NONVERBAL MANIFESTATIONS OF PERSONALITY

Thesis for the Degree of M. A.
MICHIGAN STATE UNIVERSITY
LARRY WAYNE BAILEY
1972

Z—305

E073

JUL 4 1974 R6

OCT 7 '74 316

MAR R072

JUN 23 '76 R27

JUL R27

JUL 9 '76 R65

JUL 14 '76 R34

JUL 23 '76 R11

R12

JUN 3 '79 146

ABSTRACT

NONVERBAL MANIFESTATIONS OF PERSONALITY

By

Larry Wayne Bailey

Since ancient times man has had a profound interest in determining the personality traits of others. Psychoanalysts and psychiatrists have made many observations of the significance of body behaviors in mental processes and personality. However, little research has been done in relating specific nonverbal behaviors to personality traits.

The purpose of this research was to determine if one's typical and atypical arm positions, leg positions, and use of physical space are significant indexes in differentiating a person's personality traits. Five hypotheses to test these ideas were formulated.

Using Smith's (1969) theory of personality as a basis and his personality inventory as an instrument to dichotomize the subjects, the subjects were divided into trait groups. The subjects were classified as either cautious or bold, rational or empirical, controlled or

impulsive, introverted or extroverted, and emotional or unemotional.

The subjects then filled out a body behavior questionnaire. It contained items which asked subjects to indicate their most typical and atypical methods of holding their arms, legs, and crossing their legs. Another part of the questionnaire had the subjects indicate their preferred distance from liked and disliked others. A final part of the questionnaire measured the subject's seating preferences in a classroom situation.

It was found that most traits could not be differentiated from their counter trait by means of arm or leg positions or proxomic behavior. However, the following significant results ($p \leq .05$) were obtained. Arm positions can be used to differentiate the rational and empirical, the impulsive and controlled, and the cautious and bold. Leg positions can be utilized to differentiate males from females, the impulsive from the controlled, and introverts from extroverts. Different ways of leg crossing can differentiate males and females, the introvert and extrovert, and the rational person and the empirical person.

Bold people prefer to be closer to liked others than do cautious people. Males like to be closer to liked females than do females. Females like to be closer to liked males than do males.

In a classroom situation, controlled persons prefer to sit closer to the front than do impulsive persons. The impulsive person prefers the middle of a classroom. Males also prefer the middle of a classroom; while females like to sit closer to the front.

The inconsistencies between the results of this study and other studies were reviewed. Some ideas to reduce these inconsistencies in future research were proposed.

NONVERBAL MANIFESTATIONS OF PERSONALITY

By

Larry Wayne Bailey

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Social Science

1972

ACKNOWLEDGMENT

For his help in the preparation of this thesis, I want to thank Dr. Henry Clay Smith. His availability, advice, and interest added considerable fuel to my own enthusiasm. I was particularly pleased with the free rein he allowed me in carrying out this study.

I also appreciate the critical review that Dr. Gary Stollak made of this study.

I wish to thank all the students who took part in this study. Their comments were a source of comic relief which placed the study in its proper perspective.

Finally, I want to thank all my friends and associates who unwittingly became not only a part of this thesis but also a part of myself.

TABLE OF CONTENTS

LIST OF TABLES

INTRODUCTION

One of the fastest growing fields of psychological research has become that area of social psychology which deals with the communicative aspect of nonverbal behaviors. Propelled by popularized accounts (see Fast, 1970; Pioret, 1970) there has developed in the social sciences an awareness of the informative value of the human body. A considerable body of research data has been accumulated.[1] However, as Brengelmann (1961) has pointed out, there has been a singular lack of interest in relating personality theories to nonverbal behaviors. Recent studies have focused on the relationship between nonverbal behaviors and affective or emotional states, but at the same time " . . . personality correlates of gait, posture and facial movement are practically unknown" (Brengelmann, 1961, p. 98).

---

[1]See Mehrabian (1969), Duncan (1969), Barnlund (1968), Harrison (1971), or Birdwhistell (1970) for some of the approaches to the study of nonverbal behaviors and summaries of research findings. Most of these authors and studies deal with the relation of psychological states and nonverbal behavior. The literature relating personality and nonverbal behaviors is scant and unsummarized.

The nonverbal body behaviors that any person exhibits may be determined by four main factors: (1) hereditary, (2) culture, (3) psychological states, and (4) personality. The first three factors will not be directly investigated in this paper. However, it is important to remember that all the factors interact to determine the nonverbal behaviors that a person exhibits. This is readily apparent when one considers that the human body is capable of maintaining over 1,000 steady postures and countless moving postures, gestures, etc. (see Hewes, 1957); yet only a limited number of postures are exhibited by an individual in any culture.

This is not to say that one or more of the factors may not predominate over the other factors. Research tends to indicate that a person's psychological state may be the predominate factor in determining the nonverbal behaviors that he exhibits. However, the importance of each factor in the etiology of nonverbal behaviors will be impossible to establish until all the factors have been adequately investigated.

The purpose of this paper is to investigate the relationship between an individual's personality traits and the nonverbal body behaviors that he displays. Due to the infinite variety and complexity of human body behaviors, only a limited number can be readily investigated at any one time. Therefore, this paper will be limited to

discovering whether or not the manner in which a person places his arms and his legs is related to his personality. A second purpose will be to investigate how various personality types utilize physical space in separating themselves from others. This will be investigated both generally and specifically (in a classroom situation).

HISTORY

Man has from earliest times shown a profound interest in understanding the intentions and character of the people with whom he comes into contact. In early times, the ability to differentiate friend from foe was a necessity for survival. Since early mankind did not possess a universal verbal language it was necessary for him to develop his ability to read his "body language." He learned to associate the smile with friendship and flared nostrils with anger (Haas, 1970; Darwin, 1872). It seems entirely possible that earliest man was most concerned with reading the intentions of others or their psychological states.

The development of social living, i.e., the development of the clan, tribe, family, etc., made it necessary for man to understand more than just the emotional state of fellow group members. Man expanded his interest in others to include their personality traits. There developed a vast folklore on determining personality from various physical manifestations of the individual. It is from these early beginnings that much of our

researches into personality and nonverbal behaviors have their roots. Sheldon's work on somatotyping (Sheldon & Stevens, 1945) and Allport and Vernon's (1933) work on expressive movements have origins which can readily be traced back to at least post-literate times.

Personality and Nonverbal Body Behaviors

The largest source of information relative to personality and nonverbal body behavior comes from the clinical observations of psychoanalysts and psychiatrists. A number of these observers have even gone so far as to develop theories of the mind and body.

Wilhelm Reich (1942, 1949), while working with Freud in the psychoanalytic movement, came to the conclusion that there existed a relationship between the workings of the mind and the individual's physical being. Reich believed that the individual was constantly assailed by social pressures from without and by internal pressures from within. In order to cope with these pressures and be able to carry on a good social front, the individual must control his body. He controls his body by making certain muscles rigid. This produces rigid armouring of the body's musculature. In a sense, the body is defending against the release of emotional and mental disturbances. Reich thus deduced that the body, through posture, gestures, etc., manifested physically the underlining psychic forces.

Alexander Lowen, a student of Reich, has extended Reich's work on the relationship between personality and body behaviors. Lowen (1958), drawing on clinical observations, has proposed that a person's body manifestations are related to the individual's psychoanalytic stage of development (Oral, Anal, etc.). For example, Lowen (1958) finds that the oral character is weak in the arms and legs due to their lack of aggressiveness. The oral character, in attempting to compensate for this weakness, makes the muscles of his arms and legs rigid. The rigid muscles give the oral character's movements a disjointed quality (p. 174). Like Reich, Lowen has developed physical methods for attacking and alleviating psychic problems (1967, 1970).[2]

Felix Deutsch (1947, 1952) recorded systematically during each analytic session all the postures that his clients displayed. Thirty-two patients were studied for one to four years. Deutsch recorded the position of the patient's head, hands, limbs, trunk, fingers, and feet as they lay on the couch.

Deutsch (1952) believes that the individual's posture is an expression of the individual's problems. Postures and movements are "psychologically determined

---

[2]There is a related area of study dealing with the relationship between muscle tensions and personality which lends some support to Reich's ideas (see Goldstein, 1964; Kempe, 1956).

and released through the emergence from repression of unconscious material" (1947). For example, "postures like folding the arms, clasping the fingers, the foetal position, may be interpreted as attempts to hold the 'parts' of the ego together and to diminish body surface" (1952).

Deutsch found that everyone has a characteristic basic posture, and this posture is persistent over time. This fact was demonstrated to Deutsch when interruptions occurred in the therapies for summer vacations. When Deutsch compared the prior vacation postures of his patients with their post vacation postures, he found in 42 out of 43 cases that the patient returned to the same posture. He also found that when a basic posture remains unchanged after several interruptions (six cases) prognosis for the therapy was poor (1952, p. 214).

The recent interest in "Group Therapy" has awakened a renewed concern about the relation of body behaviors to mental forces. Most of these therapies have their origins in the work of Reich; although they may not claim kinship. Bach and Wyden (1968), Janov (1970), Perls, Hefferline, and Goodman (1951), Rolf (1963), and Schutz (1967) have all been concerned with the physical manifestations of psychological forces.

The clinical-observational approach to the study of the relationship between personality and nonverbal

body behaviors has provided us with a vast store of observations. However, the generalizability of these specific observations is questionable (Wiener, Devoe, Rubinow, & Geller, 1972). This is mainly due to the limited sample sizes from which these observations were drawn. And to the fact that these observations were made upon populations which were suffering from various forms of mental disturbances.

Arm Positions

The arms and hands are man's chief tools. Because of their construction, man can make an almost limitless number of movements and assume many positions. Janov (1970) is one therapist who utilizes arm positions in his work with patients. Janov has his patients lie "spread-eagled on the couch." Janov characterizes this position as being the most defenseless one a person can assume. But he feels that such a posture is very productive in bringing unconscious material to the surface.

Unfortunately, there has been only limited research on the use and positioning of the arms by different personality types. Pavel Machotka (1965) conducted some experiments concerning the way in which different arm and body positions affect others. Machotka presented his subjects with line drawings of similar figures with arm, leg, and body variations. He had the subjects rate each drawing using a semantic differential technique.

In one part of his study, Machotka had three drawings of a nude female. One figure had her arms at her sides, another had her arms open and outspread, and the third had her arms positioned in front of her body. Subjects rated the figure with her arms at her side as the most natural, calm, ingenious, yielding, and receiving. The figure with outspread arms was seen as the most immodest, dramatic, and exhibitionistic. The figure who covered her body with her arms was perceived as being the most modest, shy, passive, self-concerned, cold, rejecting, and unyielding.

In another series of drawings, Machotka had a male and female interacting. The arm's positions and the direction of lean, toward or away from each other, were varied. When the female leaned backward while facing the male and positioned her arms near her body she was perceived by subjects to be action-receiving, cold, uncertain, unaggressive, constrained, calculating, non-erotic, and passive. When the female figure leaned toward the male with outstretched arms she was seen as action-initiating, warm, intense, determined, aggressive, sincere, erotic and active. For the male figure, a reaching towards figure was seen as being action initiating, warm, intense, determined, aggressive, free, sincere, erotic and active. A receding male figure was perceived as being action-receiving, cold, uncertain, unaggressive, constrained, non-erotic and the least active (pp. 62-64).

It should be noted that Machotka's study does not relate personality traits to arm positions. Rather, he relates inferred personality traits with arm positions.

Most other studies of arm positions have been concerned with inference of attitudes or emotions (see Mehrabian, 1969). These studies have found many significant results. However, since they have not dealt with personality per se we will not go into them.

Leg Positions

John Blazer (1966) carried out one of the few studies done relating personality and the leg positions one assumes. One thousand caucasian American women were randomly selected from responses to newspaper ads, bulletins, and personal appeals. Each woman filled out the Edwards Personal Preference Schedule, the Allport-Vernon-Lindzey Study of Values and the Wechsler Adult Intelligence Scale. The subject's educational level was verbally obtained. Then the women took part in a "dressy" and a casual interview. The interviews covered a wide range of topics and were merely devices for enabling the experimenter to record the manners in which the women crossed and positioned their legs.

Blazer found that females who sat with their knees together and ankles together had a desire for neatness and orderliness in their work, liked to make plans, did not like change and uncertainty, organized their lives

according to a rigid schedule, and appreciated the orderliness of each experience. Females who placed their knees together and crossed their ankles tended to blame themselves easily, expected punishment often, generally felt inferior, submissive, put others before themselves, and identified with those felt to be superior. Females who sat with their knees apart and their ankles crossed enjoyed helping others, were sympathetic, affectionate, generous, and put the interests of others ahead of their own.

Blazer also found that the manner in which a female crosses her legs is indicative of the type of person she is. The female who normally crosses her legs by placing one knee over the other knee is eager to get ahead and likes to influence and direct other people. The female who twists one leg around the other is sympathetic, affectionate, generous, dislikes being alone, and puts interests of others ahead of self-interest. Not surprisingly, the female who sits with her knees apart and her legs crossed under her (Indian style) tends to be unconventional. She is also selfish, critical of authority, avoids responsibilities, likes change, enjoys travel and new experiences, and follows fads and fashions.

Proxemics

Since the time when Edward Hall (1959) pointed out the importance of physical space in social interaction, there has gradually developed an accumulation of research findings on proxemics. The results of most of these studies can be boiled down to Mehrabian's basic statement that "People are drawn toward persons and things they like, evaluate highly, and prefer; and they avoid or move away from things they dislike, evaluate negatively, or do not prefer" (Mehrabian, 1971, p. 1). Significantly, students of proxemics have taken a great interest in the influence of personality traits upon proxemic behaviors.

The personality trait of extroversion-introversion has been one of the major personality traits investigated by proxemic researchers. This is in large part due to its importance to social interaction. Patterson and Holmes (1966) gave female subjects the MPI extraversion-introversion scale. They then determined the seat the females took during an interview with a male interviewer. It was found that introverts chose seats farther from the interviewer than did extroverts. Leipold (1963) obtained similar results. Williams (1963), using an approach technique where he moved toward and away from the subject until told to stop, found that introverts like to maintain greater distances between themselves and others than do extroverts. However, Meisels and Canter (1970) found no

difference between extroverts and introverts in their selection of a chair in an interview situation.

Other personality variables have been investigated. Luft (1966) found that anxious individuals judged others as closer to them than they really were. While low anxiety persons judged others as being farther away than they actually were. This may be related to the finding that a person's galvanic skin reflex (GSR) increases as a person moves closer (McBride, King & James, 1965). Hildreth, Derogatis, and McCusker (1971) found that aggressiveness is related to the distance one maintains between himself and others. Using an approach technique similar to Williams (1963), Hildreth, et al., found that aggressive prisoners placed greater distance between themselves and others than did unaggressive prisoners.

Patterson and Sechrest (1970) found that subjects rated people who maintained large distances between themselves and others as being less socially active than those who maintained small distances. This may be related to the finding that approval seeking persons sit closer to an interviewer than do approval-avoiding persons (Rosenfeld, 1965). Patterson and Sechrest also found that individuals were rated as being higher in friendliness,

extraversion, dominance, and aggressiveness when they sat close to another in an interview.[3]

Some of the most significant differences in the utilization of space appear to be related to sex differences. Hartnell, Bailey, and Gibson (1970) found that females allowed greater invasion of their personal space than did males. Males high in heterosexuality, as measured by the Edwards Personal Preference Schedule, allowed female experimenters to approach closer than did males who scored low in heterosexuality. Females tend to sit closer to other females than males sit near other males (Pellegrini & Empey, 1970). In an approach situation, females tended to approach closer to other females than to males; while males used virtually the same approach distance (Dosey & Meisels, 1969). Willis (1966) found that speakers, regardless of sex, tend to stand more closely to women than to men during conversations. "Compared with men, women stand more closely to good friends but further from those they describe as friends. Perhaps women tend to be more cautious until close relationships are established" (Willis, 1966, p. 222).

---

[3]When the person sat closer than four feet from the interviewer they were rated lower in the above traits by the subjects.

Seating Position in a Classroom

Teachers have long noted that there appears to be a relationship between a student's personality and the choice of seat he makes in a classroom. Waller (1961) has speculated on some of the traits of those students:

> In large classes where students are left free to choose their own positions, the author has found a certain distribution to recur. In the front row is a plentiful sprinkling of over-dependent types, mixed perhaps with a number of extremely zealous students. In the back row are persons in rebellion, commonly persons in rebellion against authority and ultimately against the father image; if not that, perhaps in rebellion at being assimilated to the class. Those who use the responsive technique for constellating the teacher's attention usually distribute themselves about midway of the class. A number of timid students have stated to the writer that they habitually sit next to the wall (Waller, 1961, pp. 161-162).

Winick and Holt (1961) have reported on the choice of seats made by patients in group therapy situations. They point out that a patient's adjustment to the group can be determined by his choice of seating. For example, no matter how many chairs or how they arranged "some patients occasionally sit on the floor." "The patient who does so is likely to be dependent and to be seeking to make parental images of the group, or to want more attention than he has been getting" (p. 177).

Walberg (1969) has used experimental methods to establish the relation between personality traits and seating choice. Walberg had students fill out a large questionnaire containing questions on personality, attitudes, interests, self-concept, and seating

preferences. He found that students who sat in the front of the classroom had high interest in school and in succeeding in school. They felt it was important to be creative and imaginative. They frequently thought about values and life goals and desired to be alone more often than others.

Students who sat in the back were unhappy with school. They did not study hard. They felt they could learn more by observing than by reading books. Such students felt it was unimportant to be imaginative or creative. They tended to select "things" and "business and finance" as among the most important things in life. They did not feel that being popular was important.

Students who sat wherever their friends sat gave answers consistent with a need for affiliation, but not consistent with a desire for academic success. They felt it was less important to be intelligent than others. They selected people as the most important thing in life and security as the most important thing in working conditions. Students who preferred to sit near a window disliked school the most. Students who showed no seating preferences were similar to those who sat in the front; except they were not as extreme.

Moxey (1966) has obtained some results which are at variance with Walberg's. Moxey found no relationship between row preferences and one's self-concept,

self-acceptance or level of self-actualization. Moxey did find that where a student sits is related to his achievement in class. Those who sit closer to the front of the room tend to be higher achievers as measured by grades. This may be related to Sommer's (1969) findings which indicate that class participation is greater for the members at the front of a classroom. The student who sits at the back tends to place greater distance between himself and professors, than students who sit in the front (Levinger & Gunner, 1967).

Personality Traits

The review of literature indicates that very little research has been done in relating arm and leg positioning to personality traits. A little more research has been done on the relation between proxemics and personality. However, even those studies have only dealt with a limited number of traits. No one has yet utilized a complete theory of personality in their research. The investigations have mainly focused on those traits which appear to be related to the nonverbal behaviors. Thus we do not know if many other traits are related or not related to arm and leg positioning and proxemics. To overcome this problem this report will utilize a theory of personality.

Smith's Trait Theory

Henry Clay Smith has proposed an economical, but extensive, trait theory of personality based upon five personality dimensions. Smith (1969) has illustrated that most different personality trait theories deal with many common traits. (Although they may have different names in each theory.) Expanding on research carried out by one of his students (Grossman, 1967), Smith proposes that most personality traits are related to other similar traits. Using factor analytic techniques, it was determined that most personality traits tend to bunch together into five major trait clusters. These five clusters have been named cautious-bold, calm-emotional, impulsive-controlled, introverted-extroverted, and rational-empirical.

"Cautious people lack confidence in themselves, take a gloomy view of life, are inhibited in their activities, and do not assert themselves. The bold are dominating, active, self-confident, and optimistic" (Smith, 1969, p. 103). The emotional are "easily stirred up, very sensitive to their physical and social surroundings, expressive, frank and often critical." While calm people are "amiable, unexpressive, and unresponsive to their surroundings" (p. 131). Impulsive people "respond quickly and without reflection . . . , frequently break rules, and often lose control of themselves." The controlled person sets difficult goals for himself, makes

careful plans to achieve the goals, organizes his activities to fit his plans, and exercises a firm check over both his feelings and his behavior (p. 193).

Smith defines the extrovert and introvert in a manner somewhat different than the ordinary usage of the terms.[4] "The introvert . . . is a person of high aesthetic values and low economic values, who has a strong inclination to meditative and reflective thinking" (p. 163). The rational person resists change, tends to be a religious believer, is a social conformist and tends to be non-scientific in thinking. The empiricist, on the other hand, has a readiness for change, is a religious skeptic, a nonconformist, and tends to be scientific in his thinking (p. 57).

Smith constructed the Smith Personality Inventory (SPI) to measure the five dimensions of personality. The SPI consists of five 40-question scales. Each scale measures one trait cluster. The respondent's score for the true-false scales determines his position on the trait continuum. For example, for the cautious-bold scale a high score indicates that one is more bold than cautious; and a low score indicates one is cautious. Smith (1969) has reported the internal consistencies, reliabilities,

---

[4]Smith's cautious-bold dichotomy is closely related to the ordinary use of the terms introvert-extrovert.

validities and independence of the scales (pp. 81-86). He has also published the norms of the various scales for both men and women.

PROBLEM

The review of literature indicates that there exists relationships between one's personality and the nonverbal behaviors that one displays. The question now arises as to whether nonverbal behaviors can be used to identify an individual's basic personality traits. More specifically, "does the manner in which one positions his arms or legs or use physical space indicate his position on the Smith Personality Inventory?" For example, can arm positions be taken as an index of whether one is more cautious than bold? Or stated another way, "Do cautious people assume different arm positions than bold people?"

Hypotheses

The following hypotheses will be investigated in this study:

Hypothesis 1: Arm positions can be utilized to differentiate (1) cautious people from bold people, (2) impulsive people from controlled people, (3) rational people from empirical people, (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

Hypothesis 2. Leg positions can be utilized to differentiate (1) cautious people from bold people, (2) impulsive people from controlled people, (3) rational people from empirical people, (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

Hypothesis 3. Ways of crossing the legs can be utilized to differentiate (1) cautious people from bold people, (2) the impulsive from the controlled, (3) rational people from empirical people (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

Hypothesis 4. The distance that one maintains from others can be utilized to differentiate (1) cautious people from bold people, (2) impulsive people from controlled people, (3) rational people from empirical people, (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

Hypothesis 5. The choice of a seating position in a classroom by an individual can be utilized to differentiate (1) cautious people from bold people, (2) the impulsive from the controlled, (3) rational people from empirical people, (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

METHOD

Subjects

Subjects were members of a first course in personality at a large university in the midwest during the winter of 1971. Total data was collected for 68 females and 35 males.

Procedure

The class members were required at the beginning of the class term to fill out the various scales of the Smith Personality Inventory (SPI). The purpose being not only to gather data on the class, but also to inform the students as to the methodology of personality research and to illuminate the various personality traits of each individual student. The students were informed about their scores on the scales and the significance of those scores. The collection and tabulation of the personality data was accomplished by the class instructor and his student assistants.

During the final weeks of the term, the members of the personality class took time out from their regular

schedule to fill out a questionnaire on body behaviors (see Appendix). The questionnaire consists of the following sections:

1. Methods of Holding the Arms.--consists of five line drawings of various arm placement: A--arms at sides, B--hands clasp in front, C--hands clasp in back, D--hands on hips, and E--arms folded in front. (See Appendix for illustrations.) Subjects make two choices (each) as to the most typical and least typical postures they assume.

2. Methods of Positioning the Legs (While Sitting).--consists of four line drawings of leg placements: A--knees apart, ankles apart; B--knees apart, ankles together; C--knees together, ankles apart; and D--knees together, ankles together. Subjects make two choices (each) as to the most typical and least typical postures they assume.

3. Methods of Crossing the Legs.--consists of six line drawings of various ways of crossing the legs: A--leg over knee; B--one leg twisted around other, C--ankle on other knee; D--ankle under other knee; E--knees apart, legs cross; and F--knees apart, ankles cross. Subjects make two choices (each) as to the most typical and least typical postures they assume.

4. Classroom Situations.--consists of a drawing of classroom with an instructor in the front. There are four rows with three seating positions per row. Subjects chose two seats they normally occupy in a classroom. Another question places the door near the front row and asks for two seating preferences. In the final question subjects are asked where they would sit if the instructor calls on people in class.

5. Distance From Others.--consists of a projective measure which has the subject place liked males and females and disliked males and females at some physical distance from himself.

Following completion of the questionnaire, the students were informed of the purpose of the study and a question and answer session on nonverbal behavior took place.

Analysis

Using the norms provided by Smith (1969) for males and females, the students were classified by their scores on the SPI as cautious or bold, impulsive or controlled, rational or empirical, introvert or extrovert, and emotional or unemotional. The median score was used to dichotomize the subjects into these classes. Subjects scoring at the median were eliminated from the analysis.

The subjects' responses to the body behavior questionnaire were coded on 5" x 8" cards. The subjects were then dichotomized as to personality traits and their responses to the questions on the questionnaire were categorized and totalled for groups. Then using Chi square procedures proposed by McNemar (1962), the dichotomized trait groups (cautious-bold) were tested for significant differences.

In the Distance From Others portion of the questionnaire, the actual physical distance used to separate one's self from others was measured in millimeters. Trait group totals and means were found. t-tests of the difference between group means were made.

RESULTS

Hypothesis 1

Hypothesis 1. Arms positions can be utilized to differentiate (1) cautious people from bold people, (2) impulsive people from controlled people, (3) rational people from empirical people, (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

Table 1 shows the results of Chi square tests of difference between the groups above in most typical and least typical arm positions. Most of the differences between groups failed to reach the .05 level of significance. Those that did reach this level of significance have been extracted from Table 1 and placed in Table 2. Table 2 shows the percentages of respondents in the trait groups who selected a particular arm position as typical or atypical of themselves.

From Table 2, it appears that while both the impulsive and controlled feel they typically fold their arms in front, the impulsive more than the controlled likes to place his hands on his hips. The controlled, on the

TABLE 1

Comparison of the Difference Between Traits of the Most Typical and Least Typical Methods of Holding the Arms (Chi Square Values)

Traits	Method of Holding the Arms			
	Most Typical		Least Typical	
	Choice 1	Choice 2	Choice 1	Choice 2
Impulsive-Controlled	9.52*	6.89	2.24	1.59
Rational-Empirical	9.84*	16.28**	4.91	1.28
Introvert-Extrovert	.68	5.12	4.04	1.52
Cautious-Bold	.44	9.49*	9.64*	2.36
Unemotional-Emotional	2.80	2.61	3.60	1.52
Male-Female	4.24	.72	4.61	3.56

Note: df 4.

*$p \leq .05$.

**$P \leq .01$.

TABLE 2

Percentages Choosing a Particular Arm Position

Traits	Percentage Choosing Category A, B, C, D, or E[a]				
	A	B	C	D	E
Impulsive[b,d]	19.0	10.8	5.4	24.4	40.5
Controlled	30.4	21.8	. .	6.5	41.4
Rational[c,d]	23.3	13.7	. .	3.3	60.0
Empirical	20.0	18.0	4.0	26.0	32.0
Rational[c,d]	. .	33.0	15.3	24.3	27.3
Empirical	17.4	10.9	6.5	15.2	50.0
Cautious[c,d]	11.9	31.0	7.1	11.9	38.1
Bold	11.2	5.5	8.3	27.8	47.2
Cautious[b,e]	21.4	16.7	42.8	14.3	4.7
Bold	36.8	28.9	15.8	18.4	. .

[a]A = Arms at sides
B = Hands clasp in front
C = Hands clasp in back
D = Hands on hips
E = Arms folded in front.

[b]First choice.

[c]Second choice.

[d]Most typical.

[e]Least typical.

other hand, like to keep their arms at their sides and clasp their hands in front more than the impulsive.

The rational person indicates he typically folds his arm in the front (60%). The empirical also typically assumes the folded arm position (32%) but he is more likely than the rational to say that he places his hands on his hips. The second choice of most typical arm position indicates that empirical people will, if they can not assume their typical arm position, more often than the rational place their arms at their sides (17.4%) and fold their arms (50%). The rational will more often than the controlled clasp his hands in the front (33%), clasp his hands in the back (15.3%) or place his hands on his hips (24.3%).

There was no significant difference between the cautious and bold on their first choice of most typical arm positions. On the second choice of most typical arm position, the cautious are more likely than the bold to clasp their hands in front (31%). While bold people said they are more likely to place their hands on their hips (27.8%) and fold their arms (47.2%).

The cautious are more likely than the bold to <u>not</u> assume a clasping of the hands in front position (42.8%). While the bold indicate they do <u>not</u> assume arms at the side or hands clasp in front positions as often as the cautious indicate they do.

Hypothesis 2

Hypothesis 2. Leg positions can be utilized to differentiate (1) cautious people from bold people, (2) impulsive people from controlled people, (3) rational people from empirical people, (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

Table 3 shows the results of Chi square tests of difference between the groups in most typical and least typical leg positions. Most of the differences failed to reach the .05 level of significance. Those that did reach this level of significance have been extracted from Table 3 and have been placed in Table 4. Table 4 shows the percentage of respondents in the trait groups who selected a particular leg position as typical or atypical of themselves.

From Table 3, it is found that the impulsives do not differ from the controls significantly on their first choice of their most typical position. On the second choice, however, they do differ. The controlled are more likely than the impulsive to say they assume the knees apart and ankles together position (53.4%) and the knees together and ankles apart (28.9%) positions (see Table 4).

Males typical place their knees apart and ankles apart when sitting. Females are more likely to sit with their knees together and ankles together. When males do not assume their most typical leg position they tend to

TABLE 3

Comparison of the Difference Between Traits of the Most Typical and Least Typical Methods of Placing the Legs (Chi Square Values)

Traits	Method of Placing the Legs			
	Most Typical		Least Typical	
	Choice 1	Choice 2	Choice 1	Choice 2
Impulsive-Controlled	3.65	9.83*	7.39	2.38
Rational-Empirical	.28	.64	3.00	1.99
Introvert-Extrovert	4.64	6.16	1.56	13.68**
Cautious-Bold	3.12	4.18	.80	2.09
Unemotional-Emotional	.04	1.16	4.97	.28
Male-Female	30.06**	36.86**	42.69**	28.20**

Note: df 3

*$p \leq .05$.

**$p \leq .01$.

TABLE 4

Percentages Choosing a Particular Leg Position

Traits	Percentage Choosing Category A, B, C, D[a]			
	A	B	C	D
Impulsive[c,d]	15.3	30.3	18.2	36.3
Controlled	4.4	53.4	28.9	13.3
Male[b,c]	85.7	14.3	. .	. .
Female	36.8	8.8	11.8	42.7
Male[c,d]	15.6	81.2	3.1	. .
Female	7.6	24.2	38.0	30.3
Introvert[c,d]	12.5	37.5	27.5	22.5
Extrovert	2.5	19.5	39.0	39.0
Males[b,e]	2.8	. .	51.4	45.7
Females	41.2	26.5	23.6	8.8
Male[b,e]	. .	3.0	39.4	57.6
Females	14.9	41.8	23.8	19.4

[a]A = Knees apart; ankles apart
B = Knees apart; ankles together
C = Knees together; ankles apart
D = Knees together; ankles together.

[b]First choice.

[c]Second choice.

[d]Most typical.

[e]Least typical.

sit with their knees apart and ankles together (81.2%). When females do not assume their most typical position they typically sit with their knees together and ankles apart (38%). Males are not likely to place their knees together and ankles apart nor place their knees together and their ankles together. Females are less likely than men to put their knees apart and ankles apart or knees apart and ankles together.

The introvert and extrovert did not differ on their first choice of least typical leg position. However, on the second choice significant differences arose. Introverts are less likely than extroverts to indicate that they sit with their knees apart. Extroverts, on the other hand, are not as likely as introverts to sit in knee together positions (see Table 4).

Hypothesis 3

Hypothesis 3. Ways of crossing the legs can be utilized to differentiate (1) cautious people from bold people, (2) the impulsive from the controlled, (3) rational people from empirical people, (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

Table 5 shows the results of Chi square tests of difference between the groups in the most typical and least typical ways of crossing the legs. Most of the differences failed to reach significance at the .05 level.

TABLE 5

Comparison of the Difference Between Traits of the Most Typical and Least Typical Methods of Crossing the Legs (Chi Square Values)

Traits	Method of Crossing the Legs			
	Most Typical		Least Typical	
	Choice 1	Choice 2	Choice 1	Choice 2
Impulsive-Controlled	4.15	3.84	7.26	6.48
Rational-Empirical	4.54	4.77	13.49*	7.86
Introvert-Extrovert	8.36	15.38**	9.32	10.04
Cautious-Bold	3.98	4.41	2.82	1.84
Unemotional-Emotional	6.49	2.53	10.92	1.76
Male-Female	48.56**	19.71**	14.68*	27.57**

Note: df 5.

*$p \leq .05$.

**$p \leq .01$.

Those that did reach this level of significance have been extracted from Table 5 and placed in Table 6. Table 6 shows the percentage of respondents in the trait groups who selected a particular way of crossing the legs as typical or atypical of themselves.

Males indicate they typically cross their legs by placing their ankles on their knee (57.2%). Males, if they can not assume their typical position, like to keep their knees apart and cross their ankles (61.7%). Women say they typically cross their legs by putting one knee over the other knee (78.3%). Their second choices if they can not assume their first choice is crossing their ankles (29.4%) and, unexpectedly, putting their ankle on their knee (28%).

Males are less likely than females to twist one leg around the other or to put their ankle under the other knee. While women are less likely than males to cross their ankles, keep their knees apart and cross the legs, or place an ankle on the knee.

Introverts and extroverts did not differ on their first choices. However their second choices of their most typical position, revealed that extroverts are more likely to cross their ankles than are introverts. While introverts are more likely to place an ankle on their knee and to place an ankle under their knee.

TABLE 6

Percentages Choosing a Particular Way to Cross Legs

Traits	Percentage Choosing Category A, B, C, D, E, F[a]					
	A	B	C	D	E	F
Male[b,d]	20.0	. .	57.2	. .	2.8	20.0
Female	78.3	1.4	4.4	5.8	2.9	7.2
Male[c,d]	8.8	. .	20.6	. .	8.8	61.7
Female	11.6	8.8	28.0	20.6	1.5	29.4
Introvert[c,d]	7.3	7.3	31.8	24.4	7.3	21.9
Extrovert	9.5	2.4	21.4	4.7	2.4	59.6
Rational[b,e]	. .	68.8	9.4	3.1	12.5	6.2
Empirical	10.6	38.3	12.8	10.6	27.7	. .
Male[b,e]	14.4	62.7	8.6	11.4	2.8	. .
Female	1.4	41.2	11.8	10.3	30.9	4.4
Male[c,e]	17.1	22.8	2.8	40.0	11.4	5.7
Female	1.5	22.4	14.9	16.4	25.4	19.4

[a]A = Leg over knee
B = One leg twisted around other
C = Ankle on other knee
D = Ankle under other knee
E = Knees apart; legs cross
F = Knees apart; ankles cross.

[b]First choice.

[c]Second choice.

[d]Most typical.

[e]Least typical.

The rational are less likely than the empirical to twist one leg around the other. The empirical are less likely to keep their knees apart and cross their legs or put an ankle under their knee than the rational.

Hypothesis 4

Hypothesis 4. The distance that one maintains from others can be utilized to differentiate (1) cautious people from bold people, (2) impulsive people from controlled people, (3) rational people from empirical people, (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

Table 7 gives the mean distance from liked and disliked others for the various trait groups. A two-tailed t-test of the trait groups found only one significant difference (see Table 7). Bold people indicate they are more likely than cautious people to approach closer to a liked person (sign. = .05 level).

The data was also investigated for influences of sex of subject and sex of liked or disliked other. Table 8 shows the mean distances utilized by male and female subjects in relating to liked and disliked members of both sexes. Again t-tests were performed to see if differences between the group means were significant. Two significant results were found. Male subjects position females that are liked closer to themselves than do female subjects ($t = 2.32$, sign. = .05). Female subjects position

TABLE 7

Trait Groups Mean Distances Between Liked and Disliked Others (t Scores)

	Extroverts	Introverts	t[a]
Liked	32.1	28.8	.95
Disliked	116.2	121.6	.72
	Emotional	Unemotional	
Liked	29.1	33.8	1.27
Disliked	123.2	111.9	1.14
	Impulsive	Controlled	
Liked	30.0	32.8	1.02
Disliked	123.2	110.4	1.50
	Bold	Cautious	
Liked	26.3	34.9	2.44*
Disliked	112.2	116.0	.68
	Rational	Empirical	
Liked	35.2	30.2	1.35
Disliked	114.0	122.2	1.16

[a]Two-tailed t-test.

*Significant at .05 level.

TABLE 8

Male and Female Distances From Others

	Males	Females	t
Disliked Females	51.7	58.2	1.32
Disliked Males	63.0	63.4	.10
Liked Females	12.7	17.2	2.32*
Liked Males	25.6	14.1	4.48**

*Significant at .05 level.

**Significant at .001 level.

liked males closer to themselves than do male subjects ($t = 4.48$, sign. $< .001$).

Hypothesis 5

Hypothesis 5. The choice of a seating position in a classroom by an individual can be utilized to differentiate (1) cautious persons from bold persons, (2) the impulsive from the controlled, (3) rational people from empirical people, (4) introverts from extroverts, (5) the emotional from the unemotional, and (6) males from females.

Table 9 contains the significant group differences in selection of seating positions in a classroom. Table 9 also shows the percentages choosing to sit in a particular row in a classroom situation. From Table 9, it may be found that impulsive people chose to sit closer to the

TABLE 9

Percentages Choosing a Particular Row in a Classroom

Traits	Row				
	1	2	3	4	Chi^2
Impulsive	18.0	36.1	34.7	11.1	10.64
Controlled	32.6	35.9	21.8	9.8	
Male	25.0	29.1	39.0	6.9	9.06
Female	23.1	43.2	23.1	10.5	
Row 1 is next to door					
Male	26.4	33.4	34.7	5.5	12.28
Female	29.1	48.5	14.2	8.2	

Note: df = 4.

All Chi^2 significant beyond .05 level.

middle of a classroom than do controlled people who prefer to sit closer to the front (Chi^2 = 10.64). Similarly, 66.3% of the females prefer to sit in the front half of a classroom as compared to 54.1% of the males. Males prefer to sit in the third row; while females like the second row best. Also when the instructor calls on the class to answer questions a similar male and female seating preference prevailed with a slight increase in those sitting in the front half of the room (Males 59.8%; Females 77.6%, Chi = 12.28).

DISCUSSION

The results of the tests of the five hypotheses appear to indicate that most of the traits of the Smith Personality Theory can not be differentiated through non-verbal behaviors measured by the questionnaire. It was found that arm positions can be utilized to differentiate between rational and empirical persons, the impulsive and controlled, and cautious and bold people. Leg positions were found to be significantly different for males and females. Different leg positions were also found to differentiate impulsive and controlled persons and introverts from extroverts. The way in which a person crosses his legs is related to whether he is male or female. Leg crossing can also be used to differentiate introverts from extroverts and the rational person from the controlled person.

Bold people use closer physical distances when relating to liked persons than do cautious people. No other significant differences were found between personality types for use of physical space. In the case of sex differences, it was found that males like to place a liked

female closer to themselves than do females. Females prefer to place a liked male closer to themselves than do males.

In a classroom situation, controlled persons prefer to sit closer to the front than do impulsive persons. The impulsive person prefers the middle of a classroom. Males also prefer the middle of a classroom; while females like to sit closer to the front of the room.

Inconsistencies With Prior Research

Machotka (1965) did not directly relate personality traits to nonverbal arm positions nor were his drawings the same as those used in this study. However, he found that a female who used her hands and arms to cover her body was rated as shy. This is related to this study's finding that cautious people like to clasp their hands in front. It is also consistent with the fact that bold people like to place their hands on their hips. Machotka found that exhibitionistic persons had open arm positions. However, the finding that bold people like to fold their arms is inconsistent with Machotka. It does make sense though that a bold person would cross his arms. Yul Brynner's characteristic arm position in the "King and I" is a good illustration of folding arms indicating a haughty boldness.

Blazer's (1966) study of females found many significant relations between personality and leg crossing and positioning. This study failed to support Blazer's

findings. It was hoped that this study could expand Blazer's findings for females to include males. This study did find significant differences between men and women in the ways in which they positioned and crossed their legs. Such a result lends credence to the idea that many of our nonverbal behaviors are culturally determined. It appears possible that the differences between men and women in leg positioning is largely dictated by social norms which prescribe the proper behavior for each sex. It is interesting to speculate upon the evolution of leg positioning as a result of the woman's liberation movement. Will the sexes move toward unity of nonverbal behaviors?

This study's findings concerning usage of physical distance are consistent with prior findings. Williams (1963), Leipold (1963), and Patterson and Holmes (1966) all found introverts to separate themselves more than extroverts from others. This is consistent with this study's finding that bold people like closer distances than cautious people. The findings on sex differences are also consistent. Unfortunately, much of the research into other variables is not supported by this study.

Walberg's (1969) and Moxey's (1966) slightly disparate findings concerning use of classroom seating by students were neither confirmed or disconfirmed by this study.

Possible Reasons for Inconsistencies

The inconsistency of this study's results and prior research and observational results calls for an investigation of some of the possible reasons for inconsistencies.

The simple dichotomy of individuals into one or the other of two groups is a common research method. But such a procedure casts many unlike individuals into the same research pot. Thus there may be those who are extreme in a trait with others who only lean slightly in the same direction. Smith's theory of personality does not make this sharp dichotomy. He views the traits as being at opposite poles on a continuum. Unfortunately, the sample size for this study was not large enough to permit any other divisions of the traits other than a simple dichotomy to be made. An alternative approach to more divisions of a trait dimension would be to use only the extreme positions. However, such studies would not provide us with information about the vast majority in the center of the bell-shaped curve.

It is possible that an individual's nonverbal behaviors are the result of an interaction of his personality traits. Thus future studies might investigate personality types as opposed to merely traits. That is, one could compare a person who is bold, controlled, empirical, emotional, introverted with his opposite type

(made up of opposite traits). Smith's theory would provide a manageable number of types for study.

One of the major problems of this study was in determining the nonverbal behaviors or postures which would be indicative of personality. Since only limited research into personality and nonverbal behaviors was available, it was necessary to chose a number of possible indicators. It is possible that those nonverbal behaviors chosen were not the best. Maybe head position, trunk rotation, "posture," etc., are better indicators of one's personality. Future research can solve this dilemma.

Lastly, the use of self-reporting questionnaires for the description of one's nonverbal behaviors may have reduced the validity of this research. Lowen (1958) has pointed out that most people do not really know how they look to others, how they carry their bodies, or how they move. This casts doubts upon the subjects' responses to the body behavior questionnaire. Are the subjects actually reporting their typical body behaviors or are they using cultural stereotypes? This may explain some of the significance sex difference results away. Future studies could utilize observations during interviews (if time

permits) or second party respondents (parents, spouse, etc.) who know the subjects well.[5]

A relationship between personality and nonverbal behaviors does exist. The importance of personality in determining nonverbal behaviors, however, is still debatable. And we have not reached the point of being able to read one's personality from certain specific nonverbal behaviors. But future research should make modern man almost as capable as ancient man in reading the "languages of the body."

---

[5]Another possible reason for inconsistency, lies in the drawings utilized in this study (see Appendix). An attempt was made to make the drawings neuter in sex. However, it is evident that they do retain characteristics of one or the other sex.

SUMMARY

Since ancient times man has had a profound interest in determining the personality traits of others. Psychoanalysts and psychiatrists have made many observations of the significance of body behaviors in mental processes and personality. However, little research has been done in relating specific nonverbal behaviors to personality traits.

The purpose of this research was to determine if one's typical and atypical arm positions, leg positions, and use of physical space are significant indexes in differentiating a persons's personality traits. Five hypotheses to test these ideas were formulated.

Using Smith's (1969) theory of personality as a basis and his personality inventory as an instrument to dichotomize the subjects, the subjects were divided into trait groups. The subjects were classified as either cautious or bold, rational or empirical, controlled or impulsive, introverted or extroverted, and emotional or unemotional.

The subjects then filled out a body behavior questionnaire. It contained items which asked subjects to indicate their most typical and atypical methods of holding their arms, legs, and crossing their legs. Another part of the questionnaire had the subjects indicate their preferred distance from liked and disliked others. A final part of the questionnaire measured the subject's seating preferences in a classroom situation.

It was found that most traits could not be differentiated from their counter trait by means of arm or leg positions or proxemic behavior. However, the following significant results ($p \leq .05$) were obtained. Arm positions can be used to differentiate the rational and empirical, the impulsive and controlled, and the cautious and bold. Leg positions can be utilized to differentiate males from females, the impulsive from the controlled, and introverts from extroverts. Different ways of leg crossing can differentiate males and females, the introvert and extrovert, and the rational person and the empirical person.

Bold people prefer to be closer to liked others than do cautious people. Males like to be closer to a liked female than do females. Females like to be closer to liked males than do males.

In a classroom situation, controlled persons prefer to sit closer to the front than do impulsive persons. The impulsive person prefers the middle of a classroom. Males

also prefer the middle of a classroom; while females like to sit closer to the front.

The inconsistencies between the results of this study and other studies were reviewed. Some ideas to reduce these inconsistencies in future research were proposed.

BIBLIOGRAPHY

BIBLIOGRAPHY

Allport, G., & Vernon, P. Studies in expressive movement. New York: Macmillan, 1933.

Bach, G., & Wyden, P. The intimate enemy. New York: William Morrow, 1968.

Barnlund, D. Interpersonal communication: survey and studies. Boston: Houghton Mifflin, 1968.

Brengelmann, J. Expressive movements and abnormal behavior. In H. J. Eysenck (Ed.) Handbook of Abnormal Psychology. New York: Basic Books, 1950, pp. 62-107.

Birdwhistell, R. Kinesics and context: essays on body motion communication. Philadelphia: University of Pennsylvania, 1970.

Blazer, J. Leg position and psychological characteristics in women. Psychology, 1966, 3, 5-12.

Darwin, C. The expression of the emotions in man and animals. London: John Murray, 1872. (Republished, New York: Philesophical Library, 1955.)

Deutsch, F. Analysis of postural behavior. Psychoanalytic Quarterly, 1947, 16, 195-213.

Deutsch, F. Analytic posturology. Psychoanalytic Quarterly, 1952, 21, 196-214.

Dosey, M., & Meisels, M. Personal space and self-protection. Journal of Personality and Social Psychology, 1969, 11, 93-97.

Duncan, S. Nonverbal communication. Psychological Bulletin, 1969, 72, 118-137.

Fast, J. Body language. New York: M. Evans, 1970.

Goldstein, I. B. Role of muscle tension in personality theory. Psychological Bulletin, 1964, 61, 413-425.

Hall, E. The silent language. New York: Doubleday, 1959.

Harrison, R. Nonverbal communication. Unpublished manuscript, Michigan State University, 1971.

Hartnett, J., Bailey, K., & Gibson, F. Personal space as influenced by sex and type of movement. Journal of Psychology, 1970, 76, 139-144.

Hass, H. The human animal: the mystery of man's behavior. New York: G. P. Putnam, 1970.

Hewes, G. The anthropology of posture. Scientific American, 1957, 196, 123-132.

Hildreth, A., Derogatis, L., & McCusker, K. Body buffer-zone and violence: a reassessment and confirmation. American Journal of Psychiatry, 1971, 127, 1641-1645.

Janov, A. The primal scream. New York: Dell, 1970.

Kempe, J. An experimental investigation of the relationship between certain personality characteristics and physiological response to stress in a normal population. Unpublished doctoral dissertation, Michigan State University, 1956.

Leipold, W. Psychological distance in a dyadic interview. Unpublished doctoral dissertation, University of North Dakota, 1963.

Levinger, G., & Gunner, J. The interpersonal grid: 1. felt and tape techniques for the measurement of social relationships. Psychonomic Science, 1967, 8, 173-174.

Lowen, A. Physical dynamics of character structure. New York: Grune and Stratten, 1958. (Republished, The Language of the Body, New York: Collier-Macmillan, 1971.)

Lowen, A. The betrayal of the body. Toronto: Collier-MacMillan, 1967.

Lowen, A. Pleasure. New York: Lancer Books, 1970.

Luft, J. On nonverbal interaction. Journal of Psychology, 1966, 63, 261-268.

McBride, G., King, M., & James, J. Social proximity effects on GSR in adult humans. Journal of Psychology, 1965, 61, 153-157.

Machotka, P. Body movement as communication. Dialogues: Behavioral Science Research, 1965, 2, 33-66.

McNemar, Q. Psychological statistics. New York: Wiley, 1962.

Mehrabian, A. Significance of posture and position in the communication of attitude and status relationships. Psychological Bulletin, 1969, 71, 359-372.

Mehrabian, A. Silent messages. Belmont, Calif.: Wadsworth Pub., 1971.

Meisels, M., & Canter, F. Personal space and personality characteristics: a non-confirmation. Psychological Reports, 1970, 27, 287-290.

Moxey, K. The relationship of the seating choice of college students to academic achievement and certain personality factors. Unpublished doctoral dissertation, North Texas State University, 1966. (Abstract.)

Patterson, M., & Holmes, D. Social interaction correlates of the MPI extraversion-introversion scale. American Psychologist, 1966, 21, 724-725.

Patterson, M., & Sechrest, L. Interpersonal distance and impression formation. Journal of Personality, 1970, 38, 161-166.

Pellegrini, R., & Empey, J. Interpersonal spatial orientation in dyads. Journal of Psychology, 1970, 76, 67-70.

Perls, F., Hefferline, R., & Goodman, P. Gestalt therapy: excitement and growth in the human personality. New York: Dell, 1951.

Poiret, M. Body talk: the science of kinesics. New York: Universal-Award House, 1970.

Reich, W. The function of the orgasm: the discovery of the orgene. New York: Orgene Institute Press, 1942. (Reprinted, New York: World Pub., 1971.)

Reich, W. Character Analysis. New York: Farrar, Straus & Gireux, 1949.

Rolf, I. Structural integration. Systematics, 1963-64, 1, 66-83.

Rosenfeld, H. Effect of an approval-seeking induction on interpersonal proximity. Psychological Reports, 1965, 17, 120-122.

Schutz, W. Joy: expanding human awareness. New York: Grove Press, 1967.

Sheldon, W., & Stevens, S. The varieties of temperament: a psychology of constitutional differences. New York: Harper, 1942.

Smith, H. C. Personality Development. New York: McGraw-Hill, 1968.

Sommer, R. Personal space: the behavioral basis of design. Englewood Cliffs, N.J.: Prentice-Hall, 1969.

Walberg, H. Physical and psychological distance in the classroom. School Review, 1969, 77, 64-70.

Waller, W. The sociology of teaching. New York: Russell & Russell, 1961.

Wiener, M., Devog, S., Rubinew, S., & Geller, J. Nonverbal behavior and nonverbal communication. Psychological Review, 1972, 79, 185-215.

Williams, J. Personal space and its relation to extroversion-introversion. Unpublished masters thesis, University of Alberta, 1963. (Abstract.)

Willis, F. Initial speaking distance as a function of the speakers' relationship. Psychonomic Science, 1966, 5, 221-222.

Winick, C., & Holt, H. Seating position as nonverbal communication in group analysis. Psychiatry, 1961, 24, 171-182.

APPENDIX

APPENDIX

Name_____ Student No. _____ Sex _____

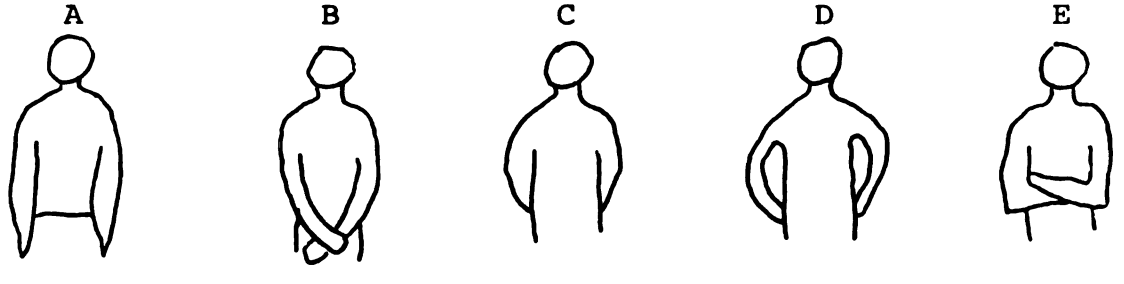
Instructions: Below you will find a number of drawings and/or verbal descriptions of different body postures or positions. Each of us typically assume a number of these postures. Other postures may be unfamiliar to you. (Note: If a posture appears unfamiliar to you it may be useful for you to try it.)

Your task is to look at the figures and/or verbal descriptions and answer some questions about the postures you use.

To answer a given question simply place the letter (over the appropriate figure) into the blank space by the question.

This task may prove to be difficult for you, but please do your best--even if it sometimes means guessing.

Methods of Holding the Arms



Hands at Side | Hands Clasp in Front | Hands Clasp in Back | Hands on Hips | Arms Folded in Front

Which two of the above postures do you most typically assume?

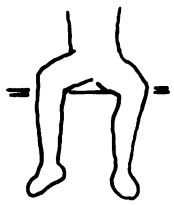
1. Most typically assumed _____ 2. _____

Which two of the above postures are you least likely to assume?

1. Least likely _____ 2. _____

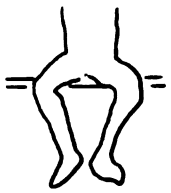
Methods of Positioning the Legs While Sitting (Frontal View)

A



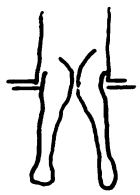
Knees Apart
Ankles Apart

B



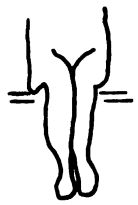
Knees Apart
Ankles Together

C



Knees Together
Ankles Apart

D



Knees Together
Ankles Together

Which two of the above postures do you most typically assume?

1. Most typically assumed _____ 2. _____

Which two of the above postures are you least likely to assume?

1. Least likely _____ 2. _____

Methods of Crossing the Legs

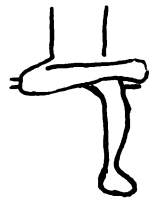
A

Leg Over Knee

B

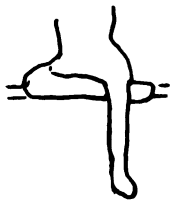
One Leg Twisted Around Other

C



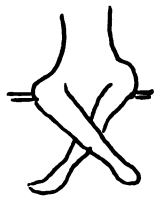
Ankle On Other Knee

D



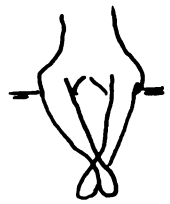
Ankle Under Other Knee

E



Knees Apart Legs Cross

F



Knees Apart Ankles Cross

Which two of the above postures do you most typically assume?

1. Most typically assumed _____ 2. _____

Which two of the above postures are you least likely to assume?

1. Least likely _____ 2. _____

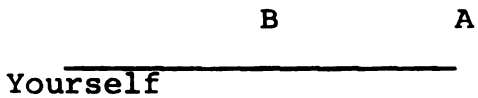
Distance From Others

Instructions: On the line below indicate how distant or far apart physically you feel yourself to be from the following persons:

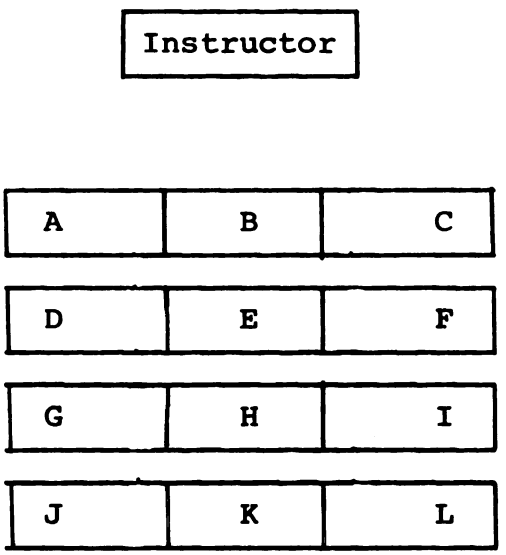
A - A liked female friend
B - A liked male friend
C - A disliked female
D - A disliked male

Indicate your separation from the other by drawing a short line perpendicular to the line below and placing the letter of the other person over the vertical line. For example, if you feel closer to B than to A indicate as follows:

Example:



Classroom Situation



The diagram above illustrates a typical classroom or lecture hall. The instructor is located at the front of the room. The letters (A, B, . . . , K, L) indicate different seating positions. A, B, C are seats at the front of the room, while J, K, L are in the back of the room.

Indicate by letter, the two seats you usually occupy in a classroom or lecture hall.

1. _____ 2. _____

If the door is located next to seating position C where would you prefer to sit?

1. _____ 2. _____

If the instructor calls on people in class where would you sit?

1. _____ 2. _____