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Proxemic Behavior of the Nonhandicapped Toward the Visually Impaired

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Proxemic Behavior of the Nonhandicapped

Toward the Visually Impaired

A Thesis

Presented to the
Department of Communication
and the
Faculty of the Graduate College
University of Nebraska

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
University of Nebraska at Omaha

by
Carol J. Olsen
November 1989
THESIS ACCEPTANCE

Acceptance for the faculty of the Graduate College, University of Nebraska, in partial fulfillment of the requirements for the degree Master of Arts, University of Nebraska at Omaha.

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Date
11-27-89
ABSTRACT

This study investigated spatial behavior of nonhandicapped individuals toward physically handicapped individuals. Initial seating distance was measured between a visually impaired experimenter and nonhandicapped subjects. Subjects were from the University of Nebraska at Omaha. Students completed a survey and then, one at a time, went to an adjacent room to answer some follow-up questions posed by a visually impaired confederate. Distances were measured and compared to other studies measuring handicapped/nonhandicapped interactions. Previous research showed significant differences in distance between handicapped/nonhandicapped interactions and nonhandicapped/nonhandicapped interactions. Greater distances were chosen when interacting with a physically handicapped individual than with a nonhandicapped person. This is an indication of discomfort or uneasiness with the stigmatized.

Research on spatial behavior with the visually handicapped is limited. This study lays the groundwork for future research involving proxemic reactions to the handicapped and, specifically, the visually impaired.
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INTRODUCTION

People often fear the unknown. We avoid what is unfamiliar to us. We feel most comfortable with familiar people, places, things, and situations. When confronted with the unfamiliar, we tend to react differently than usual and often negatively.

Most people have had very little, if any, personal experience with physically handicapped people. Individuals who are blind, deaf, quadriplegic or paraplegic, have missing limbs or other physical disfigurements, or any number of other physically disabling conditions make up one of the least acknowledged minority groups in society. As such, the majority of society, the nonhandicapped, avoid contact with that unfamiliar portion of our population.

Discomfort is demonstrated in many ways, both verbally and nonverbally. Speech patterns and conversations differ from normal, routine situations. Body language changes. Verbal communication often contradicts what we are conveying nonverbally. Whether we consciously or subconsciously display our uneasiness, the unfamiliar affects our behavior.

Adler and Towne (1987) define nonverbal communication as "those messages expressed by other than linguistic means" (p. 188). Our nonverbal messages show our anxieties and uneasiness more than verbal messages. We cannot always control our nonverbal behavior in nor adapt it to new or unfamiliar situations.

One area of nonverbal communication is proxemics, which
studies spatial behavior, how people use the space that surrounds them, and how that use of space communicates messages to and from others. Research in proxemics shows that people choose how close to or how far from others they feel comfortable. These choices involve the degree of intimacy, friendship, familiarity, or liking people have for one another and, inversely, the degree of fear, distrust, disgust, or ignorance they have toward each other.

This study involves nonverbal responses by nonhandicapped persons to the physically handicapped. More specifically, it reviews recent literature on spatial behavior (proxemics and personal space), stigmatization of the handicapped, expectations we have of the physically handicapped, and how distance may communicate nonverbally.
CHAPTER I
SURVEY OF LITERATURE

Nonverbal Communication

Nonverbal communication constantly influences our communication with others. Physical appearance, body movement, facial expression, eye contact, paralanguage, touching behavior, and spatial behavior all play roles in how what we say or don’t say is interpreted by others and, by the same token, how we interpret the communication of others toward us. Brooks and Emmert (1976) say all nonverbal behavior has communicative implications but not necessarily the same intent for both giver and receiver. Receivers can only infer intent of message senders. Adler and Towne (1987) claim we don’t always intend to send nonverbal messages, yet we constantly send nonverbal clues, making us constant sources of information about ourselves and others.

Proxemics

Proxemics is the study of the use of space. Personal space refers to the distance between two people as they interact. Hayduk (1978) defines personal space as “the area individual humans actively maintain around themselves into which others cannot intrude without arousing discomfort” (p. 118). Hall (1966) thinks of personal space as “a small, protective sphere or bubble that an organism maintains between itself and others” (p. 119). Societal and cultural norms dictate how we use the space around us, and violation
of these norms causes discomfort (Middlebrook, 1980). Two studies (Long, 1984; Vine, 1982) show violations of personal space create stress.

Malandro and Barker (1983) state proxemic messages are communicated through the use or misuse of space. They define two types of space: (1) human territory, which is the continuous association of a person or a group with a certain space, and (2) personal space, which is the expanding and contracting area surrounding and traveling with an individual. This area changes from situation to situation and differs in varying contexts and cultures. According to Taylor, Rosegrant, Meyer, and Samples (1977), how much physical closeness with others we allow depends on our relationship with them, our socialization, and our relationships with anyone else who may be around. Fisher (1987) claims the more access we have to a person, the greater the interpersonal contact with that person. Sanders (1976) concludes that personal space functions as a protective screen which minimizes the impact of interactions perceived as threatening. A study by Kanaga and Flynn (1981) shows a similar relationship between distance, subject matter of conversations, and relationship of the interactants. Knapp (1978) states that our perceptions of space and how we use that space contribute extensively to the communication outcomes we seek.

Worchel (1986) found social situations of subjects and task orientation influence distance between individuals.
Subjects who experienced social isolation prior to meeting with the experimenter chose a greater distance between the two than subjects who were not isolated. Subjects also chose greater distance when they believed the interaction was being observed by others. He also found subjects kept a greater distance from an interviewer when the topic of conversation was personal and the conversation was expected to be lengthy. Room size and shape also influenced distance.

In another study, Argyle and Dean (1965) found that distance and eye contact had a linear relationship. As distance between individuals increased, so did eye contact; and as distance decreased, eye contact decreased. As distance decreased, signs of tension were observed, and gaze direction moved away from the other party. Subjects attempted to increase distance by leaning back in their chairs and engaged in other gestures and distractions to reduce eye contact. Patterson (1972) found similar results.

Andersen and Sull (1985) studied the relationship between interpersonal distance and touch. Distancing is a function of cultural norms, situational variables, interpersonal relationships, attraction, growth and development, and the interplay of other nonverbal variables. Desire for or avoidance of touch influences the interpersonal distances between individuals. The research also found females to be more inclined to touching behavior than males and, consequently, demonstrated less distancing in interactions.

Baldassare's 1978 review of human spatial behavior
mentioned three factors he considered "causal" in early research: biological, cultural, and environmental. Later work studied sociological and psychological explanations of spatial behavior such as the spatial perceptions, stimulus overload, personal and social control, roles and symbolic meanings, and equilibrium theories -- theories of spatial variables systematically and sequentially related to an assortment of nonspatial factors.

Hayduk (1983) reviewed recent research involving personal space and listed more than thirty variables found to influence the use of personal space. Among these variables were sex, personality, acquaintance or friendship, attitude, cooperation, and stigmatizing conditions.

The study of proxemics indicates that how we use the space around us is dependent on many factors. The nature of the situation, our feelings about the interaction and other participants in it, our culture, our experiences, and our personalities all contribute to our spatial behavior. Research shows increased distance when we feel stress or discomfort with our surroundings, the situation, or people with whom we are interacting. One characteristic of individuals with which we feel discomfort is stigmatization.

**Stigmatization**

Goffman (1963) elaborates on those stigmatizing conditions. According to Goffman, stigma refers to "bodily signs designed to expose something unusual or bad about the
moral status of the signifier” (p. 1). He distinguishes among three types of stigma: (1) abominations of the body or physical deformities; (2) blemishes of the individual character such as weakness, dominance, dishonesty, or violence; and (3) tribal stigmas associated with race, nationality, or religion. Individuals characterized with these stigmas generally are treated differently than the nonstigmatized in society. Kleck (1969) found that behavior produced by physically normal people, when interacting with physically stigmatized individuals, showed distinct behavioral biases. Gliedman and Roth (1980) blame these societal differences on social paradigms that are difficult to change because of the long history of negative attitudes toward those individuals who differ from the norm (specifically, individuals with disabilities). They suggest a need to change societal paradigms to accept the stigmatized with more openness and understanding.

Sarafino and Armstrong (1986) claim the mass media, especially television, are a major source of social experience today. Portrayals of nearly every facet of culture play important roles in human development. Television is one of the most powerful influences on attitudes and behavior in society today (Mankiewicz & Swerdlow, 1978).

According to Wright (1986), mass media portrayals of minorities may be the major sources of impressions and information to those who lack much personal and direct
contact with them. These portrayals may have consequences for socialization. Donaldson (1981) states that when handicapped people are portrayed, it's usually in a negative role. Historically, the media have portrayed physically handicapped people as monsters like the Hunchback of Notre Dame and Quasi Moto (Bogdan, Biklen, Shapiro, & Spelkoman, 1982) and as criminals like the one-armed man on The Fugitive and Dr. Loveless on The Wild, Wild West (Longmore, 1987).

A study by Kleck and DeJong (1983) shows nonhandicapped children found physically handicapped children less attractive and exhibited less liking toward them. Several studies (Matthews & Westie, 1966; Richardson, 1970; Richardson & Emerson, 1970; Richardson & Royce, 1968) researched children's preference to stigmatized children. Subjects were shown six drawings of children with physical abnormalities and were then asked to rank the pictures in order of preference for the children in the drawings. The pictures illustrated: (1) a child with no physical handicap; (2) a child with crutches and a brace on the left leg; (3) a child sitting in a wheelchair with a blanket covering both legs; (4) a child with the left hand missing; (5) a child with a facial disfigurement on the left side of the mouth; and (6) an obese child.

Matthews and Westie (1966) found that rank order of preference for the pictures of children with handicaps was culturally uniform; and while not exactly as hypothesized, rank order was similar to research expectations with the
nonhandicapped child being preferred over the others. Richardson's 1970 study utilized the same type pictures but compared age and sex of the subjects. He found values toward children with disabilities gradually changed with age and by twelfth grade resembled values of same-sex parents. Older females conformed more to peer values than older males. Girls showed more aversion to handicaps that might inhibit social relations, while boys placed more weight on limitations to physical activity. All but kindergartners preferred the nonhandicapped children above all others. There was question as to the kindergartners' abilities to understand the task. In 1971, Richardson expanded the group of drawings to include more detailed pictures and obtained results consistent with the earlier studies. Sigelman and McGrail (1985) found a greater awareness of handicapping conditions and, consequently, more expressions of sympathy with older children than with younger. Boys showed more negative reactions to physical handicaps than girls.

Richardson and Royce (1968) added the dimension of race to the ranking order of preference. Their research showed a physical handicap to be such a powerful cue that preference for skin color was masked. The nonhandicapped picture was preferable no matter what the race, yet girls paid more attention to race than boys. As in Richardson's 1970 study, girls were more concerned with physical appearance and boys with functional ability. Richardson and Emerson (1970) replicated this study in a southern city (as opposed to the
1968 study in New York) where racial discrimination was more predominant. Where race was held constant, the results were the same as the earlier study. When skin color became a variable, the results shifted with a preference of light over dark. The pictures of dark-skinned children ranked lower than the same pictures with light-skinned children.

Richardson, Goodman, Hastorf, and Dornbusch (1961) studied cultural uniformity in reactions to physical disabilities. Pictures of children with physical conditions (similar to those of the earlier described studies) were shown to children of different races, social, and cultural backgrounds, some with handicaps and some without. No matter what background the subjects had, their uniformity among reactions to the pictures was apparent. Verbal discussion with the subjects showed a silent awkwardness when asked for reasons why they ranked the pictures as they did. One subject said he was uncomfortable with a handicapped child, and another reported he did not know what to say to a child with a disability.

In 1963, Goodman, Dornbusch, Richardson, and Hastorf further studied ranking orders by expanding their research. They found adults ranked the pictures identically to the children from their shared culture. In addition, children with psychiatric disturbances ranked children differently than the undisturbed children ranked them. The research concluded that children acquire values from exposure to adult values.
Billings (1963) found that attitudes of nonhandicapped children were generally unfavorable toward disabled children, particularly children with motor impairments. When asked to describe disabled children, the nonhandicapped used words like "bad," "no good," "can't do anything," "helpless," or "mean." Older children showed more negative attitudes than younger children.

These studies defined and described stigmatizations, including that of the physically handicapped. They showed an aversion toward the physically handicapped by the nonhandicapped and negative attitudes toward the stigmatized. Many of those attitudes are formed from our exposure through the media. Several studies showed a preference for nonhandicapped individuals over handicapped. Handicapping conditions were shown to be stronger determinants of preference than race.

**Expectations**

While these studies show mixed results, Myers (1987) states social interaction is preceded by and a result of our anticipation of the interaction. Our expectations of a situation maximize the chances of that expectation becoming reality. If we go into a social interaction anticipating a negative experience, say with a stigmatized individual, it will more likely result in a more negative interaction with that individual.

Dahnke (1982) says psychological barriers arise during
the interactions between handicapped and nonhandicapped people: (1) self-perceptions of handicapped individuals; (2) perceptions of nonhandicapped individuals by handicapped individuals; and (3) nonhandicapped persons' perceptions of handicapped people. These barriers can either reinforce or alter existing attitudes of both parties or cause avoidance of any interaction. Dahnke also developed a number of axioms proposing that the more information exchanged between the handicapped and nonhandicapped, the greater the communication level between them, both verbally and nonverbally, and the greater the reduction of uncertainty and anxiety. All communication between the two parties depends upon the interactions with and perceptions of one another.

In a 1980 study of communication between handicapped and nonhandicapped people, Thompson and Cundiff found that the uncertainty nonhandicapped individuals felt toward the handicapped is manifested in different ways under different circumstances. Reactions generally reflect avoidance and uncertainty with longer lengths of time before initiating interactions, decreased numbers of interactions, less eye contact during interactions, and increased staring in crowd situations. This creates a transference of negative feelings to the handicapped individual, creating a self-fulfilling prophecy. As nonhandicapped people react negatively toward the handicapped, the handicapped see themselves in a negative light.

Uncertainty reduction can occur with disclosure. If a
person is willing to discuss his or her disability with a nonhandicapped person, the resulting interaction will be more positive. Karniski (1978) found increased knowledge about the physically handicapped decreased the physical distance sixth-grade students exhibited toward a disabled person, though no significant difference was measured between girls and boys of this age. Thompson (1982) found similar results with adults, particularly when the handicapped person seemed to be coping well with the disability. Participants were more comfortable interacting, and the handicapped person became more preferable as a partner than before disclosure.

What we expect from our interactions influences the outcome of those interactions. Participants react to those expectations and to the reactions of others' expectations. We anticipate discomfort and uncertainty in an interaction with a physically handicapped person, and it is manifested by avoiding and maintaining greater distances from them. Uncertainty reduction can occur when the nonhandicapped have a greater awareness of the handicapping condition, particularly if the handicapped person is coping well with the condition.

**Distance and the Handicapped**

Thompson and Seibold (1978) found reactions to three stigmas (a wheelchair-bound person, a homosexual, and a person of Jewish origin) were uniform across those stigmas. Generally, initial reactions include uncertainty, anxiety,
and discomfort. Normals are less attracted to stigmatized individuals and try to avoid or at least reduce interactions with them. Interactions that do occur are shorter, behavior is more constrained, and interpersonal distance is increased. The study failed to show that disclosure about the stigma increased acceptability of a stigmatized person, but uncertainty within the interaction was reduced after disclosure.

In a 1961 study, Davis analyzed the coping behavior of the visibly handicapped with social interaction involving the nonhandicapped. He found the nonhandicapped to often be guilty of inadvertent remarks about the disability, made to downplay the awareness of the impairment but in actuality drawing more attention to it. In an effort to reduce strained interaction between the disabled and nondisabled, Davis suggests three states: (1) fictional acceptance; (2) role-taking; and (3) institutionalizing the normalized relationship.

Katz, Katz, and Cohen (1976) designed research to study white children's reactions to a real stimulus person -- an adult, either black or white, handicapped (confined to a wheelchair) or normal. With a white examiner, children sat closer to the nonhandicapped condition than to the handicapped condition. With a black examiner, younger children sat closer to the handicapped condition, but older children sat further from the handicapped condition than the nonhandicapped condition. In this study, race had a greater
influence on attitudes than a physical handicap.

Perlman and Routh (1980) looked at social interaction between boys with and without handicaps. Their study considered eye contact, cooperative play, movement, helping, and talking interactions. The youngsters showed preference for the nonhandicapped child and had much more interaction with him than the confederate child in a wheelchair. After the experiments, children were asked about their preference for future interactions. Two-thirds still expressed preference for the nonhandicapped child. Of the third who showed interest in the handicapped child for future encounters, one reason was the ability to beat the confederate at games. Another child who preferred the nonhandicapped child said the disabled child wouldn’t make a good friend because he’d have to be in the hospital so often. Another remarked, “If I’d known he was only pretending, I’d have picked him” (p. 33). This study showed that whether the boys had a choice of a handicapped or nonhandicapped playmate or the handicapped child was the only choice, the subjects still chose to avoid the child with the handicap.

Evans and Howard (1973) indicate interaction distances are larger between stigmatized and nonstigmatized individuals than distance between all nonstigmatized individuals. Nierenberg and Calero (1971) also found that we move closer to people we accept and keep our distance in situations of nervousness or defensiveness. Edwards (1972) states that people approach a person with whom they are familiar more
closely than a person with whom they are unfamiliar.

Kleck, Ono, and Hastorf (1966) conducted experimentation that studied handicapped/nonhandicapped interactions in face-to-face interview-type encounters. Behavioral output toward the handicapped confederates from nonhandicapped subjects was predictably stereotyped, inhibited, and over-controlled. The results of their study supported their hypotheses that subjects interacting with the physically disabled tended to demonstrate a more contrived and artificial behavior as a group than did subjects interacting with the physically normal, terminated the interaction sooner than did subjects in the nondisabled interaction, and expressed their opinions less representatively of their actual beliefs with the disabled interviewer than with the nondisabled interviewer. According to the authors, this indicates an uneasiness and anxiety on the part of the nonhandicapped when interacting with the handicapped.

In a similar study, Comer and Piliavin (1972) found that physically disabled subjects experienced a discomfort with physically able interviewers. The disabled subjects terminated the interactions sooner, showed greater motoric inhibitions, exhibited less smiling behavior, demonstrated less eye contact with the interviewers, and admitted feeling less comfortable during the interaction. The handicapped subjects also maintained greater physical distance in interactions with a disabled interviewer and demonstrated less variability in their verbal output when speaking to him.
Kleck (1968) studied nonverbal cues emitted in face-to-face interaction between normal and disabled individuals. His findings generally reinforced earlier studies indicating a typically stereotypical interaction. Sigelman, Adams, Meeks, and Purcell (1986) studied children’s nonverbal reactions to physically handicapped individuals. This study showed no significant difference in reactions to a nondisabled and disabled interviewer, unlike other studies that showed marked differences and preference for non-handicapped interactions. Somervill, Cordoba, Abbott, and Brown (1982) also found no difference in children’s distancing behavior with handicapped and nonhandicapped interviewers.

Worthington (1974) found subjects in an airport were willing to give assistance to a disabled confederate but kept a greater distance from him than a nonhandicapped confederate. While amount of time spent in the encounter was not significantly less or greater between variables, the subjects seemed apprehensive to come too close to the disabled persons. Older subjects were less affected by signs of a visible disability.

Stephens and Clark (1987) used a handicapped confederate to study the effect of a visible physical handicap on personal space. The confederate, who normally used a wheelchair, was seated at a table with five empty chairs. Nonhandicapped subjects were randomly asked to sit at the table and complete a “distracter” survey. The confederate
appeared able-bodied when in a straight-back chair, so the experiment was repeated in that manner. Results showed more distancing in the handicapped condition, and the study implied that nonhandicapped people tend to stigmatize solely on the basis of physical handicap.

A 1982 study by Albrecht, Walker, and Levy found that nonstigmatized individuals distinguished between different types of stigma. They showed more distancing toward people with social stigmas (alcoholics, drug addicts) than the physically stigmatized (paraplegics, blind). The study suggested that social distancing is more a result of perceived disruption to social interaction caused by a stigma rather than the attribution of responsibility for the stigma. Another study (Grand, Bernier, & Strohmer, 1982) showed a higher acceptance of handicapped people in the workplace than in more personal relationships such as dating and marriage.

Holton (1978) found no difference between proxemic needs of all deaf groups of college students and all-normal groups. Their distancing between one another during interactions was generally the same. There was a difference in the deaf/normal interactions, though not a great difference. Holton indicated this could, in part, be due to the desire of the deaf to want to pass as normal, so their normal interactant may not have been aware that there was a difference. The lack of verbal communication between the deaf and normal subjects could also have influenced the spatial dimension. The slightly greater spacing could have
been a result of assumed unfriendliness.

In a 1985 study, Jones found deaf children demonstrated greater distancing between each other than normal children. She did not necessarily find this different from the Holton (1978) study since differences in distancing may diminish over time with more exposure to one another. A 1974 study by Mallenby found that increased interaction between normal and hearing-impaired children decreased distancing observed in earlier interactions.

Hayduk and Mainprize (1980) investigated whether the lack of vision would have any influence on discomfort or uncertainty in spatial relationships. Using a stop-distance technique, they tested totally blind, legally blind, and sighted subjects to see if different spatial preferences existed with the subjects and, if so, if those differences were significant. Subjects with little or no vision were found to feel discomfort and anxiety to an approaching experimenter at similar distances to the sighted subjects. Hayduk and Mainprize found no significant differences in spatial discomfort; however, they did find differences in physiological restrictions. While other studies cited by the authors showed an aversion by nonhandicapped subjects to handicapped individuals, blind subjects showed no aversion to nonhandicapped individuals, possibly because of lack of visual stimuli to these differences.

Rumsey, Bull, and Gahagan (1982) undertook a study to compare distances of pedestrians on a public street to
another normal individual, an individual with a facial disfigurement, and an individual with some temporary disabling condition. Pedestrians stood further away from the individual with the permanent disfigurement, particularly when they stood to the side of the disfigurement, than they did from the normal confederate or the one with the temporary condition. The appearance of the temporary condition appeared to be less threatening to the subjects and not really disfigured rather than having a condition that would not go away in a few days or weeks or months.

A two-part study by Kleck, et al. (1968) used a figure-placement task to measure interpersonal distance between nonstigmatized individuals and individuals with specified characteristics and a chair-placement task to measure distance between an epileptic and a nonstigmatized individual. Results of the first experiment ranked the characteristic variables from closest distance to furthest distance as liked professor, friend, blind, negro, stranger, amputee, epileptic, mental patient, and disliked professor. The second part of the study used both the epileptic/nonhandicapped condition and a nonhandicapped/nonhandicapped control condition. Results showed a significant difference in the two conditions, with the epileptic condition having greater distance than the nonstigmatized condition. Epilepsy ranked much further in interpersonal distance from the self-figure than the liked professor in the first part of the study, and this increased distance remained significant in
the chair-placement task.

In a study by Heinemann, Pellander, Vogelbusch, and Wojtek (1982) it was found that physical distance is a popular indicator in studying personal interaction of individuals. Disliking corresponds with greater distance between interactants, and so does stigmatization. They found that while distancing can be an affective reaction, spatial behavior is usually intentional. Physically normal people generally keep at greater distances from physically handicapped because of discomfort, disliking, and lack of awareness about the handicap.

These studies showed evidence that nonhandicapped people generally keep a greater distance from handicapped individuals than they do from other nonhandicapped individuals. Both children and adults demonstrated more discomfort and distance with a physically handicapped confederate than with a nonhandicapped confederate. The spatial needs and comfort of the handicapped resemble that of the nonhandicapped.

**Summary of Literature**

This literature has shown a great deal of research in the area of nonverbal communication, proxemics, stigmatization, expectations created from those stigmatizations, and distancing behavior with the stigmatized. Many different methods were implemented using a number of conditions to show differences in proxemic reactions to the handicapped. Table 1 lists several of these studies.
Table 1.
Studies Showing Proxemic Differences in Nonhandicapped and Handicapped Conditions

<table>
<thead>
<tr>
<th>Study</th>
<th>Method</th>
<th>Non-handicapped Mean</th>
<th>Handicapped Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comer and Piliavin (1972)</td>
<td>Chair placement with interaction, subject in wheelchair, confederate in wheelchair</td>
<td>67.5 in.</td>
<td>79.2 in.</td>
</tr>
<tr>
<td>Heinemann, Pellander, Vogelbusch, and Wojtek (1981)</td>
<td>Chair-placement with interaction, confederate in wheelchair.</td>
<td>65.68 in.</td>
<td>73.7 in.</td>
</tr>
<tr>
<td>Holton (1978)</td>
<td>Seating distance with interaction, deaf confederate</td>
<td>52.56 in.</td>
<td>64.37 in.</td>
</tr>
<tr>
<td>Kleck, et al. (1968)</td>
<td>Chair placement, no direct interaction epileptic confederate</td>
<td>64 in.</td>
<td>78 in.</td>
</tr>
<tr>
<td>Langer, Fiske, Taylor, and Chanowitz (1976)</td>
<td>Seating distance with interaction, confederate wore leg brace, subject observed/did not observe confederate before interaction</td>
<td>45.6 in. (observed)</td>
<td>48.71 in. (observed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>46.43 in. (unobserved)</td>
<td>68.79 in. (unobserved)</td>
</tr>
<tr>
<td>Stephens and Clark (1989)</td>
<td>Chair selection without interaction, confederate in wheelchair</td>
<td>67.92 in.</td>
<td>84.84 in.</td>
</tr>
</tbody>
</table>
Statement of Purpose

While the above mentioned studies show differences in spatial behavior in stigmatized/nonstigmatized conditions from normal conditions, there is a lack of research involving the blind or visually impaired. Would a visual handicap elicit the same results, and, if so, how would these distances compare with previous research? This study will measure initial sitting position of a nonhandicapped subject and a visually impaired confederate using a chair-placement task. Results will be discussed in their relationship to previous research.
CHAPTER II

METHODOLOGY

A number of studies previously mentioned in this study measured distances between handicapped and nonhandicapped individuals, using several different techniques. Three of these studies (Kleck, et al, 1968; Rumsey, Bull, & Gahagan, 1982; Stephens and Clark, 1987) measured distances in which there was no direct interaction between subjects and confederates.

Kleck, et al. (1968) used a chair-placement task to compare distances between two nonstigmatized individuals and between a nonstigmatized subject and a confederate ascribed with epilepsy. They chose epilepsy because of where that condition fell in a ranking task and because it was easy to ascribe to the confederate.

Rumsey, Bull, and Gahagan (1982) measured approach distance by pedestrians to a facially disfigured confederate standing on a busy street corner. Stephens and Clark's 1987 pilot study used chair selection. Subjects chose a chair at a table where a confederate in a wheelchair was seated to complete a survey. Each of the studies also tested a control group.

confederates. Worthington measured approach distance in an airport where a wheelchair-bound confederate asked subjects for directions. Floor markings were used for measurement. Heinemann, Pellander, Vogelbusch, and Wojtek asked subjects to pull up a chair to answer questions of a confederate seated in a wheelchair behind a desk.

Holton (1978) measured interaction distance between deaf and normal college students. Subjects were instructed to work a jigsaw puzzle together. Initial sitting position was measured, as well as distance later in the interaction. Comer and Piliavin (1972) used handicapped subjects (in wheelchairs) as well as a confederate in a wheelchair. Subjects were asked to sit where they felt comfortable. Langer, Fiske, Taylor, and Chanowitz (1976) tested the differences between a condition where subjects were able to observe the confederate before the interaction and an unobserved condition. This experiment was conducted with a confederate wearing a leg brace.

While none of the studies would be totally suitable for replication in this study, portions of several of them were used to investigate the proxemic behavior of nonhandicapped subjects to a visually impaired confederate.

Subjects

Subjects were 63 communication students, 39 females and 24 males, from the University of Nebraska at Omaha.
Setting and Apparatus

Two rooms with standard furnishings, one an office and one a classroom, were used for experimentation, with adjacent rooms where subjects were gathered. The rooms were equipped with a 5-1/2 by 12-foot piece of linoleum with a grid pattern. Squares on the flooring measured 4 inches by 4 inches with 1/2-inch lines between the squares.

Two straight-back chairs were used, one for the experimenter and one for the subject. The experimenter's chair was placed approximately 2 feet in from the length of the linoleum. The subject's chair was placed at the far end of the linoleum, approximately 10 feet away from the confederate's chair, and was returned to its original position after each interaction. A white cane was visible leaning against the wall to the left of the experimenter (see Figure 1).

A video camera unobtrusively operated a few feet away from the experimenter to her right and was not clearly visible to subjects until they were seated. The camera pointed downward while in operation.

The author of this study, who is legally blind, served as experimenter and was dressed in casual street clothes and wore glasses with a thick lens over the left eye. The experimenter's right eye showed obvious impairment.

Procedure

Subjects were told they would be participating in a
research study. They first completed a two-page bipolar survey for another experimenter, which served as a distracter, and were then asked to go into an adjacent room one at a time to answer some follow-up questions. Before entering the second room, subjects were informed by a confederate that he would announce their arrival because the experimenter was visually impaired.

The experimenter and subject were the only two people in the room. The experimenter was seated as the subject entered and rose to greet the subject. The subject was asked to hand the completed portion of the survey to the visually impaired experimenter and to "pull up a chair" to answer a few more questions. When seated, subjects were asked some demographic questions related to the survey, thanked for their participation in the study, and dismissed. The video camera recorded foot placement of the subject.
Figure 1
Experimental Setting

Video Camera (Partially Hidden)

12 feet

Confederate Chair

Foot Placement

White Cane

Subject Chair

Wall

5-1/2 feet
CHAPTER III
RESULTS

Distance between the experimenter and subjects was measured from toe to toe. The experimenter’s feet were kept even to a line in the grid. When subjects placed their feet unevenly, measurement was taken from the foot closest to the experimenter.

An analysis of the video tape showed an overall mean distance of 30.58 inches. Mean distance for females measured 31.36 inches. For males, the mean was 29.31 inches. Median distance overall measured 24.75 inches. Female median distance was 27 inches and male was 22.5 inches (see Table 2).

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>29.31</td>
<td>22.5</td>
</tr>
<tr>
<td>Females</td>
<td>31.36</td>
<td>27</td>
</tr>
<tr>
<td>Grand Mean</td>
<td>30.58</td>
<td>24.75</td>
</tr>
</tbody>
</table>

n=63  Males=24  Females=39

Overall range between experimenter and subjects was shown to be 9 inches to 72 inches. Range for females was from 9 inches to 72 inches and for males was 9 inches to 67.5 inches. Mode for females was 18 inches, occurring a total of 4 times out of 39. For males, 13.5 inches was the mode,
occurring 4 times out of 24. Overall mode was 13.5 inches, with 7 occurrences out of 63 total subjects. Table 3 shows distances in inches for males and females and the frequency of each distance.
Table 3
Frequency of Distances for Males and Females

<table>
<thead>
<tr>
<th>Distance in Inches</th>
<th>M</th>
<th>F</th>
<th>n</th>
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<tbody>
<tr>
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<td>5</td>
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<td>3</td>
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<tr>
<td>13.5</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>15.75</td>
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<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
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<td>4</td>
<td>4</td>
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<td>72</td>
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<td>3</td>
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</table>
CHAPTER IV
DISCUSSION

Hall (1966) discusses four zones of human distance that range from no distance to more than 25 feet: intimate distance, personal distance, social distance, and public distance. Results of this study fall under the categories from the far phase of the intimate distance (6 to 18 inches) to the close phase of social distance (4 to 7 feet). Figure 2 shows the distribution of distances of subjects in comparison with Hall's distance zones. While Hall's intimate distance is generally reserved for those with very close relationships, he states that sometimes the intimate distance is necessary for interactions. Crowding requires us to stand much closer to people than we normally would in an encounter with a stranger. Possibly the nature of this study also gave the subjects a need to sit closer to the confederate than they might ordinarily in a less communicative encounter.

The personal distance zone contained the most subjects from this study. This category ranges from 1-1/2 feet to 4 feet. While this distance is considered for close friends and co-workers, the absence of other people could have made the subjects of this study sit closer to the experimenter than they would under other circumstances. Again, the nature of the experiment may have influenced the distance. A one-on-one question-answer task may, in itself, create a more personal scenario than some other type of interaction.

The remainder of distances fell into the close phase of
No subjects chose distances in the close phase of Intimate Distance (0-6 in.), the far phase of Social Distance (7-12 feet), or either phase of Public Distance (close=12-25 feet, far=over 25 feet).

Distance zones from Hall (1966).
the social distance. This coincides with Hall's description of this distance. He claims impersonal business takes place at this distance and that people are able to see the entire face of the other participant, as well as the upper part of the trunk, and the viewer is able to observe the other without much threat.

All means of previous studies without direct interaction fell into Hall's personal and social distance zones. Results from Kleck, et al. (1968) showed a mean distance of 5 feet 4 inches in the control condition and 6 feet 6 inches in the experimental condition. This falls into the close phase of social distance and also falls into the upper range of this study.

Rumsey, Bull, and Gahagan (1982) found a mean difference of 39.4 inches between a stigmatized and nonstigmatized condition and 22.1 inches in a normal condition. Falling into Hall's zone of personal space, this could represent his theory of crowding since the encounter took place between pedestrians on a public street. This compared to the lower range of this study.

In Stephens and Clark's 1987 pilot study, 43.4 percent of their subjects chose a chair closest (3.5 feet) to a handicapped confederate, 53.4 percent chose a chair at the middle distance (9.5 feet), and 3.2 percent chose a chair at the furthest distance (15 feet). In the control condition with a nonhandicapped confederate, the closest chair was chosen by 64 percent of the subjects, and the middle chair
was chosen by the remaining 36 percent. None of the subjects in the control group chose the furthest chair. The chairs in this study were placed to fall within Hall's distance zones. Results show that there is a difference in distance in the two conditions that could possibly hold true in this study as well, even though the task differs from that of Stephens and Clark.

These studies indicate a significant difference in distances between stigmatized/nonstigmatized conditions and control conditions in interactions involving no direct interactions. Figure 3 shows how the distribution of means from these studies fall into Hall's distance zones.

The five studies using direct interaction between subjects and confederates fall into the same ranges as this study. Figure 4 shows the distribution of means as they fall into Hall's distance zones. Worthington's 1974 research showed a mean distance of 19.5 inches when a handicapped confederate asked a nonhandicapped subject for assistance. The control condition brought a mean distance of 10.4 inches. Heinemann, Pellander, Vogelbusch, and Wojtek (1981) found a mean distance of 72.7 inches in the handicapped condition, and in the control condition, the mean measured 65.68 inches.

Holton's 1978 study found a significant difference in means only in the first minute of interaction between subjects in a deaf/normal condition or a normal/normal condition. Initial distance measured 47.24 to 57.87 inches in the normal condition and 59.05 to 69.68 in the stigmatized
No means fell within the Intimate or Public Distance zones. Distance zones from Hall (1966).
Figure 4

Distribution of Means for Studies with Direct Interaction

Social Distance
Close Phase
(4-7 feet)

Personal
Distance Far
Phase (30"-48")

Personal
Distance Close
Phase (18"-30")

Intimate
Distance Far
Phase (6"-18")

Comer &
Pillavin
(1972)

Heinemann, Pellander, (1978)

Holton,
Vogelbusch,
Wojtek (1981)

Langer,
Fisk, Taylor,
Chanowitz
(1976)

Langer,
Fisk, Taylor,
Chanowitz
(1976)

Worthington

Handicapped

Normal

No means fell within the close phase of Intimate distance, the far phase of Social distance, or either phase of Public distance.

Distance zones from Hall (1966).
condition. After the initial interaction, subjects moved closer to each other to complete their task.

Comer and Piliavin (1972) found handicapped subjects sat closer to a nonhandicapped confederate than a handicapped one (M=67.5 inches in the control condition as opposed to 79.2 inches in the experimental condition). In this study, it is possible that subjects felt more room was needed to accommodate two wheelchairs since subjects also were handicapped.

In both the nonstigmatized and stigmatized conditions, Langer, Fiske, Taylor, and Chanowitz (1976) found a difference in the observed and unobserved conditions. There was also a consistent difference between the handicapped and nonhandicapped conditions. In the observed conditions, males sat a distance of 48.72 inches from the nonhandicapped confederate and 51.83 inches from the handicapped confederates. Females in the observed condition sat a mean distance of 42.92 inches from the confederate in the normal condition and 45.58 inches in the handicapped condition. The unobserved means for males were 50.67 for the control condition and 83.58 inches in the handicapped condition. For females in the unobserved condition, the means were 42.19 in the normal condition and 54 inches in the handicapped condition.

These studies fall throughout Hall’s defined distances, just as the results of this study do. While this study only measured distances in an experimental condition, it is likely
that results of a control condition would show similar results, with the nonhandicapped condition showing closer distance between the confederate and the subjects.
CHAPTER V

LIMITATIONS AND IMPLICATIONS

Wiesenthal, Theodor, and Hurford (1982) have a theory of why studies involving the physically disabled are difficult to analyze. It’s difficult for confederates to effectively act disabled, and that makes it easy for subjects to recognize a confederate and realize that he or she is not truly disabled. It causes questions about the reliability of studies where confederates are used. Several of the mentioned studies brought this out. Only two (Holton, 1978; Stephens & Clark, 1987) used confederates with an actual handicapping condition. One of the short-comings is trying to act truly disabled when you are not. And use of a genuinely handicapped individual and a normal confederate allows for great differences in personalities, physical appearances, and carriage of experimenters. In the Wiesenthal, Theodor, and Hurford study, subjects could easily pick out the confederates among pictures of disabled persons. Unless a person is actually handicapped, it’s hard to convince someone else that he or she is.

This study did use an experimenter with an actual visual impairment, and the subjects reflected knowledge of a real impairment. They spoke loudly and often reached with both hands to shake hands with the confederate, even though the confederate did not offer her hand to the subjects. There is question as to whether a visual impairment gives the nonhandicapped subjects a sense of security since the
experimenter cannot visually identify the subjects. After the experimentation, one subject remarked that he didn’t think it mattered where he sat because the confederate couldn’t see him.

In Hayduk’s 1983 review of recent research involving personal space, the weaknesses of methodologies are pointed out. Two classes of measurement generally used in this type of research are projective (manipulation of miniature figures, drawings, dolls, etc.) and real-life measures. While reliability is generally acceptable (.72 for projective and .81 for real-life), correlations between the two are unacceptably low (.39). Hayduk continues by discussing the shape, flexibility, and permeability of personal space. Monge and Kirste (1980) also found common weaknesses in studies involving proximity: (1) the studies are based on physical distance rather than functional distance; (2) distance is measured as fixed rather than fluctuating; and (3) distance between individual others is used rather than distance between multiple others.

Another short-coming of this study was the size of the measurement grid. Chairs were positioned so that 72 inches was the maximum distance away from the experimenter subjects were able to sit unless they moved the chair off the grid. It is possible that if given the possibility of greater distance, subjects may have chosen to sit further away from the experimenter. A different arrangement of the furnishings in the room could also have created more availability of
space rather than limiting the subjects to a fairly confined area.

This study lays the groundwork for future research. With the handicapped condition measurement in place, a control condition could be implemented to compare variables. Comparative studies could be done with other handicapping conditions, as well as other stigmatizing conditions such as race, socioeconomic class, educational levels, or employment status. Variables such as age, race, or education level of subjects could also be used. Another variable that could be of interest would be level of experience dealing with the physically handicapped. Perhaps people with experience dealing with handicapped individuals would react quite differently than those with no experience. This research simply sets the stage for any number of future research projects in an area of increasing importance in today's society.
REFERENCES


