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Client attitudes generated by varied interaction distances and counselor trunk lean in the dyadic counseling interaction.

Paul Arthur Byron Pierce
University of Massachusetts Amherst

CLIENT ATTITUDES GENERATED BY VARIED INTERACTION DISTANCES AND COUNSELOR TRUNK LEAN IN THE DYADIC COUNSELING INTERACTION

A Dissertation

By

Paul Arthur Bryon Pierce

Approved as to style and content by:

(Chairman of Committee)

(Head of Department)

(Member)

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August 1970
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A Dissertation Presented

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Paul Arthur Bryon Pierce

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A C K N O W L E D G E M E N T S

I would like to dedicate this paper to my wife, Patti, "who was always there . . . ." I would also like to acknowledge the sacrifice of my children who often played alone while their daddy worked. They have often demonstrated an understanding far beyond their years.

I would like to thank the members of my committee, Drs. Douglas Forsyth and David Yarington for their guidance and support. I have saved an especial thanks for Dr. Richard F. Haase, the chairman of my committee. He is a teacher's teacher, and seeing research through his eyes is truly an enlightening, as well as an enriching, experience.

I owe a debt of thanks to many others who helped me along the way: to Dr. David Day for his suggestions and comments, to Dr. G. Barton Ogden, Dr. Allen R. Kaynor, Mr. Roger M. Roper, and Mr. William Scheel who assisted me in my data collection; to the subjects who gave up their time to take part in this study; to the students at Springfield College and Holyoke Community College who took part in the development of the semantic differential; to Mr. Robert Vertrees and Mr. Stanley Piatczyc who assisted in the development of the stimulus materials; to Mrs. Dorothy Ives--a superb typist; to my many friends and colleagues who offered various types of support.

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CHAPTER I

INTRODUCTION

There is an emerging awareness across the United States and throughout the world regarding ecology. To the biologist, ecology concerns the relationships between living organisms and their environment. To the sociologist, the term ecology is related to the spacing of people and institutions as well as the interdependency of the two.

The field of psychology is currently attempting to address itself to ecological concerns. Wohlwill (1970) has advocated the development of what he calls environmental psychology in an attempt to better understand and deal with ecological-psychological matters and problems.

The emphasis of the study presented in this paper is related to both ecology and psychology: interpersonal space and its effect upon the dyadic counseling interaction.

There are many theories which attempt to explain what takes place in a dyadic counseling interaction. Some are extremely sophisticated and complex. It would seem, however, that one of the most basic elements of the dyadic counseling interaction--that of interpersonal interaction distance--may have been partially overlooked by many theorists to date.

For the purposes of this study, interpersonal interaction distance or interpersonal space is defined as the range of distances that any one person maintains from other persons in various interpersonal interactions.

Little (1965) writes that man's personal space "appears to be established completely outside his awareness though there is considerable anecdotal evidence that it markedly influences his behavior (p. 238)." "People can be put at ease, shut up, or frozen, depending on where they place themselves in relation to each other (Hall, 1963a, p. 437)."

"The psychiatric literature rarely refers to space, yet it is artfully and intuitively used by psychotherapists: closeness and distance, as well as the relative position of the patient and therapist, are modulated in therapy (Horowitz, Duff, and Stratton, 1964, p. 161)." Only recently has counseling research attempted to discover what effects interpersonal space has on the dyadic interaction; yet certain ethologists and anthropologists would have us believe that the concept of territoriality which is currently very acceptable when discussing animal behavior is also applicable to human interactions (Ardrey, 1966; Hall, 1966; Hediger, 1955).

Theorists such as Ardrey (1966), Hall (1966), and Hediger (1955) suggest that territoriality is a basic behavioral characteristic of all living organisms. They have cited various parallels between animal and human territories. For example, animal territory provides protection from predation, as well as protection for breeding. Man's boundaries and territories, especially his home, provide essentially the same benefits.

There are, however, some basic differences between animal territory and man's personal space. Animal territory tends to be geographical.

It has fixed boundaries, and the animal defends these boundaries. Man's personal space on the other hand is non-geographical. It is carried around with him. There are no fixed boundaries for man's personal space. These boundaries are usually determined by the varying situational events which confront man. Unlike the animal's defense of geographic territory, man often tends to withdraw physically if his personal space is encroached upon.

Some studies have been carried out in the past decade which have attempted to provide a better understanding of man's use and abuse of interpersonal space. Many of the studies to date have been observational in nature; yet some empirical studies have been carried out in the realm of human social interaction.

Recent research on interpersonal interaction distance in the counseling encounter (Haase and Di Mattia, 1969; Haase, 1970) has indicated that this type of encounter is indeed different from many social encounters, and that preferred interaction distances are different as well.

To gain an understanding of how variations in interpersonal distance affect the dyadic counseling interview would benefit the field of counseling. It would undoubtedly facilitate the entire interaction if the therapist was aware of how his distance from the client was affecting that client's attitude at any one point during the interaction. Such knowledge would also be extremely beneficial for counselor training because it would eliminate a great deal of trial and error learning and make the cues explicit.

The purposes of this study were threefold. First, the study

attempted to discover the effects that variations in interaction distance between a counselor and client had upon preferences for those interactions. Second, this study examined the effects of a counselor's varying postures, or trunk leans, upon preferences for those postures. Third, this study attempted to isolate the differences in attitude which occurred between various groups exposed to varying distances and counselor postures, or trunk leans, during a dyadic counseling interaction.

CHAPTER II

LITERATURE REVIEW

This chapter deals with three main topics. First, the chapter discusses territoriality in animals and man, and reviews several studies that relate to territoriality. The second topic is man's use of interpersonal space in various situations. Again, several studies are cited which relate to this topic. The third section of the chapter is devoted to studies more closely related to interpersonal space in the dyadic counseling interaction.

Territoriality

In biological terms, "a territory is an area of space, whether of water or earth or air, which an animal or group of animals defends as an exclusive preserve (Ardrey, 1966, p. 3)." In 1920, an ornithologist named H. E. Howard coined the term territoriality. Territoriality has become "the technical term used by the ethologist to describe the taking possession, use and defense of a territory on the part of living organisms (Hall, 1959, p. 51)." It has been hypothesized that, "In addition to territory that is identified with a particular plot of ground, each animal is surrounded by a series of bubbles or irregularly shaped balloons that serve to maintain proper spacing between individuals (Hall, 1966, p. 10)."

Hediger (1950, 1955, 1961) describes the four various types of interaction distance utilized by animals: flight distance, critical distance, personal distance, and social distance.

Flight distance is that distance to which an animal will tolerate the approach of another species before fleeing. Critical distance is a narrow zone which separates an animal's flight and attack distances. If a lion is approached by a man, it will generally flee until it meets an insurmountable barrier. If the man continues his approach, he soon enters the lion's critical distance. It is at this point that the cornered animal may reverse direction and begin to stalk the approaching man.

Social distance is that distance which tends to keep members of a flock or herd together. Hediger (1961) likens social distance in animals to an elastic rubber band which seems to connect all the members of a group leaving specific distances between them. He states that if that "rubber band" is stretched over and above a specific value the result is often an unhealthy one for the animals concerned.

Personal distance is the normal distance animals maintain between themselves. This is the distance that Hall (1966) likens to a bubble surrounding each animal.

In discussing the various types of animal territoriality, Hediger describes two basic types of animals: the non-contact species and the contact species. To date, there seems to be no clear-cut reason for the categorization of various species; yet at least two distinct categories exist. The non-contact species such as swallows, blackheaded gulls, and deer do not tolerate bodily contact with their kind, excepting their young. Contact species, on the other hand, such as parrots, porcupines, and monkeys seek, or at least tolerate, substantial bodily

contact with their kind. "Thus, territorial behavior of a group insures the right degree of distance and contact within its biotope; and social distance, the right degree of distance and contact between the individuals within their territory (Hediger, 1961, p. 54)."

According to Hediger (1961),

> Territorial behavior is designed to prevent the loss of contact among reproducing units. Within the territory, the specific "social distances" act effectively against any dissolution of the group. Aggressions, and indications thereof, or threats, prevent any dangerous crowding of territories (p. 37).

What happens, however, when these preventive measures fail and crowding occurs? The studies of Christian (1960, 1961) and Calhoun (1962) lend a partial answer to this question.

Christian, Flyger, and Davis (1960) reported the effects of overpopulation on a herd of sika deer. The herd in question lived on an island of 240 acres with an abundant supply of food and water. The population reached a density of about one per acre and subsequently experienced a mass mortality which reduced the herd by approximately three-fifths. Their findings indicated that the deer died from shock following prolonged adrenocortical activity.

> Increased adrenocortical function provides one of the important means of insuring survival when confronted with environmental change or markedly increased physiological demands. Notably, it increases its size and function in response to emotional stress, burns, injury, cold, and a number of potentially harmful stimuli and therefore provides an extremely useful indication of the degree of stimulation from adverse circumstances to which an animal has been subjected (Christian, 1961, p. 428).

In essence, it seems that the territorial balance of the sika deer had been upset by overpopulation and the stress of overcrowding caused undue

strain on the adrenocortical systems of the deer. This stress was a primary factor in the mass mortality of the deer which, in turn, stabilized the territorial balance.

Laboratory studies of mice conducted by Christian (1961) further demonstrated the effects of overcrowding. Christian cited the following reactions to overcrowding in the mice: increased adrenocortical activity, depression of the reproductive functions with increasing population, inhibition of growth, inhibition of sexual maturation, decreased resistance to disease, and inhibition of growth of nursing young through deficient lactation.

Calhoun (1962) made similar observations in studies with Norway rats. In this study he coined a term, the "behavioral sink," to describe what happens when overcrowding occurs for one reason or another. In Calhoun's words, a behavioral sink is "the outcome of any behavioral process that collects animals together in unusually great numbers (p. 144)."

In concluding his study of population density, Christian (1961) wrote,

> Insofar as experiments are analagous and permit conclusions, dogs, guinea pigs, monkeys, and man respond similarly to increased numbers, at least in terms of increased secretion of adrenocortical steroids. When environmental factors do exert controlling effects, they probably do so largely by altering the social or competitive situation and thereby shifting social pressures up or down, rather than by acting directly (p. 446).

Edward Hall echoes Christian by writing,

> True, men aren't mice or rats, nor sika deer, muskrats or lemmings. However, men share key physiological and endocrine features with other mammals, particularly those associated with response to stress (1962, p. 27).

It is certainly more difficult to study man's territorial behavior than it is to study its animal counterpart. Thus, it is also difficult to judge the relationship of animal studies such as those of Christian and Calhoun to studies of human behavior. Often such relationships can only be inferred.

Chombart de Lauwe (1959a, 1959b) studied the consequences of crowding in French urban housing. He found that when the space available per person fell below 8 to 10 square meters both social and physical pathologies doubled. He also found an increase in both types of pathology when the available space rose above 14 square meters per person, although the increase was not as great. He was unable to explain the latter finding.

Hutt and Vaizey (1966), in studying the social behavior of different groups of children, found that increased population density of their subject group promoted greater aggression and less social interaction.

Esser, Chamberlain, Chapple, and Kline (1965) found that aggressive behavior in a population of mental patients was related to both territoriality and position in the patient hierarchy. Patients who had established a place in the hierarchical structure did not tend to occupy specific areas in their ward, nor did they tend to manifest aggressive behavior. Patients who, for one reason or another, had not established a firm position in the ward hierarchy (often new patients) tended to manifest aggressive behavior and tended to occupy certain ward areas as their own territories.

Altman and Haythorn (1967) studied men in isolation and found that individual differences in personality had a definite effect upon territorial behavior. Their study demonstrated that pairs of men who were incompatible on personality traits directly related to interpersonal matters tended to manifest a high degree of territorial behavior. On the other hand, pairs of men incompatible on such characteristics as orientation to ideas and objects were not as territorial in their interpersonal behavior.

Sommer and Becker (1969) conducted several studies of territorial behavior using college students as subjects. One of their findings tends to reinforce that of Hutt and Vaizey (1966). They found that high population density in a room increased the degree of physical retreat on the part of the subjects in that room. They also found that humans utilize territorial markers, such as a coat over a library chair, with great success in the defense of a geographic space while they are absent. It would seem that this type of behavior closely resembles the many types of geographical demarcation used by animals.

As indicated previously, it is difficult to establish a direct relationship between animal territoriality and human territorial behavior. Much of the knowledge gained to date regarding territoriality in man is now being applied to the study of man's use of interpersonal space.

Interpersonal Space

In 1966, Robert Ardrey wrote, "We have yet to explore the implications of territory in man (p. 4)." Actually, however, the search for

keys to man's territorial behavior had already begun. In the late 1950's the anthropologist Edward Hall coined the term proxemics. According to Hall (1959), proxemics is the study of man's microspace--that distance men maintain between themselves in the conduct of their daily transactions. In essence, Hall extended the hypothesis that animals are surrounded by a series of "bubbles" that maintain proper spacing between individuals, and made it applicable to man.

In a series of books and articles (1955, 1959, 1960a, 1960b, 1962, 1963a, 1963b, 1963c, 1964a, 1964b, 1964c, 1966) Hall put forth the hypothesis that there are permissible ranges for varying types of human interaction. He postulates three types of space which have an effect upon man's interactions: fixed feature space (e.g., buildings), semi-fixed feature space (e.g., the movable furniture in those buildings), and informal (or interpersonal) space. Hall writes that interpersonal space "is perhaps the most significant for the individual because it includes the distances maintained in encounters with others (1966, p. 105)."

In 1957, Osmond coined two terms to describe spatial settings which have an effect upon the interpersonal interactions of people. The first term, sociofugality, describes a setting which tends to prevent or discourage interpersonal interaction. The second term, sociopetality, describes settings which encourage or foster interpersonal interaction. In 1963, Sommer (a former colleague of Osmond) and Dewar published a paper wherein they concerned themselves with sociopetal and sociofugal environments in a mental hospital. Their finding was that by and large the patients of the hospital were "being arranged" and thereby affected

by their largely sociofugal environment.

Cross-cultural differences.

Hall cites various examples of the uses and misuses of interpersonal space in his writing. One of his recurring themes is how people from various cultures tend to misunderstand one another's use of interpersonal space and thereby suffer the frustrations of interactional breakdowns caused by the misuse of interpersonal space. For example, Hall hypothesizes that members of cultures in the northern hemisphere tend to interact at larger interpersonal distances than their counterparts in the southern hemisphere. Thus, when a person from the northern hemisphere engages in a discussion with one from the southern hemisphere the chances are good that the former will try to maintain what he feels is the proper interaction distance while the latter will probably attempt to close that distance. The result: the former keeps backing away while the latter keeps moving toward him. The person from the northern hemisphere tends to think his southern discussion partner is "pushy," while the person from the southern hemisphere comes to the conclusion that the northerner is "stand-offish." If each understood something about his own pattern of interpersonal space as well as that of his counterpart, chances for the occurrence of this type of misunderstanding would be lessened a great deal (Hall, 1959).

In an attempt to further elucidate cross-cultural differences in interpersonal interaction distance, Little (1968) hypothesized that members of mediterranean cultures would manifest closer social interaction distances than their northern European counterparts. Using a

technique of doll placement in response to 19 different social schemata, Little tested subjects from America, Sweden, Greece, Southern Italy, and Scotland. His hypothesis was confirmed at a high level of significance.

A surprising observation made by Little (1968) was the greater similarity of Americans to Italian subjects than to either the Swedes or the Scots. This is surprising primarily because Americans are thought to be members of a "non-contact" culture, whereas Italians are thought to be a "contact" people. A possible explanation for this finding may be that the United States encompasses a great many sub-cultures, and various samples of American subjects might cover the spectrum from "contact" types to "non-contact" types.

Watson and Graves (1966) in systematic observations of Arab and American students found that highly significant Arab-American differences emerged in the direction they expected. The Arab students confronted each other more directly than the Americans, they moved closer together, were more apt to touch each other while talking, looked each other more squarely in the eye, and conversed in louder tones.

Interaction zones.

In an attempt to isolate the ways in which man uses interpersonal space, Hall further hypothesizes four basic zones of interpersonal interaction used in normal social intercourse. The population that Hall used in developing his hypothesis was described as being composed of middle-class white adults who were natives of the northeastern United States. Hall has labeled the four interaction zones the intimate zone (from

0 inches to 18 inches), the personal zone (from 18 inches to 4 feet), the social zone (from 4 feet to 12 feet), and the public zone (12 feet and beyond).

Hall breaks each of the four zones down into a close and a far phase. For example, the close phase of the intimate zone (0 inches to 6 inches) is the distance used for love making, comforting, etc.; the far phase (6 inches to 18 inches) is still considered intimate and its use in public is considered improper by middle-class American adults. The close phase of the personal zone (18 inches to 2½ feet) is one wherein a person can hold or grasp another person with impunity so long as the second person is a close friend or relative. The far phase of personal distance (2½ feet to 4 feet) is literally the distance best used to keep someone "at arm's length." This is actually the limit of the physical domination of one person over another. Impersonal business is often conducted between people who work together at the close phase of social distance (4 feet to 7 feet). The far phase of social distance (7 feet to 12 feet) is reserved for formal business and social discourse. At the close phase of public distance (12 feet to 25 feet) a person can take evasive or defensive action if threatened. The far phase of this distance (25 feet and beyond) is the distance at which much of the non-verbal part of interpersonal communication becomes gesture and stance.

In discussing the various types of interaction distance people use, Hall underscores the point that how people are feeling toward each other at the time of interaction is a decisive factor in the type of distance used.

Invasion of personal space.

Garfinkel (1964) found that violation of implicit norms regarding allowable distances led to an addressee's avoidance of a communicator. A study by Felipe and Sommer (1966) with mental patients seems to reinforce Garfinkel's finding. They found that when a dominant person (in this case, one who is carrying ward keys and rattling them) attempts to sit 6 inches away from a mental patient, the patient displays almost immediate discomfort and attempts to increase the interpersonal distance. When later commenting on this study, Sommer (1969) wrote, "The fact that regressed and 'burnt out' patients can be moved by sheer propinquity is of theoretical and practical importance (p. 36)."

Mehrabian (1969) writes that "studies carried out by sociologists and anthropolotists indicate that distances which are too close, that is inappropriate for a given interpersonal situation, can elicit negative attitudes when the communicator-addressee relationship is not an intimate personal one (p. 362)."

Felipe and Sommer (1966) studied spatial invasion in a college library. They found that when a subject had seated herself alone at a study table, a female decoy sitting alongside her and then moving closer generally caused the subject to depart. This occurred partially because such an action was a violation of the typical seating norms for that library, which required a newcomer to sit at a considerable distance from those already seated unless the room was crowded.

Body-buffer zone.

Horowitz, Duff, and Stratton (1964) investigated the individual

distances maintained by schizophrenic and non-schizophrenic people from both inanimate objects and other people. Their findings revealed that both groups would approach an inanimate object more closely than they would approach another person. The schizophrenics maintained a greater mean distance from the inanimate object than the non-schizophrenic group, but no significant difference was found between group means for interpersonal approach.

In a second phase of their study, Horowitz, Duff, and Stratton asked a group of schizophrenics and a group of non-schizophrenics to approach three different objects (a hatrack, a person of the opposite sex, and a person of the same sex) in eight different ways (frontwards, backwards, sideways, etc.). The results of this phase of their study were similar to the initial phase in that both groups approached the inanimate object more closely. The individual measures from each of the eight approaches were plotted on a graph around a figure representing a top view of the subject's body. Connected, these eight points formed an irregular circle around the subject which was designated as the "body-buffer zone." This zone was found to be larger for schizophrenics than non-schizophrenics with respect to approaching another person. It is interesting to note how the empirical data of Horowitz, Duff, and Stratton tend to support the hypothesis of variable interaction zones, or "bubbles," of humans put forth by Hall (1966). In fact, they also seem to echo Hall when they conclude that the size, shape, and penetrability of the buffer zone would depend on immediate interpersonal events as well as on the current ego state and motivational state of the individual.

Kinzel (1970) conducted research on the variability of body-buffer zones in prisoners. He studied the distances at which both prisoners with records of violence as well as those termed non-violent would allow an approach. His findings indicate that the body-buffer zones of violent prisoners are almost four times larger than those of non-violent prisoners. Also the shape of the zones is different between the groups. The buffer zone of the violent prisoners bulges at the rear--an avenue of approach which seems particularly menacing to them, whereas the buffer zones of the non-violent prisoners are nearly cylindrical.

The larger body-buffer zone of the violent prisoners would seem to indicate their general avoidance of interpersonal interaction. The fact that their zone bulges at the rear would also seem to indicate their fear of attack from an area not readily visible to them. This speculation seems to be borne out by the smaller, more cylindrical zones of the non-violent prisoners who are more relaxed and less belligerent (and therefore less fearful of attack from the rear).

The work of Horowitz, Duff, and Stratton (1964) and that of Kinzel (1970) give empirical support to the hypothesis that man indeed has variable interaction distances for differing situations. These studies also tend to bear out the hypothesis that both personality and interpersonal attitude affect interaction distance in a variable manner.

The galvanic skin response (GSR) is a sensitive indicator of an individual's emotional state. Whenever the emotions are aroused, changes in the sympathetic division of the autonomic nervous system occur. These

changes cause detectable electrical changes to take place on the skin and the galvanic skin response records such changes.

McBride, King, and James (1965) studied the effects of varied approach distances on the galvanic skin responses of their subjects. They found that the GSR was higher for approaches of one and three foot distances than for an approach distance of nine feet. They also found that the GSR was greatest when the subject was approached frontally, while a side approach yielded a greater effect than a rear approach.

This study is important because it utilizes a physiological response rather than verbal reporting to isolate body-buffer zones. It would appear from the findings of McBride, King, and James that their subjects were more comfortable with frontal interaction distances of 9 feet than those of 3 feet. It would also appear that the subjects were less aroused by lateral and rear approaches because they could see the approaches only peripherally (in the case of lateral movement toward the subjects) or not at all (in the case of approach from the rear).

Studies by Argyle and Dean (1965) related to eye-contact of subjects and its effect upon interpersonal interaction distance provided some interesting conclusions. They found that adult subjects tended to stand closer to a life-size picture of a man with his eyes closed than to a similar picture of a man with his eyes open. In a second part of their study they found that the eye contact of seated subjects appeared to be a function of interaction distance. As the interpersonal interaction distance was decreased, the eye contact tended to decrease, as the distance was increased, the length of the gaze of subjects was increased.

Relationship of attitude to interpersonal space.

The distances at which people interact are often affected by interpersonal attitude or the task at hand. Sommer (1969) asked students to choose the type of seating arrangement at a rectangular table that they would most prefer for themselves and a friend. The subjects in this study most often chose adjacent seating positions or face-to-face positions citing physical proximity as one desirable factor in these arrangements.

When Sommer (1969) replicated the aforementioned study using round tables, the subjects chose adjacent chairs--emphasizing "psychological closeness" as a factor in their choice.

Rosenfeld (1965) asked female subjects to enter a room where a female decoy was seated and demonstrate whether they liked or disliked her without stating this verbally. Those subjects that were given the positive ("liked") attitudinal set interacted with the decoy at an average distance of 57 inches; those given the negative ("disliked") attitudinal set interacted with the decoy at an average distance of 94 inches.

Mehrabian (1969) found that the distance between a communicator and his addressee was a decreasing linear function of the degree of liking of the addressee.

Little (1965) writes that

> Perceived interaction distances in a dyad are markedly influenced by the degree of acquaintance of the two members. The effect holds true whether the two "people" involved are line drawings, stylized silhouettes, or the real thing. If the pair is labeled as Friends, they will be seen as interacting at significantly closer distance than if labeled Acquaintances; if labeled as Strangers, at a significantly greater distance (p. 244)."

Interpersonal space in group situations.

In discussing the interaction distances used in group situations, Sommer (1967b) echoed Little (1965). He wrote,

> Results have shown that spatial arrangement is a function of group task, the degree of relationship of individuals, and the amount and kind of available space. The resulting arrangement in turn affects communication, friendship, and status differentiation between individuals (p. 145).

Steinzor (1950) in his study of group interactions found that individuals partaking in a discussion responded to other factors in an individual than the mere content of his remarks. He found that people were more likely to interact with one another in groups if they were seated in a position which allowed them to see each other clearly as well as hear each other.

Sommer (1959) in three studies carried on in a hospital setting found that people conversing tended to prefer corner positions at a table as opposed to side-by-side or face-to-face positioning.

In 1965, Sommer studied the seating preference of people who were either conversing or co-acting. He found that people who were conversing at small square tables tended to prefer corner seating as opposed to opposite or side-by-side arrangements. For people who were co-acting, he found that distant seating arrangements which separated them geographically as well as physically were preferred.

In a study of sociofugal space, Sommer (1967c) wrote that one must distinguish between sociofugal space chosen voluntarily (e.g., a study area) and space inhabited involuntarily (e.g., a corridor of a building). This study concerned itself with the way people distributed themselves

at rectangular study tables in a library so as to increase psychological and social distance. Sommer found that students who wanted to sit by themselves as far as possible from other people overwhelmingly chose the end chairs at the table, while those students who wanted to keep other people away from the table almost unanimously chose the middle chair at the table.

Interpersonal space in children.

It is interesting to note that there are differences between adults and children in terms of preferred interpersonal interaction schema for cooperating, competing, and co-acting at rectangular tables. Norum, Russo, and Sommer (1967) found that pairs of children in cooperating groups tended to sit side-by-side, in a corner arrangement during competition, and in a catty-corner arrangement in the co-acting condition. They also found that very few children sat directly across from one another--a widely used arrangement in studies with adults.

In terms of interpersonal interaction distance in children, much less research has been conducted than even the meager research to date on adult interpersonal interaction distance.

Markey[1] studied the placement of cut out figures on a felt board by children. Children from kindergarten through grade eight placed figures representing adults and children of both sexes in dyads on the board. The distance between the figures was then measured. It was found that the subjects placed the figures farther apart as they progressed from kindergarten to grade eight. Markey concluded that this finding might be

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[1] Markey, M. personal communication, July, 1970.

accounted for by the acculturation of the children (i.e., as kindergartners they interact more closely because they have not learned social norms, whereas by the time they reach grade eight they have learned to keep the proper social distance).

King (1966) found that the ratio of unfriendly acts to the total number of acts made by one child to another child during free play was strongly related to the mean distance maintained by the second child from the first.

Weinstein (1965), in a study of emotionally disturbed and normal boys, found that normal boys placed felt figures of children on a flannel board closer to a felt figure of mother than to father or peer figures. Emotionally disturbed children, however, did just the reverse. When the experimenter had both the disturbed and the normal boys replace pairs of human and geometric figures previously set 15 inches apart, the disturbed boys replaced the human figures farther apart than the non-human figures significantly more often than did the normal boys. Weinstein interpreted these results as indicating a tendency for emotionally disturbed children to construe people, especially females, more negatively than do normal children. There would seem to be a parallel between this finding and that of Horowitz, Duff, and Stratton (1964) who found larger body-buffer zones for schizophrenic adults than for non-schizophrenic adults who were asked to approach other people.

Fisher (1967), using a similar technique to that used by Weinstein, found similar results. Disturbed boys of elementary school age placed greater distances between figures in social schemas than did normal boys of the same age.

Seating distance without tables.

Returning to studies of the interpersonal interactions of adults, Sommer (1961, 1962) conducted studies of seating arrangements of people when no table intervenes. He found that people who were conversing preferred to sit across from one another except when the distance between their seating positions was greater than the distance of alternate, side-by-side seating positions. Generally, when the distance between seating positions was three feet or less, people tended to sit across from one another. When the distance between seating positions was three and one half feet, however, people generally chose to sit side-by-side instead.

Effects of status on interpersonal space.

Sommer (1961) found that perceived group leaders tend to affect the spatial arrangement of their group members. He found that leaders generally preferred end positions at rectangular or square tables, and that the other members of the group sat close by. When, however, the leader didn't take the head position, the other members of the group sat opposite or across from him rather than next to him.

Strodbeck and Hook (1961) studied the social dimensions of a twelve-man jury table. They found that the initial selection of seats upon the entry of the jury into the room was not entirely at random. Proprietor and managerial types of people tended to choose end seats 15 per cent more frequently than would be expected under a random distribution. Strodbeck and Hook also found that the members of the jury felt some propriety regarding the foreman being at the head of the table and most

frequently chose one of the two persons seated at that position as the foreman. Finally, it was found that the jurors at the head of the table participated more and were rated by their fellow jurors as having more influence on the outcome of jury deliberation.

With regard to the effects of status difference on interpersonal interaction, Lott and Sommer (1967) found that people tended to sit farther from lower- and higher-status individuals than they did from their peers. Mehrabian and Friar (1969) found no significant differences between the distances people maintained from either high-status or low-status addressees.

Interpersonal space in dyadic counseling.

"It seems apparent that it is the nature of the relationship between individuals rather than the topic itself which characterizes a discussion as personal or impersonal (Sommer, 1969, p. 65)." This statement by Sommer and one by Hall (1966) which hypothesizes permissible ranges for varying types of interaction seem to lend strength to the findings of Haase (1970) who wrote that

> those distances which, under conditions of normal social intercourse, are seen as appropriate are rejected for the counseling encounter. This might suggest that the counseling interaction is not only perceived quite differently by individuals, but that this particular interaction setting carries a distinct and identifiable proxemic notation (p. 235).

His findings indicated that college students preferred closer interaction distances in a counseling setting than would be normally preferred in a social interaction. In concluding the aforementioned study, Haase wrote,

> The crucial question would seem to be: is there a functional relationship between the use of the spatial environment by both parties in a theraputic encounter and the ultimate

> outcome of that encounter? If the goal of counselors is to maximize the possibilities for growth in clients, it would seem that the impact of the spatial environment on the ultimate outcome of that encounter is an important area for further clarification (p. 236).

The preceding sections of this chapter have dealt with animal territoriality and human use of interpersonal space in various types of situations. Because the primary concern of this study is the relation of interpersonal space to the counseling dyad, two other aspects of this relationship will be discussed in the remainder of the chapter: posture and its effect on dyadic interaction, and the possibility of differing client perception of varied counselor trunk leans and interaction distances.

Posture: Its Effect on Dyadic Interaction

Mehrabian and Friar (1969) wrote that "the concept of proxemics subsumes variations in postural and distance variables which relate to the degree of directness or immediacy of interaction between a communicator and his addressee (p. 330)."

The anthropologist Birdwhistell (1952) is a pioneer in the study of kinesics (body movement). In recent years, Birdwhistell has been studying the relation of kinesics to psychotherapy. Davis (1970) wrote, "One of the things Birdwhistell has learned from the psychotherapy project is that even the best therapists cannot explain what it is that they do right (p. 31)."

Scheflen (1964) in an observational study of posture in the theraputic encounter wrote,

> The therapist begins the session seated, with legs and arms crossed, and leaning backward, away from the patient. In this posture, he uses the clinical tactic of not answering and "eliciting free associations." After about five minutes, he leans toward the patient, uncrossing his legs. After this postural shift he is more active--reassuring, interpreting, conversing. He is likely to think of this tactic as establishing rapport (p. 323).

Argyle and Dean (1965) found that when the subjects of their study were seated at an interpersonal interaction distance of 2 feet, they attempted to increase this distance by leaning backward. When seated at an interpersonal interaction distance of 10 feet, however, they attempted to close that distance by leaning forward.

In 1932, W. T. James published a research study wherein he attempted to ascertain the significance of a communicator's posture in the communication of his attitude. James' findings indicated that a forward lean of a communicator's torso communicated a positive attitude to his addressee, whereas a backward torso lean seemed to communicate a more negative attitude to that addressee.

Mehrabian (1968b) found that both male and female addressees inferred a more negative attitude when their communicator was leaning backward and away from them than when he was leaning forward toward them.

Ivey, Normington, Miller, Morrill, and Haase (1968), in their discussion of the central aspects of what they call "counselor attending behavior" stated that postural position, movements and gestures of the counselor communicate attentiveness. Mehrabian and Friar (1969), in their study of the attitude of seated communicators, found that the mean angle of backward lean with liked addressees (1.4 degrees) was less than

the mean angle with disliked addressees (9.3 degrees). They summarized their study by noting that torso lean was more backward for disliked addressees than for liked addressees.

Mehrabian (1968a) conducted three experiments dealing with the inference of a communicator's attitudes from his posture, body orientation, and distance from an addressee. His findings suggested that greater relaxation, a forward lean of trunk toward one's addressee, and a smaller distance to the addressee communicated a more positive attitude to the addressee than a backward lean of posture and a larger interaction distance. Again, after studying the attitude of seated communicators by the postural and position cues they gave, Mehrabian and Friar (1969) wrote: "The findings suggest that the most important variables for the communication of positive attitude are small backward lean of torso, close distance, and more eye contact (p. 331)."

In the light of research to date on the effects of postural shifts on interpersonal social relationships, an important question regarding the counseling relationship is: Does a change in the counselor's postural positioning have a measurable effect upon the dyadic interaction? In essence, the question being asked is whether or not the counselor's postural changes in the dyadic counseling interaction arouse different attitudes in the client.

Differences in Client Perception of Interaction Distance and Counselor Trunk Lean

As previously mentioned, theoretical discussion of interpersonal space and posture and their possible effect upon the dyadic counseling

interaction is almost non-existent. In the informal work of Deutsch (1947, 1952) posture was used as a source of information about clients' characteristics, feelings, and attitudes toward others and toward themselves. Winick and Holt (1961) in another informal article hypothesized varied seating positions of patients in a group as being indicative of non-verbal communication.

Sigmund Freud's psychoanalytic approach to psychotherapy is one of the few theories that actually utilizes a definite structuring of interpersonal space.

> The therapist sat behind the patient, out of sight, but in a position to observe the patient's features as he lay on the couch. This was partly a matter of personal preference. Freud could not endure being stared at twelve hours a day (Ford and Urban, 1963, p. 168).

It can be assumed from the preceding statement that Freud's use of interpersonal space was not really based upon empirical research, but more upon personal preference.

Sullivan (1954), feeling that schizophrenics were embarrassed at being stared at, wrote, "For years, seven and a half at least, I sat at an angle of ninety degrees from the people whom I interviewed, and usually gazed at something quite definitely in front of me--very clearly not at them (p. 6)."

Rosen (1953) made several general references to the use of interpersonal space in psychotherapy. In fact, he cited "closeness" as one of the characteristics of his "direct analysis."

Sivadon (Hall, 1963) utilized space as a psychotheraputic agent in a hospital setting. On the hospital grounds, open space was used,

rather than fences or walls, to contain patients. Internal hospital space was designed so that room size could be altered to suit the theraputic needs of the patients.

Brammer and Shostrom (1960) discuss three types of seating arrangement for the dyadic counseling interaction: face-to-face across a desk, face-to-face behind a desk, and face-to-face across the corner of a desk. They cite their preference for the latter by stating: "We prefer the arrangement . . . in which the client is given the security of being partially behind the desk . . . (pp. 172-173)." Once again, personal preference for seating arrangement in the dyadic counseling interaction is being dealt with; not empirical evidence of the effects of interpersonal space upon that relationship.

In a study conducted by Haase and Di Mattia (1970) which dealt with semi-fixed feature space and counseling interaction, it was suggested that "inasmuch as counselors, clients, and administrators seem to have different views of physical space and its impact upon the nature of the interaction, it becomes important to begin to specify the relationships which might exist between spatial arrangement and counseling outcome (p. 324)." The results of this study suggested that counselors and administrators tended to prefer different types of furniture arrangements when reacting to photographs of four basic types of furniture arrangement common to counseling settings. Clients tended to prefer the arrangement chosen by the administrators, but the magnitude of their preference was not as great.

A question which is generated by the above finding is: Would varied

populations of subjects have differing attitudinal responses to varied interaction distance and counselor posture in a dyadic counseling interaction?

Conclusion

In summary, there was a good deal of evidence which indicated the need for the present study.

On one hand, counseling theory and practice provided very little information related to the effects of interpersonal space on the dyadic counseling interaction.

On the other hand, the theories and studies compiled prior to this study indicated that man indeed uses interpersonal space according to certain rules which seem to vary from situation to situation. It would appear that in many instances positive attitude is indicated by closer interaction distance. It also seems that in certain instances a forward trunk lean on the part of a seated interactor indicates positive attitude. Do these assumptions relate to the dyadic counseling interaction? Do different types of subjects view the distance and postural cues in a dyadic counseling interaction differently? This study addressed itself to such questions.

Hypotheses

1. Subject attitude toward interaction distances as measured by the semantic differential will not differ significantly.

2. Subject attitude as measured by the semantic differential toward varying counselor postures in the dyadic interaction will not differ

significantly.

3. There will be no differences as measured by the semantic differential between subject groups (clients, counselors, and administrators) with regard to attitudes toward interaction distance and trunk lean.

4. There will be no interaction between main effects of group membership, distance, and posture.

C H A P T E R I I I

METHODOLOGY

This chapter is divided into five primary sections. It deals with the selection of subjects, the development of the testing instrument, the apparatus used in testing the subjects, the design of the study, and the procedure followed.

Subjects

The subject population (N=30) was composed of 10 male clients, 10 male counselors, and 10 male administrators from the University of Massachusetts. Each of the subjects was sampled incidentally from a larger population.

> In the typical experimental situation, the actual population, or universe does not exist. What we attempt to do is to find out something about the characteristics of that population if it did exist. Thus, our sample groups provide us with information about the characteristics of a population if it did, in fact exist (Runyan & Haber, 1967, p. 127).

"The term incidental sample is applied to those samples that are taken because they are the most available . . . (Guilford, 1965, p. 142)."

The client population was drawn from the total number of male clients being seen at the University Counseling Center. In order to qualify as a subject, the client had to have been seen at least twice in counseling prior to this study.

The counselor subjects were drawn from a population which had the following characteristics: composed of people whose career goals entailed the counseling and guidance of individuals; whose educational preparation was in the field of counseling and guidance at the master's

degree level or higher; who were spending at least two-thirds of their work time in counseling endeavors, or who were currently preparing to work in such an endeavor.

The administrator subjects were drawn from a population which had the following characteristics: composed of people whose career goals entailed the administration of an educational institution; whose educational preparation was in the field of educational administration at the master's degree level or higher; who spent at least two-thirds of their work time in administrative endeavors, or who were currently preparing to work in such a position.

All of the subjects were middle-class white residents of the northeastern United States.

Instrumentation

The semantic differential.

The semantic differential (Osgood, Suci, & Tannenbaum, 1957) was chosen as the evaluative instrument for this study for several reasons. The primary reason for the selection of the semantic differential is that it is a valid indicator of attitude or preference on the part of people who respond to it.

As an evaluative instrument, the semantic differential "is a very general way of getting at a certain type of information . . . (Osgood, Suci & Tannenbaum, 1957, p. 75)." This was an important factor in the present study because the subjects were expected to respond to variations in interaction distance and counselor trunk lean without having these factors pointed out to them as such.

In essence, the subjects were placed in a projective situation: they were asked to express their attitudes about a series of interpersonal interactions (depicted by 12 slide photographs) while attempting to envision themselves in such a situation. The intent of the experimenter was not to ask the subject how he felt about the varied interaction distances and trunk leans he was confronted with, but rather to have the subject respond to the gestalt--the overall set given by the experimenter--by expressing his attitude about, or amount of preference for, each of the slide photographs in the series.

Secondary reasons for the selection of the semantic differential were its ease of construction and administration combined with its capability of being objectively scored.

The basic format of the semantic differential consists primarily of a concept to be rated (in the current study, a slide photograph), followed by a number of scales. The scales are bipolar adjective continua, e.g., "bad-good." Varied rating scales are used on the adjective continua, the most commonly utilized being a 7-point scale. However, 9-point and 5-point scales are used with regularity and the latter was chosen for the present study because of its adaptability to the DIGITEK answer sheets. "Direction of attitude, favorable or unfavorable, is simply indicated by the selection of polar terms by the subject; if the score falls toward the more favorable poles, then the attitude is taken to be more favorable and vice-versa (Osgood, Suci, & Tannenbaum, 1957, p. 192)."

Osgood, Suci, and Tannenbaum (1957) have demonstrated factor

analytically that there are primary factors which contribute to the meaningful judgments made by subjects. They write, "Three factors appear to be dominant, appearing in most of the analyses made and roughly the same order of magnitude--evaluation, potency, and activity (p. 72)."

> A pervasive evaluative factor in human judgment regularly appears first and accounts for approximately half to three-quarters of the extractable variance. Thus the attitudinal variable in human thinking, based as it is on the bedrock of rewards and punishments both achieved and anticipated appears to be primary. . . . The second dimension of the semantic space to appear is usually the potency factor, and this typically accounts for approximately half as much variance as the first factor--this is concerned with power and the things associated with it, size, weight, toughness and the like. The third dimension, usually about equal to or a little smaller in magnitude than the second, is the activity factor--concerned with quickness, excitement, warmth, agitation and the like (Osgood, Suci, & Tannenbaum, 1957, pp. 72-73).

Development of the semantic differential for this study.

This section involves the development of the semantic differential instrument used for the current study. The first part describes the method of test construction. The second part describes the method used to determine the reliability of this instrument. The third part describes the method used for determining the validity of the instrument.

Three groups of fifteen adjective continua each were selected from the evaluative, activity, and potency factors cited in Osgood, Suci, and Tannenbaum (1957), and are presented in Appendix A. The criteria for item selection were the high factor analytic loadings for each item as listed in Osgood, Suci, and Tannenbaum (1957) and the face validity of each item.

The order of presentation of the 45 adjective continua was

randomized by placing the numbers of the items (1-45) into a container and drawing numbers one at a time, e.g., item number 22 became item number 1, etc.

All of the adjective continua chosen had meanings that ranged from a positive loading to a negative loading, e.g., "good-bad." The direction of the 45 adjective continua were randomized to eliminate the chance of response sets on the part of the subjects taking the test. A coin was tossed for each pair of adjectives to determine its direction. For example, if the coin landed head side up, the adjective placement would be from negative to positive, e.g., "bad-good." If the coin landed tail side up, the direction would be from positive to negative, e.g., "good-bad." The coin tosses yielded 26 heads and 19 tails; thus, 26 of the previously randomized adjective pairs were printed from negative to positive, and 19 were printed from positive to negative.

For purposes of scoring, the proper items were reversed so that each of the 45 items ran from negative to positive. The negative end of each adjective continuum was assigned a numerical value of one and the positive end a numerical value of five.

For the second phase of instrument development, one of the slide photographs used in the final study was shown to a group of male students (N=89) at Springfield College. The slide photograph depicted two seated male models facing each other at a distance of 48 inches from chair center to chair center. Both models were seated in an upright position.

The subjects tested were members of an undergraduate class in

introductory psychology and a graduate class in student personnel administration. Members of the latter class were preparing for careers in counseling or student personnel administration.

The subjects were asked to express their attitude toward the scene depicted by the slide photograph by responding to each of the 45 adjective continua and placing their responses on a DIGITEK answer sheet.

The DIGITEK forms were read by machine and data cards were punched from them. After the data cards were punched, the appropriate 19 items were reversed. Then, individual item scores as well as overall total scores were obtained for each student.

Each item score was then correlated to the total score for each student. The twelve adjective continua having the highest correlations were partialled out for use in the final instrument of the study. See Appendix A for the twelve items and their loadings.

The reliability for this twelve-item semantic differential was obtained by subjecting the total scores for those items for each of the 89 testees to the coefficient alpha (Nunnaly, 1967, pp. 194-198). The coefficient alpha, "represents the expected correlation of one test with an alternative form containing the same number of items (Nunnaly, p. 196)." The coefficient of correlation for these twelve items was found to be .74; thus indicating the high reliability of the items as indicators of attitude.

As mentioned in chapter II, Edward Hall (1966) hypothesizes four basic zones of interpersonal space. Two of those zones are the personal zone (from 18 inches to 4 feet) and the social zone (from 4 feet to

12 feet). Hall also intimates that people react to changes in interpersonal interaction distance in a culturally conditioned manner. In other words, when someone gets too close to us we respond by attempting to increase the interpersonal interaction distance. The key here is that we respond first without necessarily bringing the reason for our response into conscious awareness. Because of the apparent verity of this observation, it seemed reasonable to utilize an instrument such as the semantic differential in an attempt to obtain subject attitude regarding the whole situation.

It would seem reasonable to conjecture that the subjects who responded to the four slide photographs would interpret the situation to be of a "personal-social" nature. This interpretation would seem more reasonable than either an "intimate" or a "public" interpretation. Therefore, if Hall's hypothesis is valid (and if the semantic differential is valid as well), we would expect the subjects to show a preference for one or both of the middle interaction distances which more closely correspond to the "personal-social" distances hypothesized. On the other hand, we would expect the subjects to express less preference for those distances which were either too close or too distant for comfortable "personal-social" interaction.

In order to validate the twelve-item semantic differential, four slide photographs were shown to male students (N=29) in three classes of general psychology at Holyoke Community College. These students responded to the photographs by using the twelve-item semantic differential previously developed and placing their answers on DIGITEK answer

sheets. The same twelve items were used to evaluate each slide photograph. The students were asked to express their attitude regarding each of the slides by responding to the semantic differential items.

The slide photographs shown depicted two seated male models facing each other at distances of 30 inches, 39 inches, 48 inches, and 66 inches as measured from chair center to chair center respectively. Both models were seated in an upright position for each photograph.

The order of presentation of the slide photographs was randomized for each presentation to eliminate the possibility of serial effects over the three classes tested.

After the proper items were reversed and the answer sheets scored, the scores were broken down into four parts for each respondent in order to isolate the proper responses for each of the slide photographs.

A correlated t-test was run between the response scores for all combinations of the four pictures to determine whether or not there were significant differences between them. Significance was found between the responses for two of the photographs (see Figure 1). The means of the response scores given by the subjects for each of the four interaction distances tend to fall in a curve that corresponds to Hall's hypothesis. This evidence would suggest that the twelve item semantic differential was a valid instrument for this study.

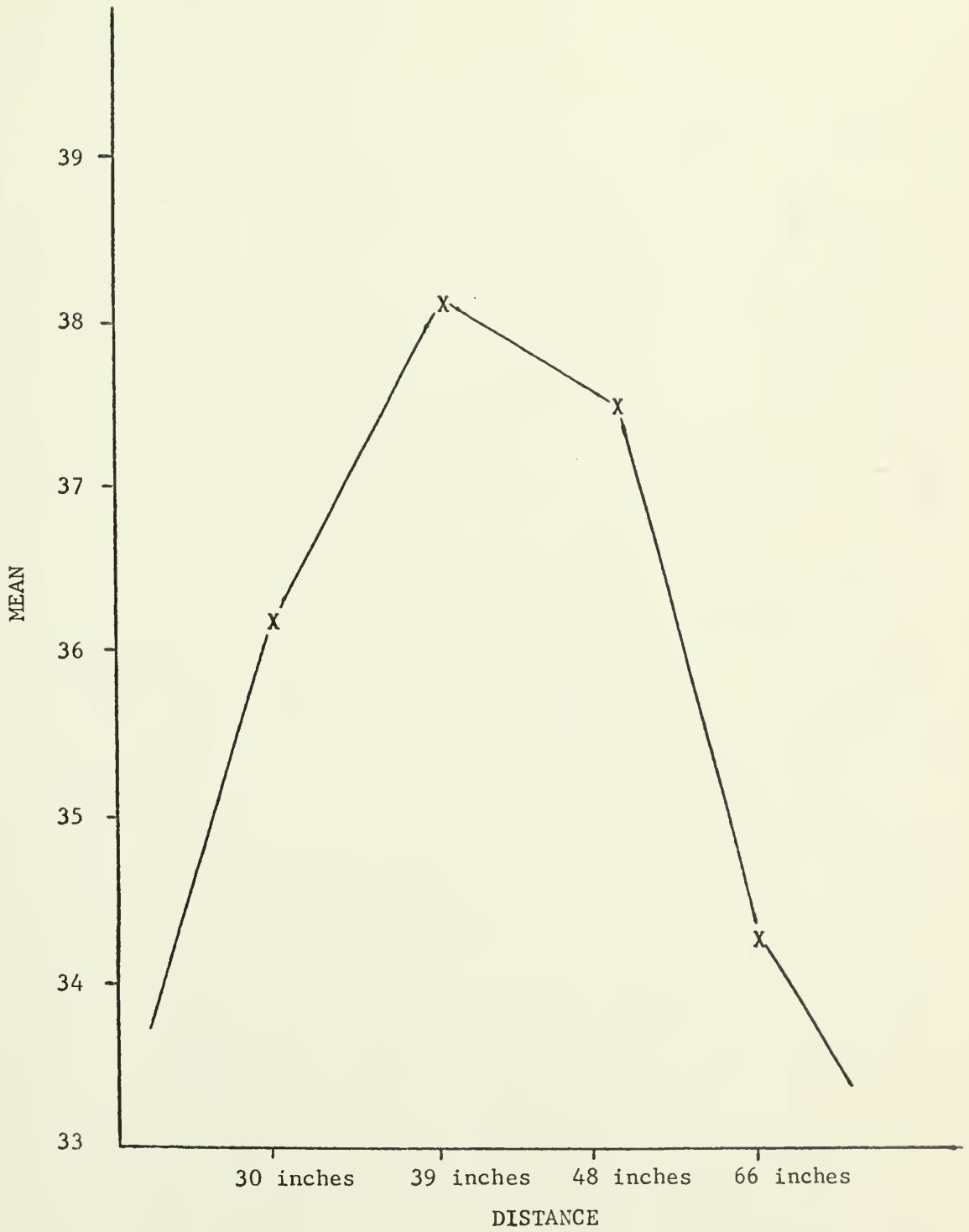

Fig. 1. Mean Scores of the Responses Given to the Four Slide Photographs by Male Students at Holyoke Community College.

Apparatus

Stimulus materials.

The stimulus materials presented to the subjects were twelve black and white slide photographs of two individuals. These photographs depicted the individuals interacting at four different distances from each other. Also, within each distance, these photographs depicted one of the individuals utilizing three different types of trunk lean for each interaction distance. In each of the slide photographs, the models were seated in identical tilt and swivel chairs (similar to the type found in most counseling center offices). There was no other furniture or decoration visible in the slide photographs.

Both of the models pictured in the slide photographs were white males between the ages of thirty and thirty-five. Both were dressed in a suit and tie. For all of the slide photographs, the body orientation of the models was face-to-face, and similar facial expressions for both models were maintained. The slide photographs were cropped so that the models were pictured only from the waist up.

The four interaction distances depicted were 30 inches, 39 inches, 48 inches, and 66 inches as measured from the center of the chair to the center of the other chair. For each of the interaction distances there was a slide photograph of one model in each of three different trunk positions: an upright position, a backward lean of twenty degrees from the upright position, and a forward lean of twenty degrees from the upright position. In all twelve slide photographs, the second model was seated in the upright trunk position. This model was also seated on the

right in all of the twelve slide photographs. All of the photographs were taken at a distance of fifteen feet from the models (see Appendix A).

Testing conditions.

Subjects were tested in a room 13 feet by 13 feet that contained a small study desk with a chair for the subject, a similar desk adjacent to it upon which a slide projector was placed, a chair for the experimenter, and a small projection screen (see Appendix A). The screen was placed approximately 10 feet from both the subject and the projector. The room had artificial lighting so that the light conditions were the same for all of the subjects. The temperature of the room was thermostatically controlled so that the average temperature remained the same for all of the subjects (approximately 70 degrees).

Design

The study was designed so that each of the subjects (N=30) responded to the twelve-item semantic differential for each of the twelve slide photographs. The responses of the subjects were scored by summing the values of the semantic differential items for each photograph. These twelve totals served as the criterion measure for the study.

The data were analyzed in accordance with the prescriptions for a multiple classification analysis of variance (Winer, 1962, p. 319) with repeated measures on two factors. The analysis of variance used was a three by three by four model: three levels of subjects (clients, counselors, and administrators), three levels of trunk lean (upright,

twenty degrees forward from upright, and twenty degrees backward from upright), and four levels of interaction distance (30 inches, 39 inches, 48 inches, and 66 inches). The repeated measures were on the factors of trunk lean and interaction distance. The model for the analysis appears in Table 1.

TABLE 1

Analysis of Variance for Three Groups of Subjects (A) Responding to Four Interaction Distances (B) with Three Trunk Leans (C) at Each Distance

Source	df	SS	MS	F
Between Subjects				
Groups (A)	2			
Subjects within A	27			
Within Groups				
Distance (B)	3			
Posture (C)	2			
A X B	6			
A X C	4			
B X C	6			
BC X Subjects within A	162			

Winer (1962) writes that "Experiments in which the same elements are used under all (k) treatments require (k) observations on each

element. Hence the term repeated measurements (is used) to describe this kind of design (p. 105)." He later writes, ". . . the primary purpose of repeated measures on the same elements is the control that this kind of design provides over individual differences between units (p. 300)." Finally Winer writes, "Using different subjects under each of the treatment combinations in a factorial experiment has the marked advantage of providing statistically independent estimates of treatment effects from all cells in the experiment (p. 301)."

Procedure

Each subject was tested individually. Upon entering the testing room, the subject was greeted by the experimenter and seated at the study desk. The subject was then presented with a set of standardized semantic differential instructions which had been modified for use with slide photographs and machine scored DIGITEK answer sheets. In addition, the instructions asked the subject to respond as if he was a client who had come to a counseling center with a personal-psychological problem. Also, each subject was further instructed to attempt to perceive himself as the person on his right in each slide photograph (see Appendix A).

The instructions were read aloud by the experimenter as the subject read them silently. If the subject had any question concerning proper procedure, he was referred to the appropriate portion of the printed instructions by the experimenter.

The order of presentation of the twelve slide photographs was randomized for each subject by using a table of random numbers (Wert,

Neidt, and Ahmann, 1954, pp. 416, 417). Randomization in this manner was done to eliminate subject response sets. Winer (1962) writes, "Unless the nature of the experimental variables dictates the order in which treatments are administered to subjects, it will be assumed that the order of administration is randomized independently for each of the subjects (p. 301)."

At the end of the administration of the twelve slide photographs, the experimenter discussed the experiment with the subject and asked the cooperation of that subject in not divulging the nature of the experiment to other people until the research period was over.

CHAPTER IV

RESULTS

A three by four by three multiple classification analysis of variance with repeated measures on two factors was used to analyze the data from this study. Results of this study pertaining to the four hypotheses have been presented in Table 2. Means and standard deviations pertaining to main effects have been presented in Table 3.

TABLE 2

Analysis of Variance for Three Groups of Subjects Responding to Four Interaction Distances with Three Counselor Postures at Each Distance

Source	df	SS	MS	F
Between Subjects	29	7598.23		
Groups (A)	2	177.02	88.51	.32
Subjects within A	27	7421.21	274.86	
Within Subjects	330	22308.75		
Distance (B)	3	1068.14	356.05	9.52****
A X B	6	339.52	56.59	1.51
B X Subjects within A (error B)	81	3029.76	37.40	
Posture (C)	2	1312.27	656.13	6.69***
A X C	4	590.72	147.68	1.51
C X Subjects within A (error C)	54	5293.52	98.03	
B X C	6	2664.33	444.06	9.68****
A X B X C	12	577.68	48.14	1.05
BC X Subjects within A (error BC)	162	7432.82	45.88	

*** $p < .005$

**** $p < .001$

TABLE 3

Means and Standard Deviations of Main Effects for Groups, Interaction Distances, and Postures

	Main Effects	
	$\bar{X}$	SD
Clients	37.00	7.61
Counselors	36.56	10.76
Administrators	38.22	8.73
30 Inches	36.84	8.84
39 Inches	38.74	9.63
48 Inches	38.83	8.90
66 Inches	34.61	8.60
P_1 (Upright)	37.63	8.91
P_2 (Forward Lean)	39.39	8.85
P_3 (Backward Lean	34.76	9.09

Hypothesis I: Subject attitude toward interaction distances as measured by the semantic differential will not differ significantly.

Examination of Table 2 reveals that significant differences occurred between interaction distances ($p < .001$). The null hypothesis was rejected.

The Newman-Keuls procedure for testing differences between ordered means was employed to determine the nature of the differences between treatment means following a significant overall F. Results of the Newman-Keuls test, presented in Table 4, showed that distances of

30 inches, 39 inches, and 48 inches were seen as differing significantly from the distance of 66 inches ($p < .05$).

TABLE 4

Newman-Keuls Test on Ordered Means of Interaction Distances

Ordered Means	66 inches	30 inches	39 inches	48 inches
	34.61	36.84	38.74	38.83

	66 inches	30 inches	39 inches	48 inches
66 inches	____	2.23*	4.13*	4.22*
30 inches		____	1.90*	1.99
39 inches			____	.09
48 inches				____

* $p < .05$

The Newman-Keuls test also showed a significant difference between distances of 30 inches and 39 inches ($p < .05$), but no significant difference between the distances of 39 inches and 48 inches. Judging from the rank order of the mean scores, it would appear that the two middle distances of 39 inches and 48 inches were seen by the subjects of this study as being more preferable for the dyadic counseling interaction. The next most preferable distance was 30 inches and the least preferable was 66 inches. These differences have been graphically presented in Figure 2.

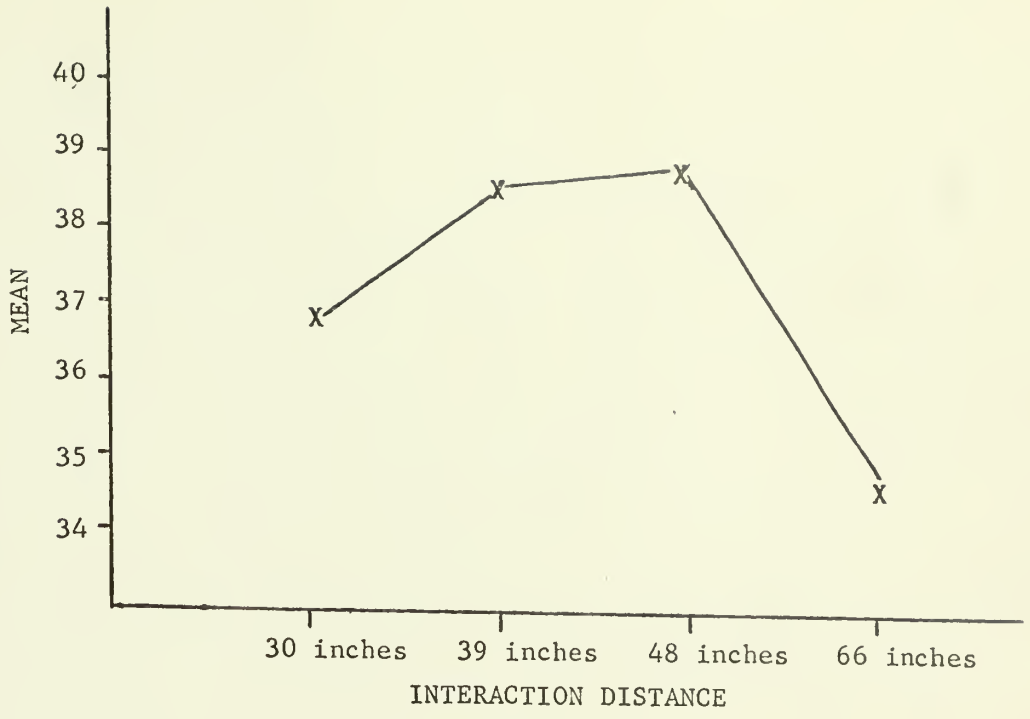

Fig. 2. Mean scores for each interaction distance.

Hypothesis II: Subject attitude as measured by the semantic differential toward varying counselor postures on the dyadic interaction will not differ significantly.

The analysis of variance (Table 3) showed an overall significant difference between the three postural configurations ($p < .005$). The null hypothesis is rejected.

These results indicate that a certain posture (or postures) was seen as more preferable than the others. Rank order of the cell means for posture from the most to the least preferred was the forward

posture, the upright posture, and the backward posture.

The Newman-Keuls test was again used to determine the nature of the differences between the means for posture. It was found that there were no significant differences between the upright and the forward postures, whereas there was a significant difference between the forward and backward postures ($p < .05$). Results of this analysis have been presented in Table 5.

TABLE 5

Newman-Keuls Test on Ordered Means of Posture

Ordered Means	Backward	Upright	Forward
	34.76	37.63	39.39

	Backward	Upright	Forward
Backward	____	2.87	4.63*
Upright		____	1.76
Forward			____

* $p < .05$

The data analysis suggests that the upright and forward postures on the part of a counselor in a dyadic interaction were seen by subjects as being more preferable than the backward posture. This relationship has been shown in Figure 3.

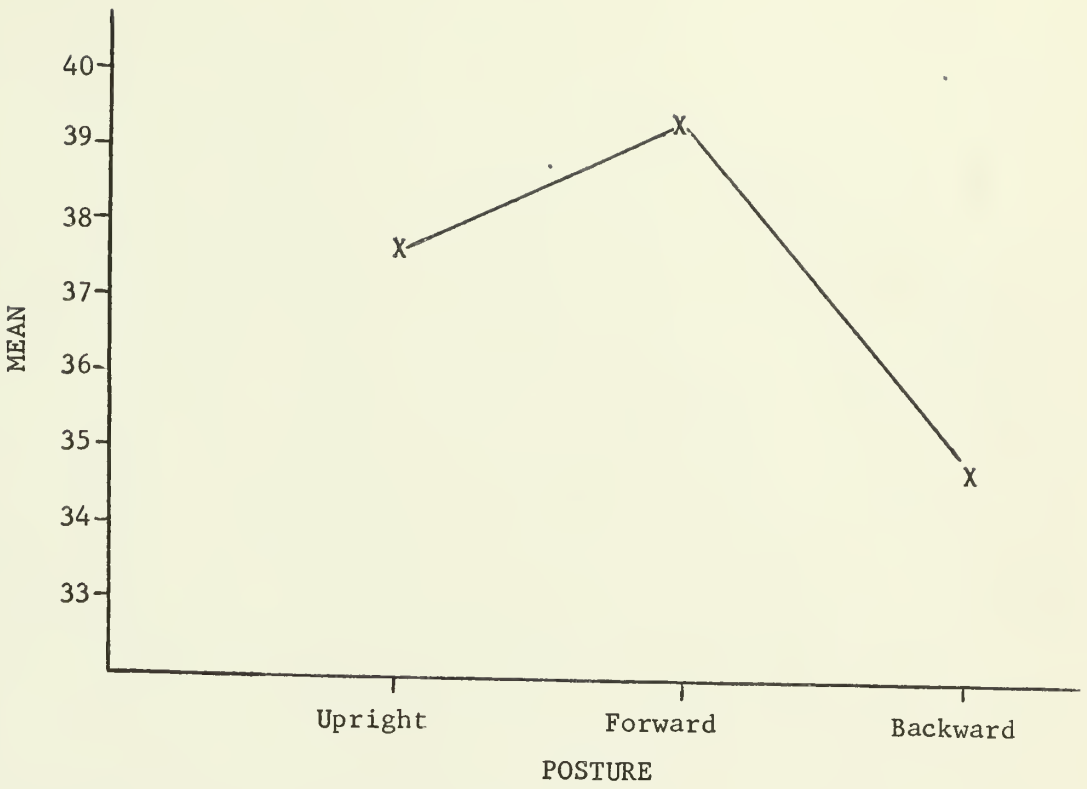

Fig. 3. Mean scores for each posture.

Hypothesis III: There will be no differences as measured by the semantic differential, between subject groups (clients, counselors, and administrators) with regard to attitudes toward interaction distance and trunk lean.

The inspection of Table 2 reveals no significant differences between subject groups in terms of interaction distance or counselor trunk lean ($F = 1.51$; $p > .05$). The null hypothesis was not rejected.

Hypothesis IV: There will be no interaction between main effects of group membership, distance, and posture.

The analysis of variance (Table 2) revealed a significant interaction between main effects of distance and posture ($p < .001$). In cases of significant interaction, tests on simple main effects are indicated (Winer, 1962, p. 310). Tests for simple main effects of upright posture, forward posture, and backward posture were made at each level of B (distance); tests of 30 inches, 39 inches, 48 inches, and 66 inches were made at each level of C (posture). Results of tests on simple main effects appear in Table 6.

Tests on simple main effects are analogous to computing a series of one way analyses of variance. In tests for simple main effects across distance and postural configuration, it was found that although the three postures were not seen as significantly different from one another at an interaction distance of 30 inches (C at B_1), there were significant differences ($p < .05$) between them at 39 inches (C at B_2), 48 inches (C at B_3), and 66 inches (C at B_4). Tests of simple main effects also revealed that there were significant differences between distances ($p < .05$) at all three levels of posture. Cell means for this interaction have been presented in Table 7.

TABLE 6

Tests of Simple Main Effects on the

Distance (B) X Posture (C) Interaction

Source	df	SS	MS	F
B at C_1	3	7477.30	2492.40	66.64*
error B at C_1	81	3029.76	37.40	
B at C_2	3	1657.70	552.50	14.77*
error B at C_2	81	3029.76	37.40	
B at C_3	3	2062.48	687.50	18.33*
error B at C_3	81	3029.76	37.40	
C at B_1	2	156.90	78.45	1.02
error C at B_1	108	8323.28	77.07	
C at B_2	2	6979.30	3489.70	45.28*
error C at B_2	108	8323.28	77.07	
C at B_3	2	2347.80	1173.90	15.23*
error C at B_3	108	8323.28	77.07	
C at B_4	2	2445.90	1222.90	15.87*
error C at B_4	108	8323.28	77.07	

* $p < .05$

TABLE 7

Means and Standard Deviations on the

Distance X Posture Interaction

Posture	Distance			
	30 inches	39 inches	48 inches	66 inches
Upright	$\bar{X}$ = 35.77 SD = 8.02	$\bar{X}$ = 45.17 SD = 7.53	$\bar{X}$ = 36.60 SD = 7.72	$\bar{X}$ = 32.97 SD = 7.68
Forward	$\bar{X}$ = 37.40 SD = 9.69	$\bar{X}$ = 38.33 SD = 8.46	$\bar{X}$ = 43.00 SD = 8.20	$\bar{X}$ = 38.83 SD = 8.36
Backward	$\bar{X}$ = 37.40 SD = 8.95	$\bar{X}$ = 32.73 SD = 8.72	$\bar{X}$ = 36.90 SD = 9.45	$\bar{X}$ = 32.03 SD = 8.36

Graphic representation of the means of the three postural configurations as seen at each of the four interaction distances is shown in Figure 4. It appears that the two most preferable postural-distance configurations are the upright posture at 39 inches and the forward trunk lean at 48 inches. The backward trunk lean at 66 inches appears to be the postural-distance combination least preferred.

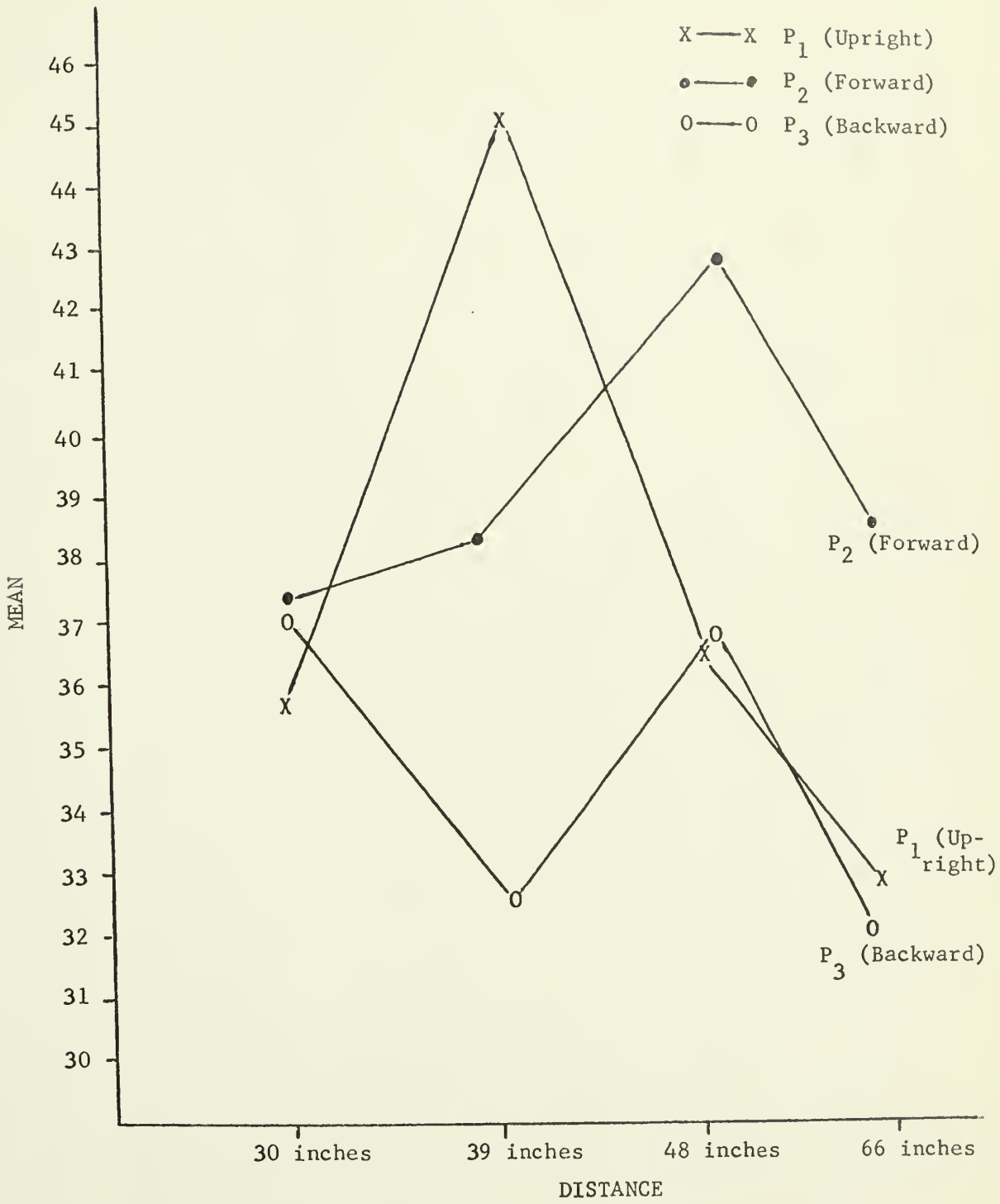

Fig. 4. Means for posture across distance.

CHAPTER V

DISCUSSION

Of the four null hypotheses presented in this study, only one was not rejected. The following chapter discusses the nature of the findings of this study, some conclusions related to those findings, the limitations of the study, and some suggestions for further research.

Groups

One finding of this study was that there were no differences between clients, counselors, and administrators in terms of preferred interaction distance or posture. This finding appears to be contrary to research conducted by Haase and Di Mattia (1970) which found significant differences between three groups of subjects similar to those tested in this study. One basic difference between these studies, however, is that the significant differences between counselors, clients, and administrators in the Haase and Di Mattia study were in terms of preference for furniture arrangement in a counseling encounter, whereas the present study focused upon different distances within the same furniture arrangement.

There are at least three possible reasons for the lack of difference between the subject groups in this study. First, each of the subjects was asked to perceive himself as a client and to project himself into the photographed scenes he was rating. This psychological "set" given to each subject may have obliterated any previously existing differences between the three subject groups.

It is possible that other sets might have produced different results. For example, the subjects might have been asked to perceive themselves in social or business situations as opposed to seeing themselves as clients in a counseling situation. Although this study did not test differences between sets, previous research suggests that differential sets will produce different proxemic behavior (Rosenfeld, 1965).

A second factor which may have contributed to the lack of significant differences between subject groups could have been the fact that all of the subjects were enrolled as either undergraduate or graduate students at the time this study was conducted. The client subjects were undergraduate students and, although each had been seen in counseling at least twice prior to this study, their "student identity" may have been stronger than their "client identity." In the case of the counselor and administrator subjects, each was a graduate student at the time of the study. Once again, the fact that these subjects were still enrolled as students rather than actually working as counselors or administrators may have caused them to identify with their student role orientations. Perhaps, then, there was a pervasive factor of "student-ness" which overrode any differences between subject groups.

The third possible factor for the lack of significant differences between subject groups was that all of the subjects were white, middle-class American males who were living in the northeastern United States at the time this study was conducted. Perhaps, as Hall (1959) suggested, there was an overriding cultural factor shared by the subjects which precluded any significant differences between clients, counselors,

and administrators.

Distance

The second main effect tested in this study was that of distance. The interaction distances which generated the most positive subject attitude were the two middle distances of 39 inches and 48 inches. It is interesting to note again that these two interaction distances fall within the "personal-social" area of Hall's (1966) hypothesized interaction distances. The interaction distance of 39 inches is within the far phase of Hall's hypothetical personal distance; the interaction distance of 48 inches is on the boundary between the far phase of personal distance and the close phase of social distance.

It is also of interest to note that the interaction distances of 30 inches and 66 inches generated less positive attitude than the two middle distances. The interaction distance of 30 inches falls within Hall's close phase of personal distance, and the 66 inch interaction distance falls almost midway between the close and far phases of Hall's hypothesized social distance. It may be that the 30 inch distance was seen by the subjects of this study as being too close for the counseling interaction, whereas, the 66 inch distance may have been seen as too distant for the counseling interaction.

The findings of this study indicate that the counseling interaction is seen by subjects as a combined personal-social encounter. Thus, this study supports the conjecture of Haase and Di Mattia (1969) and Haase (1970) that the counseling encounter is indeed different from strictly social encounters in terms of preferred interaction distances--and may

be different from a completely personal encounter as well.

This study only partially supports the findings of Sommer (1961). When discussing the optimal distances for opposite seating in the dyadic social interaction, Sommer reported that the range was from approximately 36 inches to 39 inches. The optimal distances for the counseling interaction suggested by the study described herein are 39 inches and 48 inches. Therefore, although the 39 inch distance falls within Sommer's range for social interaction, the 48 inch distance does not. In the light of this data, it would appear once again that the counseling interaction differs from a purely social interaction.

Posture

Studies by James (1932), Mehrabian (1968a), and Mehrabian and Friar (1969) have suggested that subject attitude in a dyadic social encounter was more positive for forward trunk lean or upright posture on the part of the interactor as opposed to a backward lean of the trunk. The present study upholds these findings for the counseling interaction as well. Subjects in this study prefer the forward trunk lean or the upright posture on the part of a counselor as opposed to a backward trunk lean on his part.

A possible reason for this preference may be that the forward trunk lean and the upright posture are generally thought of as demonstrating counselor interest or attention to the client. The backward lean, on the other hand, is sometimes thought of as being a manifestation of a counselor's rejection or avoidance of a client. These conjectures regarding the reasons for, as well as the effects of counselor posture are still

open to further empirical research.

Distance X Posture Interaction

The interaction effect found in this study was between the factors of distance and posture. This interaction is reflected in reversals in subject preference for upright posture and forward trunk lean across distance. Figure 4 on page 55 demonstrates this interaction. It appears that subject preference for the upright posture was greatest at 39 inches and then diminished rapidly as the interaction distance was increased. On the other hand, subject preference for the forward trunk lean gradually increased across distance until it surpassed the upright posture between 39 inches and 48 inches. In short, the greater the interaction distance, the more preferable a forward trunk lean becomes; the closer the distance, the more preferable the upright posture becomes.

The most preferable posture by distance combinations for the counseling interaction were the upright posture at 39 inches and the forward trunk lean at 48 inches. This finding is important because it further underscores the optimal distances and postures already cited as being necessary for the generation of positive attitude on the part of the client in the dyadic interaction (James, 1932; Mehrabian, 1968a; Mehrabian and Friar, 1969).

When measurements were made of the eye-contact distance from one model to another in the photographs used for the subject response in this study, it was found these distances were nearly equal for the photographs depicting the upright position at 39 inches and the forward position at

48 inches (see Appendix A). Therefore, it appears that this interaction might be explained by the findings of Argyle and Dean (1965) who suggested that people might maintain proper eye contact in dyadic social interaction by modifying their posture and/or interaction distance.

Posture accentuates the effects of distance alone. The forward trunk lean at 30 inches actually places the eye contact distance within the close phase of Hall's hypothetical personal distance--a distance cited by Mehrabian (1969) as capable of generating negative subject attitudes. Likewise, the backward trunk lean at 66 inches would place the eye-contact distance between the interactors well out of the seemingly optimal personal-social range. The subject attitude in this study for the posture by distance combinations of the forward trunk lean at 30 inches and the backward trunk lean at 66 inches was far less positive than it was for the optimal posture by distance combinations of the upright posture at 39 inches and the forward trunk lean at 48 inches.

The findings of this study will have to be validated by a series of related studies using similar, as well as different subject populations before this information can be used effectively in "live" counseling interactions. The main reason for such replication is that the findings of this study relate only to a very limited population and could not be readily generalized to a broader population.

In addition, it would seem that research must be generated which will demonstrate the relationship between outcome variables and the variables of client attitude toward counselor trunk lean and counselor-client interaction distance. To date, almost no research has been

generated which would relate counseling outcome to client attitude.

Three possible means of assessing outcome variables related to client attitude might be some measure of client satisfaction, some objective rating scale, or some form of counselor rating. It would be necessary, however, to carefully isolate and describe the counseling outcomes being measured. Opinions vary regarding desirable counseling outcome and it ranges from client "insight," through client "satisfaction" and/or "growth," to modified client behavior.

Limitations and Suggestions for Further Research

There are certain limitations to the present study which must be borne in mind when assessing its value. The overriding limitation is the limited generalizability of this study. The reasons for this, combined with suggestions for further research are listed below:

1. The subject population was composed of only three groups: clients, counselors, and administrators. All of the members of these groups were students; all were male; all had similar cultural backgrounds. Therefore, it is difficult to generalize the findings to other groups of people.

Further studies might utilize other subject populations such as teachers or businessmen. They might also use non-student subjects. Further studies might also use female subjects or combinations of males and females. Such studies might also use subjects from cultures other than the one included in the present study.

2. The subjects in this study were only given one set--that of attempting to perceive themselves as clients in a dyadic counseling

interaction. Therefore, it is difficult to generalize the findings beyond that particular situation.

Further research might give the subjects an additional set (or sets). For example, subjects might be asked to perceive themselves in a social situation and a business situation as well as in a counseling situation. It might be interesting as well to give the subjects a status set: interacting with a peer, or a person of higher or lower status than themselves.

3. The findings of this study have yet to be related to counseling outcome. Therefore, it is difficult to generalize the effect of positive client attitudes caused by nonverbal stimuli such as counselor posture and/or interaction distance.

Further research might attempt to assess the effects of these nonverbal stimuli. One such method might be to pretest subjects, use the nonverbal stimuli found to generate positive attitudes throughout counseling, and then administer a post test. The problem with this type of research design is its susceptibility to extraneous variables, however.

4. The stimulus materials presented to the subjects of this study were black and white slide photographs depicting a counseling interaction. It is therefore difficult to generalize the findings of this study to live situations until further research of a correlational nature is undertaken.

Further research might present subjects with a live counseling situation which displayed the variables contained in the present study. Another design might actually place the subjects in a live counseling situation as clients. The latter design would have to deal with the

factor of verbal output as a possible confounding variable, however.

It is difficult to assess why certain interaction distances and counselor trunk leans generated greater positive subject attitude than did other posture by distance combinations.

Perhaps there was an overriding cultural "set" which dictated these preferences. Such a set is undoubtedly acquired in the maturation process, but it is difficult to determine either how it evolved or what factors cause it to endure.

Other factors which may have had something to do with the distance by posture choices may have been intelligence and/or the psychic state of the subjects.

It is feasible that since all of the subjects of the present study were college students, they may differ from a non-college population. Whether or not relative intelligence affects attitudes generated by interaction distance or counselor posture in the dyadic counseling encounter is a question beyond the scope of the present study.

A person's psychic state (normal vs. psychotic or neurotic) may also have a bearing on his preference for counselor posture and/or interaction distance. The work of Horowitz, Duff, and Stratton (1964) would seem to support this conjecture.

There are many questions that are generated by this study. Hopefully, further research will provide answers to some of them.

Implications

This study provides counselors, counselor educators, and counselor trainees with a better understanding of the effects of certain nonverbal

cues in the dyadic counseling interaction.

Based on the findings of this study, it seems that male counselors stand a better chance of generating positive attitude on the part of male clients by interacting with them at a distance of 39 inches or 48 inches and using either an upright posture or a forward trunk lean--depending upon the interaction distance chosen.

If the theoretical point of view of the therapist, educator, or trainee tends to be humanistic, the information found in this study could be of use in generating positive client attitudes as a step in providing a "warm," "accepting" counseling atmosphere.

If, on the other hand, the theoretical bias of the therapist, educator, or trainee was behavioral, the findings of this study could also be put to productive use. For example, if a counselor chose to reinforce a certain type of client behavior, he would sit in the appropriate posture at the appropriate interaction distance to generate positive client attitude. On the other hand, if the counselor wanted to extinguish certain client behaviors, he would sit in a postural configuration at a distance more likely to generate less positive client attitude.

The fact that this group of subjects responded differentially to distances and posture would suggest that nonverbal stimuli may have reinforcing properties for client behavior. The extent to which the counselor can accomplish a desired end by use of nonverbal discriminative stimuli would seem possible and should be further researched.

Such utilization of the findings of this study would also act as an ongoing type of validation. This utilization would also enhance a primary suggestion for further research which is to replicate this

study in a live setting, using subjects as raters or as actual clients.

Conclusions

In summary, this study has provided additional empirical data regarding the effects of certain nonverbal stimuli in the counseling interaction.

No significant differences were found between client, counselor, and administrator groups with regard to their preference for varied counselor postures and interaction distances in the counseling interaction.

This study demonstrated subject preference for upright and forward counselor postures as opposed to the backward posture in the counseling interaction.

This study demonstrated subject preference for interaction distances of 39 inches and 48 inches as opposed to 30 inches and 66 inches in the dyadic counseling interaction.

There was a significant posture by distance interaction found by this study which indicated that the greater the interaction distance, the more preferable a forward trunk lean became, whereas the smaller the distance, the more preferable the upright posture became.

The information gained from this study must now be validated by further research, and related to research on counseling outcome. In essence, one of the major questions to be answered by further research is whether or not client attitude generated by counselor posture and/or interaction distance is a prerequisite for client "growth" or change in the counseling interaction.

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APPENDIX A

Included in this appendix are: a table which presents the adjective continua pool with correlation scores arrived at by item analysis from which the items for the final semantic differential were drawn, a table showing validity data for the semantic differential, copies of the semantic differential at the three stages of development, copies of the photographs which were used to elicit subject responses (a line is drawn through each photograph, showing where it was cropped prior to being converted into a 35 mm slide), and a figure depicting the room in which the experiment was conducted.

List of Adjective Continua Taken from Osgood, Suci, and Tannenbaum (1957) with Correlation Scores Arrived at by Item Analysis

	r		r
EVALUATIVE:		POTENCY (cont.):	
*good-bad	.471	powerful-weak	.336
*beautiful-ugly	.486	safe-dangerous	.311
sweet-sour	.363	dark-bright	-.045
clean-dirty	.352	*happy-sad	.488
*valuable-worthless	.483	gentle-violent	.163
*kind-cruel	.501	rugged-delicate	.077
*pleasant-unpleasant	.514	masculine-feminine	.295
bitter-sweet	.248		
*sacred-profane	.448	ACTIVITY:	
fragrant-foul	.339		
*nice-awful	.452	sharp-dull	.340
*honest-dishonest	.389	hot-cold	.117
*fair-unfair	.575	angular-rounded	.143
*pleasing-annoying	.543	*active-passive	.415
deep-shallow	.295	fast-slow	.111
		definite-uncertain	.299
POTENCY:		soft-loud	.068
		clear-hazy	.316
large-small	.049	calming-exciting	-.088
strong-weak	.271	soft-hard	-.301
deep-shallow	.237	loose-tight	-.040
heavy-light	.060	relaxed-tense	.366
thick-thin	.234	obvious-subtle	.156
bass-treble	.180	deliberate-careless	.166
wide-narrow	.032	mild-intense	.231
smooth-rugged	.026		

* Items selected for the final scale by item analysis.

Scores on Correlated t Tests Used for the Validity Check of the 12-item Semantic Differential

Variable	t
Between Upright Posture at 30 inches and Upright Posture at 66 inches	1.52
Between Upright Posture at 39 inches and Upright Posture at 66 inches	3.52**
Between Upright Posture at 48 inches and Upright Posture at 66 inches	3.70****
Between Upright Posture at 30 inches and Upright Posture at 39 inches	1.44
Between Upright Posture at 30 inches and Upright Posture at 48 inches	-1.00
Between Upright Posture at 39 inches and Upright Posture at 48 inches	.704

** $p < .01$

**** $p < .001$

Semantic Differential Used in the Initial Phase

of the Development of the 12-item Scale

INTRODUCTION

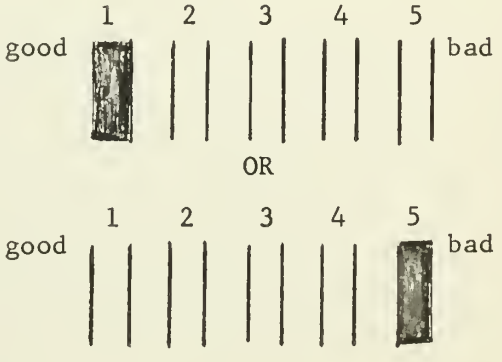
The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you.

You will be shown a slide photograph depicting two people interacting. You will also be shown a list of 45 adjective pairs. Please judge the photograph by responding to each of the adjective pairs and placing your answers in the corresponding numbered spaces on the digitek answer sheet you have been given.

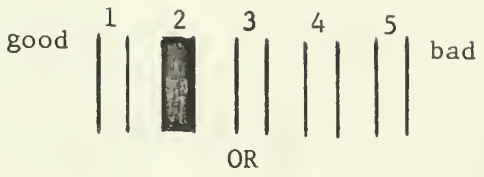
Here is how to use these scales:

Each of the spaces on the answer sheet is provided with five choices numbered 1-5. The numbered spaces for your answers correspond to the adjective pairs in the following manner. The space numbered 1 corresponds to the adjective to the extreme left of the continuum, while the space numbered 5 corresponds to the extreme right of the continuum.

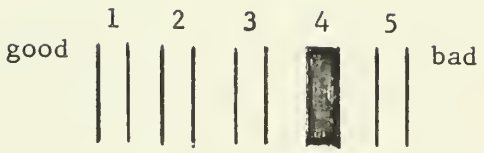
If you feel that the photograph you are rating is very closely related to one end of the adjective scale, you should darken the scale as follows:



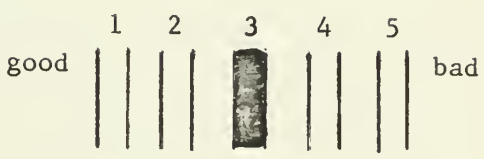
If you feel that the slide photograph is slightly related to the adjective scale you are rating, you should darken the space as follows:



OR



If you feel that the slide photograph is neutral on the scale, both sides of the scale equally associated with the photograph, or if the scale is completely irrelevant (unrelated to the photograph), then you should darken the middle space (that numbered 3):



IMPORTANT:

(1) Be sure that you fill in the space for your answer completely. Make every attempt to keep your pencil marks inside the space provided for your answer. If you have to erase, be sure that you do so completely.

(2) Be sure that you respond to every adjective pair for the photograph. Try not to omit any.

(3) Never darken more than one answer space for a single scale.

(4) Make each item an independent judgment. It is usually better to work quickly through all the scales. Remember, it is your first impression and "feeling" about the photograph that is most important. On the other hand, try not to be careless in your marking of the items; we do want your true impressions.

IF YOU HAVE ANY QUESTIONS ABOUT THE PROCEDURES FOR COMPLETING THESE ITEMS, PLEASE ASK THEM OF THE PERSON WHO IS ADMINISTERING THE SCALES.

		1	2	3	4	5	
1	wide	_____ :	_____ :	_____ :	_____ :	_____	narrow
2	weak	_____ :	_____ :	_____ :	_____ :	_____	strong
3	happy	_____ :	_____ :	_____ :	_____ :	_____	sad
4	careless	_____ :	_____ :	_____ :	_____ :	_____	deliberate
5	dark	_____ :	_____ :	_____ :	_____ :	_____	bright
6	large	_____ :	_____ :	_____ :	_____ :	_____	small
7	violent	_____ :	_____ :	_____ :	_____ :	_____	gentle
8	valuable	_____ :	_____ :	_____ :	_____ :	_____	worthless
9	dangerous	_____ :	_____ :	_____ :	_____ :	_____	safe
10	bitter	_____ :	_____ :	_____ :	_____ :	_____	sweet
11	foul	_____ :	_____ :	_____ :	_____ :	_____	fragrant
12	dull	_____ :	_____ :	_____ :	_____ :	_____	sharp
13	delicate	_____ :	_____ :	_____ :	_____ :	_____	rugged
14	thick	_____ :	_____ :	_____ :	_____ :	_____	thin
15	awful	_____ :	_____ :	_____ :	_____ :	_____	nice
16	smooth	_____ :	_____ :	_____ :	_____ :	_____	rugged

		1	2	3	4	5	
17	bad	____ :	____ :	____ :	____ :	____	good
18	subtle	____ :	____ :	____ :	____ :	____	obvious
19	clean	____ :	____ :	____ :	____ :	____	dirty
20	angular	____ :	____ :	____ :	____ :	____	rounded
21	powerful	____ :	____ :	____ :	____ :	____	weak
22	dishonest	____ :	____ :	____ :	____ :	____	honest
23	loud	____ :	____ :	____ :	____ :	____	soft
24	hazy	____ :	____ :	____ :	____ :	____	clear
25	pleasant	____ :	____ :	____ :	____ :	____	unpleasant
26	slow	____ :	____ :	____ :	____ :	____	fast
27	sweet	____ :	____ :	____ :	____ :	____	sour
28	shallow	____ :	____ :	____ :	____ :	____	deep
29	profane	____ :	____ :	____ :	____ :	____	sacred
30	fair	____ :	____ :	____ :	____ :	____	unfair
31	loose	____ :	____ :	____ :	____ :	____	tight
32	light	____ :	____ :	____ :	____ :	____	heavy

		1	2	3	4	5	
33	uncertain	_____ :	_____ :	_____ :	_____ :	_____	definite
34	annoying	_____ :	_____ :	_____ :	_____ :	_____	pleasing
35	bass	_____ :	_____ :	_____ :	_____ :	_____	treble
36	intense	_____ :	_____ :	_____ :	_____ :	_____	mild
37	hot	_____ :	_____ :	_____ :	_____ :	_____	cold
38	masculine	_____ :	_____ :	_____ :	_____ :	_____	feminine
39	beautiful	_____ :	_____ :	_____ :	_____ :	_____	ugly
40	calming	_____ :	_____ :	_____ :	_____ :	_____	exciting
41	active	_____ :	_____ :	_____ :	_____ :	_____	passive
42	cruel	_____ :	_____ :	_____ :	_____ :	_____	kind
43	tense	_____ :	_____ :	_____ :	_____ :	_____	relaxed
44	hard	_____ :	_____ :	_____ :	_____ :	_____	soft
45	shallow	_____ :	_____ :	_____ :	_____ :	_____	deep

Semantic Differential Used in Validating the 12-item Scale

INSTRUCTIONS

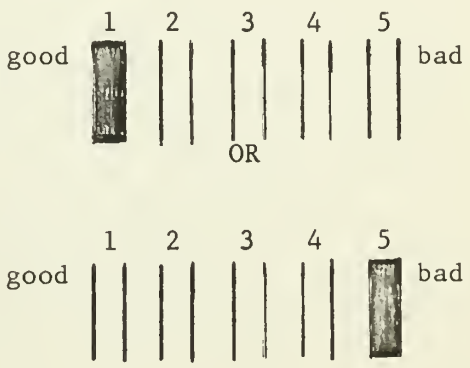
The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you.

You will be shown slide photographs depicting two people interacting. You will also be given a list of 12 adjective pairs. Please judge each photograph by responding to each of the adjective pairs and placing your answers in the corresponding numbered spaces on the digitek answer sheet you have been given. The test administrator will tell you which numbered spaces correspond to each of the slide photographs.

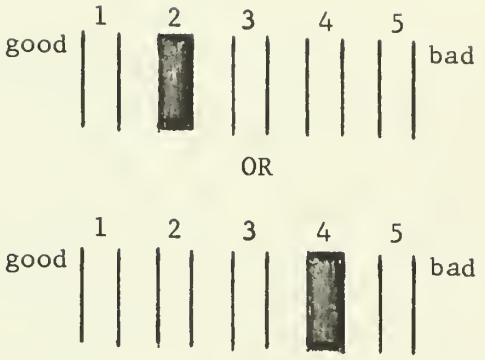
Here is how to use these scales:

Each of the spaces on the answer sheet is provided with five choices numbered 1-5. The numbered spaces for your answers correspond to the adjective pairs in the following manner. The space numbered 1 corresponds to the adjective to the extreme left of the continuum, while the space numbered 5 corresponds to the extreme right of the continuum.

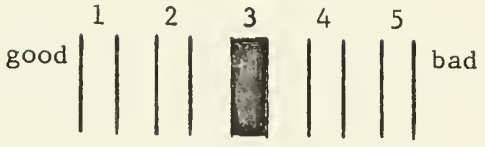
If you feel that the photograph you are rating is very closely related to one end of the adjective scale, you should darken the scale as follows:



If you feel that the slide photograph is slightly related to the adjective scale you are rating, you should darken the space as follows:



If you feel that the slide photograph is neutral on the scale, both sides of the scale equally associated with the photograph, or if the scale is completely irrelevant (unrelated to the photograph), then you should darken the middle space (that numbered 3):



IMPORTANT:

(1) Be sure that you fill in the space for your answer completely. Make every attempt to keep your pencil marks inside the space provided for your answer. If you have to erase, be sure that you do so completely.

(2) Be sure that you respond to every adjective pair for each photograph. Try not to omit any.

(3) Never darken more than one answer space for a single scale.

(4) Make each item an independent judgment. It is usually better to work quickly through all the scales. Remember, it is your first impression and "feeling" about each photograph that is most important. On the other hand, try not to be careless in your marking of the items; we do want your true impressions.

IF YOU HAVE ANY QUESTIONS ABOUT THE PRECEDURES FOR COMPLETING THESE ITEMS, PLEASE ASK THEM OF THE PERSON WHO IS ADMINISTERING THE SCALES.

		1	2	3	4	5	
1-13-25-37:	happy	_____ :	_____ :	_____ :	_____ :	_____	sad
2-14-26-38:	valuable	_____ :	_____ :	_____ :	_____ :	_____	worthless
3-15-27-39:	awful	_____ :	_____ :	_____ :	_____ :	_____	nice
4-16-28-40:	bad	_____ :	_____ :	_____ :	_____ :	_____	good
5-17-29-41:	dishonest	_____ :	_____ :	_____ :	_____ :	_____	honest
6-18-30-42:	pleasant	_____ :	_____ :	_____ :	_____ :	_____	unpleasant
7-19-31-43:	profane	_____ :	_____ :	_____ :	_____ :	_____	sacred
8-20-32-44:	fair	_____ :	_____ :	_____ :	_____ :	_____	unfair
9-21-33-45:	annoying	_____ :	_____ :	_____ :	_____ :	_____	pleasing
10-22-34-46:	beautiful	_____ :	_____ :	_____ :	_____ :	_____	ugly
11-23-35-47:	active	_____ :	_____ :	_____ :	_____ :	_____	passive
12-24-36-48:	cruel	_____ :	_____ :	_____ :	_____ :	_____	kind

Semantic Differential Used in the Final Study

INSTRUCTIONS

The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you.

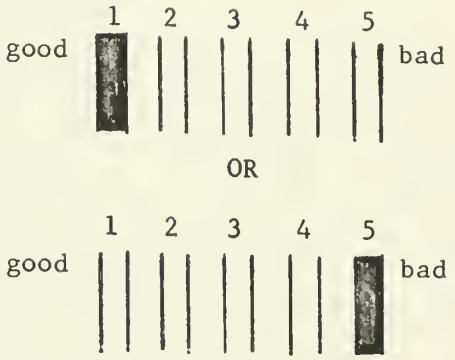
You will be shown a set of twelve slide photographs which depict two people interacting in a counseling situation. You will also be given a list of twelve adjective pairs. As each slide photograph is shown, you will be asked to respond to it by referring to the twelve adjective pairs and placing your responses in the numbered spaces on the digitek answer sheet as directed by the test administrator. THE TEST ADMINISTRATOR WILL TELL YOU WHICH NUMBERED SPACES YOU ARE TO USE FOR EACH PHOTOGRAPH.

For each slide photograph, please respond as if you are a client who has come to a counseling center for assistance with a personal-psychological problam. Also, for each slide photograph, please attempt to perceive yourself as the person on your right as you face the screen.

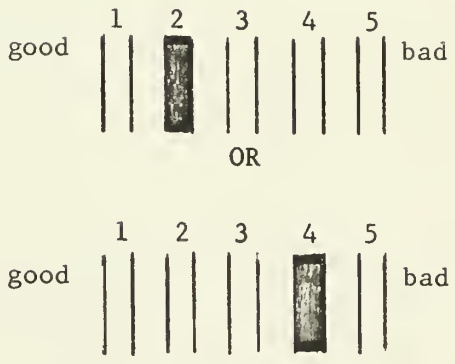
Here is how to respond to each slide photograph by using the twelve adjective pairs:

> Each of the spaces on the answer sheet is provided with five choices numbered 1-5. The numbered spaces for your answers correspond to the adjective pairs in the following manner: The space 1 corresponds to the extreme left of the continuum, while the space numbered 5 corresponds to the extreme right of the continuum.

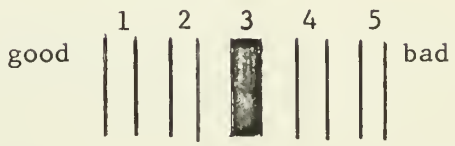
If you feel that the photograph you are rating is very closely related to one end of the adjective scale, you should darken the scale as follows:



If you feel that the photograph is slightly related to the adjective scale you are rating, you should darken the space as follows:



If you feel that the photograph is neutral on the scale (both sides of the scale equally associated with the photograph), or if the scale is completely irrelevant (unrelated to the photograph, then you should darken the middle space (that numbered 3):



IMPORTANT:

(1) Be sure that you fill in the space for your answer completely. Make every attempt to keep your pencil marks inside the space provided for your answer. If you have to erase, be sure you do so completely.

(2) Be sure that you respond to all twelve adjective pairs for each photograph. Try not to omit any. YOU WILL USE THE SAME TWELVE ADJECTIVE PAIRS FOR RATING EACH SLIDE PHOTOGRAPH.

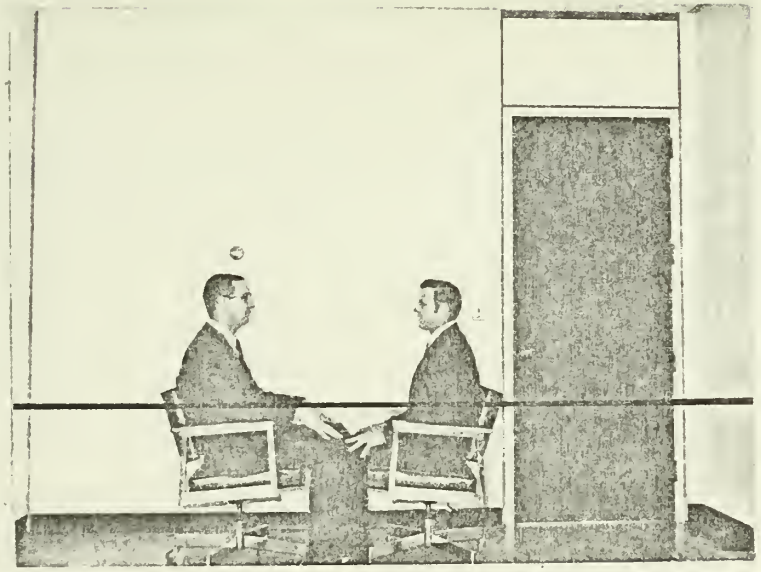
(3) Never darken more than one answer space for a single scale.

(4) Make each item an independent judgment. It is usually better to work quickly through all the scales. Remember, it is your first impression and "feeling" about each photograph that is important. On the other hand, try not to be careless in your marking of the items; we do want your true impressions.

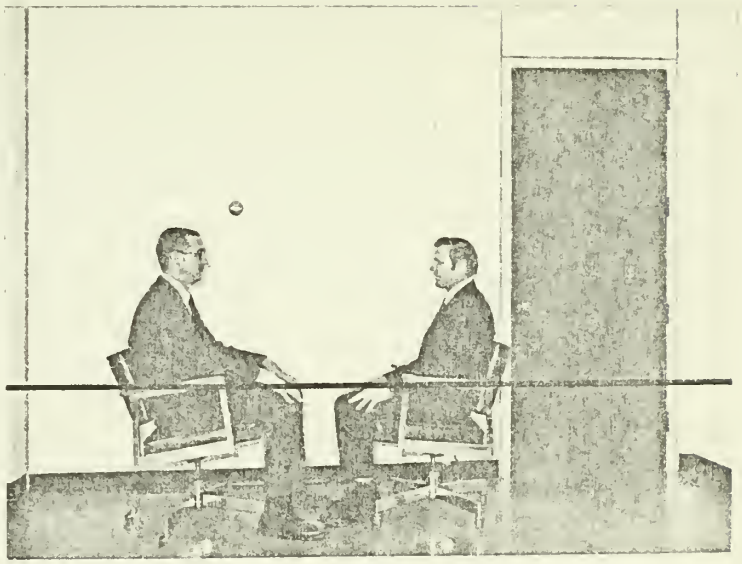
(5) When the test is complete, you should have one response marked for each item from 1-144 on the digitek answer sheet.

IF YOU HAVE ANY QUESTIONS ABOUT THE PROCEDURES FOR COMPLETING THESE ITEMS, PLEASE ASK THEM OF THE PERSON WHO IS ADMINISTERING THE SCALES.

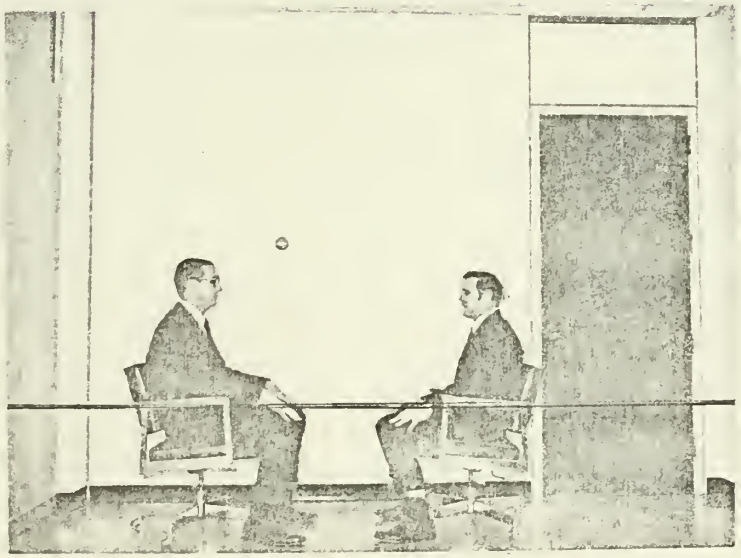
		1	2	3	4	5	
1	happy	_____	_____	_____	_____	_____	sad
2	valuable	_____	_____	_____	_____	_____	worthless
3	awful	_____	_____	_____	_____	_____	nice
4	bad	_____	_____	_____	_____	_____	good
5	dishonest	_____	_____	_____	_____	_____	honest
6	pleasant	_____	_____	_____	_____	_____	unpleasant
7	profane	_____	_____	_____	_____	_____	sacred
8	fair	_____	_____	_____	_____	_____	unfair
9	annoying	_____	_____	_____	_____	_____	pleasing
10	beautiful	_____	_____	_____	_____	_____	ugly
11	active	_____	_____	_____	_____	_____	passive
12	cruel	_____	_____	_____	_____	_____	kind



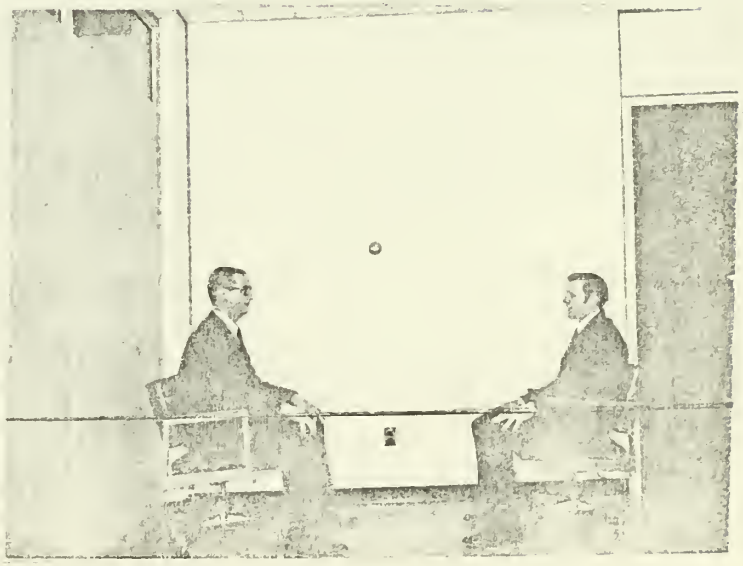
Upright at 30 inches



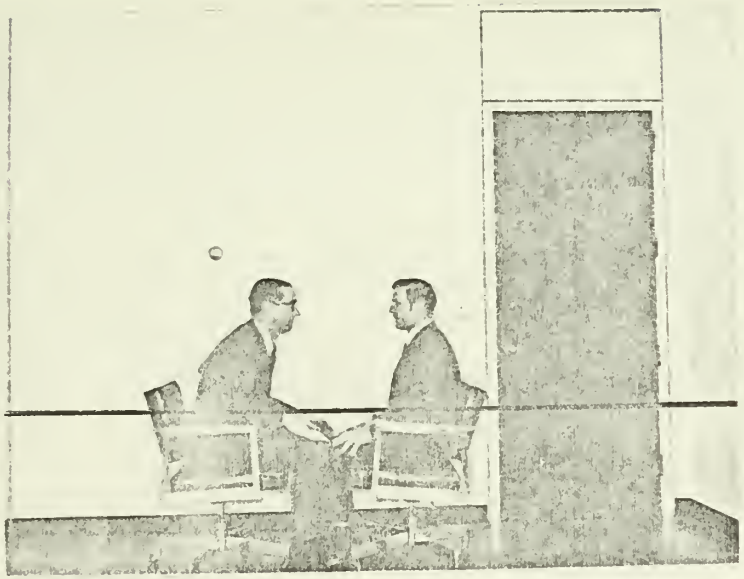
Upright at 39 inches



Upright at 48 inches

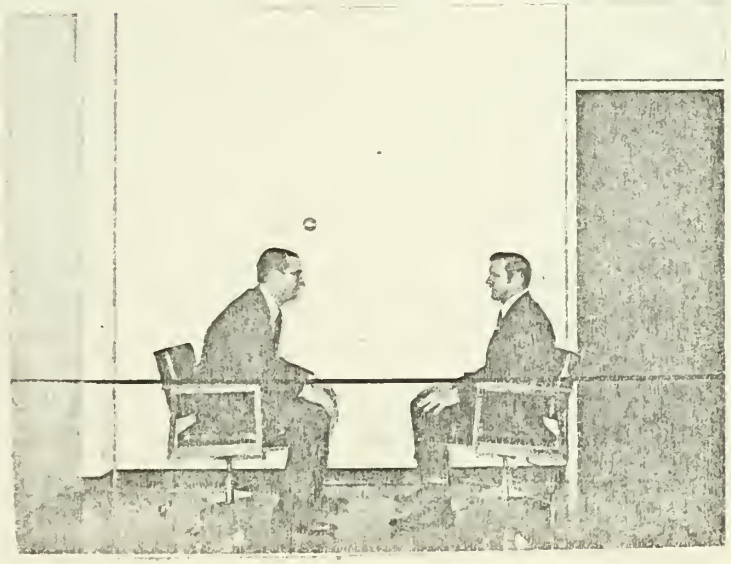


Upright at 66 inches

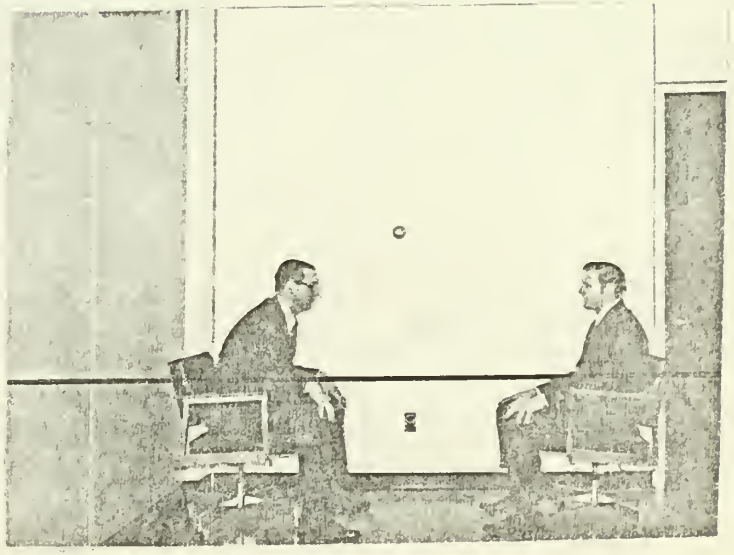


Forward at 30 inches

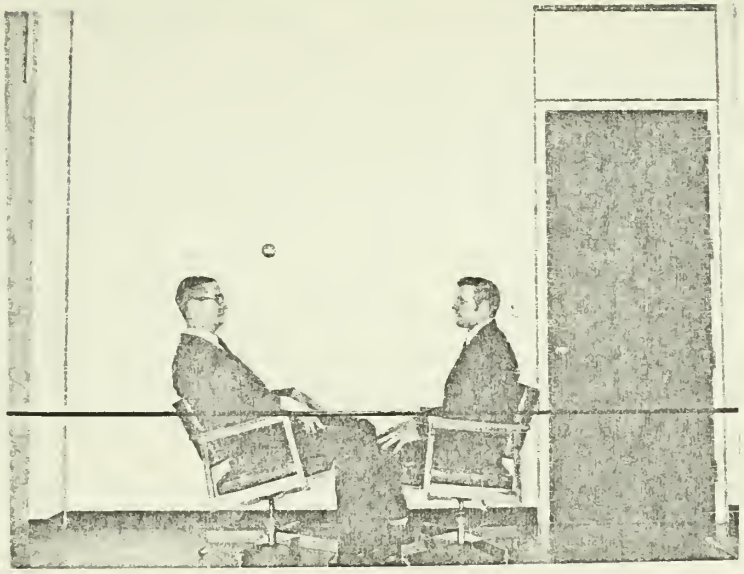
Forward at 39 inches



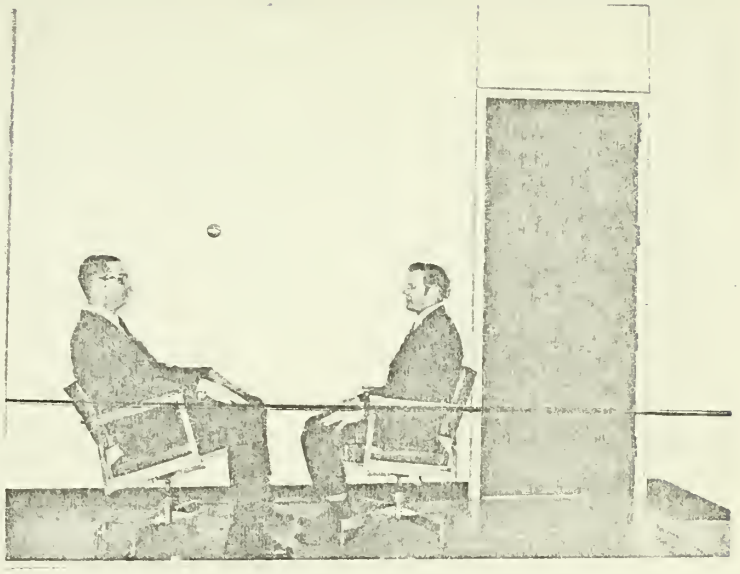
Forward at 48 inches



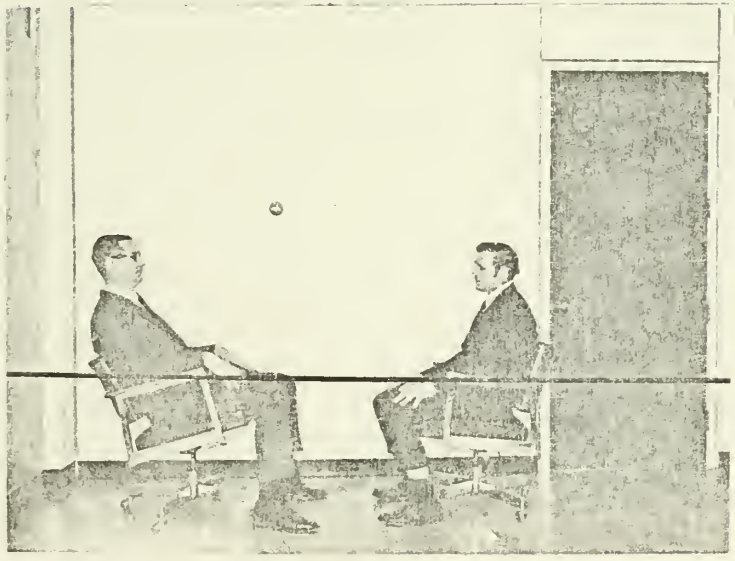
Forward at 66 inches



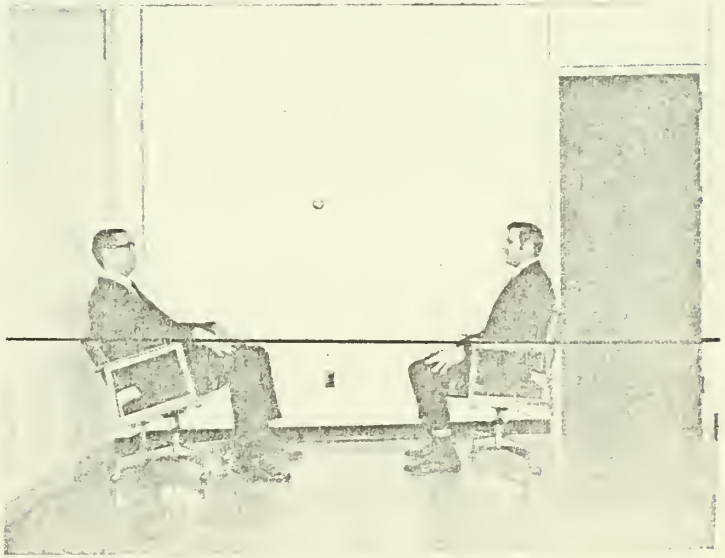
Backward at 30 inches



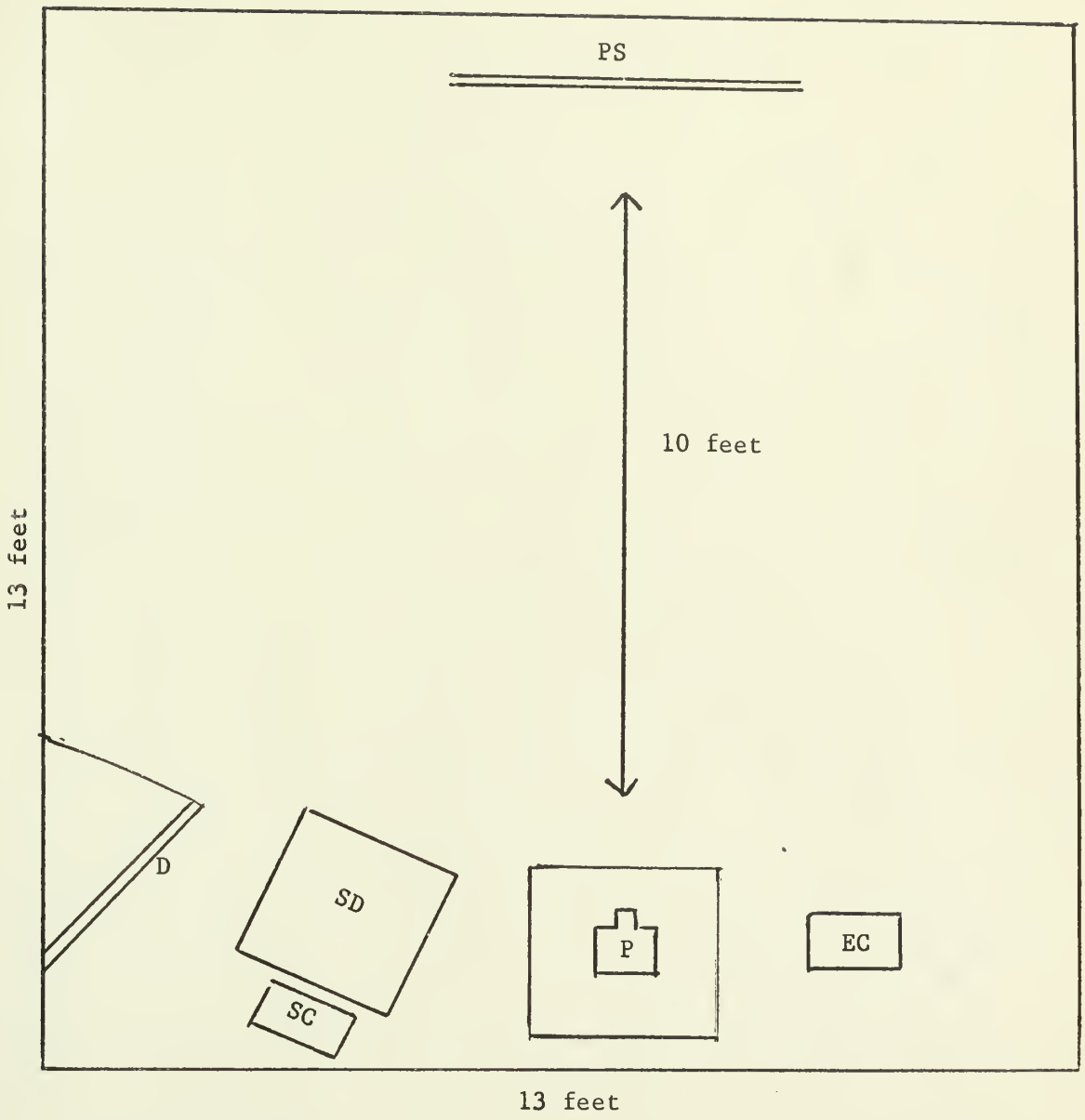
Backward at 39 inches



Backward at 48 inches



Backward at 66 inches



Legend: D = Door
EC = Experimenter's Chair
P = Projector
PS = Projection Screen
SD = Subject's Desk
SC = Subject's Chair

Floor diagram of room where experiment was conducted.