with high color contrast. There is no artwork, plants, or flowers. (Figure 3-1)	32.686	1	11.951	3
2	Organic design elements (e.g., ceiling and a reception area desk) with carpet flooring. 2 upholstered chairs in the background are placed at a 45° angle. The other 2 upholstered chairs in the foreground are also placed at a 45° angle. Lighting level is dim with moderate color contrast. An artwork, plant, and flowers are present. (Figure 3-2)	51.118	4	10	1
3	Orthogonal design elements (e.g., walls, ceiling, and a reception area desk) with some stone and dark wood flooring. Four black leather chairs are placed at a right angle. Lighting level is dim with moderate color contrast. There is no artwork, plants, or flowers. (Figure 3-3)	34.647	1	11.853	3
4	Organic design elements (e.g., ceiling, floor patterns, waiting area furniture, and a reception area desk) with carpet flooring. On the right side of the photograph, 2 chairs are set at a 45° angle with a curvilinear sofa on the opposite side. On the left side of the photograph, 2 chairs are placed next to each other, separated by a small table. Lighting level is bright with high color contrast. An artwork and a flower are present. (Figure 3-4)	55.029	5	9.647	1

Table 4-3. Continued

#	Descriptions of reception area	Mean score for factor1	Group for factor1	Mean score for factor2	Group for factor2
5	Orthogonal design elements (e.g., an opening and walls), with a little bit of organic design features (e.g., reception area desk). The majority of the flooring material is stone, with 2 leather chairs placed next to each other. Lighting level is dim with low color contrast. An artwork, sculpture, and flowers are present. (Figure 3-5)	33.167	1	11.961	3
6	Organic design elements (e.g., walls and ceiling) with wood flooring and a reception desk made out of wood. There are 2 brown leather chairs placed at a 45° angle, separated by a small round table. Furthermore, there are 2 chairs placed at a 45° angle, and on the opposite side, there is a brown couch. Lighting level is moderate, with low color contrast. There is a vase with flowers on the reception area desk. (Figure 3-6)	44.412	2 &3	9.863	1
7	Organic design elements (e.g., walls, ceiling, and a reception area desk), with stone flooring. Two black leather chairs are placed in a 45° angle, separated by a small round table. On the opposite side, there is a back leather chair and a small round table. There is a vase with flowers on the reception area desk, and a small sculpture on the small table on the left side of the photograph. (Figure 3-7)	41.814	2	11.373	3
8	Orthogonal design elements (e.g., walls, ceiling, and a reception area desk), with wood flooring, wood wall paneling, and a reception area desk with wood finish. There are 2 brown leather chairs placed at a right angle. Lighting level is bright, with low color contrast. An artwork and a vase of flowers are present. (Figure 3-8)	45.902	3	10.725	2

Additionally, the main effect was also found for ratings of organizational control: $F=20.924, p<.001$. Four of the slides (slides 5, 1, 3, and 7) were perceived as more controlling than the others, whereas 3 of the slides (slides 2, 6, and 4) were perceived as least controlling.

Students' Impressions of Consideration, Control, and Liking to Work for the Companies

Analyses were conducted to examine the relationships between students' impressions of consideration, control, and liking to work for those firms. Specifically, this analysis permitted for an overall comparison between students' impressions of consideration, control, and liking across 8 slides. For each person, there were consideration and control scores for each of the 8 reception area slide. First, for each student, the 8 slides were rank-ordered from least to most considerate. Next, Spearman-Brown rank-order correlations were calculated between rankings of consideration and liking. Significant correlations were found between firms ranked by impressions of consideration and preferences for liking to work in these firms ($r=.660, p<.001, \mathcal{L}=0.01$). This implied that students had a clear preference to work for firms they found considerate.

Next, for each student, the 8 slides were rank-ordered from least to most controlling. Then, Spearman-Brown rank-order correlations were calculated between rankings of control and liking. Moderate negative correlations were found between firms ranked by impressions of control and preferences for liking to work in these firms ($r= -.173, p<.001, \mathcal{L}=0.01$). This suggested that students had a clear preferences for disliking to work for firms they found controlling. Finally, Spearman-Brown rank-order correlations were also calculated between rankings of consideration and rankings of

control. Thus, negative correlations were also found between consideration and control ($r=-.351$, $p<.001$, $L=0.01$).

Conclusion

In conclusion, the hierarchical cluster analysis, in addition to the factor analyses of the students' responses revealed that the students distinguished 2 dimensions of meaning (consideration and control) connoted by the slides of office reception areas. According to ANOVAs and post hoc analyses, students formed different impressions of consideration and control across the 8 companies represented. Furthermore, the Spearman-Brown rank-order correlations revealed a significant correlation between firms ranked by impressions of consideration and preferences for liking to work in these firms. This suggested that the students had a clear preference for working in firms that they perceived as more considerate. On the other hand, moderate negative correlations were found between firms ranked by impressions of control and preferences for liking to work in these firms. Finally, negative correlations were also found between consideration and control.

CHAPTER 5 DISCUSSIONS AND CONCLUSIONS

Reception areas are where visitors first encounter a company or business. Therefore, these spaces are often designed to create specific impressions which are consistent with the business objectives of the company (Ornstein, 1992; Steele, 1973; Stimpson, 1988). Although there is primarily anecdotal literature of symbolic meanings of design, existing empirical research is insufficient for designers and corporate managers to use in making design decisions about meanings design elements convey to the public. Thus, the purpose of my study was to examine the influence of specific design elements and arrangements of furnishings in office reception areas on impressions held by first-time visitors. The research design used obtained ratings from participants as they viewed photographs selected to emphasize particular design elements and furniture arrangements. Even though numerous empirical studies have confirmed the validity of using photographs as substitutes for actual environments, it is possible that photographs may influence people's impressions in some ways different from the actual experience of entering an office (Ornstein, 1992). Specifically, 102 graduate students were shown slides of eight different office reception areas. The students recorded their impressions of these companies by completing 12 semantic differential scales for each slide. In addition to the semantic differential, participants were asked to indicate on a 9-point scale, how much they would like to work for the company represented in the photograph.

My study was organized around 3 areas of inquiry which informed the 3 hypotheses of my research. The first hypothesis was derived from Ornstein's (1992)

study, in which slides of office reception areas were presented to participants and the findings suggested that 2 dimensions of meaning (consideration and control) were connoted by various types of physical symbols (e.g., artwork, plants, and flowers) and furniture arrangements. Thus, following Ornstein's (1992), logic, my first hypothesis stated that 2 dimensions, consideration and control, underlie participants' impressions of companies as a result of viewing slides of reception area designs. Likewise, following Ornstein's (1992) logic, my second hypothesis was derived from the perspectives of 2 groups who have theories pertaining to how individuals develop perceptions. One group, represented by Gibson (1979) is the ecological perceptions approach which posits that "elements of the physical environment afford opportunities for certain types of behaviors. Based on these affordances, it is suggested that people form impressions of the importance, desirability, and acceptability of the behavior" (Ornstein, 1992, p. 87). The second theoretical perspective, the information-processing approach by Schnieder & Schriffrin (1977) proposes that "people process information about the environment and form cognitive schema consistent with their prior experiences" (Ornstein, 1992, p. 88). Guided by these 2 theories, my second hypothesis stated that the participants will have different impressions of the office spaces represented based on the design elements and arrangements of furnishings. Finally, based on Ornstein's (1992) overall findings, my third hypothesis stated that participants would show a preference for working in firms that appear more considerate than controlling. The following chapter discusses the results relevant to these 3 hypotheses, as well as provides suggestions for further research, suggestions for the designers, and conclusions of the thesis study.

Two Dimensions of Meaning Underlie Students' Impressions: Consideration and Control

According to the hierarchical cluster and factor analysis, the research participants distinguished 2 dimensions of meaning (consideration and control) connoted by the slides of the office reception areas. According to Gifford (1997, p. 302), creating a positive impression within office reception areas “vary in 2 important ways: the amount of control and the amount of consideration” that is implied by the design of reception area. Control can be defined as “order, stability, and rigidity” (Gifford, 2002, p. 362). Jarmel (2003) believed that lawyers often use their office spaces to convey a feeling of power and control. Specifically, a younger law firm might want to seem older and more conservative and therefore use their interior space design to convey the image of control (Jarmel, 2003). Furthermore, Goodsell’s research suggested that some agencies use aspects of the physical environment to reinforce and legitimate the authority of an organization and its members (Goodsell, 1977). For example, by visiting various offices, Goodsell found that authoritative organizations, such as government office buildings, displayed props, such as photographs of organizational leaders, flags, logos, and seals in their reception areas to convey an image of control (Goodsell, 1977).

On the other hand, consideration can be defined as “warmth, comfort, ease, and goodness of communication” (Gifford, 2002, p. 363). Becker (1982) believed that counselors, therapists, dentists, and physicians must place more emphasis on providing an image of comfort in their offices, especially reception areas. Furthermore, Goodsell visited various service organizations (public health agencies and sales organizations) and found that these organizations displayed a large number of plants, artwork, and magazines to convey an image of comfort (Goodsell, 1977).

The finding that the participants distinguished 2 dimensions of meaning (consideration and control) connoted by the slides of the reception areas is consistent with Ornstein's findings. Specifically, Ornstein (1992) found that when the students and business executives were shown slides of office reception areas, their responses indicated 2 dimensions of meaning (consideration and control) underlying their judgments. Furthermore, the findings of my study corroborate the results of other empirical studies that suggested that the physical environment communicates meanings along 2 dimensions (Osgood, 1969; Ornstein, 1986, 1992).

Students Would Form Different Impressions of Consideration and Control Across the 8 Companies Represented

The question of whether the participants discriminated among the slides was also tested with ANOVAs and post hoc analyses. Specifically, the goal of this set of analyses was to determine if students distinguished between these 2 dimensions of meaning. The results revealed that the students formed different impressions of consideration and control across the 8 companies represented.

The finding that the students formed different impressions of consideration and control across the 8 office spaces provides further evidence of the importance of design elements and furniture arrangements within the reception areas as a "conveyor of symbolic information" (Ornstein, 1992, p. 104). Moreover, these results suggest that design elements and arrangement of furnishings within reception areas serve "a symbolic role" by communicating meanings about companies (Ornstein, 1992, p. 103). Specifically, the results of my study support the findings of Ornstein (1992). She used slides of office reception areas and found that aspects of the office environment such as arrangement of furnishings, presence of artwork, plants, and flowers influenced

individual's impressions (Ornstein, 1992). Additionally, the results of my study support the suggestion made by numerous researchers and scholars (Ornstein, 1989a, 1989b, 1992; Steele, 1973, 1986; Steele & Jenks, 1977), that the office environment send messages about organizational life. Next, a detailed explanation of the slides that were considered as both considerate and controlling follows.

Consideration

Two firms that were identified by the students as the most considerate were those represented in slides 4 (Figure 3-4, Table 5-1) and 2 (Figure 3-2, Table 5-1). Specifically, both of these slides contained organic forms (e.g., ceiling, floor patterns, furniture), abundance of soft materials (carpet flooring and upholstered chairs), and presence of artwork and flowers. However, it should be noted that slide 4 was rated more considerate than slide 2. Consequently, it can be concluded that a combination of organic forms, abundance of soft materials, along with presence of artwork and flowers in reception areas conveyed a message that the organization was very considerate (warm and comfortable) of people.

These findings are consistent with a research by Goodsell (1977). Specifically, Goodsell (1977) visited various service organizations and found that these organizations displayed a large number of elements, such as plants, artwork, magazines, and upholstered seating in the reception areas to make visitors feel comfortable. Furthermore, these findings are consistent with Ornstein (1992) that soft materials convey warmth and comfort. Specifically, Ornstein showed slides of office reception areas to the students and executives and found that furnishings with softer edges, upholstered couches send messages about flexibility, warmth, and comfort (Ornstein, 1992).

Table 5-1. Most considerate (slides 4 and 2)

Most considerate	
Slide 4	Slide 2
Organic forms	Organic forms
Bright lighting	Dim lighting
High color contrast	Moderate color contrast
Soft materials	Soft materials
Artwork/flowers present	Artwork/flowers present
Informal seating arrangement (chairs arranged in a 45° angle and a couch on the opposite side)	Formal seating arrangement (chairs arranged in a 45° angle)

The firms that students identified as moderate in consideration were slides 8 (Figure 3-8, Table 5-2), 6 (Figure 3-6, Table 5-2) and 7 (Figure 3-7, Table 5-2). All of the 3 firms displayed flowers and hard materials. Specifically, slides 8 and 6 predominantly featured wood in the reception areas, and had low color contrast. Moreover, slides 7 and 6 both had organic forms. On the other hand, slide 8 and slide 7 both had bright lighting. From these results, it can be concluded that when wood was predominately used in reception areas, with low color contrast, along with the presence of flowers, it conveyed a message that the organization was moderate in consideration.

Table 5-2. Moderate in consideration (slides 8, 6, and 7)

Moderate in consideration	
Slide 8	Slide 6
Orthogonal forms	Organic forms
Bright lighting	Moderate lighting
Low color contrast	Low color contrast
Hard materials (wood)	Hard materials (wood)
Artwork/flowers present	Artwork/flowers present
Informal seating arrangement (chairs arranged in a 90° angle)	Informal seating arrangement (chairs arranged in a 45° angle and a couch on the opposite side)
Slide 7	
Organic forms	
Bright lighting	
High color contrast	
Hard materials (stone)	
Flowers present	
Formal seating arrangement (chairs arranged in a 45° angle)	

The firms that students identified as least considerate included slides 3 (Figure 3-3, Table 5-3), 5 (Figure 3-5, Table 5-3), and 1(Figure 3-1, Table 5-3). All of the 3 firms displayed orthogonal forms (e.g., ceiling, walls, and furniture) and hard materials. Specifically, 2 of these firms (slides 5 and 1) predominantly featured stone (e.g., floors, reception area desk) in the reception areas and the waiting area chairs had airport seating arrangements. Moreover, slides 3 and 5 both had dim lighting. On the other hand, slide 3 and slide 1 did not display any artwork/plants/flowers. This implied that absence of artwork/plants/flowers sent a message that the organization was not considerate of people. Furthermore, these results also indicated that when orthogonal architectural elements (e.g., ceiling, walls, and furniture) and stone were used within the reception areas, along with airport seating arrangements, the organization was seen as inconsiderate.

These results are consistent with Ornstein's findings. Specifically, she found that formal seating arrangements were perceived as less considerate than informal seating arrangements (Ornstein, 1992). Additionally, the slides that had airport seating arrangements, along with stone floors and walls were both perceived as least considerate. These findings are in-line with the ecological perceptions approach by Gibson (1979). Specifically, Gibson (1979) indicated that "elements of the physical environment afford opportunities for certain types of behaviors. Based on these affordances, it is suggested that people form impressions of the importance, desirability, and acceptability of the behavior" (Ornstein, 1992, p. 87). The presence of hard surfaces, along with formal seating arrangements (airport seating arrangements) within the reception areas were both perceived to be least considerate, since it did not afford opportunities for people to

comfortably wait for a job interview. Furthermore, it is also possible that since the airport seating arrangements did not afford opportunities for communication, it may have implied something to the participants about the importance, desirability, and suitability of communication in this office setting.

Table 5-3. Least considerate (slides 3, 5, and 1)

Least considerate	
Slide 3	Slide 5
Orthogonal forms	Orthogonal forms
Dim lighting	Dim lighting
Moderate color contrast	Low color contrast
Hard material (dark wood)	Hard materials (stone)
Artwork/flowers absent	Artwork/flowers present
Informal seating arrangement (chairs arranged in a 90° angle)	Formal seating arrangement (airport seating arrangement)
Slide 1	
Orthogonal forms	
Moderate lighting	
High color contrast	
Hard materials (stone)	
Artwork/flowers absent	
Formal seating arrangement (airport seating arrangement)	

However, the results showed that certain design features such as organic/orthogonal forms, dim/moderate/bright lighting, low/moderate/high color contrast, display of artwork/plants/flowers, use of stone, and certain seating arrangements (chairs that are arranged in a 45° or a 90° angle) were considered to take on different meanings, under different circumstances. One explanation for the fact that color contrasts did not appear to differentiate between consideration and control is that the color schemes in all of these eight photographs were quite neutral and somewhat similar. Specifically, my study only examined one dimension of color, value contrast, and did not explore contrasts in hue or chroma.

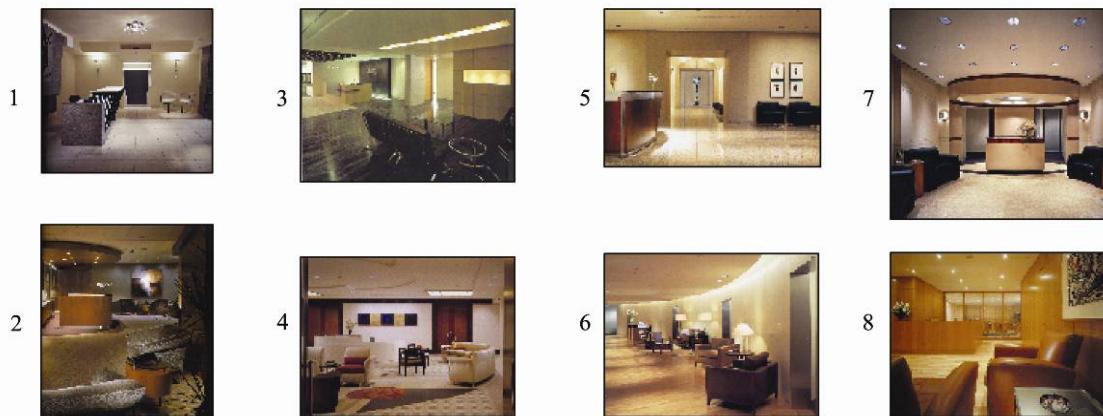
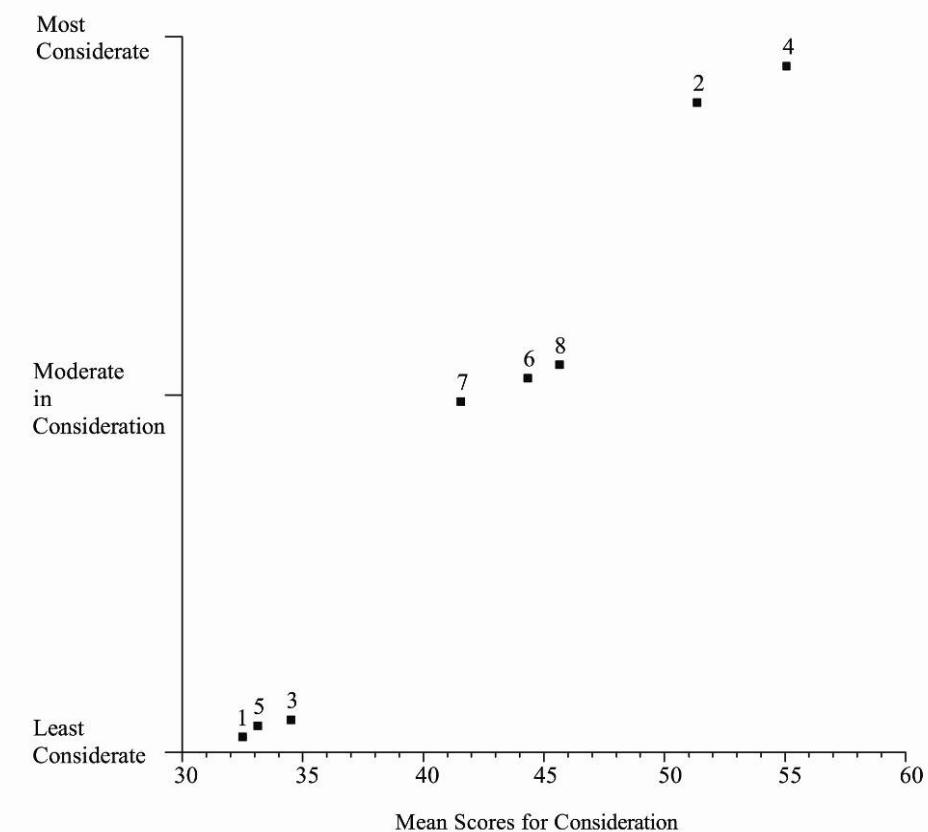


Figure 5-1. Chart for consideration. 1) Figure 3-1. 2) Figure 3-2. 3) Figure 3-3. 4) Figure 3-4. 5) Figure 3-5. 6) Figure 3-6. 7) Figure 3-7. 8) Figure 3-8

Control

The firms that students identified as most controlling were slides 5 (Figure 3-5, Table 5-5), 1 (Figure 3-1, Table 5-5), 3 (Figure 3-3, Table 5-5), and 7 (Figure 3-7,

Table 5-5). All of the 4 firms in these photographs displayed hard materials. Specifically, 3 of these slides (slides 5, 1, and 3) had orthogonal forms (e.g., ceiling, walls, and furniture). Moreover, slides 5, 1, and 7 all had predominantly used stone in the reception areas. Two of the reception areas (slides 5 and 1) also featured airport seating arrangements. Furthermore, slide 1 and slide 3 did not feature artwork/plants/flowers. This suggested that when artwork/plants/flowers were not used in office reception areas, it sent a message that the organization was controlling. Also, slide 1 and slide 7 both had high value contrast. Additionally, slide 5 and slide 3 had dim lighting.

According to Jarmel (2003), certain law firms use their office space to convey a feeling of power and control. Thus, “the space can become a critical influence in gaining leverage in negotiations” (Jarmel, 2003, p. 20). Furthermore, Goodsell (1977) found that authoritative organizations such as state drivers licensing agencies and police stations try to convey an image of control. My study suggested that orthogonal forms (e.g., ceiling, walls, and furniture), stone, and an airport seating arrangement used in reception areas conveyed an image of control.

Additionally, the slides that had airport seating arrangements, along with stone floors and walls were perceived as most controlling. Specifically, the presence of hard surfaces, along with formal seating arrangements (airport seating arrangements) within the reception areas were both perceived to be very controlling, since it did not afford opportunities for people to comfortably wait for a job interview. Furthermore, it is also possible that since the airport seating arrangements did not afford opportunities for communication, it may have implied something to the participants about the importance,

desirability, and suitability of communication in this office setting. These findings support the ecological perception approach.

Table 5-4. Most controlling (slides 5, 1, 3, and 7)

Most controlling	
Slide 5	Slide 1
Orthogonal forms	Orthogonal forms
Dim lighting	Moderate lighting
Low color contrast	High color contrast
Hard materials (stone)	Hard materials (stone)
Artwork/flowers present	Artwork/flowers absent
Formal seating arrangement (airport seating arrangement)	Formal seating arrangement (airport seating arrangement)
Slide 3	Slide 7
Orthogonal forms	Organic forms
Dim lighting	Bright lighting
Moderate color contrast	High color contrast
Hard materials (dark wood)	Hard materials (stone)
Artwork/flowers absent	Flowers absent
Informal seating arrangement (chairs arranged in a 90° angle)	Formal seating arrangement (chairs arranged in a 45° angle)

There was only one firm (slide 8) that was considered to be moderate in control (Figure 3-8, Table 5-6). Specifically, this firm displayed orthogonal design elements (e.g., ceiling, walls, and furniture), bright lighting, and low color contrast. Wood was the predominant material used in the reception area. Furthermore, the waiting area chairs were arranged in a 90° angle (informal seating arrangement). Artwork and flowers were also present in the reception area.

Table 5-5. Moderate in control (slide 8)

Moderate in control
Slide 8
Orthogonal forms
Bright lighting
Low color contrast
Hard material (wood)
Artwork/flowers present
Informal seating arrangement (chairs arranged in a 90° angle)

Finally, the firms that the students identified as the least controlling included slides 2 (Figure 3-2, Table 5-7), 6 (Figure 3-6, Table 5-7), and 4 (Figure 3-4, Table 5-7). All of these slides had organic forms (e.g., ceiling, walls, and furniture) and displayed flowers. Slides 2 and 4 both had soft materials (e.g., carpet flooring, upholstered chairs) and slide 6 had used wood predominantly. Slides 4 and 6 both had informal seating arrangements. Specifically, these firms displayed chairs that were arranged in a 45° angle with a small table in between, and a couch on the opposite side. Slide 6 displayed 2 other chairs that were arranged in a 45° angle with a small table in between. Slide 4 also displayed 2 chairs next to each other separated by a small table. These findings suggested that when organic forms, flowers, and soft materials were used in reception areas, the organization was seen as least controlling. These results corroborate Ornstein's (1992) findings that upholstery furniture and deep pile carpeting were perceived as less controlling by the students and the executives (Ornstein, 1992).

Table 5-6. Least controlling (slides 2, 6, and 4)

Least controlling	
Slide 2	Slide 6
Organic forms	Organic forms
Dim lighting	Moderate lighting
Moderate color contrast	Low color contrast
Soft materials	Hard materials (wood)
Artwork/flowers present	Artwork/flowers present
Formal seating arrangement (chairs arranged in a 45 angle)	Informal seating arrangement (chairs arranged in a 45 and a sofa on the opposite side)
Slide 4	
Organic forms	
Bright lighting	
High color contrast	
Soft materials	
Artwork/flowers present	
Informal seating arrangement (chairs arranged in a 45 angle and a couch on the opposite side)	

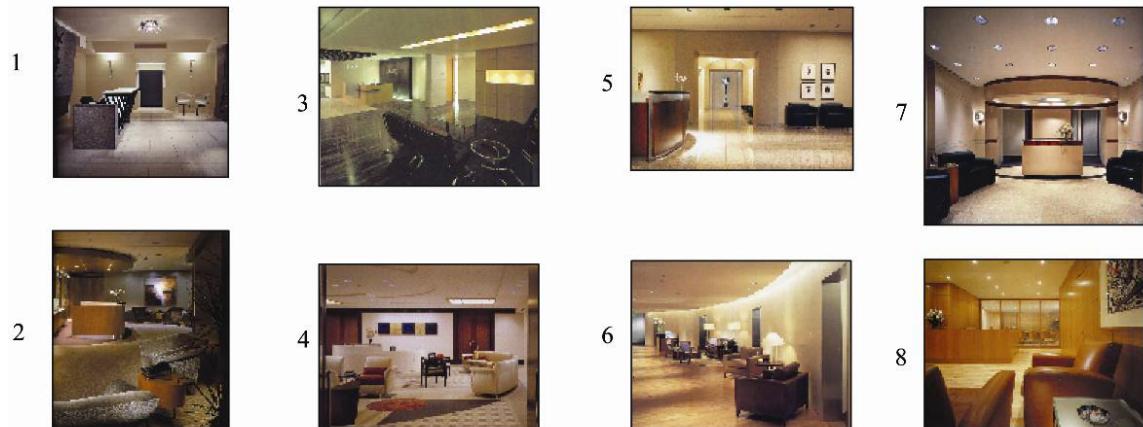
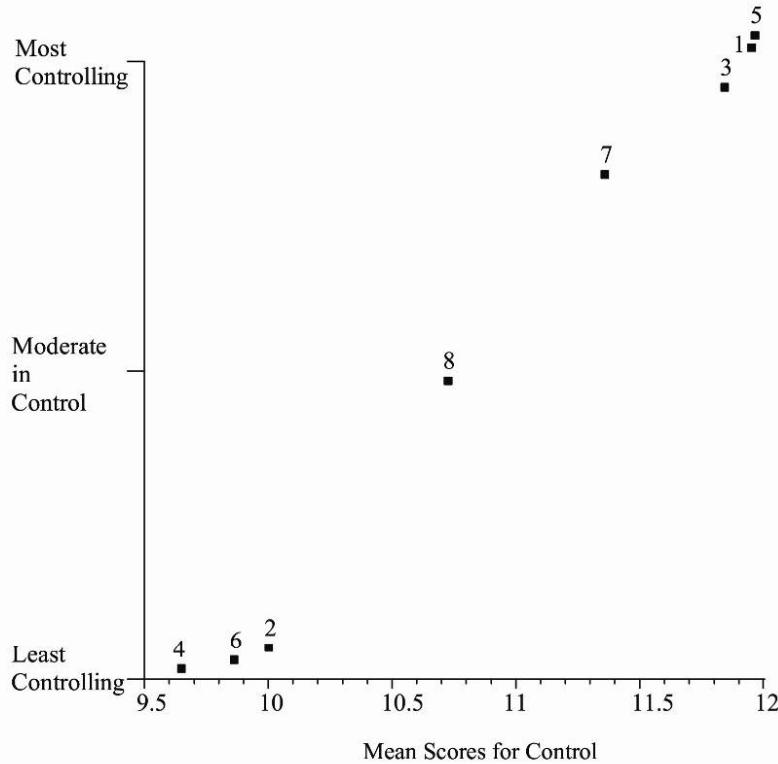


Figure 5-2. Chart for control. 1) Figure 3-1. 2) Figure 3-2. 3) Figure 3-3. 4) Figure 3-4. 5) Figure 3-5. 6) Figure 3-6. 7) Figure 3-7. 8) Figure 3-8.

Relative Strength of Consideration as Opposed to Control

The Student-Newman post hoc comparisons of means revealed that the difference between the means of the design variables associated with consideration is higher than

the difference between the means associated with control. Thus, students were more sensitive to distinctions made on the consideration dimension than the control dimension. These results build on those of Ornstein (1992) who indicated that “control is not a particularly salient dimension of which people make judgments about organizations” (p. 105). The control dimension, in my study, accounted for considerably less variance than did the consideration dimension. Specifically, the factor analysis indicated that the consideration dimension accounted for approximately 51% of the variance and control accounted for approximately 15% of the variance. While both consideration and control were statistically significant, the consideration dimension was considerably stronger than the control dimension. An alternative explanation for control being weak compared to consideration is the lack of symbolic information—flags, seals, emblems, and logos—in the photographs. Nonetheless, airport seating arrangements and use of stone floors and walls appeared to convey control to the research participants.

Furthermore, it is possible that the students were less sensitive to distinctions made on the control dimension, since they had very little or no prior work experiences in large companies. This argument is consistent with the information-processing approach by Schnieder & Schriffrin (1977), which explains that “people process information about the environment and form cognitive schema consistent with their prior experiences” (Ornstein, 1992, p. 88). Approximately half (52%) of the students had prior work experiences at large companies, ranging from six weeks to twenty years. Since many students had very little, or no prior work experiences in large companies, it is likely that the students were less sensitive to distinctions made on the control dimension. There is some support for this idea in the work of Ornstein (1992) who showed slides of office

reception areas to a group of undergraduate students as well as to business executives. The finding indicated differentiation between the firms for both students and executives in the area of consideration; however, only the executives exhibited differences in impressions of the firms based on control (Ornstein, 1992). Given that the executive may have more past experiences working at large companies, this might explain why the executives exhibited differences but students did not.

Students' Impressions of Consideration, Control, and Liking to Work for the Companies

To evaluate the third hypothesis, a correlation coefficient was computed between rankings of consideration and preference. Significant correlations were found between firms ranked by impressions of consideration and preferences for liking to work in these firms ($r=.660, p<.001$). This suggested that students had a clear preference to work for firms they found considerate. It makes sense that people will like places that appear more considerate than controlling (Ornstein, 1992). Furthermore, this finding is consistent with Ornstein's (1992) findings that showed that both executive and student groups liked the firms that were perceived as considerate.

On the other hand, moderate negative correlations were found between firms ranked by impressions of control and preferences for liking to work in these firms ($r=-.173, p<.001$). This suggested that students had a clear preferences for disliking to work for firms they found controlling. Finally, negative correlations were also found between consideration and control ($r=-.351, p<.001$). This implied that the firms that were perceived as considerate were not controlling, where as the firms that were perceived as controlling were not considerate.

Hence, these findings also support the information-processing approach. Since 52% of the students had prior work experiences in a large company or an office with 30 or more employees, their past experiences might explain why students liked firms that were considerate and disliked the firms that were controlling. Additionally, the fact that the students wanted to work for organizations that were considerate, and not work for organization that is controlling validates that individuals' impressions of the companies determine whether or not they would like to work at the firm.

Suggestions for Further Research

My study found that design elements and arrangement of furniture in reception areas—including elements such as form, finish materials and furniture arrangements—communicated meanings that research participants used in forming impressions about companies. Although the results of my study are promising, there are some issues that need to be addressed in future research.

First, in my study, color schemes in all of the photographs were similar because my study only examined the differences in the contrast of the color value. Future research will need to explore the relative impact that variations among multiple color dimensions might have on individual's impressions. For example, future studies can systematically manipulate hue, value, and chroma dimensions. Furthermore, the results of my study suggested that when a large amount of achromatic color (e.g., black) were used in office reception areas, it sent a message that the organization was very controlling and inconsiderate. On the other hand, a large amount of warm tones were perceived as considerate and least controlling. This suggested that temperature contrast of colors might have an effect on individuals' impressions. Future studies could expand on this finding by systematically manipulating the color temperature (e.g., warm vs. cool) in

office reception spaces. Specifically, a new scale, warm-cool should be added to the semantic differential instrument.

The findings of this thesis only supported the ecological perceptions approach. However, these findings are based on the responses from the graduate students with little or no prior work experiences. Future studies should test both ecological perceptions and information-processing approaches by including research participants that have prior work experiences in large companies (e.g., executives). By including both individuals with experiences and those who do not have much experience, the researcher can determine whether or not the findings support or deny these 2 theoretical perspectives.

Another area for future research might be to examine the impact of spaces that are intentionally designed. Most interior designers believe that carefully constructed interiors (e.g., spaces that are designed intentionally) will send specific desired messages (Ornstein, 1989b). Thus, it may be interesting to assess whether explicitly designed offices are better at creating desired impressions than ones that are not professionally designed. Additionally it may be of interest to compare the designer's impressions to the non-designer's impressions of the design elements used in reception areas. Specifically, future studies could assess whether non-designers' impressions of a reception area support the concepts designers were intentionally trying to convey about the image of a certain company. Studies of this kind might be helpful for the designers to realize that they view their designs differently from non-designers (Gifford, 2002). Thus, it might validate the need for the designers to understand users' perceptions.

Suggestions for Architects, Designers, Corporate Planners, and Corporate Managers

My study suggests that architects, designers, and corporate planners need to recognize that design elements and furniture arrangements in the reception areas play a significant role in influencing impressions. Another suggestion is that designers need to work together with company managers and potentially, end users of the space to determine the messages being conveyed to employees and the outside visitors and to identify whether the messages are consistent with company's values (Ornstein, 1992). Ornstein (1992, p. 107) further suggested that "if the messages connote are not accurate or appropriate," then this implies that the design of the reception areas might be changed.

The results of my study indicated that form, finish materials, and arrangements of furnishings made a difference in impressions. While the present study will need to be replicated, if the present results hold, the designers and the corporate managers will want to incorporate design elements that help support the overall business objectives. Pertaining to consideration (e.g., flexibility, warmth, and comfort), combinations of organic forms (e.g., ceiling, walls, and furniture), abundance of soft materials (e.g., carpet flooring and upholstery furniture), along with presence of artwork and flowers can be used in reception areas. Furthermore, when wood is predominately used in an office reception area, with low color value contrast, along with presence of flowers, it is likely to convey a message that the organization is moderate in consideration. Moreover, orthogonal forms, stone, and airport seating arrangements can be used in the reception areas to convey a message that the organization is controlling (e.g., rigid and deliberate). For instance, authoritative organizations might use these design elements and seating arrangements in the reception areas to convey an image of control. Furthermore, when

organic forms, flowers, and soft materials (e.g., carpet, upholstery) are used in office reception areas, it is likely to convey a message that the organization is not controlling. It should be noted that even though presence of artwork, plants, and flowers tends to take on different meanings under different circumstances, 2 of the reception areas that did not display these elements were seen as very controlling and least considerate. Thus, it may be important for the designers to remember that although presence of artwork, plants, and flowers connote different meanings, absence of these elements tend to convey the message that the organization is controlling/least considerate.

Conclusion

In conclusion, my study supports Ornstein's (1992) findings and lends additional empirical support to the notion that the design of an office reception area—including elements such as form, finish materials (e.g., carpet, upholstery, wood, and stone), and furniture arrangements—communicates meanings that people use in forming initial impressions about companies. These findings add to the knowledge base of symbolic influences of the design elements and furniture arrangements in office reception areas on individuals' perceptions of companies. Furthermore, these demonstrate a need for further study of the design elements and furniture arrangements used in the office reception areas as important sources of information about individuals' first impressions of companies.

APPENDIX A
THE 23 SEMANTIC DIFFERENTIAL SCALES FOR JUDGING THE
PHOTOGRAPHS

Please evaluate the reception areas shown by selecting a point on each of 23 Semantic differential scales.

Inexpensive	_____ : _____ ; _____	Expensive
Fine	_____ : _____ ; _____	Substandard
Low quality	_____ : _____ ; _____	High quality
Spacious	_____ : _____ ; _____	Cramped
Out of proportion	_____ : _____ ; _____	In proportion
Chaotic	_____ : _____ ; _____	Unitary
Eclectic	_____ : _____ ; _____	Similar style
Uncluttered	_____ : _____ ; _____	Cluttered
Traditional furniture	_____ : _____ ; _____	Contemporary furniture
Traditional artwork	_____ : _____ ; _____	Contemporary artwork
Contemporary detailing	_____ : _____ ; _____	Traditional detailing
Curved lines	_____ : _____ ; _____	Straight lines
Orthogonal furnishings	_____ : _____ ; _____	Organic furnishings
Organic architectural elements	_____ : _____ ; _____	Orthogonal architectural elements
Bright lighting	_____ : _____ ; _____	Dim lighting
Windows	_____ : _____ ; _____	Absence of windows
Exposed light fixtures	_____ : _____ ; _____	Concealed light fixtures
High contrast color scheme	_____ : _____ ; _____	Low contrast color scheme
Informal seating arrangement	_____ : _____ ; _____	Formal seating arrangement
Conversational seating arrangement	_____ : _____ ; _____	Airport seating arrangement
Seating arrangement discourages social interaction	_____ : _____ ; _____	Seating arrangement facilitates social interaction
Absence of artwork, plants, and flowers	_____ : _____ ; _____	Artwork, plants, and flowers significantly present
Soft materials	_____ : _____ ; _____	Hard materials

APPENDIX B STUDENT QUESTIONNAIRE

You will be shown photographs of 8 different office reception areas. Imagine yourself sitting in each of these reception areas waiting for a job interview. Imagine “what it might be like to work for these companies.” You will be shown each photograph for 2 minutes. During this time, answer the questions about the photograph¹

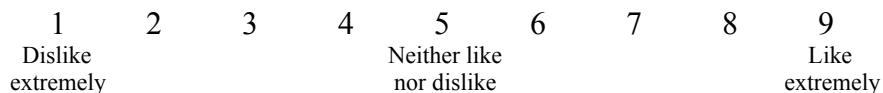
¹ From “First impressions of the symbolic meanings connoted by reception area design,” by S. Ornstein, 1992, *Environment and Behavior*, 24(1), p. 96. Copyright 1992 by Sage Publications. Adapted with permission of the Sage Publications.

Photograph 1

- Please record your impressions of the company shown by choosing a point on each of 12 scales listed²

Flexible	_____	_____	_____	_____	_____	_____	_____	Rigid
Tense	_____	_____	_____	_____	_____	_____	_____	Relaxed
Unrewarding	_____	_____	_____	_____	_____	_____	_____	Rewarding
Orderly	_____	_____	_____	_____	_____	_____	_____	Chaotic
Pleasant	_____	_____	_____	_____	_____	_____	_____	Unpleasant
Negative	_____	_____	_____	_____	_____	_____	_____	Positive
Deliberate	_____	_____	_____	_____	_____	_____	_____	Impulsive
Approving	_____	_____	_____	_____	_____	_____	_____	Disapproving
Prohibitive	_____	_____	_____	_____	_____	_____	_____	Permissive
Impersonal	_____	_____	_____	_____	_____	_____	_____	Personal
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Uncomfortable	_____	_____	_____	_____	_____	_____	_____	Comfortable

- Please indicate on a 9-point scale how much you would like to work for the company pictured¹ (1=dislike extremely, 5=neither like nor dislike, 9=like extremely) circle one



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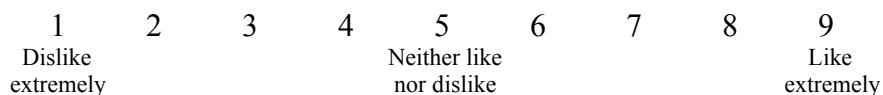
² From "First impression of the symbolic meanings connoted by reception area design," by S. Ornstein, 1992, *Environment and Behavior*, 24(1), p. 91. Copyright 1992 by Sage Publications. Reprinted with permission of the Sage Publications.

Photograph 2

- Please record your impressions of the company shown by choosing a point on each of 12 scales listed²

Flexible	_____	_____	_____	_____	_____	_____	_____	Rigid
Tense	_____	_____	_____	_____	_____	_____	_____	Relaxed
Unrewarding	_____	_____	_____	_____	_____	_____	_____	Rewarding
Orderly	_____	_____	_____	_____	_____	_____	_____	Chaotic
Pleasant	_____	_____	_____	_____	_____	_____	_____	Unpleasant
Negative	_____	_____	_____	_____	_____	_____	_____	Positive
Deliberate	_____	_____	_____	_____	_____	_____	_____	Impulsive
Approving	_____	_____	_____	_____	_____	_____	_____	Disapproving
Prohibitive	_____	_____	_____	_____	_____	_____	_____	Permissive
Impersonal	_____	_____	_____	_____	_____	_____	_____	Personal
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Uncomfortable	_____	_____	_____	_____	_____	_____	_____	Comfortable

- Please indicate on a 9-point scale how much you would like to work for the company pictured¹ (1=dislike extremely, 5=neither like nor dislike, 9=like extremely) circle one



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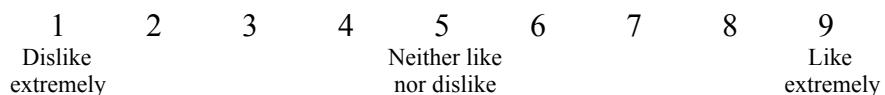
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Photograph 3

- Please record your impressions of the company shown by choosing a point on each of 12 scales listed²

Flexible	_____	_____	_____	_____	_____	_____	_____	Rigid
Tense	_____	_____	_____	_____	_____	_____	_____	Relaxed
Unrewarding	_____	_____	_____	_____	_____	_____	_____	Rewarding
Orderly	_____	_____	_____	_____	_____	_____	_____	Chaotic
Pleasant	_____	_____	_____	_____	_____	_____	_____	Unpleasant
Negative	_____	_____	_____	_____	_____	_____	_____	Positive
Deliberate	_____	_____	_____	_____	_____	_____	_____	Impulsive
Approving	_____	_____	_____	_____	_____	_____	_____	Disapproving
Prohibitive	_____	_____	_____	_____	_____	_____	_____	Permissive
Impersonal	_____	_____	_____	_____	_____	_____	_____	Personal
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Uncomfortable	_____	_____	_____	_____	_____	_____	_____	Comfortable

- Please indicate on a 9-point scale how much you would like to work for the company pictured¹ (1=dislike extremely, 5=neither like nor dislike, 9=like extremely) circle one



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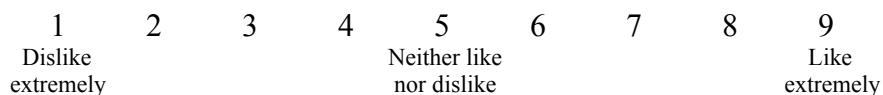
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Photograph 4

- Please record your impressions of the company shown by choosing a point on each of 12 scales listed²

Flexible	_____	_____	_____	_____	_____	_____	_____	Rigid
Tense	_____	_____	_____	_____	_____	_____	_____	Relaxed
Unrewarding	_____	_____	_____	_____	_____	_____	_____	Rewarding
Orderly	_____	_____	_____	_____	_____	_____	_____	Chaotic
Pleasant	_____	_____	_____	_____	_____	_____	_____	Unpleasant
Negative	_____	_____	_____	_____	_____	_____	_____	Positive
Deliberate	_____	_____	_____	_____	_____	_____	_____	Impulsive
Approving	_____	_____	_____	_____	_____	_____	_____	Disapproving
Prohibitive	_____	_____	_____	_____	_____	_____	_____	Permissive
Impersonal	_____	_____	_____	_____	_____	_____	_____	Personal
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Uncomfortable	_____	_____	_____	_____	_____	_____	_____	Comfortable

- Please indicate on a 9-point scale how much you would like to work for the company pictured¹ (1=dislike extremely, 5=neither like nor dislike, 9=like extremely) circle one



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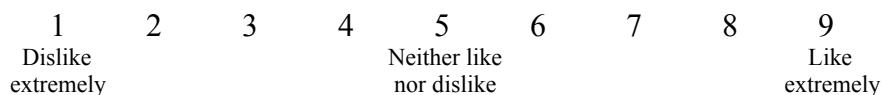
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Photograph 5

- Please record your impressions of the company shown by choosing a point on each of 12 scales listed²

Flexible	_____	_____	_____	_____	_____	_____	_____	Rigid
Tense	_____	_____	_____	_____	_____	_____	_____	Relaxed
Unrewarding	_____	_____	_____	_____	_____	_____	_____	Rewarding
Orderly	_____	_____	_____	_____	_____	_____	_____	Chaotic
Pleasant	_____	_____	_____	_____	_____	_____	_____	Unpleasant
Negative	_____	_____	_____	_____	_____	_____	_____	Positive
Deliberate	_____	_____	_____	_____	_____	_____	_____	Impulsive
Approving	_____	_____	_____	_____	_____	_____	_____	Disapproving
Prohibitive	_____	_____	_____	_____	_____	_____	_____	Permissive
Impersonal	_____	_____	_____	_____	_____	_____	_____	Personal
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Uncomfortable	_____	_____	_____	_____	_____	_____	_____	Comfortable

- Please indicate on a 9-point scale how much you would like to work for the company pictured¹ (1=dislike extremely, 5=neither like nor dislike, 9=like extremely) circle one



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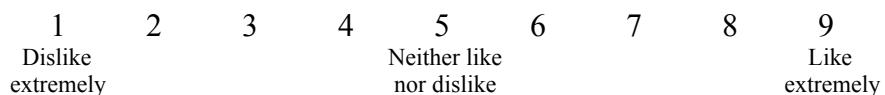
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Photograph 6

- Please record your impressions of the company shown by choosing a point on each of 12 scales listed²

Flexible	_____	_____	_____	_____	_____	_____	_____	Rigid
Tense	_____	_____	_____	_____	_____	_____	_____	Relaxed
Unrewarding	_____	_____	_____	_____	_____	_____	_____	Rewarding
Orderly	_____	_____	_____	_____	_____	_____	_____	Chaotic
Pleasant	_____	_____	_____	_____	_____	_____	_____	Unpleasant
Negative	_____	_____	_____	_____	_____	_____	_____	Positive
Deliberate	_____	_____	_____	_____	_____	_____	_____	Impulsive
Approving	_____	_____	_____	_____	_____	_____	_____	Disapproving
Prohibitive	_____	_____	_____	_____	_____	_____	_____	Permissive
Impersonal	_____	_____	_____	_____	_____	_____	_____	Personal
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Uncomfortable	_____	_____	_____	_____	_____	_____	_____	Comfortable

- Please indicate on a 9-point scale how much you would like to work for the company pictured¹ (1=dislike extremely, 5=neither like nor dislike, 9=like extremely) circle one



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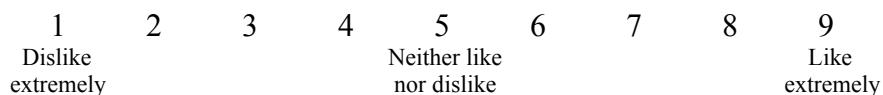
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Photograph 7

- Please record your impressions of the company shown by choosing a point on each of 12 scales listed²

Flexible	_____	_____	_____	_____	_____	_____	_____	Rigid
Tense	_____	_____	_____	_____	_____	_____	_____	Relaxed
Unrewarding	_____	_____	_____	_____	_____	_____	_____	Rewarding
Orderly	_____	_____	_____	_____	_____	_____	_____	Chaotic
Pleasant	_____	_____	_____	_____	_____	_____	_____	Unpleasant
Negative	_____	_____	_____	_____	_____	_____	_____	Positive
Deliberate	_____	_____	_____	_____	_____	_____	_____	Impulsive
Approving	_____	_____	_____	_____	_____	_____	_____	Disapproving
Prohibitive	_____	_____	_____	_____	_____	_____	_____	Permissive
Impersonal	_____	_____	_____	_____	_____	_____	_____	Personal
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Uncomfortable	_____	_____	_____	_____	_____	_____	_____	Comfortable

- Please indicate on a 9-point scale how much you would like to work for the company pictured¹ (1=dislike extremely, 5=neither like nor dislike, 9=like extremely) circle one



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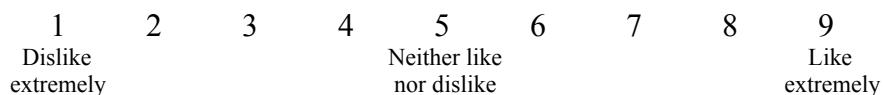
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Photograph 8

- Please record your impressions of the company shown by choosing a point on each of 12 scales listed²

Flexible	_____	_____	_____	_____	_____	_____	_____	Rigid
Tense	_____	_____	_____	_____	_____	_____	_____	Relaxed
Unrewarding	_____	_____	_____	_____	_____	_____	_____	Rewarding
Orderly	_____	_____	_____	_____	_____	_____	_____	Chaotic
Pleasant	_____	_____	_____	_____	_____	_____	_____	Unpleasant
Negative	_____	_____	_____	_____	_____	_____	_____	Positive
Deliberate	_____	_____	_____	_____	_____	_____	_____	Impulsive
Approving	_____	_____	_____	_____	_____	_____	_____	Disapproving
Prohibitive	_____	_____	_____	_____	_____	_____	_____	Permissive
Impersonal	_____	_____	_____	_____	_____	_____	_____	Personal
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Uncomfortable	_____	_____	_____	_____	_____	_____	_____	Comfortable

- Please indicate on a 9-point scale how much you would like to work for the company pictured¹ (1=dislike extremely, 5=neither like nor dislike, 9=like extremely) circle one



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² From "First impression of the symbolic meanings connoted by reception area design," by S. Ornstein, 1992, *Environment and Behavior*, 24(1), p. 91. Copyright 1992 by Sage Publications. Reprinted with permission of the Sage Publications.

Background Information

Gender

- a) Male
- b) Female

Year you were born: 19____

Highest education level completed

- a) High school
- b) Some college
- c) Bachelor's degree
- d) Graduate degree

What is your major?

Do you have any prior work experience(s) in a large company or an office (30+ people)?

- a) Yes
- b) No

If YES, how long did you work for the company or an office?

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BIOGRAPHICAL SKETCH

Jahae Park was born in Seoul Korea in June 1979. Jahae and her family moved to Salt Lake City, Utah, USA in December of 1990. Since she was a child, she has always been interested in the design of buildings and interior spaces. In May of 2001, she obtained a Bachelor of Science in Architectural Studies from University of Utah. After gaining some experience working at Don Brady Interior Design, Jahae became interested in the field of interior design and decided to further her education in interior design. In the fall of 2002, she enrolled in the Master of Interior Design program at the University of Florida. Her primary research interest focuses on the symbolic messages conveyed by office design. Upon completion of this master's thesis, Jahae plans to work in the commercial design industry, particularly in the field of corporate design.