

AN INVESTIGATION OF THE EFFECTS OF BODY
LANGUAGE IN A COUNSELING SITUATION

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Here's to all the people who read this research. You will gain the groundwork and some of the rules for the game of Body Language. You have been playing the game unconsciously all of your lives. Now start playing it consciously. Break a few rules and see what happens. It will be surprising and sometimes a bit frightening, adventurous, revealing and funny, but I promise you it will not be dull.

H. M. M.

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Chapter 1

INTRODUCTION

Man's behavior is, of course, extremely flexible and complex, due to his learning abilities and his capacity to control his actions intelligently. But it is surprising how much of one's everyday behavior is not under continuous conscious control. Facial expressions and body gestures are used as a more primitive means of human communication than words. They can be seen particularly clearly in young children, but continue into adulthood and may provide a means of communicating with mentally ill patients who can no longer communicate verbally. However, words are not the only way in which we communicate. Man has a more basic and primitive form of communication. Its units are not words but expressions, facial expressions, gestures, and body postures. These are used to express attitudes (as by a negative shake of the head) and emotions (as in a smile or a frown). If a counselor could master the art of reading body language, he could conceivably better understand his client.

It is possible for counselors to tell what other people are feeling. Unfortunately, most people listen only with their ears. Yet, gestures often communicate much more than speech. Each action has meaning, regardless

of the words accompanying it. People have a vocabulary of movements.

The hands, the ears, and the eyebrows often say much more than the mouth. Although one may be unaware of his natural gestures, those gestures can greatly affect the degree of success which counselors achieve with their clients.

The behavioral scientists and ethologists say each gesture is a revelation of thought. People are rarely aware of foot-dangling, hair patting, and expressive hands. These gestures are natural.

Unlike oral communication, the language of bodily movements (Kinesics) tells the truth. Despite how carefully guarded one makes his conversation, he reveals his true feelings through his gestures. Any alert counselor can analyze his client's reactions by observing his gestures. Each movement can conceivably tell him what the client is thinking.

There is currently a "movement movement," a growing interest in the psychological and sociological aspects of body motion. Increasingly, psychiatrists, teachers, anthropologists, and others are attending to the importance of non-verbal communication: facial expressions, postures, gestures, patterns of speaking, eye contact and touch among people. The notion that this is a new and unexplored subject is a mistaken one for there have been studies of body movement in the past which are still relevant and

often more advanced than current research. Darwin gave impetus to such research one hundred years ago with his The Expression of the Emotions in Man and Animals. Since that time, important and fascinating works have been written on the subject, but have been in danger of being lost or overlooked.

The movements of expression in the face and body . . . serve as the first means of communication between the mother and her infant. The movements of expression give vividness and energy to our spoken word. They reveal the thoughts and intentions of others more truly than do words, which may be falsified. The free expression by outward signs of an emotion intensifies it. On the other hand, the repression, as far as it is possible, of all outward signs softens our emotions. He who gives way to violent gestures will increase his rage; he who does not control the signs of fear will experience fear in a greater degree; and he who remains passive when overwhelmed with grief loses his best chance of recovering elasticity of mind. (Darwin, 1972)

Researchers have discovered in recent years that there is a system to body gestures, almost as consistent and comprehensible as language, and so, a new field for research has been opened. The general assumption is: that all body movements have meaning within their specific context.

Flora Davis (1969) points out that every culture has its own body language, and children absorb its nuances along with spoken language. A Frenchman talks and moves in French; an American handles his body in a distinctively American way. It is also true that men and women use the same body language in distinctively masculine and feminine ways. Your ethnic background, your social class, and

your personal style influence your body language. Also moves and gestures can have individual meanings.

People who can successfully control their faces are often unaware of what their hands, legs, and feet may be doing; or else they just cannot prevent signs of tension and anxiety from leaking out.

One should not become obsessed with his own gestures. It is difficult if not impossible for one to analyze his own signs because he is not aware of the fact that he makes such signs. When he does become aware of them, they are not natural.

The most subtle signs people make offer intense insight into their thoughts and moods. Learning to decipher these silent signals can be an invaluable asset in understanding human behavior.

Perls (1951) stated, "Eventually, you might recognize that the one thing which non-verbal communication does express very efficiently is emotion."

THE PROBLEM

Studies have shown that a counseling relationship is dependent upon the interaction between counselor and client (Rogers, 1957). Counselors also show a concern for a more in-depth look at the person through the body language or non-verbal communication. The question asked is not whether the interaction is influential, but how much body language can be used, and how it can be interpreted

once seen by the counselor. Counselors do not really understand the importance of this investigation which is to study the influence of body language of the individuals involved in a counseling situation. A question of central importance might be: To what extent does the age, sex, race, environment, and group setting affect the body language shown by the client? Does this affect the interaction between two people? Does it help the counselor arrive at a conclusion of the problem which the client has?

Statement of the Problem

The problem to be investigated can be stated as follows: What effect does body language have in a counseling situation?

Statement of the Hypothesis

The hypothesis may be stated that body language or non-verbal communication is not a significant factor in determining the deep-seated problems of a client in a counseling situation.

Importance of the Study

The importance of this study is the fact that it is the first of its kind done in the mid-west. Reviewing the literature shows that very little research has been published. Importance is also attained since the project contributes to this field of research which has been neglected. No matter whether positive or negative

attitudinal results are attained their contributions will be important to this area of research.

This particular study was selected because it clearly illustrates the importance of the counselor's understanding of the relationship and interdependence between what the client says and the symbolic meaning of body language behavior that is connected with speech.

The study deals with the non-verbal and body language factors important in communications. Since people in the field of counseling have not done a great deal of work in this area, other reports and studies are written by people whose orientation is primarily in the field of medicine or psychiatry. Recently, however, there has been an increased interest in these non-verbal factors, but the number of research studies is yet small.

In an attempt to outline certain aspects of body language and unify the science, or perhaps make body language into a science, Birdwhistell felt that the first premise in developing this type of notational system of body language is to assume that all movements of the body have meaning. None is accidental; once this is accepted researchers can proceed to a study of every movement, its significance and means of labeling it.

DEFINITION OF TERMS

Specific terms used in this study should be defined in order to enhance the value of the work to the reader.

Body Language

Body language refers to the vocabulary of movements through signal gestures. It can include any non-reflexive movement of a part, or all, of the body used by a person to communicate an emotional message to the outside world (Fast, 1972).

Body Posture

This term refers to a relative arrangement of the different parts of the body (Birdwhistell, 1970).

Communication

The sum of the bits of information which pass between two people in a given period of time is called communication (Birdwhistell, 1970). Birdwhistell views communication as a process in which all participants in an interaction constantly contribute by messages of various, overlapping lengths along one or more channels (such as language, movement and smell) whose elements are culturally patterned.

Client

The client is the individual who is being counseled (Hoppock, 1957).

Counselor

A counselor is the individual who gives advice and works to solve a client's problem. Williamson says:

. . . Counseling is individualized, personalized, and permissive assistance in developing skill in attaining and re-attaining socially enlightened self-understanding and self-direction (Williamson, 1937).

Counseling Situation

The term counseling situation refers to a purposeful, reciprocal relationship between two individuals in which one, a trained person (the counselor), helps the other (the client) to better understand himself in relation to his present and future needs. This may then result in a change in the client or his environment (C. H. Patterson, 1969).

Facial Expression

The movements made by the face that can be recorded and read are facial expressions (Birdwhistell, 1970).

Gestures

Gestures refer to a revelation of thought through movement of the body.

Kinesics

The study of bodily movements as they convey what the client does not verbalize is kinesics (Middleman, 1970).

Non-Verbal Communication

Such things as a blush, a gesture, a glance, a frown, or even deliberate silence as indicators which communicate attitude and feeling without words are called non-verbal communication (Milton, 1958).

LIMITATIONS OF THE STUDY

The following limitations apparently affect the extent to which one may make generalizations from the study.

1. No effort was made to consider sex, race, academic background, environment, nor any other consideration in the subject except that they were males and females.
2. The sampling was restricted to city and rural settings.
3. There were no blind or deaf students in the study.
4. The validity of the questionnaire or checklist has not been tested. National norms have not been established on the checklist.
5. There is the lack of resources on body language used in counseling.
6. Mentally retarded students were not used in the study.
7. The study is limited because of the number of people used and the length of time during which the study was conducted.

Chapter 2

REVIEW OF THE LITERATURE

A study of body language is a study of the mixture of all body movements--from the very deliberate to the completely unconscious, from those which apply only in one culture to those which cut across all cultural barriers (Fast, 1971).

Language of the body, or non-verbal language, is astonishingly well described in everyday things. A gesture, a glance, a frown, or even deliberate silence, are indicators that communicate attitude and feeling without words. Psychiatry and psychology have devoted much attention to kinesics, a study of bodily movements, as they convey what the client does not verbalize. Some writings in the field have shown this aspect of communication as being crucial for a full understanding of the client. Psychiatrists are also concerned with the meaning and usefulness of expression through non-verbal activities as a part of the dynamics in treatment.

The study of semantics is probably incapable of giving a scientific basis for understanding the meaning of all interpersonal communication. Non-verbal behavior is not always decoded as easily as verbal behavior (Barbara, 1956). Yet, it is surely important. In many cases,

it is truly not what you say but the way you say it that matters most to another person.

Non-verbal clues can be observed and evaluated (Saslow, 1963). The room temperature is quite cool and the client is perspiring, for instance. Perhaps the subject under discussion stirs some inner emotion. The acting out of feelings by an adolescent is not unusual, but sometimes interpretation is not easy. A small child will act out his feelings in direct response to stimuli. A temper tantrum clearly means the presence of frustrated feelings.

As kinesics and body language became more generally known and understood, what started as curiosity soon became a science. What started as an observable fact soon became a measurable fact. Also, unfortunately, what became a science also became an exploitable situation.

In time of stress a baby will suck his thumb, a man will bite his nails or knuckle, a woman will spread her hand across her chest. All are curious gestures but an understanding of body language makes us realize that the child is sucking his thumb for security in a symbolic return to the comfort of the mother's breast. The man has substituted the socially acceptable nail biting or knuckle biting for the unacceptable thumb sucking, and the woman spreads her hand across her chest in a defensive manner, covering and protecting her vulnerable breasts. An understanding of the forces behind these

gestures is the point at which a curiosity becomes a science (Birdwhistell, 1970).

The syndrome of non-verbal clues can be highly complex. The order of interpretation of non-verbal behavior is vital. Out of context the interpretation is too tentative to be of much worth. A certain inflection of the voice may mean deep feeling and involvement in one context, facetiousness in another (Daniel and Bernard, 1964).

HEAD AND NECK GESTURES

Body language is an intrepid journey into a little known world. It is full of unexpected revelations and gems of insight. Your body does not know how to lie. Unconsciously, it telegraphs your thoughts as you hold your head upright. The head is the important center for the location of self. The head generally receives emphasis in body language. The head is essentially the center for intellectual power, social dominance, and control of body impulses. It is the only part of the body which is consistently exposed to view, thus being involved in the function of social relationships. Lowen (1971) stated that especially when the head is used it is a function of ego strength and quality. He speaks of a long, proud neck or a short, bull neck.

Rolf (1958) writes that the aggressive man who thrusts his head forward all the time develops a posture with the head thrust forward and he cannot change it.

His emotions, according to Rolf, cause his posture of expression to freeze into a given position.

Many of one's expressive elements can be seen from birth. At this stage there is little possibility of them being learned by imitation because for several days after birth an infant's eyes cannot clearly resolve the features of its parent's face. These elements are, therefore, probably innate, as are many signals of other animals.

Studies on human expressions have been carried out for the past half dozen years. Many of the early observations were made on large groups of day-nursery children between three and five years old, whose social interaction tends to be uninhibited compared with that of adults, particularly as regards aggression and escape. This has helped to describe as wide a repertoire of expressions as possible.

FACIAL EXPRESSIONS

Judging by the number of times people hear such statements as, "You should have seen the look on his face," counselors must be well aware of the general signalling value of facial expressions. Most people interpret other people's expressions several times each day, although they may not be explicitly aware of doing so. Yet, when asked to describe in detail the face of a happy person, counselors might find it difficult to

say more than "He was smiling." If asked to describe a smile in detail, few would succeed. There are, in fact, nine distinct types of smiles. Similarly, though everyone can instantly recognize an angry face, few can afterwards describe the exact movements of the facial features which produced an angry look.

This emphasizes the fact that expressions form a communication system at a lower level of consciousness than verbal language. The distinctness of the two systems can be illustrated by deliberately paying attention to facial expressions and gestures during conversation. Researchers will probably lose the thread of the verbal argument. It is extremely difficult to keep both sets of incoming information at the same "level of awareness."

Facial expressions arise mainly from two areas--the eyes and the mouth. Even very simple movements have definite signal value. For example, by changing the line of the mouth people are able to obtain two opposite impressions of mood. Completely opposite movements are often found to express opposite emotions. Presumably there is less chance of the social partner getting confused.

Birdwhistell (1970) has identified thirty-six expressive elements produced by the mouth. Some of these can be grouped as the "smile complex." Smiles are characterized by the mouth corners moving upwards and outwards. Three very common smiles are: (1) The simple smile is

commonly seen when a person is not participating in any outgoing activity. He is smiling to himself, and the teeth are not exposed; (2) The upper smile is often used as a greeting smile when friends meet, or when children greet their parents. The upper incisors are exposed, and there is usually eye-to-eye contact between individuals; (3) The broad smile is commonly seen during play and is often associated with laughing. Both the upper and lower incisors are exposed, and eye-to-eye contact seldom occurs.

Mouth movement should not be considered in isolation, because its signal value often depends on its relationship with movements of other parts of the face, particularly the eye region. Davis (1969) stated that one of the most potent elements in body language is eye behavior. The friendly impression made by an upper smile, for example, is often enhanced by subtle movements beneath and near the outer corners of the eyes. Smiles are also often seen in association with an elevation of the eyebrows. For instance, when a person is suddenly and pleasantly surprised, a rise of the eyebrows is associated with a broad smile. During conversation counselors may also see a colleague suddenly lift his eyebrows, as in a raising movement, but they are quickly lowered again. This is a flash, which attracts the partner's attention and can indicate our interest or special emphasis on a certain phrase or word. Incidentally, many other

expressive elements can be used to modify the listener's interpretation of what people are saying.

Smiles are generally associated with cooperative types of social contact. Conflict between individuals involves very different expressions. Consider, for example, what happens when two children in the nursery quarrel over the possession of a toy. They stand facing each other about an arm's length apart. One individual usually draws his eyebrows down, particularly on the inner ends, producing an angry frown. At the same time his lips are tense and pushed forward slightly though the teeth are not shown. The head, and often the chin, is thrust forward and the eyes glare steadily at those of the opponent. He may strike his opponent. This is characteristic of aggression in the under-five-year-olds. The blow is delivered with the palm of the hand facing the opponent, fingers uppermost, sometimes loosely curled but never clenched. Not surprisingly, the other child often responds by crouching, crying or running. The eyebrows are drawn down at their outer ends to produce a sad frown, the mouth corners are drawn back and somewhat squared and the whole face flushes. Flushing, contrary to popular belief, is never seen in a purely aggressive individual; it is a sign of actual or possible defeat.

GESTURES OF THE BODY LIMBS

Many of the expressive elements which are shown by young children can be seen in adults too. Some, such as the smiles and the frowns, are used in adults in much the same way as in children. But other elements may disappear from the adult repertoire or at least become disguised. The defensive posture, for example, is rarely seen in individuals over six years old. As an open preparation for physical aggression it is inappropriate in the subtler, often largely verbal, aggression/escape conflicts of adults. However, its disappearance is apparent, not real. Careful observations show that it becomes transformed into two disguised forms which can be readily recognized during everyday conversation. One form involves the thumb and adjacent finger touching the chin or cheek with the palm of the hand facing the verbal opponent. The palm will turn to face any other individual who poses a threat.

In more defensive situations the hand moves back, as in the defensive posture, but this is disguised by the palm being placed on the back of the neck. If one finds himself doing this, and examines his motivation honestly, he will be feeling very defensive. In women especially, the hand to neck movement may be combined with a rather sophisticated hair grooming action. Similarly, a driver making a mistake in overtaking and

pulling in too quickly in front of another car often does a quick grooming movement through his hair followed by a hand to neck posture. Grooming or other irrelevant actions occur in many other animals at moments of great tension or conflict. They are called displacement activities because it was at one time thought that they were triggered by "nervous energy" overflowing (displaced) from the strongly aroused motivational systems.

Fast (1971) finds most serious studies of body language have concerned themselves with the emotions transmitted by movement, not with the innate nature of the person transmitting the message. At best, the signal sent out, the body language, has been used to make a person understand himself. When it is used to try to determine personality or character rather than behavior, it seems fraught with contradictions.

The first premise in developing this type of notational system for body language, Birdwhistell (1970) says, is to assume that all movements of the body have meaning--none are accidental. Once this is accepted researchers can proceed to a study of every movement, its significance and the means of labeling it.

McGowan and Schmidt (1966) say that in order to communicate with more purpose and meaning we of necessity should tend toward a language which is productive and understandable to both the speaker and the listener. An organism which is in conflict and tends toward psychic

disorganization and the formation of anxiety will concomitantly express this state of disturbance in all areas of personality, including that of verbalization. Disturbances in communication are not only expressed in terms of the spoken or written word, but in all the interplay of hidden gestures, feelings, bodily reactions and glances which are constantly going on in dynamic human beings. An awareness of both verbal and non-verbal factors is essential in order to arrive at a more complete understanding of human behavior.

GESTURES OF SMOKERS

The gestures which people use while they are smoking are equally revealing. One can look at a man's ash tray and can assess much about his character. If the butts are squashed with great force, the person is a pessimist and not very happy with his life. If he barely snubs his cigarettes out, he is optimistic and enjoys living.

Those who light the cigarette and then let it burn out in a tray are often hard working to the extent that they forget other things. They become deeply absorbed when they apply themselves to something.

A man who cups his cigarette with his hand is smart and penetrating. He guards his words and actions like he does his tobacco. He is generally very successful.

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A man who cups his cigarette with his hand is smart and penetrating. He guards his words and actions like he does his tobacco. He is generally very successful.

A man who uses his cigarette to avoid eye contact with people is calculating. He often knows something the speaker does not. He plans conversations to his advantage with precision.

One should not become obsessed with his own gestures. It is difficult, if not impossible, for one to analyze his own signs because he is not aware that he makes most of them (Lowen, 1971).

BODY POSTURE

Schutz (1967) has written a great deal about the new technique of encounter groups, a technique for preserving man's identity in the pressure of today's society. To show how much of feeling and behaving are expressed in body language, Schutz cites a number of interesting expressions that describe behavior and emotional states in body terms. Among these are: shoulder a burden; face up; chin up; grit your teeth; a stiff upper lip; bare your teeth; catch your eyes; shrug it off, and so on.

The interesting thing about these is that they are all also body language phrases. Each of them expresses an emotion, but also expresses a physical body act that signals the same emotion.

When considering these phrases one can understand Schutz's (1967) suggestion that "psychological attitudes affect body posture and functioning." He cites Rolf's

speculation that emotions harden the body in set patterns. The man who is constantly unhappy develops a frown as a set part of his physical being. The aggressive man who thrusts his head forward all the time develops a posture with the head thrust forward and he cannot change it. His emotions, according to Rolf, cause his body posture. Rolf believes a smile will affect one's personality and cause him to smile mentally. The same is true for a frown and for deeper, less obvious, body posture.

By analyzing the association between the various elements in the expressions, and particularly by examining their connections with overt aggression or escape, one can arrange them according to the balance between aggression and escape which they represent. For example, looking at element sequences in the situation just mentioned one will find that emotion is usually preceded by a posture where the hand is poised as for aggression but remains still, to one side of the head. The posture may be held for several seconds, after which if the opponent does not give way, a blow may be delivered or the escape elements appear. The nearer the hand is to the head and the further back it is, the less likely it is to give rise to a blow. When it is held well forward and away from the head, a blow is more likely. In other words, one can distinguish between a defensive posture and an offensive posture. Between the full defensive posture and the full offensive posture is a whole range

of intermediates, suggesting that the postures are essentially ambivalent and that they signal the state of balance between the aggressive and escape tendencies. The signalling function of the offensive is shown by the fact that the opponent often responds to it by assuming a defensive posture before there is any direct attack from the assertive child. Indeed, the offensive alone may be sufficient to induce the full complement of escape expressions in the opponent.

Further analysis reveals the relationships of these elements of behavior one to another, the situations in which they occur, and their effects on the actions of the social pattern.

Chapter 3

METHODS AND PROCEDURES

The researcher conducted this study to aid counselors in their struggle to help unlock the problems encountered in dealing with their clients. In this ever-changing world it is hard to understand people through verbal communication so a large amount of research has started in the field of body language or non-verbal communication to see whether there is any value in this type of communication.

In dealing with body language in a counseling situation you will find a lot of positive and negative feedback from counselors such as: Does body language have any value when working with a client? The researcher in this chapter will deal with the sample group and research instrument that was used in determining the null hypothesis.

POPULATION AND SAMPLES

The subjects used in this study were a control group of twenty pre-school students from three to five years old observed by the researcher. The second control group was twenty students, ages twelve to fifteen, from junior high school in Wichita, Kansas. The checklist

was conducted by the counselor. The third group was composed of twenty Wichita high school students aged sixteen to eighteen. The checklist was administered by the counselor. The fourth group of people was a random sample group, aged nineteen to thirty, from Kansas State Teachers College of Emporia and people from the senior citizens' home, Emporia, Kansas. The observations done on these groups were done by the researcher. The reason for the wide range of clients was to give or get a correlation from early childhood to geriatrics. This will show that there is a great deal of carry over from the cradle to the grave.

INSTRUMENTATION

A checklist in body language was used. The checklist was made by the researcher after studying body movements for the past two years. Birdwhistell (1970) says there are approximately eighty facial movements and fifty-five movements of the body limbs. The researcher did not attempt to use all one hundred and thirty-five body movements. The researcher used fifty-eight movements which he selected to be valid to the study. The way the fifty-eight movements to be used were arrived at was by the researcher observing people in bus stations, airports, restaurants, lounges and school classrooms. The movement was observed and a question was asked to the person being observed as to his feeling when the

movement was made. This process was repeated many times in order to find a valid checklist. The instrument used to determine the validity of the hypothesis has no norms formed to date other than those developed by the researcher and the process of determining the movements to be used in this study.

DESIGN OF THE STUDY

In order to check the null hypothesis the researcher chose to use a checklist on body language. The checklist was mailed to those counselors chosen to help in the giving of the checklist information. A cover letter was sent with the checklist explaining the purpose of the study and asking for the assistance of the person contacted (see appendix). The counselors chosen were asked to use the checklist while counseling the twenty people chosen for the control group and each individual response or observation was recorded. In order to see if the client's response was valid the counselor was instructed to ask the client did the body language shown have any correlation with his feelings or emotional state of mind.

Data from the checklist was placed on tabulation sheets and then punched into data processing cards. This made it possible to use the facilities of the Data Processing Center of Kansas State Teachers College to acquire the relationship of the various data collected for this research.

DATA ANALYSIS

To determine if there was a significant difference between the responses to the above criteria, chi square was used. Chi square provides a way to analyze data that are expressed as frequencies. Since it was necessary to use sampling in this study, chi square was used to judge whether deviations of sample frequencies from those expected or hypothesized were due to sampling error or if such deviations were significantly different from those expected.

The formula for finding chi square is as follows:

$$\chi^2 = \frac{(O_f - E_f)^2}{E_f} .$$

The O_f symbol represents each observed frequency and E_f is the symbol for the expected frequencies that correspond with those observed. The formula indicates that these steps are to be carried out:

1. The difference between each observed frequency and its corresponding expected frequency is found by subtracting the latter from the former.

2. Each difference is squared and then divided by the expected frequency in each case.

3. The values found in step 2 are summed.

The amount that observed frequency (O_f) deviates from expected frequency (E_f) was found.

If chi square (χ^2) was large enough, the null hypothesis would be rejected at some prescribed level of

confidence. The test of the null hypothesis is that if E_f 's were the same as O_f 's, χ^2 value would equal zero. Sampling error can cause O_f 's to differ from E_f 's to some extent; but when differences between observed frequencies and expected frequencies are great--as measured by χ^2 --in comparison to the expected frequency, a conclusion would be reached that the differences probably are not a result of sampling error, then the null hypothesis would be rejected. When $O_f - E_f$ differences are small compared to E_f 's, it is concluded that the differences are probably a result of sampling error.

Degrees of freedom (df) are found by taking the number of rows minus one times the number of columns minus one. The formula used was as follows:

$$df = (r - 1) (c - 1).$$

One row and one column in a diagram or analysis table are dictated by the number of responses. They are not therefore free to vary but are fixed by the total. If there were four rows and three columns, the number that are free to vary could be shown:

$$df = (4-1) (3-1) = (3) (2) = 6.$$

Chapter 4

STATISTICAL ANALYSIS

In order that the data collected in this study could be analyzed, the chi square test was utilized. Since there were four main categories that were investigated, the analysis was calculated accordingly.

Facial Expressions

From the total number (N = 879) of responses to the facial expressions, a chi square value of 19.95 was found. In determining the degree of freedom according to the number of rows and columns in the chi square table a value of 12 (df = 12) was obtained.

Using 12 degrees of freedom, a χ^2 value of 21.0 ($\chi^2 \geq 21.0$) was needed to reject the null hypothesis (see Table 1, page 29). Since the χ^2 value obtained was 19.95, acceptance of the null hypothesis was tenable.

As a result of accepting the null hypothesis, there was no significant difference between the actual observed frequencies and the expected frequencies of the four groups involved in this study.

Table 1
FACIAL EXPRESSIONS

Group Responses	A	B	C	D	Total
++	82 (78.69)	56 (71.18)	74 (65.30)	75 (71.83)	287
+	98 (103.09)	106 (93.25)	77 (85.55)	95 (94.11)	376
-	20 (24.13)	21 (21.82)	23 (20.02)	24 (22.03)	88
0	32 (25.77)	30 (23.31)	14 (21.39)	18 (23.53)	94
	9 (9.32)	5 (8.43)	12 (7.74)	8 (8.51)	34
T_i	241	218	200	220	N = 879

O_f = Observed frequency

χ^2 = 19.95

E_f = Expected frequency (in parenthesis)

df = 12

Head and Neck Gestures

In the analysis of responses with respect to the observed and expected frequency distributions the value of chi-square was determined. Using the appropriate degrees of freedom, the results have been tabulated below.

Table 2
HEAD AND NECK GESTURES

Group Responses	A	B	C	D	Total
++	38 (42.29)	39 (40.28)	43 (40.28)	44 (41.14)	164
+	53 (54.67)	51 (52.07)	53 (52.07)	55 (53.19)	212
-	21 (17.28)	17 (16.46)	12 (16.47)	17 (16.81)	67
0	21 (17.79)	20 (16.95)	15 (16.95)	13 (17.31)	69
	14 (14.96)	13 (14.25)	17 (14.25)	14 (14.55)	58
T_i	147	140	140	143	N = 570

O_f = Observed frequency

$\chi^2 = 6.1916$

E_f = Expected frequency (in parenthesis)

df = 12

Table 2 shows that with 12 degrees of freedom (df = 12), chi square value of 6.1916 ($\chi^2 = 6.1916$) would indicate no sign of difference between the observed frequencies (O_f 's) and expected frequencies (E_f 's) at the

.05 level of confidence. A chi square value of $\chi^2 \geq 21.00$ was needed to reject the null hypothesis. When accepting the null hypothesis and there is no significant difference between the actual observed frequency and the expected frequency, the table must be accepted.

Smoking Gestures

Chi square of the accumulated responses from each client observed and questioned yielded the following results.

Table 3
SMOKING GESTURES

Group Responses	A	B	C	D	Total
++	27 (30.99)	35 (29.24)	31 (29.53)	26 (29.24)	119
+	44 (38.02)	36 (35.87)	30 (36.23)	36 (35.87)	146
-	14 (15.63)	16 (14.74)	15 (14.89)	15 (14.74)	60
0	18 (18.49)	11 (17.44)	22 (17.62)	20 (17.44)	71
	3 (2.86)	2 (2.70)	3 (2.73)	3 (2.70)	11
T_i	106	100	101	100	$N = 407$

O_f = Observed frequency

$$\chi^2 = 8.4804$$

E_f = Expected frequency (in parenthesis)

$$df = 12$$

The total number ($N = 407$) responses to smoking gestures yields a chi square value of 8.48. It was found to determine the degree of freedom according to the number of rows and columns in the chi square table a value of 12 ($df = 12$) was obtained. Using 12 degrees of freedom, a chi square value of 21.00 ($\chi^2 \geq 21.0$) was needed to reject the null hypothesis. Since the χ^2 value was obtained was 8.48, acceptance of the null hypothesis was shown, which yielded no significant difference between the actual observed frequency and the expected frequency.

Body Limbs Gestures

Table 4 (see page 33) has been developed to indicate the observed frequencies (O_f 's) and the expected frequencies (E_f 's).

Upon tabulation of the questionnaire it was found that the total number ($N = 2840$) responses to body limbs gestures which indicates a chi square value of 93.00. By using the table a degree of freedom of 12 was obtained. Using 12 degrees of freedom a chi square value of 21.0 ($\chi^2 \geq 21.0$) was needed to reject the null hypothesis. Since the χ^2 value received was 93.00, it might be concluded that there is a significant difference between the observed and expected frequencies.

Table 4
BODY LIMBS GESTURES

Group Responses	A	B	C	D	Total
++	97 (184.75)	191 (174.25)	210 (175.00)	212 (176.00)	710
+	349 (289.35)	260 (272.91)	261 (274.08)	242 (275.65)	1112
-	122 (105.65)	98 (99.64)	90 (100.07)	96 (100.64)	406
0	115 (119.18)	124 (112.40)	102 (112.89)	117 (113.53)	458
	56 (40.07)	24 (37.80)	37 (37.96)	37 (38.17)	154
T_i	739	697	700	704	N = 2840

O_f = Observed frequency

$\chi^2 = 93.0078$

E_f = Expected frequency (in parenthesis

df = 12

Chapter 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study was designed to determine whether there is a significance in understanding body language in counseling. The researcher wanted to discover if such understanding would help the counselor look deeper into a client's problems.

SUMMARY

The study of body language is a study of the mixture of body movements--from the very deliberate to the completely unconscious, from those that apply only in one culture to those that cut across culture barriers. Further analysis will reveal the relationships of these elements of behavior one to another, the situations in which they occur, and their effects on the actions of the social partner. It is an odd fact that we know more about these signals in some animals than in our human species.

The study also indicated that knowledge about the nature of human expressions is likely to be of practical use in several ways. Potentially the most fruitful application is in those instances where verbal communication

has broken down or is inadequate, as often occurs in serious mental illness.

CONCLUSION

A complete analysis of data has been computed. The researcher has summarized the findings and drawn a final conclusion.

The results of this study indicated that the null hypothesis could not be accepted for a large percent of the non-verbal communication used by clients in a counseling situation. Body language, in addition, sends and receives messages, if understood and used properly.

Body language and spoken language, the researcher has found, in some cases depend on each other. Spoken language alone will not give us the full meaning of what a person is saying, nor for that matter will body language alone give us the full meaning. The research pointed out that there was a different pattern of body language from early childhood to geriatrics (old age).

RECOMMENDATIONS

The study shows that further examination of body language should be made to secure a deeper understanding of what goes on in the sub-conscious being. Further investigation of the limitations of this study will clear up some of the generalizations and assumptions of people.

Should a study of this type be done again, it is suggested that the following categories be clarified:

1. Sex
2. Race
3. Environment
4. Physical handicaps, if present (blindness, deafness, etc.)

It is the researcher's belief that the control group and random sample groups should be larger and come from different geographical locations. This will help to establish some concrete norms which will give more validity to research of this type.

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BIBLIOGRAPHY

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APPENDIX A

LETTERS ACCOMPANYING CHECKLIST

1031 Sylvan
Emporia, KS 66801
April 20, 1972

Mr. Floyd Elvin
Southeast High School
903 S. Edgemoor
Wichita, KS 67218

Dear Mr. Elvin:

I am forwarding this checklist on Body Language for you to help me with the statistics I need in order to finish my thesis on a Masters Degree Program.

In our previous conversation, I discussed how the checklist was to be used. I am also enclosing a self-addressed envelope that may speed up the returning process. I shall appreciate a quick response.

If you should desire statistics on this paper, please let me know.

Sincerely,

Harold Murray

ak

Enclosures: Checklist
Envelope

1031 Sylvan
Emporia, KS 66801
April 20, 1972

Mr. Russell Peck
Allison Junior High School
221 S. Seneca
Wichita, KS 67213

Dear Mr. Peck:

I am forwarding this checklist on Body Language for you to help me with the statistics I need in order to finish my thesis on a Masters Degree Program.

In our previous conversation, I discussed how the checklist was to be used. I am also enclosing a self-addressed envelope that may speed up the returning process. I shall appreciate a quick response.

If you should desire statistics on this paper, please let me know.

Sincerely,

Harold Murray

ak

Enclosures: Checklist
Envelope

APPENDIX B

CHECKLIST USED IN SURVEY

A CHECKLIST FOR BODY LANGUAGE

This checklist is designed to be thought provoking, information getting and to cause counseling to delve deeper into the factors involved in its relationship with each client or group. This checklist should not be answered with a simple yes or no; rather questions should be discussed and answered honestly.

Unfortunately, most people listen only with their ears. Yet, gestures often communicate much more than speeches. Each action has a meaning, regardless of the words accompanying it. People have a vocabulary of movements: the hands, the ears, the eyes, and the eyebrows often say much more than the mouth. Although you may be unaware of your natural gestures, they can greatly affect the degree of success in counseling which you achieve with your clients.

The only rating scale is from complete agreement to complete disagreement on reactions. This scale is for comparative purposes to help establish a valid checklist.

SCALE:	<u>++</u>	Complete Agreement
	<u>+</u>	Agreement
	<u>0</u>	Indifference
	<u>-</u>	Disagreement
	<u> </u>	Complete Disagreement

Key to Reaction Responses of the Checklist on Body Language

<u>++</u>	Complete Agreement
<u>+</u>	Agreement
<u>0</u>	Indifference
<u>-</u>	Disagreement
<u>---</u>	Complete Disagreement

FACIAL EXPRESSIONS

Body Language Movement Behavior	Meaning	Reaction
1. The simple smile: the mouth corners move upward and outward, very slightly.	Reflects some secret thought he (she) finds humorous.	_____
2. The upper smile: exposing the upper teeth.	Friendly, but reserved for greeting. There is usually eye-to-eye contact between the individuals.	_____
3. The broad smile: the mouth opens, and the upper and lower teeth are exposed.	Happy, friendliest, and most relaxed.	_____
4. Peering at the floor to avoid eye contact.	Reveals depression.	_____
5. Covering the eyes for just an instant.	Reflects a person is ashamed of something.	_____
6. Lingering look.	Sign of sexual attraction.	_____
7. Sad frown and angry frowns can be detected by eyebrows.	Sad ones have the outer ends droop; angry ones are depressed on the inside.	_____
8. Lift one eyebrow.	Disbelief.	_____
9. Wink one eye.	Intimacy.	_____
10. Slapping forehead.	Forgetfulness.	_____
11. Change in face coloration.	Embarrassment or stress.	_____

Key to Reaction Responses of the Checklist on Body Language

<u>++</u>	Complete Agreement
<u>+</u>	Agreement
<u>0</u>	Indifference
<u>-</u>	Disagreement
<u>---</u>	Complete Disagreement

THE HEAD-NECK GESTURES

Body Language Movement Behavior	Meaning	Reaction
12. Tilted head.	The person is imaginative, lively, and has a good sense of humor. Such a person does not hold grudges.	_____
13. Hair rubbing in a hair grooming gesture. (The rub is actually a ruse since the person always clasps the back of his neck. This is to relax the nerves.)	The man is tense and agitated.	_____
14. Run a hand through the hair.	Embarrassment	_____
15. When a woman pats her hair while talking to a man.	She is interested in him; attempting to impress him; and she likes him.	_____
16. If a woman brushes her hair back and leaves her hand on her neck for a moment.	She has just told a lie.	_____
17. Up and down motion of the head.	Yes; positive action.	_____
18. Left to right motion of the head.	No; negative action.	_____

Key to Reaction Responses of the Checklist on Body Language

<u>++</u>	Complete Agreement
<u>+</u>	Agreement
<u>0</u>	Indifference
<u>-</u>	Disagreement
<u>---</u>	Complete Disagreement

SMOKING GESTURES

<u>Body Language Movement Behavior</u>	<u>Meaning</u>	<u>Reaction</u>
19. If the butts are squashed with great force.	The person is a pessimist, (and not very happy with life).	_____
20. If he barely snubs his cigarettes out.	He is optimistic, (and enjoys living).	_____
21. One who lights one cigarette and then lets it burn out in a tray.	This person is often hard-working to the extent that he is forgetful of other things. He becomes deeply absorbed whenever he applies himself to something.	_____
22. A man who cups his cigarettes with his hand.	He is smart and penetrating. He guards his words and actions like he does his tobacco. He is generally very successful.	_____
23. A man who uses his cigarette to avoid eye contact with people.	He is calculating. He often knows something which the speaker does not know. He plans conversations to his advantage with precision.	_____

Key to Reaction Responses of the Checklist on Body Language

<u>++</u>	Complete Agreement
<u>+</u>	Agreement
<u>0</u>	Indifference
<u>-</u>	Disagreement
<u>---</u>	Complete Disagreement

GESTURES OF THE BODY LIMBS

Body Language Movement Behavior	Meaning	Reaction
24. If the person swings his hands outward from his body.	He is open and outgoing.	_____
25. If he swings his hands with inward movements, bringing his hands toward his body.	He is an introvert.	_____
26. The direction of the palms is another strong semaphore. People turn their palms open toward those who are antagonizing them.	This is a defensive gesture against those who seem to be posing a verbal battle.	_____
27. Palms near or touching the body.	Reflects a person who is friendly toward the speaker.	_____
28. While speaking, sweeping the hands up and out.	The person is optimistic and enthusiastic.	_____
29. Hands arching inward toward the body and downward.	Reflects a person to be shy and retiring. (He is pessimistic, lacks self confidence, and tends to be easily dejected.)	_____
30. Wiping the lips unnecessarily with a hand or handkerchief.	Reflects a shielding gesture, (when one does this he is being evasive).	_____
31. Nose rubbing: the movement is almost always very quick.	This is a negative gesture (one is repulsed and upset).	_____

Key to Reaction Responses of the Checklist on Body Language

<u>++</u>	Complete Agreement
<u>+</u>	Agreement
<u>0</u>	Indifference
<u>-</u>	Disagreement
<u>---</u>	Complete Disagreement

GESTURES OF THE BODY LIMBS

Body Language Movement Behavior	Meaning	Reaction
32. Man who props his elbows on, or leans arms across a desk or counter.	Confidence (one is decisive and solid in his knowledge of his subject).	_____
33. Man who leans back and grips his desk by the edges.	Is aggressive, (may often exhibit the strength of his moods by the amount of pressure which is applied to the gesture).	_____
34. One who shifts his weight from one foot to another.	He is uneasy (he is bored and thinking of something else he would rather be doing). The shuffling gesture increases as the person continues to progress toward disgust.	_____
35. The way a person stands expresses his thoughts and traits of character. If he rocks back on his heels.	He is confident and skeptical. (He is rather efficient and conscientious.)	_____
36. If he stands with his feet spread apart and hooks his fingers in his belt.	He is conservative and not easily swayed. (Such a gesture stance reflects solidarity.)	_____
37. One who folds his arms.	He is cold and aloof; sometimes physically aggressive (one is in a defensive mood and prefers not to be bothered by intruders).	_____
38. Fist clenching, (even the most subtle).	Potential hostility.	_____

Key to Reaction Responses of the Checklist on Body Language

<u>++</u>	Complete Agreement
<u>+</u>	Agreement
<u>0</u>	Indifference
<u>-</u>	Disagreement
<u>---</u>	Complete Disagreement

GESTURES OF THE BODY LIMBS

Body Language Movement Behavior	Meaning	Reaction
39. One who scratches himself while conversing.	He is in the process of becoming anti-social.	_____
40. When a woman dangles one foot in a swinging rhythm.	She is very uneasy or bored (she has a tremendous desire to get up and leave wherever she happens to be).	_____
41. If a woman sweeps an ankle in a circular motion.	She has a man on her mind; her thoughts are very preoccupied with him.	_____
42. If a woman constantly smooths away imaginary wrinkles from her dress.	She is expecting distress (this is a gesture of strong frustration).	_____
43. A man who primps or feels his pants cuff.	He is a little apprehensive.	_____
44. When a woman sheds one shoe or lets it dangle only by the toe.	She is friendly and relaxed, (she will always put it back on if she becomes tense).	_____
45. Sitting with crossed knees.	This position reflects pro (for) side of conversation.	_____
46. Legs stretched out and arms folded.	This position reflects the con (against) side of the conversation.	_____
47. Crossing knees and folding arms combination.	A few middle-of-the roaders may try a little of each.	_____
48. If an individual abruptly shifts his body around in his chair.	He disagrees with the speaker (or is changing sides).	_____

Key to Reaction Responses of the Checklist on Body Language

<u>++</u>	Complete Agreement
<u>+</u>	Agreement
<u>0</u>	Indifference
<u>-</u>	Disagreement
<u>---</u>	Complete Disagreement

GESTURES OF THE BODY LIMBS

Body Language Movement Behavior	Meaning	Reaction
49. Perspiring of the body.	The subject which is under discussion stirs some inner emotions.	_____
50. Shoulders shrug.	Indifference.	_____
51. Tapping fingers.	Impatience, tense, uneasy	_____
52. When a person touches and caresses everything within reach.	Help me, I'm lonely.	_____
53. Rocking, leg swinging.	You are too near.	_____
54. Closed eyes, withdrawal of the chin into the chest and hunching of the shoulders.	You are intruding, go away.	_____
55. Retracted shoulders.	Suppressed angers.	_____
56. Raised shoulders.	Related to fear.	_____
57. Squared shoulders.	Shouldering responsibility.	_____
58. Bowed shoulders.	One has the weight of a heavy load (carrying a burden).	_____

APPENDIX C

COMPOSITE DATA ON FACIAL EXPRESSIONS

Appendix C

Composite Data on Facial Expressions

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
<p>Question 1. The simple smile: the corners of the mouth move upward and outward, very slightly. Reflects some secret thought he (she) finds humorous.</p>							
A	12	8	1	0	0	15.6366	12
B	4	10	2	2	2		
C	6	11	2	0	1		
D	9	10	0	0	2		
<p>Question 2. The upper smile: exposing the upper teeth. Friendly, but reserved for greeting. There is usually eye-to-eye contact between individuals.</p>							
A	11	8	0	2	0	31.4232	12
B	5	10	2	3	1		
C	7	11	1	0	1		
D	5	13	0	1	0		

Appendix C (continued)

Group	Complete Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 3. The broad smile: the mouth opens, and the upper and lower teeth are exposed. Happy, friendliest, and most relaxed.						
A	13	7	0	1	15.3582	12
B	3	12	1	3		
C	11	8	0	1		
D	9	9	0	2		
Question 4. Peering at the floor to avoid eye contact. Reveals depression.						
A	4	7	2	8	7.5647	12
B	4	6	2	7		
C	4	5	6	4		
D	3	7	3	5		
Question 5. Covering the eyes for just an instant. Reflects a person is ashamed of something.						
A	5	8	0	7	28.9543	12
B	4	12	2	1		
C	11	2	2	2		
D	10	8	2	0		

Appendix C (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 6. Lingering look. Sign of sexual attraction.							
A	1	8	7	3	2	14.7817	12
B	5	7	2	6	0		
C	6	6	2	4	2		
D	6	8	4	2	0		
Question 7. Sad frown and angry frowns can be detected by eyebrows. Sad ones have the outer ends drooped; angry ones are depressed on the inside.							
A	8	8	3	2	0	7.9971	12
B	10	8	2	0	0		
C	6	10	3	0	1		
D	7	7	4	1	1		
Question 8. Lift one eyebrow. Disbelief.							
A	2	9	5	3	2	14.6940	12
B	5	9	5	1	0		
C	5	7	5	1	2		
D	10	6	4	0	0		

Appendix C (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 9. Wink one eye. Intimacy.							
A	4	12	0	3	2	18.1730	12
B	4	11	2	2	1		
C	13	4	1	2	0		
D	8	8	0	2	2		
Question 10. Slapping forehead. Forgetfulness.							
A	3	13	2	1	2	35.5909	12
B	12	4	2	2	0		
C	16	3	0	0	1		
D	2	10	4	3	1		
Question 11. Change in face coloration. Embarrassment or stress.							
A	9	10	0	2	0	21.3776	12
B	0	17	0	3	0		
C	9	10	1	0	0		
D	6	9	3	2	0		

APPENDIX D

COMPOSITE DATA ON HEAD-NECK GESTURES

Appendix D

Composite Data on Head-Neck Gestures

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 12. Tilted head. The person is imaginative, lively, and has a good sense of humor. Such a person does not hold grudges.							
A	4	11	3	3	0	11.3567	12
B	9	7	3	1	0		
C	11	7	1	1	0		
D	7	12	1	0	0		
Question 13. Hair rubbing in a hair grooming gesture. (The rub is actually a ruse since the person always clasps the back of his neck. This is to relax the nerves.) The man is tense and agitated.							
A	1	11	7	2	0	15.4641	12
B	3	7	5	3	2		
C	8	6	2	3	1		
D	3	9	5	3	0		
Question 14. Run a hand through the hair. Embarrassment.							
A	2	9	4	5	1	22.9658	12
B	4	11	2	1	2		
C	1	13	1	1	4		
D	8	4	1	5	2		

Appendix D (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 15. When a woman pats her hair while talking to a man. She is interested in him; attempting to impress him; and she likes him.							
A	1	8	3	5	4	9.5066	12
B	3	4	4	6	3		
C	5	3	4	5	3		
D	6	4	5	4	1		
Question 16. If a woman brushes her hair back and leaves her hand on her neck for a moment. She has just told a lie.							
A	2	1	4	5	9	11.7510	12
B	3	1	3	7	6		
C	0	4	4	5	7		
D	2	4	5	1	8		
Question 17. Up and down motion of the head. Yes; positive action.							
A	15	6	0	0	0	13.4809	12
B	9	10	0	1	0		
C	9	10	0	0	1		
D	6	14	0	0	0		

Appendix D (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 18. Left to right motion of the head. No; negative action.							
A	13	7	0	1	0	7.7043	12
B	8	11	0	1	0		
C	9	10	0	0	1		
D	12	8	0	0	0		

APPENDIX E

COMPOSITE DATA ON SMOKING GESTURES

Appendix E

Composite Data on Smoking Gestures

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 19. If the butts are squashed with great force. The person is a pessimist, (and not very happy with life).							
A	5	9	2	5	1	8.4242	12
B	6	8	2	4	0		
C	8	8	1	2	1		
D	2	10	4	3	1		
Question 20. If he barely snubs his cigarettes out. He is optimistic (and enjoys living).							
A	6	9	3	3	0	13.4184	12
B	12	3	3	1	1		
C	9	5	1	4	1		
D	11	5	0	4	0		

Appendix E (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
<p>Question 21. One who lights one cigarette and then lets it burn out in a tray. This person is often hard working to the extent that he is forgetful of other things. He becomes deeply absorbed whenever he applies himself to something.</p>							
A	8	11	1	1	0	7.2204	12
B	9	9	2	0	0		
C	6	9	2	2	1		
D	6	11	1	2	0		
<p>Question 22. A man who cups his cigarettes with his hand. He is smart and penetrating. He guards his words and actions like he does his tobacco. He is generally very successful.</p>							
A	3	5	5	6	2	10.8691	12
B	3	5	7	4	1		
C	4	2	4	10	0		
D	3	2	8	7	0		

Appendix E (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 23. A man who uses his cigarette to avoid eye contact with people. He is calculating. He often knows something which the speaker does not know. He plans conversations to his advantage with precision.							
A	5	10	3	3	0	14.4690	12
B	5	11	2	2	0		
C	4	5	7	4	0		
D	4	8	2	4	2		

APPENDIX F

COMPOSITE DATA ON BODY LIMBS GESTURES

Appendix F

Composite Data on Body Limbs Gestures

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 24. If the person swings his hands outward from his body. He is open and outgoing.							
A	3	11	4	3	0	5.2042	12
B	6	7	3	3	1		
C	5	11	1	2	1		
D	5	9	3	2	1		
Question 25. If he swings his hands with inward movements, bringing his hands toward his body. He is an introvert.							
A	2	10	4	6	0	13.3800	12
B	4	5	8	3	0		
C	5	8	4	2	1		
D	4	3	5	7	1		
Question 26. The direction of the palms is another strong semaphore. People turn their palms open toward those who are antagonizing them. This is a defensive gesture against those who seem to be posing a verbal battle.							
A	0	13	2	5	1	34.6907	12
B	12	2	3	3	0		
C	2	4	4	6	4		
D	6	6	2	4	2		

Appendix F (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 27. Palms near or touching the body. Reflects a person who is friendly toward the speaker.							
A	0	12	7	2	1	31.5958	12
B	14	4	0	1	1		
C	6	9	3	2	0		
D	9	4	2	4	1		
Question 28. While speaking, sweeping the hands up and out. The person is optimistic and enthusiastic.							
A	0	12	6	2	1	23.1390	12
B	7	5	4	3	1		
C	4	9	1	6	0		
D	9	8	2	1	0		
Question 29. Hands arching inward toward the body and downward. Reflects a person to be shy and retiring. (He is pessimistic, lacks self confidence, and tends to be easily dejected.)							
A	2	12	5	1	1	12.6844	12
B	3	13	1	3	0		
C	8	9	1	1	1		
D	4	10	3	2	1		

Appendix F (continued)

Group	Complete Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 30. Wiping the lips unnecessarily with a hand or handkerchief. Reflects a shielding gesture (when one does this he is being evasive).						
A	2	8	6	4	4.0445	12
B	3	7	5	0		
C	4	8	3	0		
D	3	8	4	1		
Question 31. Nose rubbing: the movement is almost always a very quick one. This is a negative gesture (one is repulsed and upset).						
A	3	6	5	7	4.2483	12
B	4	6	4	6		
C	6	3	4	6		
D	3	6	5	5		
Question 32. Man who props his elbows on, or leans arms across, a desk or counter. Confidence (one is decisive and solid in his knowledge of his subject).						
A	4	12	0	4	11.7365	12
B	7	7	1	5		
C	4	11	3	1		
D	7	7	2	4		

Appendix F (continued)

Group	Complete Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
<p>Question 33. Man who leans back and grips his desk by the edges. Is aggressive (may often exhibit the strength of his moods by the amount of pressure which is applied to the gesture).</p>						
A	5	10	2	4	6.0847	12
B	6	9	2	3		
C	6	8	3	2		
D	6	10	0	2		
<p>Question 34. One who shifts his weight from one foot to another. He is uneasy (he is bored and thinking of something else he would rather be doing). The shuffling gesture increases as the person continues to progress toward disgust.</p>						
A	4	11	3	1	9.8166	12
B	4	11	3	1		
C	3	11	2	2		
D	9	6	1	3		
<p>Question 35. The way a person stands expresses his thoughts and traits of character. If he rocks back on his heels. He is confident and skeptical. (He is rather efficient and conscientious.)</p>						
A	0	10	4	4	15.7972	12
B	4	6	5	5		
C	6	5	3	5		
D	5	4	6	5		

Appendix F (continued)

Group	Complete Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 36. If he stands with his feet spread apart and hooks his fingers in his belt. He is conservative and not easily swayed. (Such a gesture stance reflects solidarity.)						
A	1	11	4	5	12.2868	12
B	6	7	4	3		
C	8	4	3	4		
D	6	8	3	3		
Question 37. One who folds his arms. He is cold and aloof; sometimes physically aggressive (one is in a defensive mood and prefers not to be bothered by intruders).						
A	3	12	2	4	19.4076	12
B	4	11	1	4		
C	8	7	3	0		
D	9	8	0	3		
Question 38. Fist clenching (even the most subtle). Potential hostility.						
A	6	8	3	3	4.9987	12
B	5	10	2	3		
C	8	6	4	1		
D	7	8	2	2		

Appendix F (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 39. One who scratches himself while conversing. He is in the process of becoming anti-social.							
A	3	8	6	3	1	5.6647	12
B	6	5	3	5	1		
C	5	9	3	3	0		
D	5	7	3	4	1		
Question 40. When a woman dangles one foot in a swinging rhythm. She is very uneasy or bored. She has a tremendous desire to get up and leave wherever she happens to be.							
A	5	9	4	3	0	14.1528	12
B	2	11	1	4	2		
C	7	7	2	4	0		
D	3	6	6	3	2		
Question 41. If a woman sweeps an ankle in a circular motion. She has a man on her mind; her thoughts are very preoccupied with him.							
A	2	2	2	8	8	13.9283	12
B	3	4	4	8	1		
C	3	3	6	6	2		
D	4	5	4	5	2		

Appendix F (continued)

Group	Complete Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 42. If a woman constantly smooths away imaginary wrinkles from her dress. She is expecting distress (this is a gesture of strong frustration).						
A	1	13	2	4	11.3506	12
B	8	7	2	3		
C	7	7	3	3		
D	7	7	3	2		
Question 43. A man who primps or feels his pants cuff. He is a little apprehensive.						
A	1	15	2	1	20.3292	12
B	7	10	2	1		
C	8	9	0	2		
D	11	5	0	3		
Question 44. When a woman sheds one shoe or lets it dangle only by the toe. She is friendly and relaxed (she will always put it back on if she becomes tense).						
A	6	10	3	0	12.2927	12
B	6	13	0	1		
C	7	9	2	1		
D	7	9	0	3		

Appendix F (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 45. Sitting with crossed knees. This position reflects pro (for) side of conversation.							
A	0	4	9	4	4	19.6224	12
B	3	6	5	5	1		
C	1	5	6	8	0		
D	3	1	7	9	0		
Question 46. Legs stretched out and arms folded. This position reflects the con (against) side of the conversation.							
A	0	9	5	2	5	24.3910	12
B	5	2	4	8	1		
C	3	2	4	5	6		
D	3	6	4	7	0		
Question 47. Crossing knees and folding arms combination. A few middle-of-the-roaders may try a little of each.							
A	0	9	5	4	3	15.3997	12
B	4	2	6	6	2		
C	1	7	7	4	1		
D	4	4	5	6	0		

Appendix F (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 48. If an individual abruptly shifts his body around in his chair. He disagrees with the speaker (or is changing sides).							
A	1	13	2	4	1	13.1963	12
B	3	9	4	4	0		
C	6	8	2	2	2		
D	6	8	2	1	3		
Question 49. Perspiring of the body. The subject which is under discussion stirs some inner emotions.							
A	4	10	1	2	4	17.2509	12
B	6	7	1	5	1		
C	8	6	2	4	0		
D	2	11	3	4	0		
Question 50. Shoulders shrug. Indifference.							
A	8	11	2	0	0	19.5109	12
B	6	13	0	1	0		
C	10	8	1	0	1		
D	14	3	0	2	1		

Appendix F (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 51. Tapping fingers. Impatience, tense, uneasy.							
A	5	14	1	1	0	8.0938	12
B	5	11	1	1	2		
C	8	11	0	1	0		
D	7	10	0	2	1		
Question 52. When a person touches and caresses everything within reach. Help me, I'm lonely.							
A	5	11	2	2	1	9.5906	12
B	6	9	2	1	2		
C	8	8	0	3	1		
D	10	4	3	2	1		
Question 53. Rocking, leg swinging. You are too near.							
A	8	3	2	6	2	20.1409	12
B	5	12	0	3	0		
C	9	10	1	0	0		
D	9	5	2	3	1		

Appendix F (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 54. Closed eyes, withdrawal of the chin into the chest and hunching of the shoulders. You are intruding, go away.							
A	1	11	5	3	1	14.9099	12
B	6	6	4	2	2		
C	6	10	2	1	1		
D	9	9	0	1	1		
Question 55. Retracted shoulders. Suppressed angers.							
A	3	11	4	3	0	23.5329	12
B	3	4	8	5	0		
C	10	8	0	1	1		
D	5	9	3	2	1		
Question 56. Raised shoulders. Related to fear.							
A	2	7	4	6	2	12.7743	12
B	6	7	3	3	1		
C	10	5	2	3	0		
D	3	6	5	5	1		

Appendix F (continued)

Group	Complete Agreement	Agreement	Indifference	Disagreement	Complete Disagreement	χ^2	Degrees of Freedom
Question 57. Squared shoulders. Shouldering responsibility.							
A	4	11	4	1	1	20.0528	12
B	10	7	0	2	1		
C	3	9	3	4	1		
D	4	10	0	2	4		
Question 58. Bowed shoulders. One has the weight of a heavy load (carrying a burden).							
A	3	10	2	2	4	6.5380	12
B	5	7	2	3	3		
C	7	7	2	2	2		
D	3	12	1	1	3		

* χ^2 26.217 (Sign Difference at .01)