

DIFFERENCES IN NONVERBAL BEHAVIOR AND INTER-
PERSONAL RELATIONSHIPS OF VIOLENT AND
NONVIOLENT ADOLESCENTS

By

PERRY LEN HASSELL

Bachelor of Arts
Oklahoma State University
Stillwater, Oklahoma
1971

Master of Science
Oklahoma State University
Stillwater, Oklahoma
1978

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
DOCTOR OF PHILOSOPHY
December, 1982

Thesis
1982D
H355d
Cop. 2



DIFFERENCES IN NONVERBAL BEHAVIOR AND INTER-
PERSONAL RELATIONSHIPS OF VIOLENT AND
NONVIOLENT ADOLESCENTS

Thesis Approved:

John M. Sears

Thesis Adviser

Joe McMillan

Therrell P. Suddeth

Gene Huff

Nancy Jo Campbell

Norman N. Durha

Dean of the Graduate College

ACKNOWLEDGMENTS

The immense gratitude and appreciation felt for the supportive nature of my major adviser, Dr. James Seals, cannot be adequately expressed here. His insight, knowledge of the field of study, and expert ability at pointing to however dimly lit the end of the tunnel, gave me countless opportunities for encouragement.

It is appropriate that I also give thanks to the other members of my advisory committee, Dr. Noma Jo Campbell, Dr. Gene Acuff, Dr. Kenneth Sandvold, and Dr. John Dillard. I would especially like to thank Dr. Campbell for her energy, endurance, patience, and empathic understanding. Her keen mind and sharp insight were equalled only by her compassionate nature.

My heartfelt thanks are also extended to the members of the professional staff with whom I work and who helped me so very much in my task. Their willingness to laboriously and painstakingly help in the interviewing and judging of the videotapes used in this project contributed tremendously to its success.

The support, love, and endurance of my family are things for which I am continually grateful. I am thankful to my wife, Tamra, for her patience and ability to cope with typewriter keys pounding late into the night and a kitchen table constantly covered with manuscript pages. I warmly admire my youngest daughter, Christina, who learned to walk through the many stacks of reference books piled around the chair where the project was drawn together. And my daughter, Laurie, who seemed to

see even less of me than usual, I hope will constantly be aware of my respect, love, and admiration for her. Without the wonderful family support of these three lovely individuals, I doubt this study could have been completed as it was.

Finally, I wish to thank my mother, Juanita Cooper Hassell, and my father, Carlton Lee Hassell, for all they have seen me through. All of the years when they thought their good thoughts regarding people about them, they molded in my personality the ability to care for others. The devotion and brilliance of their lives will always inspire and comfort me. Their gentle ways will cause me to stand in awe.

TABLE OF CONTENTS

Chapter	Page
I. GENERAL INTRODUCTION TO THE AREA OF STUDY	1
Introduction	1
Significance of the Study	3
Definitions of Terms	3
Purpose of the Study	5
Statement of the Problem	5
Research Questions	5
Limitations to the Study	6
Overview of the Study	7
II. REVIEW OF SELECTED LITERATURE	8
Introduction	8
Nonverbal Behavior Studies	9
Violent Behavior	13
Sex and Age of Subjects and NVB	17
Videotaped Analysis of Counseling Interactions	20
Summary	23
III. DESIGN OF THE STUDY	24
Introduction	24
Statement of the Problem	24
Research Questions	24
Procedure	25
Selection of Participants	34
Selection of Interviewers	35
Selection of Judges	35
Selection of Instruments	36
Collection of Data	38
Statistical Treatment	39
Summary	40
IV. RESULTS OF THE STUDY	41
Introduction	41
Nonverbal Behavior Determination	41
Project Data Analysis	42
The Standardized Discriminant Function Coefficient	49

Chapter	Page
The Discriminant Functions Evaluated	-
at Group Means	52
Summary	52
V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	55
Summary	55
Conclusions	56
Recommendations	58
A SELECTED BIBLIOGRAPHY	61
APPENDIX A - MANUAL FOR INTERVIEWERS	69
APPENDIX B - MANUAL FOR JUDGES	72
APPENDIX C - CONSENT FORMS	76
APPENDIX D - MASTER TALLY SHEETS BY GROUP MEMBERSHIP OF RAW DATA	78
APPENDIX E - NONVERBAL BEHAVIOR TALLY SHEET	81
APPENDIX F - INTERVIEW FORMAT FOR INTERVIEWERS	83

LIST OF TABLES

Table	Page
I. Judge Agreement on Nonverbal Behaviors	42
II. Multiple Regression Analysis of NVB and <u>FIRO-B</u> Subscale Scores Stepwise Analysis	43
III. Histogram of Group Scores by Individuals	45
IV. Group Means of Individual Groups and Grand Means for Both Groups by Variables	47
V. Group Standard Deviations of Individual Groups and Combined Group Standard Deviations	48
VI. Standardized Discriminant Function Coefficients	51
VII. Unstandardized Discriminant Function Coefficients	53

LIST OF FIGURES

Figure	Page
1. Layout of the Office Used for Videotaping in the Institutional Setting	30
2. Layout of the Office Used for Videotaping in the Private Practice Setting	31
3. Physical Layout of the Videotaping Judges' Office	33

CHAPTER I

GENERAL INTRODUCTION TO THE AREA OF STUDY

Introduction

For as long as the counseling relationship has existed, there has been a series of problems in analyzing it. Some of the earliest efforts to reflect on the significance of a specific counseling session made use of anecdotal notes. These notes were generally made after the session by the counselor. Over forty years ago researchers wished to rely less on what they feared might be nonobjective recall on the part of the counselors. It was this desire for more objective research that brought about the use of audio tape recordings. Audio recordings permitted the researcher a fuller account of what actually occurred in a counseling interview. However, with the advent of video tape recordings, an awareness also developed about the wealth of communication that was not auditorially recordable. This nonauditory communication has been called "silent messages" (Harman, 1971; and Schlesinger, 1978). During a 25-year period, from 1947 to 1973, 75 percent of studies relating to extra-auditory messages was done in the last 10 years of that time frame (Gladstein, 1974). It would appear that this finding indicates the significance with which this form of communication had come to be appreciated.

The extent to which nonverbal behavior (NVB) is significant in the counseling process is reflected in the literature of Birdwhistell (1970),

Island (1966), Prichard (1971), Hinde (1972), Mehrabian (1968), and Silker (1979). Their work reflects the assertion that in the communication process, 50 percent can be accounted as nonverbal, 30 percent can be accounted as tonal, and only 20 percent may be accounted verbal (Mehrabian, 1968). It appears imperative that research better facilitate an understanding which goes beyond mere words.

Gladstein (1974) pointed out that researchers who discuss NVB often appear to differ in what they mean by it. NVB has been used to mean "kinesics," or body language. It has been used to mean "paralanguage," or voice quality, vocalizations, tonal factors, etc. It was used to refer to "proxemics" or spaciality, space and distance of communicators. It has also been used to mean "object language," or the implicit meaning of symbols between communicators. The three major areas of agreement are kinesics, paralanguage, and proxemics (Silker, 1979).. Though NVB has been studied a great deal, its relationship to aggressiveness is barely mentioned in the literature. Violent persons pose special problems in the counseling relationship due to their tendency to hurt other people.

Violence and aggression have been studied by a variety of researchers. The greatest amount of the literature seems to indicate a difficulty in predicting violent aggression in people. The current study undertakes a first step in the important task of identifying aggressive persons. The study was designed to determine whether there is enough quantifiable difference in two particular groups of people to identify them on the basis of those differences.

Significance of the Study

The present study of NVB is significant in that the results may be used to improve the counselor-client relationship. The ability to identify a client's level of violent aggressiveness by examining the NVB demonstrated in an initial interview could provide valuable diagnostic information for the counselor. The information gathered in this study may be useful to others who work with persons in potentially violent settings. Educators, medical professionals, houseparents, and parents of violent children would be benefitted from having a greater awareness of a person's possible potential for violent aggressiveness. The relationships found between NVB and violence indicate a need for future studies which might show that a person's family background impacts on the NVB and/or propensity of violent behavior. The use of the FIRO-B (Fundamental Interpersonal Relations Orientation-Behavior) as a possible indicator, in conjunction with NVB, of likely, violent behavior is also useful.

Definitions of Terms

Nonverbal Behavior (NVB): That part of the total communications process that is not verbal speech and reflects thoughts and feelings. Prichard and Seals' (1972) modification of Island's (1967) Modified Taxonomy of nonverbal behavior is included as Appendix B of this study.

Interviews: An interview relationship is one in which two people meet to talk, to exchange thoughts and feelings, and to empathize with one another. There is no pretense for change in behavior.

Interviewer: The interviewer was in charge of establishing the relationship. He or she had been trained and coached in the interview format so that it would be as exact in each new diadic setting as

possible. Each interviewer signed an informed consent form as well as a form which promised to keep identities of the subjects confidential.

Interviewee: Fifteen of the interviewees used in this study were volunteers from a group of adolescents confined to a maximum security institution for youth in the state of Oklahoma. Fifteen subjects were also drawn from a high school journalism class from a neighboring town. The interviewees were boys and girls between the ages of 15.0 to 17.11 years. The interviewees had signed informed consent forms.

Interview Setting: The 30 interviews that took place in this study were conducted in two offices. The offices were made to appear as similar as possible. However, one office was in the institution that housed the more violent youth, and the other was in a private counseling office in the town in which the high school students lived.

The Juvenile Institution: The juvenile institution from which one-half of the subjects were drawn provides treatment for some of the most violent adolescents in the state of Oklahoma. The residents have been tried and found guilty of a major, index crime. They have generally demonstrated physically violent and assaultive behavior in the community and in other institutional settings before coming to the placement which currently houses them. All of these institutionalized youth had been adjudicated by the Oklahoma juvenile courts to be "delinquent."

Judges: Six judges were used to evaluate, quantify, and view the resultant 15 hours of videotaping that the 30 interviews generated. The judges were employees of the juvenile treatment facility used in the research. Judges were trained in the use of Island's (1967) modified taxonomy of nonverbal behavior.

Violent: For the purpose of this study, violence means physically hurting other people. The institutionalized youth had hurt other people. They had done bodily injury to others, in some cases to the point of having taken another's life without apparent provocation. Furthermore, they had continued this assaultive behavior after institutionalization. They had a history of assaulting other students or staff members while in the current placement.

Purpose of the Study

The purpose of this study was to determine if there was a relationship between NVB and violent aggression. This study also reports relationships that may exist between a person's subscale scores on the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) scale and history of violent or nonviolent behavior.

The independent variable of violent behavior was introduced into this investigation to produce a broader understanding of the counseling process. For example, this study may result in better understandings of clients for whom a question of violent propensity has been raised.

Statement of the Problem

The problem under current investigation was: What is the relationship between nonverbal behavior, selected interpersonal relations scores, and aggressive behavior.

Research Questions

The following questions were used to accomplish the stated purpose of this study:

1. What was the relation between nonverbal behavior, as measured by a modification of Island's (1967) categories, and adolescent violence?
2. What was the relationship between interpersonal relationship preference, as measured by the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) subscale scores, and adolescent violence?
3. What frequencies of nonverbal behavior related to the FIRO-B subscale of Inclusion-Wanted?
4. What frequencies of nonverbal behavior related to the FIRO-B subscale of Inclusion-Expressed?
5. What frequencies of nonverbal behavior related to the FIRO-B subscale of Control-Wanted?
6. What frequencies of nonverbal behavior related to the FIRO-B subscale of Control-Expressed?
7. What frequencies of nonverbal behavior related to the FIRO-B subscale of Affection-Wanted?
8. What frequencies of nonverbal behavior related to the FIRO-B subscale of Affection-Expressed?

Limitations to the Study

One-half of the volunteer interviewees used in this study were from a very special setting. These adolescents had been adjudicated by the Oklahoma juvenile court system. The generalizability of the findings from this study may be limited on this basis of subject selection. Also, the relatively small number of subjects used in this study may limit its generalizability. The extent to which the data collected in this study indicated a likely relationship between violence and NVB and FIRO-B

subscale scores may indicate a need for further research using many more subjects and possibly different populations.

Overview of the Study

The present chapter provided an introduction to the area of investigation, the significance of the study, definitions of terms, the purpose of the study, a statement of the problem, research questions, and limitations. Chapter II contains a review of literature pertinent to the area of this study. Chapter III describes the procedures utilized in this study and the statistical process used to analyze data. Chapter IV includes the findings of the study and reports the statistical data obtained. Chapter V summarizes the information derived from the investigation, addresses conclusions, and makes recommendations for future study.

CHAPTER II

REVIEW OF SELECTED LITERATURE

Introduction

The present investigation focused on the nonverbal behavioral differences of people in interview settings. These people were of one of two groups. One group was composed of 15 institutionalized adolescents who had been determined by the Oklahoma juvenile court system to be "delinquent." They had also had a history of alleged violent assaults on people. This history of violent assaults had continued into the institutional settings, including the placement in which the adolescents are currently housed. Their current placement during this research project was a maximum security treatment facility in the Oklahoma Department of Human Services' direction. These youth had been selected at random from a group of 30 volunteers. The other group of youth had been randomly selected from a group of 30 teacher-recommended journalism students. These adolescents were students in a high school of a neighboring town. All youth in this study were between the ages of 15.0 to 17.11 years. The 30 adolescents who were used in this study were administered the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) inventory. The scores from the FIRO-B's were the bases for the videotaped interview formats. Analysis of the nonverbal behavior (NVB) and the FIRO-B scores was utilized to examine the interaction between NVB, FIRO-B scores, and history of violent behavior. The discussion of

related literature will be comprised of four major areas: (1) nonverbal behavior; (2) violent behavior; (3) sex and age of subject and nonverbal behavior in the counseling relationship; and the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) and its usefulness in counseling; and (4) videotaped analysis of counseling interactions.

Nonverbal Behavior Studies

Charles Darwin (1896), in his The Expression of The Emotions of Men and Animals, began the scientific investigation of NVB. He provided testimony of animal body movements and facial expressions that he associated with five specific emotions: (1) weeping and suffering; (2) hatred and anger; (3) contempt; (4) surprise; and (5) shame.

Of the many definitions of nonverbal behavior, Birdwhistell (1952) used the word "kinesics" and identified it as the systematic study of human communication with body movements and gestures. Ruesch and Keys (1956) defined as "nonverbal behavior" that communication which is not conveyed by words. It is this understanding of nonverbal behavior that is most used by researchers today.

Counselee Nonverbal Behavior and Related Variables

The relationship of voice quality to perceived psychopathology was studied by Markel, Meisels, and Houck (1964). Voice quality could be differentiated by 40 undergraduate judges who judged 21 audio tapes. Ten of the audio tapes had been the recorded voices of schizophrenic patients in a hospital and 11 of the tapes were the voices of non-schizophrenic hospital patients. With content and voice set held constant, they found

there were in fact differences in the tapes on the basis of voice quality.

Ekman (1965) conducted experiments in which judges viewed photographs which had been taken during five standardized stress interviews. In his experiments he was interested in analyzing the differential communication of affect by head and body cues. Using Scholsberg's (1954) three dimensions of emotion, the judges were asked to rate the emotion experienced by each person in the separate photographs. It was demonstrated that different affect was communicated based on head and body nonverbal cues, though the level of affect was something little revealed by the cues.

Two experiments using videotapes were conducted by Graham, Bitti, and Agryle (1975). In each experiment nine men and women were divided into three groups. Each group had a different viewing task in trying to determine role-played emotions. One group viewed face only, the second group viewed body only, and the third group viewed the whole person. It was concluded by the researchers that some emotions are revealed best by the face alone and that the body does not provide any additional information. Unlike Ekman (1965) they found no better information about judgment of emotion intensity based on either facial cues or bodily cues. This difference they attributed to the use of videotapes over the still photographs of the former study.

In studying counselor NVB and related aspects, Strong, Taylor, Grotton, and Loper (1971) examined the effect of NVB on perceived counselor characteristics. Two male counseling psychologists were recruited to perform at high and low frequencies of NVB in 10-minute simulated interviews with one male confederate client. Eighty-six female undergraduates were

randomly assigned to rate counselors' characteristics in four experimental conditions: (1) video and audio presentation of a "still" counselor; (2) video and audio presentation of an "active" counselor; (3) auditory presentation of a "still" counselor; and (4) auditory presentation of an "active" counselor. They found that: (a) counselors' NVB influences how observers describe them; (b) clients are more attracted to active counselors; and (c) students "imagine" counselors to be warmer, less critical, and more reasonable, relaxed, fair, interesting, alert, knowledgeable, talented, etc., when rating with audio and visual aids.

Seay and Alterkruse (1979) studied several aspects of NVB in the counseling relationship. They were concerned with which aspects of NVB lend themselves most to an understanding of facility in a counseling setting. Twenty undergraduate, volunteer clients who had personal concerns were randomly assigned to each of ten male counselors. The four NVB's observed were: (1) eye contact; (2) smiling; (3) head nodding; and (4) trunk lean forward. The variables considered as facilitative conditions were: (a) empathic understanding; (b) regard; and (c) genuineness. Eye contact was found to be indicative of genuineness. Longer eye contact was indicative of less genuineness. Smiling was found to be predictive of all three conditions, but with negative connotations, at times. Smiling was negatively related to empathy and regard, but it was positively related to genuineness. Trunk lean forward was found to be indicative of both regard and genuineness.

Woodyard (1978) examined 28 graduate level counselor trainees through videotaped interviews of their interactions with confederate clients. The confederate clients role-played "reluctance" or "cooperativeness." He found a significant relationship between counselor NVB and client

type. This difference tended to mean more exaggerated NVB by the counselor encountering the client who role-played "reluctance."

Silker (1979) videotaped ten interview sessions. Each session utilized a split-screen technique which allowed for simultaneous viewing of counselors and clients. Nonverbal behaviors, Transactional Analysis ego states, and subroles were analyzed from 15-minute segments of the tapes. The following conclusions were reached: (1) counselors used a higher frequency and range of subroles than counselees during the counseling relationship; (2) counselees exhibited higher frequencies of NVB in all categories except head support; (3) the Adult ego state was the dominant mode of communication for counselors, while the Child ego state was the dominant mode for the counselees; (4) the low frequency of the Parent ego state limited the analysis of associated NVB; (5) there was a trend toward less NVB for the counselor when moving from Direct to Indirect subroles; and (6) counselors used the Adult ego state extensively while spending the majority of interview time in Indirect subroles.

Duncan (1982) built upon the work of Woodyard (1978) and Silker (1979) in his study of the relationship between trust and counselor-client interactions. Twenty videotapes of initial interviews were studied by judges for the occurrence of participant subroles. Twelve counselor subroles and ten counselee subroles were studied. All subroles were verbal in nature. The judges also analyzed the presence of 14 nonverbal categories. The study involved the use of 10 counselors who were professional psychologists in the mental health setting of southern Oklahoma, and 20 student volunteers from an area university serving as volunteer counselees for the psychologists. The study undertook an investigation of the interrelationship of the various types and frequencies

of verbal subroles utilized by counselors and clients in initial interviews. He concluded that there did seem to be differences in types and frequencies of verbal subroles used by counselors and counselees in the initial interviews. However, none of the differences in frequency between groups was found to be significant. There did seem to be significant differences in frequency related to differences in the trust level of the client, which had also been under investigation.

The literature concerning the NVB of counselors and counselee in the counseling relationship seems to support a notion that NVB is a powerful additive in the process. It seems to affect trust levels, understandings of sincerity, integrity, and warmth, and even perceptions of whether the proper message has been understood when transmitted from one to the other. In addition, clients seem to be able to exert some control over the NVB of counselors through manipulation of their own NVB. There also appears to be NVB's characteristic of perceived psychopathology, feeling states, and certain verbal modes of communication.

Violent Behavior

Much research has been done in the area of nonverbal behavior. The likelihood that NVB is powerful in interpersonal relationships has been established. The thrust of this current study was to see to what extent NVB correlates with a person's propensity for violence.

The ability to predict violence has been a topic of much research and debate. Monahan (1981) points out many errors that are often made by professional clinicians in their efforts to predict violent behavior. One aspect of prediction that Monahan does not list is NVB. Sweetland (1972) has written of the "illusory correlation" and the estimation of dangerous

behavior. However, he does not focus on the potential advantage one might gain from the use of nonverbal clues to violence.

Megargee (1979) perceived that the time for developing better predictors of "dangerous behavior" has come. He stated that mental health professionals need to be especially sensitive to this issue. He proposed that there are three relevant variables in predicting violence. The three variables are all aspects of what he calls "personality factors." They are listed as: (1) motivation, (2) internal inhibitions, and (3) habit strength. Though these three variables may underlie NVB, he does not address the issue more immediately. NVB is not discussed by him as a predictor of violence.

Orsagh (1979) perceived that any attempt at interpreting results from social science studies of aggression and violence was pointless. He inferred that a detached attempt at empiricism is "irrelevant." He opted for a system of interpretation of statistical data from a different perspective. This interpretation would recognize the subjective sense of the material under investigation. He proposed an awareness that the data in such studies are always interpreted subjectively.

Nichtern (1981) asked whether psychiatry had failed the acting out and violent adolescent? He perceived that the psychodynamics of adolescent violence were related to the violence of the inner self. He believed that the disturbances in adolescence represent the arrest or regression of maturationally produced sequences of thought and behavior. This arrested or regressive state he perceived as arising from unresolved conflict generated within the progression toward maturity. Though the nature of the disturbances may be varied, Nichtern believed the violence generated by them resulted from a naturally occurring conflict of

transition. This transition he believed to occur in all human beings. His research studied the intensity of aggression, observing a variety of different patterns of violent adolescent behavior. The observations were based on what he called "intellectual predispositions." He was concerned with whether the subject reflected levels of aggression that corresponded to a set of variables such as object loss, object constancy, etc.

Sue (1977) perceived that it was class-bound and culture-bound values which often contribute to cross-cultural communication problems. Sue and Sue (1977) researched the principle that NVB tends to be a major part of all communication. They determined that cross-cultural communication is also greatly determined by that behavior which is not verbal. Crosby and Bromley (1980) inferred that NVB is heavily correlated with culturally predetermined factors of aggressiveness. These factors impact on the human being in childhood.

Fedder and Gabaldon (1970) recognized the power of the "silent language" in their work with social workers. The social workers taught classes of varying subject matter to disadvantaged children. The children with whom the social workers worked were of a variety of cultural backgrounds. Through the use of behavioral communication that went beyond mere words, successful experiences for the children occurred. The steps which led to this success were reportedly "infinitesimal" as they evolved from nonworking to working relationships.

Strube and Werner (1982) researched two behavior patterns which they labeled "Type A" and "Type B." Type A behavior was characterized by competitive striving, a sense of urgency, and hostility. Type B behavior was less aggressive and more relaxed. It was theorized that individuals

exhibiting Type A behavior had a strong need to maintain control over their environment. It was further theorized that they had a tendency to react more strongly to threat. Two studies were conducted to investigate NVB by Type A individuals to interpersonal threat. In the first study, 80 college students participated in a sales transaction and assumed the role of either a customer or a salesperson. The customer role provided a situation wherein students expected a threat to their behavioral freedom. The salesperson role lacked such a threat. The results indicated that an interpersonal interaction characterized by threat to freedom can produce nonverbal reaction. Overall, the subjects in the customer and salesperson roles used NVB in separate and distinct ways. More importantly, Type A and Type B individuals differed in the use of personal space and interpersonal distance while in the customer role. In the second study the subjects confirmed that the customer role was threatening.

Hanna (1978) studied communication patterns in a desegregated school located in an urban, middle-class, black neighborhood. The study specifically looked at explanations for special kinds of aggressive behavior (e.g., name calling, rumor mongering, body bluster, etc.). They determined that explanations for these behaviors include: (1) racism and the need to earn respect; (2) socialization to violence; (3) inadequate academic work and the need to save face; (4) responding to the self-fulfilling prophecy that blacks are more physical; (5) poor impulse control of anger; (6) sexual competition; (7) desire to test one's strength and establish position in a peer hierarchy; (8) peer pressure; and (9) desire for attention. The researchers concluded that the long-term negative

consequences of the aggressive behavior outweigh the positive gains in self-esteem sometimes made by individual aggressors.

Zabel (1979) researched the abilities of emotionally disturbed children and adolescents to recognize primary emotions in facial expressions. He found that emotionally disturbed subjects were significantly less proficient in recognizing overall emotions. He found that the same subjects were also much less capable of recognizing several individual emotions.

McDonald (1979) studied instances of harassment of teachers by students. He found harassment to be a sign system. This sign system had structure, folkloric elements, a wide paradigmatic range, behavioral effects on the receiver, and meaning beyond the normal significance of the sign.

The study at hand endeavors to add to the research findings presented. The awareness that people behave differently is well established. The fact that some people are more violent than others is also recognized. The question becomes one of relationship to specific variables. Do people who behave violently have significant clues emoted to this in their FIRO-B scores and/or NVB?

Sex and Age of Subjects and NVB

Several studies have been concerned with subject age in relation to NVB. Brownlee and Bakeman (1981) examined whether toddler peers used hitting as a means of communication. They studied the interaction of age specific groups. One group was composed of one-year-olds, the next was composed of two-year-olds, and the last was made up of three-year-olds. Results of the study demonstrated that hitting systematically resulted in different social outcomes for the two-year-old children: However,

results showed no such system for the one- or three-year-old children. The authors speculated that the use of gestures in NVB may change as verbal communication skills are developed. They further postulate that NVB gestures may change as verbal communication comes to dominate peer interaction.

Ginsburg (1977) researched the ethological differences of nonverbal inhibitors of aggressive behavior in male elementary children. He found that maturational identity was a factor as was size of student, in determining the extent of aggressiveness displayed. Lobato (1981) examined 40 institutionalized, severely and profoundly retarded children and adolescents. In her study she found that more competent sensorimotor performance was associated with higher frequency of more sophisticated gestural communication. She also found that subjects tended to use more complex gestures to communicate in the imperative than in the declarative tasks.

Achilles and Crump (1978) studied the "generation gap" as, in actuality, two distinct cultures. They perceived that there was a youth culture and an adult culture. They further hypothesized that each culture is expressed through verbal and nonverbal norms. These norms enhance a feeling of group kinship. However, the norms also hamper communication with members of the other culture. Levine and Sutton-Smith (1973) studied the interpersonal visual behavior of subjects of various ages. They were primarily studied in two situations: (1) conversation, and (2) a block construction task. In each case the partners were of the same sex and same age. The results indicated some support to an argument that age difference is less of a communication requirement as people get older. Specifically, it does not seem to be as serious a problem for

children who are elementary school aged and older. The range of the ages of the children used in this current study under investigation was from 15.0 years to 17.11 years.

Adams and Kirkevold (1977) examined body movements and facial expressions of males and females in a restaurant setting. They wished to determine whether differences in frequency of these behaviors could be accounted on the basis of age or sex. The subjects studied were 197 males and 131 females. They were seated in three different Seattle, Washington, fastfood restaurants. The subjects were observed for three minutes by one female and two male observers. The behaviors observed were: (1) trunk movement; (2) standing position; (3) looks; (4) glances; (5) smiles; and (6) laughter. The results of the study indicated that: (a) subjects who were alone exhibited more looks than those who were with companions; (b) male subjects looked away from companions more than females; (c) females over age 14 with female companions showed the highest frequency of glances; (d) all female subjects smiled more than male subjects; and (e) laughter occurred more often among female subjects.

Campbell (1973) investigated adolescent intellectual decline in an attempt to determine to what extent sexual differences were inherent. She hypothesized that: (1) girls would decline in greater numbers and to a greater degree than boys; and (2) areas and amounts of sex differences of the delciners would differ from those of the total sample. Both of these hypotheses were substantiated under a design that examined the subject's type and score of IQ test each had taken in early adolescence. The subjects were then given another IQ test, the FIR0-B test of interpersonal relations, a semantic differential inventory, and a questionnaire on sex roles. The results of this battery of tests showed that

overall girls lost IQ points while boys gained. Campbell (1974) did further research to investigate the relationship between sex and a decline of intellectual abilities during adolescence. She also wished to examine some personality differences between young women who declined in intellectual abilities during adolescence and those who did not. Differences examined were: (1) need to be included; (2) need to be liked; (3) need to be controlled; (4) need to control; (5) view of self as an active person; (6) view of specific jobs as being for one or both sexes; and (7) view of the role of women in man/woman relationships. High school seniors from two public and two parochial schools were participants in the study, on a volunteer basis. These students were from rural, urban, and suburban New York settings. They were 290 girls and 181 boys. Seventh and twelfth grade IQ scores of each student were compared. The female subjects were given the FIR0-B inventory, semantic differential scale on "myself," an inventory of jobs to categorize for males, females, or both, and questions on the importance of female inferiority in the dating relationship. The phenomenon of female intellectual decline during adolescence evidenced itself in this study. Young women who declined saw themselves as closer to the passive, nonassertive, ideal of a woman than did young women who did not decline. The current investigation used both males and females, in the same percentages, in both the violent and the nonviolent groups.

Videotaped Analysis of Counseling Interactions

Audio recordings replaced the counselor-made anecdotal notes used as recently as the first 45 years of this century. Videotape recordings

became important additions to the study of the counseling relationship with the awareness of the importance of nonverbal behavior.

Roberts and Renzaglia (1965) studied the influence of audio tape recordings on counseling. The study looked at the impact on a counseling session of: (1) tape recorder visible; (2) microphone visible; and (3) recording system completely hidden and unknown to counselor or client. They concluded that: (a) clients spoke more favorably of themselves when the recorder was in full view; and (b) counselors trained to be client-centered were apt to be less client-centered when being recorded.

Van Atta (1969) studied the inhibitory and excitatory effects of different observational methods on counseling and psychotherapy. A questionnaire was administered to 89 clients. This questionnaire was composed of nine possible conditions of observation. Three of the conditions were considered problem conditions: (1) study; (2) career; and (3) personal feelings and thoughts. Six of the conditions were simply those of observation. The questionnaire asked in which situation would one feel most inhibited. It then asked for a general, progressive rating of the situations to the least most inhibiting method. It was found that co-therapy and tape recordings were minimally inhibiting. More than one-quarter of the clients indicated they would reject counseling rather than submit to observation via motion picture camera, television, or one-way mirror.

Gelso (1972) studied audio and video tape recording procedures. He primarily looked at the effects each had on: (1) clients; (2) the different type of client problem; and (3) the dissipation of client effects from recording over two interviews. He concluded that: (a) recording

does appear to affect clients; (b) the effect depends partly upon the client's problem type (those with personal problems, when videotaped, were inhibited in self-exploration and experienced less satisfaction with counseling) and those with educational or vocational problems, when taped in either manner (were inhibited in self-exploration but experienced no reduction in satisfaction with counseling); and (c) the effects of recording did not decrease or dissipate during the second interview.

Tanney and Gelso (1972) did a follow-up study of Gelso's (1972) earlier work. They found that nonrecorded clients found the counseling interview most stimulating and that recorded clients found it least stimulating. Videotaped clients found that type of recording to be the most unrewarding. Counselors' ratings reflected an almost opposite pattern. They perceived clients counseled under video recording as being more stimulated. The researchers cautioned against using testimonials by counselors as support for the positive effects of recording methods or the absence of adverse effects.

The technique of videotaping has varied limits of appreciation. It can be a helpful tool in the analysis of counseling interactions. It may also be an inhibiting factor in a variety of interview settings that call for personal disclosure. It appears to be most useful as a training aid and, as Duncan (1982) warns, should be considered as a possible, potential confounding variable in the study of counseling interactions. In the present study the interviewees were well aware that they were being videotaped, having been required to previously sign an informed consent form that specifically mentioned videotaping. If it had an impact on the results, the impact should have been the same for each recording.

Summary

Chapter II has presented a discussion of selected literature related to the areas studied in this investigation. Nonverbal behavior and its importance in counseling was discussed. Violent behavior and its impact upon counseling and other mental health settings was reviewed. Finally, a discussion of videotaped analysis of counseling interactions was presented.

CHAPTER III

DESIGN OF THE STUDY

Introduction

The literature in Chapter II examined the areas of nonverbal behavior, FIR0-B scores, violence, and videotape analysis in the assessment of counseling interactions in an interview setting. Chapter III will provide the details of the research methodology used in the present study. Areas will include the statement of the problem, research questions, procedure, selection of participants and instruments, selection and training of interviewers and judges, collection of data, statistical treatment of data, and the summary.

Statement of the Problem

The problem under current investigation was: What is the relationship between nonverbal behavior, selected interpersonal relations scores, and aggressive behavior.

Research Questions

The following questions were used to accomplish the stated purpose of this study:

1. What was the relation between nonverbal behavior, as measured by a modification of Island's (1967) categories, and adolescent violence?
2. What was the relationship between interpersonal relationship

preference, as measured by the Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) subscale scores, and adolescent violence?

3. What frequencies of nonverbal behavior related to the FIRO-B subscale of Inclusion-Wanted?

4. What frequencies of nonverbal behavior related to the FIRO-B subscale of Inclusion-Expressed?

5. What frequencies of nonverbal behavior related to the FIRO-B subscale of Control-Wanted?

6. What frequencies of nonverbal behavior related to the FIRO-B subscale of Control-Expressed?

7. What frequencies of nonverbal behavior related to the FIRO-B subscale of Affection-Wanted?

8. What frequencies of nonverbal behavior related to the FIRO-B subscale of Affection-Expressed?

Procedure

Sixty subjects were administered the FIRO-B test. These subjects had all volunteered to take part in a research project that would hopefully improve the general knowledge of the counseling relationship. They were told that the project would include a half hour videotaped interview. Thirty of the subjects were high school students from the same journalism class. They had been teacher-selected for the project on the basis of their cooperativeness and easy-going manner. The other 30 subjects were residents of a maximum security treatment facility for violent adolescents located a very short distance from the town in which the high school students lived. All 60 of the subjects ranged in age from 15.0 to 17.11 years. Fifteen adolescents were selected at random

from the two pools of 30 student and resident subjects. In both randomly selected groups there were six girls and nine boys. All children had been required to sign informed consent forms. In the case of the juvenile facility subjects, their forms were co-signed by the resident student defender. In the case of the high school student volunteers, the informed consent forms were co-signed by their parents.

The process of having informed consent forms co-signed was the last in a long series of special permission procedures that were followed for this study. First, permission to do the study had to be secured from the superintendent of the treatment facility which housed the more violent adolescents. Next, the state chief psychologist for the Department of Human Services submitted a written proposal to do the research to a Department of Human Services human subjects research committee. Once the proposal was approved by that committee, the proposal was then approved by the chief psychologist and sent to the office of the deputy director of the Department of Human Services who approved it and sent it to the Office of the director of the Department of Human Services. Once the director had given approval for the research project, several conditions had been outlined before the project could be undertaken: (1) no names of the subjects could be used in the final publication of the resulting data; (2) no subject would take part in the study without having signed an informed consent form that had been co-signed by the resident student defender (a paid state employee responsible for the human and civil rights of the children in institutional care of the Department of Human Services); (3) no videotaped material involving the voice or appearance of any youth from the institution's custody would be allowed to leave the campus of the institution without being erased first; (4) interviewers

of the subjects would have to be employees of the institution to further protect the anonymity of the subjects; (5) judges of the videotapes would have to be persons who were professionally involved with the youth, as well, for the same reason of protection of identity; and (6) the exact location of the treatment facility could not be mentioned in any of the material written about the study. The Department of Human Services also required a copy of the research data once the project was completed. This process is necessary to insure that safeguards be taken to protect the identities of children for whom the Department of Human Services is responsible, and to insure that their individual human rights and safety are strictly maintained for each child. A similar but much less involved process was completed with the other children who took part in the study. Each child was asked to have his or her parent sign an informed consent form along with the child. A copy of the form, which was identical for both groups of youth, is included as Appendix C to this study. The length of time required to get the appropriate permission to proceed from this point was approximately six months.

The separation of the youth into two separate groups was done on the basis of residence. The residential location of the more violent youth was at the direction of the Oklahoma juvenile court system. The physically assaultive behavior each of these youth had displayed had continued into institutional settings. This physically assaultive behavior had also continued into the maximum security facility in which they resided at the time of the videotaping that was done for this current study. Their pre-institutional histories had included behavior that ranged from sexual assault to murder. These youth had been placed at the current facility on the basis of three other factors beyond the initial, violent,

index crime: (1) they had each been determined to be "delinquent" by the Oklahoma juvenile court system; (2) their behavior was so violently assaultive against persons at other institutions that they had to be moved to restore peace and order; and (3) they had not been determined suitable for a less structured treatment facility. Thus, this particular population was selected on the basis of its level of violent histories. It was theorized that such a population would best reflect non-verbal behaviors that could distinguish itself from another on such a basis. This particular aspect of the research project will be discussed in a later section on subject selection.

Once the subjects had been selected for the interview phase of the project, they were scheduled to meet with a trained, volunteer interviewer. The interviewer was instructed in a prepared format that is presented as Appendix A in this study. The first topic of discussion for each interview was an interpretation that had been printed of the tabulated FIR0-B responses provided by the interviewee. The interviews were to be conducted in an informal manner. They were to be directed, with the help of the prepared format, by the interviewer. The interviewer was instructed to remember that each interview was to be a one-time experience, and that therapy, per se, was not to be the goal of the session. Interviewers were required to sign an informed consent form and to sign a pledge that they would keep the identities of the interviewees in strict confidence. The content of the interview discussions was kept in confidence, as well. Only the interviewee was videotaped. The interviewer sat just off camera in a chair identical to the one in which the interviewee was seated. Once the interviewer and interviewee were seated, the camera was turned on and the interview began. When the

interviewer perceived that he or she had completed the course of the prepared format for the interview, the interviewee was asked if he or she had any questions. At the conclusion of any questions, the videotaping equipment was turned off and the interview had been terminated.

Each interviewee was told that results of the project would be shared with all interviewees at a time shortly following their final tabulation. Questions that were asked about the study had to do with the confidentiality of the study and the way in which the data were to be used.

The interviews were conducted in two different offices. One office was for the residential youth of the treatment facility. It was necessary for the videotaping to take place on the campus due to legal problems and safety factors involved in transporting the youth. The town residing high school youth could not be videotaped in the same office due to other legal restraints and safety factors. An alternative office for the videotaping had to be found for the high school youth. This became necessary primarily due to the fact that their safety could not be absolutely guaranteed on the campus of the treatment facility. The office which was selected for the videotaping was an office space in a private counseling practice which was located in the town in which the high school students lived. Figure 1 shows a diagram of how the office at the institution was laid out. Figure 2 shows how the office at the private practice office was laid out for the purposes of the videotaping.

The major difference in the offices used was the location of the video equipment. In both cases the youth were aware they were being videotaped. The first words spoken to them in the welcome portion of the interview format had to do with the fact that they were currently being video and audio taped. However, in both cases all that the interviewees

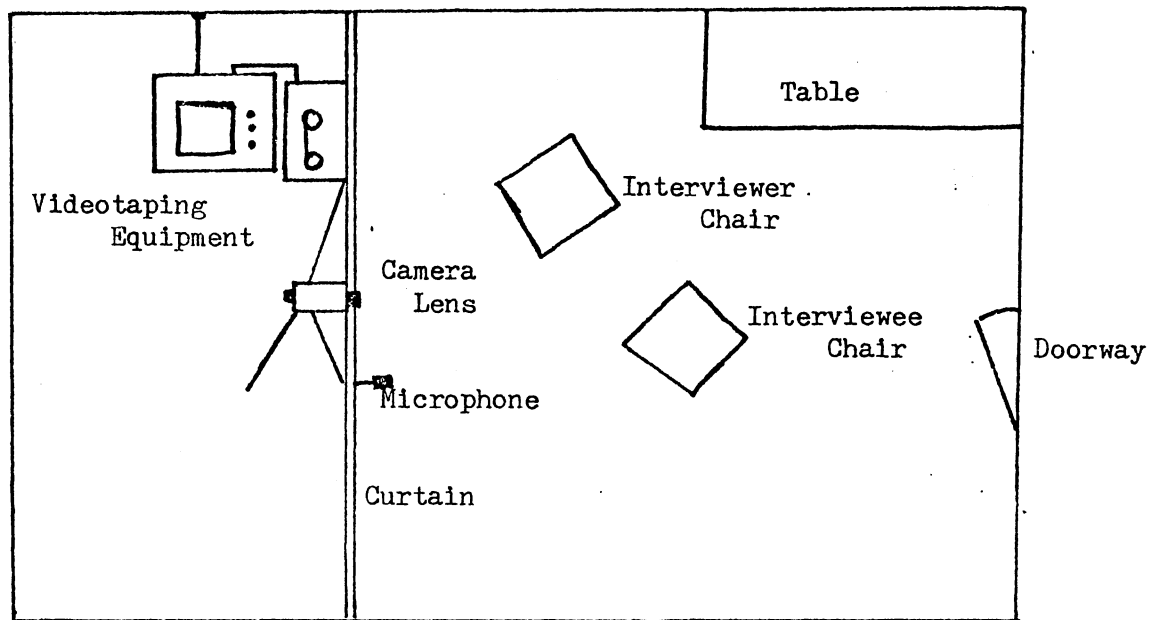


Figure 1. Layout of the Office Used for Videotaping in the Institutional Setting

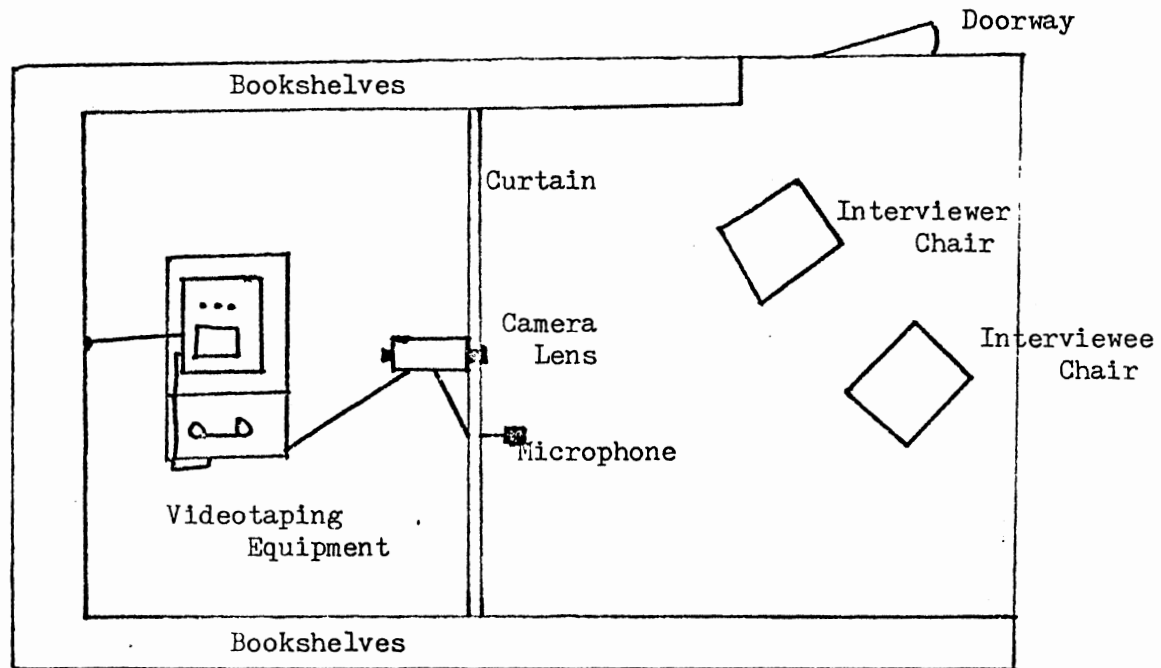


Figure 2. Layout of the Office Used for Videotaping in the Private Practice Setting

were able to see of the video equipment was the eye of the camera lens as it poked out in front of a blue curtain. It was hoped that by making the video equipment as inconspicuous as possible, the mechanics of videotaping would be less obtrusive. A sound microphone was visible to all interviewees. The interviewers were located off the view of the video camera. The largest image of the interviewees was videotaped in order to make the judging of nonverbal behavior somewhat easier. The focus of the lens on the video camera was set so that the interviewee was pictured, seated, from head to toe.

These videotaped interviews were then observed for the tabulation of nonverbal behaviors of the interviewees by one of two teams of trained judges. The judges were trained for their task with the aid of the manual for judges provided in Appendix B to this study. Each judge was assigned specific nonverbal behaviors. A fourth person was utilized as a time keeper. For every tape the time keeper simply made a loud rapping noise on a table top in order to let the scorers of timed data know when each five-second interval had elapsed. The time keeper used a Seiko brand quartz stop watch for the task. Figure 3 shows the structure of the videotaped judging sessions. Quantities of the assigned nonverbal behaviors were tallied with pencil tic marks. At the end of the videotape review, the tic marks were added together and for each category were noted on the tally sheet. The three tally sheets were stapled together with the proper identifying mark at the top of each tally sheet.

The final tabulations of the results in preparation for entering the data on computer cards for the statistical analysis were placed on group-specific master tally sheets. The data for each group are presented in two diagrams in Appendix D.

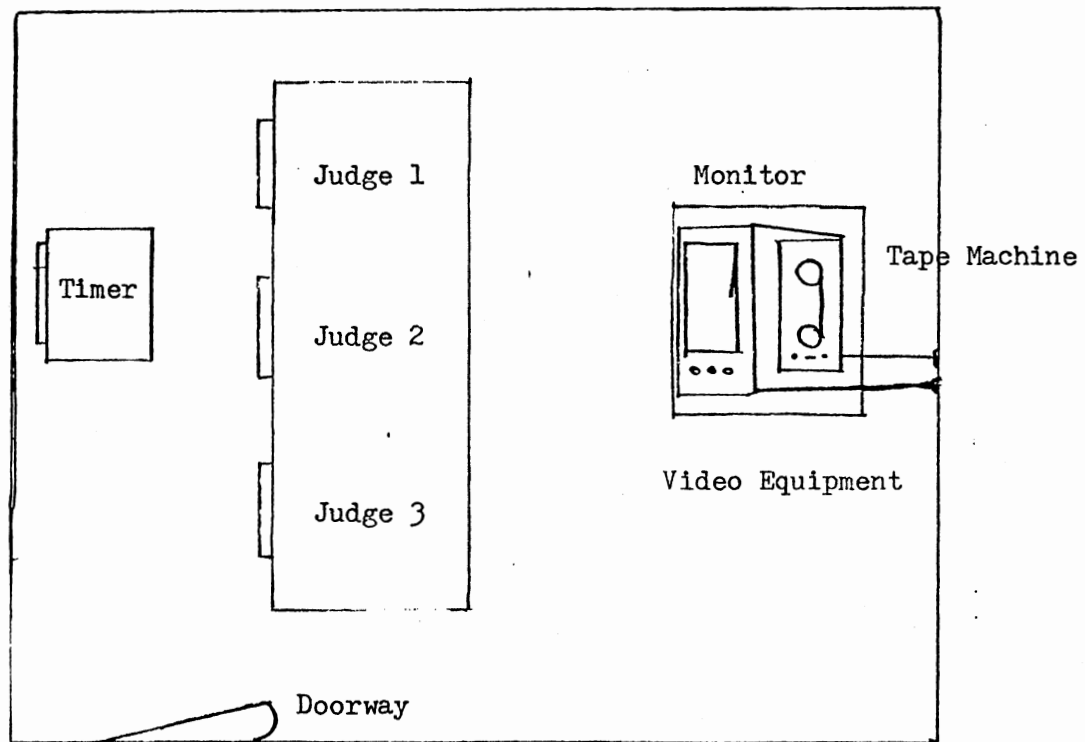


Figure 3. Physical Layout of the Videotape Judging Office
(Videotape Machine Used was a Black and White
Reel-to-Reel)

Selection of Participants

The participants in this study were selected at random from two different pools of 30 volunteers. One group of volunteers were residents of a maximum security juvenile treatment facility in Oklahoma. These persons were both male and female and were between the ages of 15.0 and 17.11. The institution was selected to solicit the volunteers for the pool on the basis of the kinds of residents, based on their history, it housed. The criteria used for placement of an adolescent in this facility have to do with a violent physically assaultive history against other persons. The intention of the study was to discriminate between people on the basis of their responses to FIRO-B questions and NVB in an interview setting in contrast to their histories of violence. Therefore, it appeared necessary to develop a set of subjects who would most likely qualify as "violent." The other group of subjects were teacher-selected volunteers from a neighboring community high school journalism class. The students were selected by the teacher on the basis of their cooperativeness and apparent non-violent histories and manners. From the two groups of 30, 15 members for each group were selected using a table of random numbers. Using this system, six girls and nine boys were selected from each group. It was coincident that the sex ratio in each group was the same. The high school group was perceived as the control group for the dependent variable of violence. It was hypothesized that they would be less physically assaultive than the other group membership.

Each person in both groups of 15 subjects was required to sign an informed consent form which was witnessed by someone responsible for them in a guardian capacity. In the case of the high school students it was a

parent. In the case of the institutional residents it was the campus student defender. The individuals were told that they were going to be videotaped as they were interviewed by someone who would have seen an interpretation of their FIRO-B subscale scores. The FIRO-B had been administered shortly after the random selection of the two groups of interviewees.

Selection of Interviewers

The Department of Human Services, which provided the care for the adolescents used in the noncontrol group of the study, insisted that all efforts be used to maintain the secret identities of those youth who took part in the study. One of the requirements placed upon the use of the institution from which their adolescent subjects were selected was that they would be interviewed by persons with whom they were familiar. It was therefore hoped that no non-state-employee would be aware of exactly which youth had participated in the study. The interviewers were professional staff from the institution. They were psychologists and social workers who had been trained in the use of the format as provided in Appendix F of this study. They were selected on the basis of having volunteered to take part in the project. They were assigned particular interviewees on a random basis.

Selection of Judges

No videotapes were allowed to leave the institutional grounds of the institutions which allowed the use of the treatment residents. On this basis it was also necessary to recruit judges who worked at the facility. Another factor that made this necessary was a requirement

that the videotapes not be viewed by non-employees. Seven persons volunteered to take part in the project in the capacity of judge. Six of the volunteers composed the two teams of three NVB judges that were used. The seventh person was the time keeper for the judging of all tapes. The judges were trained using the manual for judges that is provided in Appendix B. An interjudge reliability was established at .91 before judging.

Selection of Instruments

The Fundamental Interpersonal Relations

Orientation-Behavior (FIR0-B)

This study undertook to determine any implicit association of violent aggression to any FIR0-B scale. The FIR0-B scales measure a person's characteristic behavior toward others. The three areas it is designed to examine are: (1) Inclusion, (2) Control, and (3) Affection. The three subscales are abbreviated: Inclusion--I; Control--C; and Affection--A. Each of these three subscales is further divided into two additional subscales each: (1) Expressed, abbreviated E, and (2) Wanted, abbreviated W. Not only is the instrument designed to measure individual characteristics, but also to assess interpersonal characteristics such as compatibility. The reliability coefficient for the FIR0-B is .94. The mean coefficient of stability for the FIR0-B is .76. The FIR0-B scale is used widely in research as well as by marriage counselors, family counselors, and thousands of others involved in the counseling relationship. The reliability coefficient for the various subscales is as follows: for subscale I-E, .94; for subscale I-W, .94; for subscale C-E, .93; for subscale C-W, .94; for subscale A-E, .94; and for subscale A-W, .94 (Schutz, 1960).

The three dimensions of the FIRO-B (I, C, and A) measure different aspects of personality. The I-scale examines a person's feelings about being included with others. The E subscale implies how one chooses to include others. The W subscale implies how one wishes to be included by others. The C-scale examines a person's willingness to control or be controlled. The E subscale implies a person's willingness to control others. The W subscale implies a person's willingness to be controlled by others. The A-scale measures one's feelings related to affection. It examines how a person feels about his or her need to love or be loved. The E subscale infers how one feels about others, and the W subscale infers how he or she wishes to be loved by others. The higher the subscale number, between 0 and 9, the more one is said to feel.

The FIRO-B was developed in 1957 by William C. Schutz. The subscales are useful for lending validity to investigations of nonverbal behaviors correlated with feelings. The instrument used in the current research seemed to show particular sensitivity to the topic of violence in three subscales: (1) Affection-Wanted, (2) Inclusion-Expressed, and (3) Control-Wanted.

Island's (1967) Taxonomy of Nonverbal Behavior

• The judges used in this study were schooled in a modification of Island's (1967) Taxonomy of Nonverbal Behavior. Prichard and Seals (1973) modified the taxonomy to make it more meaningful in working with videotaped data. The taxonomy is presented in the judge's training manual which is found in Appendix B. An interjudge reliability of .70 was the initial goal of the pre-videotape judging process. A training tape was used in the process of insuring interjudge reliability. The interjudge

reliability, agreement in how the judges scored the NVB, remained quite high throughout the study. It was measured twice during the project with a .91 and a .92 reliability coefficient being taken at the two measurements.

Collection of Data

Thirty interviews were videotaped for this project. Fifteen of them were taped in the office of a residence cottage at the resident treatment facility. The other fifteen videotapes were filmed at the office of a psychologist in private practice in the town which housed the high school students used in the study. The two offices were very similar in physical design. A curtain separated the interview dyads from the videotape equipment. A microphone was fully visible during the filming, as was the video camera lens. The primary importance of the audio microphone was so that three NVB's could be measured more accurately: (1) Talk--Momentary, (2) Talk--Longlasting, and (3) Talk Shift. When both interviewer and interviewee were seated, the videotape machine was turned on and they were instructed to begin.

A format was provided for the interviewer, who was in charge of directing the interview. There was no time limit set for the interviews, but it was planned that the interview would go for at least 30 minutes and not over one hour. The expectation of time length of interviews was overestimated. Most interviews lasted from 29.8 to 31.1 minutes. When the interview was completed, the interviewer verbally thanked the interviewee for his or her participation in the project and the videotape machine was turned off.

The removal of data from the tapes was accomplished by assigning the various videotapes to the judges on a random basis. The scheduling of the judging around the schedules of teams of three people was somewhat of a research problem. Whenever it was possible to get the teams together, three tapes were judged. On each team the members specialized in particular nonverbal behaviors. A time keeper who sat behind the judges, so that he would not interfere with the viewing of the monitor screen, made a rapping noise every five seconds for the purpose of facilitating the timed nonverbal behaviors' scoring. An example of the NVB tally sheet is illustrated in Appendix E. Data were extracted from these score cards and, along with FIRO-B scores, were included on Master Tally Sheets like those presented in Appendix D.

Statistical Treatment

The relationship of the frequencies of judges' scoring of training videotape was made with the aid of Scott's correlation coefficient (Amedon and Hough, 1967). This particular method of measuring interjudge reliability was chosen due to its ability to work well with high and low frequencies resulting from small N sizes. Since there were three judges on each team, an expanded formula of Scott's "Pi" developed by Enger (1976) was required in this study. This formula related the amount of observed agreement compared with the amount of expected agreement by chance, divided by the amount that perfect agreement exceeds chance.

The specific formula used for computing interjudge agreement in this study was:

$$\pi = \frac{\frac{\sum_{j=1}^c \sum_{k=1}^s f \cdot j k^2 - r s}{r(r-1)s} - \frac{\sum_{j=1}^c f \cdot j \cdot 2}{(rs)^2}}{1 - \frac{\sum_{j=1}^c f \cdot j \cdot 2}{(rs)^2}}$$

where

$i = 1, 2, \dots$, number (r);

$j = 1, 2, \dots$, number (c);

$k = 1, 2, \dots$, number (s);

r = number of judges;

c = number of possible categories;

s = number of categories rated; and

$f_{ijk} = 1$ if object k was classified in category j by judge i .

The data gathered by the judges from the videotape and the FIRO-B scores were tallied and entered into a computer programmed for discriminant multiple regression analysis. Use was made of a specific technique called RAO's V , which maximizes significant differences in small N groups. Results of the analysis are discussed in Chapter IV.

Summary

This chapter discussed the research design and methodology of the present study. Attention was given to a statement of the problem, research questions, procedure, selection of participants, selection of interviewers, training of interviewers, selection and training of judges, selection of instruments, data collection procedures, and methods of statistical analysis.

CHAPTER IV

RESULTS OF THE STUDY

Introduction

The procedures for analysis of the data were discussed in Chapter III. In this chapter the results will be presented in tables and discussed in relation to the research question.

In discussing interviewee nonverbal behavior, it was necessary to first determine reliability of the judges in tabulating the data from the videotapes. Should the interjudge reliability be low, a question would arise as to whether the judges' decisions were based on the same criteria.

Following a discussion of interjudge reliability, the question of interrelationship of violence and FIRO-B scores and nonverbal behaviors will be addressed in regard to the results of data analysis. Finally, a summary of the results will be presented.

Nonverbal Behavior Determination

Judge agreement among the two teams of three judges was determined from a training tape using Scott's "Pi" correlation coefficient. Interjudge agreement is reported in Table I. The correlations ranged from .90 to 1.00 on the different 15 nonverbal behaviors. The measurement was taken twice. One measure was taken as a part of the pre-judge training exercise. The other was conducted after the judging of the sixteenth

videotape. Judges 1 and 4 judged the same nonverbal behaviors. They judged nonverbal behaviors (NV's) as follows: NV 1, Head Movements; NV 4, Lower Face Movements; NV 5, Smile; and NV 6, Upper Face Movements. The other two sets of judges also viewed the same nonverbal behaviors. Judges 2 and 5 tallied the quantities of: NV 7, Hand Movements; NV 8, Arm Movements; NV 2, Head Support; and after the taping judgments, NV 3, Head Support Shift. The final nonverbal behaviors were judged by judges 3 and 6.

TABLE I
JUDGE AGREEMENT ON NONVERBAL BEHAVIORS

Judges		Nonverbal Behaviors							
1&4	Trial 1	NV 1		NV 4		NV 5		NV 6	
	Trial 2	.90		.92		.94		.92	
	Trial 1	1.00		1.00		1.00		.91	
2&5	Trial 1	NV 7		NV 8		NV 2		NV 3	
	Trial 2	.90		.95		.93		.91	
	Trial 1	.98		.96		1.00		1.00	
3&6	Trial 1	NV 9	NV 10	NV 11	NV 12	NV 13	NV 14	NV 15	
	Trial 2	.96	.98	.97	.90	.91	.90	.90	
	Trial 1	1.00	1.00	1.00	.96	.92	.91	.91	

Project Data Analysis

Two multiple regression analyses were performed on the data that were collected in this study. In both cases the data were composed of group membership, individual person number, FIRO-B subscale scores, and

quantitative scores of nonverbal behavior. An analysis of the data yielded the information presented in Table II.

TABLE II
MULTIPLE REGRESSION ANALYSIS OF NVB AND FIRO-B
SUBSCALE SCORES STEPWISE ANALYSIS

Var. No.	Description	R ²	F
NV 14	Talk Longlasting	0.567	36.7
FB 06	Affection Wanted	0.802	54.7
NV 11	Body Position Back	0.867	56.5
NV 07	Hand Movements	0.895	53.1
FB 01	Inclusion Expressed	0.921	56.2
NV 05	Smile	0.928	49.6
NV 04	Lower Face	0.934	44.7
FB 04	Control Wanted	0.947	46.8
NV 08	Arm Movements	0.950	42.4
NV 13	Talk Momentary	0.953	38.5
FB 05	Affection Expressed	0.954	34.2
NV 10	Body Position Up	0.957	31.6
FB 02	Inclusion Wanted	0.959	28.6
FB 03	Control Expressed	0.959	25.3
NV 12	Body Position Shift	0.960	22.4

From the analysis presented in Table II, it is apparent that the first ten variables accounted for the most variations. The line separating NV 13 from FB 05 indicates the separation of the most important variables in the study from the least important ones. The analysis further indicates that the first variable, NV 14--Talk Longlasting, accounted for 56.7 percent of the total difference in the two groups of subjects. If one were to look at the first six variables, variables NV 14, FB 06, NV 11, NV 07, FB 01, and NV 05, one could account for 92.8 percent of

the difference in the two groups of adolescents. The next four variables only account for another 2.5 percent of the difference between groups, and their inclusion in further research might, therefore, be of questionable value.

Analysis determined that at the .005 level there is significance of the first 10 variables outlined in Table IV, as well as the order of entry of the 10 variables. The question of the ability to discriminate between two groups of data for the purpose of separation of persons into groups remained.

The question to be addressed by the discriminate analysis was: what equation would be devised to differentiate subjects into their appropriate group? In other words, could the variables found significant be useful in discerning one's likely membership in Group 0 or Group 1? If an affirmative answer were to result, then exactly what would the proposed equation look like?

Table III is a presentation of a histogram of the individual discriminant scores determined by the analysis. There is no overlap of group membership in the analysis of the data. In this study the subjects whose scores are clustered around the centroid of -4.34602 are members of Group 1, the violent group. Those who scored closer to the centroid of $+4.34602$ are all members of the other group, the nonviolent group. The concept of "centroid" suggests group central tendency. The cluster of individual scores in both groups suggested within group homogeneity of responses on the FIRO-B tests and in nonverbal behavior performances during the 30-minute videotaped interviews.

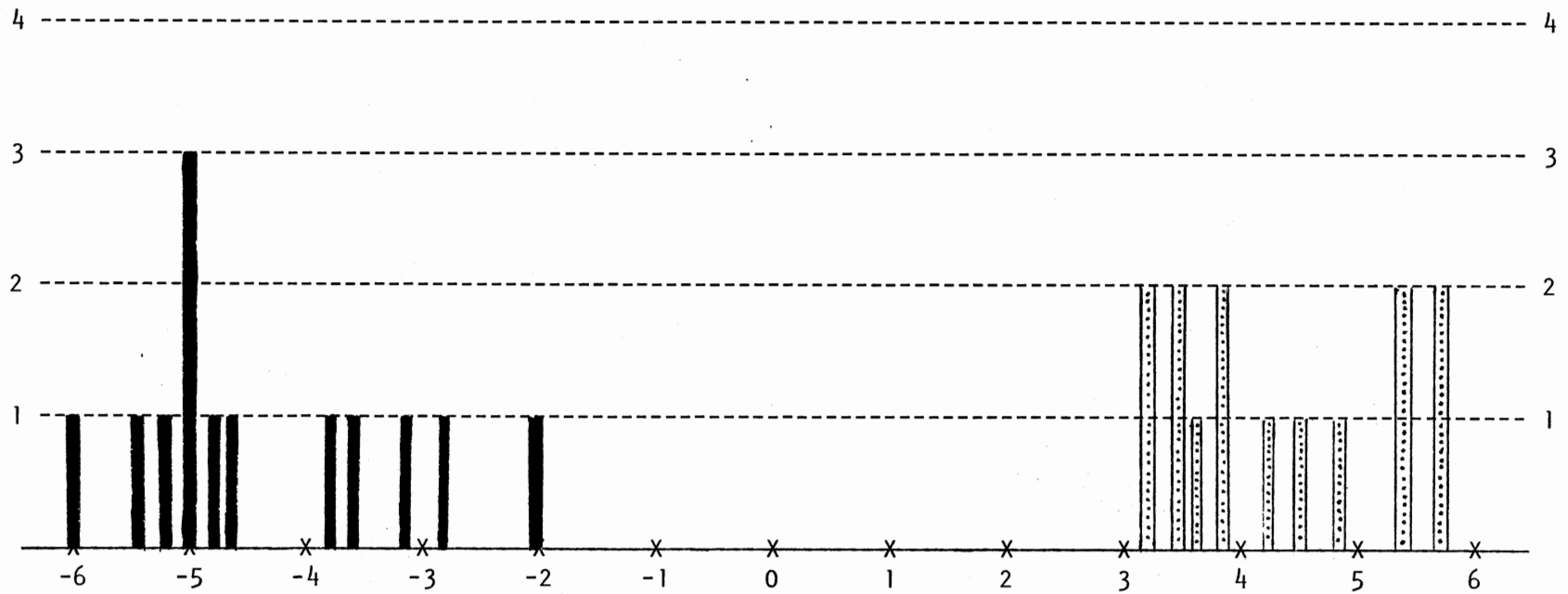
Each of the variables used in the study was analyzed individually to determine the Group 0 and Group 1 group means and the total group

TABLE III

HISTOGRAM OF GROUP SCORES BY INDIVIDUALS

Solid Black Bar Columns: Group 1 (Violent Group Membership)
 Grey Bar Columns: Group 0 (Nonviolent Group Membership)

Frequencies



Group 1
 Centroids: (-4.34602)

Group 0
 Centroids: (4.34602)

means for each variable. Table IV represents a presentation of that information. The following explanation of the variable abbreviations in Table IV is as follows:

FB 01: FIRO-B Inclusion/Expressed Subscale

FB 02: FIRO-B Inclusion/Wanted Subscale

FB 03: FIRO-B Control/Expressed Subscale

FB 04: FIRO-B Control/Wanted Subscale

FB 05: FIRO-B Affection/Expressed Subscale

FB 06: FIRO-B Affection/Wanted Subscale

NV 01: Head Movements

NV 02: Head Support

NV 03: Head Support Shift

NV 04: Lower Face Movements

NV 05: Smile

NV 06: Upper Face Movements

NV 07: Hand Movements

NV 08: Arm Movements

NV 09: Body Position Forward

NV 10: Body Position Upright

NV 11: Body Position Back

NV 12: Body Position Shift

NV 13: Talk Momentary

NV 14: Talk Longlasting

NV 15: Talk Shift.

The same variable abbreviations are used in Table V, which is a presentation of the group standard deviations. They are presented by group: (0) Nonviolent Group, and (1) Violent Group.

TABLE IV
 GROUP MEANS OF INDIVIDUAL GROUPS AND GRAND MEANS
 FOR BOTH GROUPS BY VARIABLES

Groups	Variables			
	FB 01	FB 02	FB 03	FB 04
0	5.13333	4.06667	2.06667	3.86667
1	2.86667	2.33333	3.60000	2.13333
Total	4.00000	3.20000	2.83333	3.00000
	FB 05	FB 06	NV 01	NV 02
0	3.53333	5.80000	83.73333	2.26667
1	2.53333	2.40000	84.33333	0.53333
Total	3.03333	4.10000	84.03333	1.40000
	NV 03	NV 04	NV 05	NV 06
0	3.80000	51.46667	55.13333	23.20000
1	0.33333	42.73333	10.33333	24.06667
Total	2.06667	47.10000	32.73333	23.63333
	NV 07	NV 08	NV 09	NV 10
0	87.20000	41.53333	30.33333	327.00000
1	96.06667	83.06667	61.33333	134.60000
Total	91.63333	62.30000	45.83333	230.80000
	NV 11	NV 12	NV 13	NV 14
0	2.66667	2.13333	30.06667	40.46667
1	141.80000	10.80000	65.66667	19.33333
Total	72.23333	6.46667	47.86667	29.90000
	NV 15			
0	13.33333			
1	8.86667			
Total	11.10000			

TABLE V
 GROUP STANDARD DEVIATIONS OF INDIVIDUAL GROUPS
 AND COMBINED GROUP STANDARD DEVIATIONS

Groups	Variables				
	FB 01 ^a	FB 02	FB 03	FB 04	FB 05
0	1.59762	3.49421	2.12020	2.94877	2.38647
1	2.09989	3.01583	2.77231	2.64215	2.36647
Total	2.16556	3.32597	2.54725	2.88874	2.39947
	FB 06	NV 01	NV 02	NV 03	NV 04
0	2.00713	25.91598	5.02091	8.97775	29.86605
1	1.95667	28.19237	1.45733	0.89974	26.21196
Total	2.60437	26.60890	3.73797	6.51223	27.96469
	NV 05	NV 06	NV 07	NV 08	NV 09
0	30.54941	19.22127	35.12061	44.12946	81.07110
1	13.17826	18.70625	39.21091	29.63701	113.82924
Total	32.45680	18.64086	36.85150	42.54746	98.36985
	NV 10	NV 11	NV 12	NV 13	NV 14
0	81.03086	7.99702	3.71996	22.05016	12.51209
1	114.18081	129.99352	15.52509	42.44268	5.10835
Total	137.97536	114.86985	11.93584	37.84336	14.27163
	NV 15				
0	7.55614				
1	3.31375				
Total	6.16637				

^aDefinitions of variable abbreviations are found on page 46.

Ten variables were selected by the analysis as those which significantly delineated one group of scores from the other. They were the same ten variables as had been determined to be significant in the first analysis. The discriminant analysis selected the variables to use in stepwise fashion. Those which were more discriminating of the differences in the two groups were selected first. The last 11 variables were not selected by the computer on the basis of their inability to significantly contribute to the distinction between the two groups of subjects.

The Standardized Discriminant Function Coefficient

The standardized discriminant function coefficient is used to compute the discriminant score for a case in which the original discriminating variables are in standard form (Z scores). The ten variables selected for the study were selected on the basis of their F to enter values in the discriminatory process. The procedure calls for a variable to have a partial F of at least 1.0 in order for it to be selected for inclusion in the analysis. Only the first ten variables were noted to have had a partial F of greater than 1.0 in their orderly selection for the discriminant analysis.

The standardized discriminant function coefficients are of great analytic importance in and of themselves. The sign (plus or minus) may be ignored in the interpretation of the coefficient. Each coefficient represents the relative contribution of its associated variable to that function. The sign merely denotes whether the variable is making a positive or negative contribution. The interpretation is analogous to the interpretation of beta weights in multiple regression. Thus, in

comparing two variables as FB 04, with a coefficient of 0.56534, and variable NV 07, with a coefficient of -1.01571, one would interpret NV 07 as being about twice as important as FB 04 in that function (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975). The standardized discriminant function coefficients for the ten variables determined to be significant in this study are presented in Table VI.

The standardized discriminant function coefficients may be used to determine an individual's likely group membership proximity. The process itself is quite laborious, but in some cases it might be of value. First one would wish to convert each raw score of corresponding interest to a Z-score. One would subtract the group mean from the raw score, divide it by the standard deviation of the group, and have the Z-score for that particular variable. This number would then be multiplied times the coefficient and the resulting number would be set aside to be added to all other such derived Z-scores. The resulting summation of all Z-scores multiplied the corresponding coefficients, produces a standardized coefficient with a mean of 0 and a standard deviation of 1. Thus, if an individual group member had a summated score in the above formula of .09347, he or she would fall very nearly on the mean and be a likely group member. One whose score was 3.45601 would have less than a .05 percent chance of being a likely group member. This is a within group procedure and since discriminating variables are not normally coded in standard form, the standardized discriminant function coefficients may not be very useful for computational purposes.

TABLE VI
STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS

Variable	Coefficient ^a
FB 01 (<u>FIRO-B</u> : Inclusion/Expressed)	0.76261 ^b
FB 04 (<u>FIRO-B</u> : Control/Wanted)	0.56534
FB 06 (<u>FIRO-B</u> : Affection/Wanted)	1.02574
NV 04 (Nonverbal Behavior: Lower Face Movements)	-0.81252
NV 05 (Nonverbal Behavior: Smile)	0.98837
NV 07 (Nonverbal Behavior: Hand Movements)	-1.01571
NV 08 (Nonverbal Behavior: Arm Movements)	0.41240
NV 11 (Nonverbal Behavior: Body Position Back)	-0.74955
NV 13 (Nonverbal Behavior: Talk/Momentary)	-0.30268
NV 14 (Nonverbal Behavior: Talk/Longlasting)	1.26121

^aStandardized on Z-score values for computation.

^bA negative notation (-) indicates violent group preference; a positive notation (+) indicates nonviolent group preference.

The Discriminant Functions Evaluated
at Group Means

The unstandardized discriminant function coefficients may be used to determine more readily whether a particular subject is a member of one or the other group. They are presented in Table VII. In this formula the coefficient is multiplied directly against the raw score of corresponding variables. The resulting products are summed and then summated with a constant. Group centroids are already determined; in this study they were determined to be +4.34602 for the Nonviolent Group (0), and -4.34602 for the Violent Group (1). If the resulting number from the equation were to be closer to the corresponding centroid for the particular group of comparison, the subject would be likely to hold membership in that group. This identification of group membership is one of the most powerful functions of discriminant analysis. By classifying the cases used to derive the functions in the first place and comparing predicted group membership with actual group membership, one can empirically measure the success in discrimination by observing the proportion of correct classification (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975). The predicted group membership in the current study was achieved through the use of the included variables in all 30 cases. All cases were appropriately discriminated into their predicted groups.

Summary

This chapter has presented the results in tables and discussed their relationship to the research questions. It has also discussed some of the possible reasons for these results. Chapter V will present

TABLE VII
UNSTANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS

Variable	Coefficient
FB 01 (<u>FIRO-B</u> : Inclusion/Expressed)	0.4087440
FB 04 (<u>FIRO-B</u> : Control/Wanted)	0.2019326
FB 06 (<u>FIRO-B</u> : Affection/Wanted)	0.5175127
NV 04 (Nonverbal Behavior: Lower Face Movements)	-0.2891677D-01
NV 05 (Nonverbal Behavior: Smile)	0.4201213D-01
NV 07 (Nonverbal Behavior: Hand Movements)	-0.2728778D-01
NV 08 (Nonverbal Behavior: Arm Movements)	0.1097143D-01
NV 11 (Nonverbal Behavior: Body Position Back)	-0.8139072D-02
NV 13 (Nonverbal Behavior: Talk/Momentary)	-0.8949652D-02
NV 14 (Nonverbal Behavior: Talk/Longlasting)	0.1319765

Constant: -5.488638.

a general summary of this investigation, the conclusions drawn, and recommendations for future research.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this investigation was to determine whether there is a relationship between an adolescent's nonverbal behavior, interpersonal relationship preference, and his or her history of violence. Thirty videotapes of initial, one-time interviews were examined for the occurrence of specific nonverbal behaviors. Fifteen categories of nonverbal behaviors were utilized.

The question asked was whether there was such a relationship between an adolescent's past, violent behavior, and his or her FIR0-B scores, and nonverbal behavior demonstrated during the thirty-minute videotaped interviews? The subjects for this study consisted of 30 boys and girls between the ages of 15.0 and 17.11 years. One-half of the adolescents were residents of a maximum security treatment facility in the Oklahoma Department of Human Services' jurisdiction. These youth were selected on the basis of their past violent and physically assaultive histories as well as their current violent tendencies. Primarily they were understood to be violent on the basis that they had physically hurt other people in an intentional manner. They also had maintained a current reputation for fighting and assaulting other residents or even staff members of the treatment site which currently housed them. The other group was selected for its nonviolent tendencies. They were

selected from a group of 30 teacher-selected individuals who had been members of a journalism class in a high school located nearby the juvenile treatment center. These youth were cooperative, leadership-prone individuals who had shown great cooperativeness and compliance with teacher expectations.

The students and residents were randomly assigned to professional staff persons who worked at the treatment facility for the purpose of sharing in a 30-minute interview that was videotaped. The students and residents had previously been administered the FIRO-B test, the subscale scores of which became the basis for the interviews.

Data from the videotaped interviews were extracted by two teams of four judges/observers. Each of the judges/observers had been assigned specific nonverbal behaviors to tally from the videotapes or to quantify from other data after the videotapes had been reviewed. These data and the FIRO-B subscale scores were analyzed for relationship with one's history of relative violence or relative nonviolence.

Conclusions

The variables used in this research project were able to discriminate between the two groups of subjects on the basis of their relative violent or nonviolent histories. The distinction made by the analysis was accurate in every one of the 30 cases studied.

The membership of the nonviolent group tended to display longer lasting talk than the members of the other group. The latter membership provided mostly one word answers or no answers to questions asked them. They seemed, for the most part, to be very careful in their sharing of themselves through the medium of videotaped interviews. When the more

violent youth tended to use long-lasting talk, they were often talking of some way of maintaining distance between themselves and others. An example of this would be relative to a discussion of anger. If one of the high school youth were asked about his or her handling of anger, the youth would likely reply that he or she did not get angry. Often the youth would admit having occasionally gotten "upset," but would generally deny a tendency to get "angry," per se. The more violent youth would often reply with a statement that indicated he or she tended to get even for offenses that were perceived as an excuse to get angry. The responses were often the only long-lasting ones of the interviews. The ways in which the subjects tended to "get even" were generally quite violent.

Regarding F1R0-B subscale scores, a typical member of the nonviolent group was found to be one who wanted affection more than a typical member of the other group. He or she wished to be included more than the other group member in interpersonal activities. He or she was generally far more willing to be a follower than the other youth, who was generally not willing to follow, but was also unwilling, as a rule, to lead.

Relative to the remaining nonverbal behaviors observed, the more violent youth were likely to sit back in their chairs more than the other youth. They were also likely to use more hand and arm gestures than the nonviolent youth. The nonviolent youth tended to have more numbers of lower face movements and smiled many more times than the more violent youth in this study.

The typical nonviolent youth was a person who, during the interview, sat upright in his or her chair, talked easily and freely, smiled often,

and used lower face expressions in far more number than the members of the other group. The typical violent youth tended to sit back in his or her chair, talked little, used many arm and hand movements in contrast to the other group membership, and tended to use few facial expressions or movements at all.

With regard to FIRO-B subscale scores, the nonviolent youth was one who tended to want to be with other people, did not mind being led by them, and generally wanted approval from others. The other youth tended to want to be alone, refused to take or follow leadership, and had little apparent regard for the judgment of others.

In the event that any member in this group were to have his or her FIRO-B subscale scores and demonstrated NVB frequencies compared, a prediction of which subgroup, violent or nonviolent, could be made with 100 percent accuracy.

Recommendations

Of the biggest limitations to this study was the relatively small number of subjects incorporated. The research that may follow this initial inquiry may wish to use more subjects in the study.

Another of the problems encountered in the current study was the selection of a control group, a group that could be considered "nonviolent" for the purpose of contrasting it with the other group whose violence had been rather easy to document and to define. Future studies may wish to determine a more randomly selected control group from the community at large, rather than using the narrowly defined control group such as utilized in this study. The selection of this particular group was intentional, however. It was not known whether one could distinguish

between two groups of persons on the basis of the variables incorporated, and widely different groups were sought to see if such distinction could be determined, if not forced. Since it does seem possible to distinguish groups on the basis of the variables incorporated here in this study, one might wish to answer broader, more important questions. Such questions may relate to specificity and precision in order to determine if any kind of predictive correlation might be forthcoming from later research.

The question of time of interview length was often raised in this study. It was hoped that the interviews would last one hour each. It was very difficult in some cases to get the interviewees to participate in the interview for half that time. The most difficult group to get to stay with the interview were the members of the violent group. They seemed suspicious of the interviewers, if not the entire process itself, far more than the members of the other group. One might assume that part of this suspicion was because of the institutionalized youths' awareness of the interviewers' identities. This was probably of little consequence in the study, since the interviewers were selected from their relatively nonthreatening job classifications before they were asked to volunteer for the project. There were no administrators or security personnel utilized in this study with the institutionalized youth. Also, the youth were assured by the project coordinator and the legal defense for the institutionalized youth, the student defender, that the videotapes, nor information coming from the process, would not be used against them. However, in future studies such a factor might be controlled against, especially in such a politically and legally entangled situational setting. The responsibilities of the representatives of the Department of Human Services appeared awesomely complex as the process of securing permission

to do this project in their institutions wore on. Their thoroughness in considering the proposal before allowing the current study occasionally perplexed the project coordinator, but the need for such a safeguard system was appreciated. The determination to protect the identities of the subjects in their care was professionally and ethically laudable.

A SELECTED BIBLIOGRAPHY

- Achilles, C. M., & French, R. L. (Eds.). Inside classrooms. Knoxville: University of Tennessee Press, 1978.
- Adams, R., & Kirkevold, B. Looking, smiling, laughing, and moving in restaurants: Sex and age differences. Human Sciences Press, 1974, April, 233-256.
- Amendon, E. L., & Hough, J. B. Interaction analysis: Theory, research, and association. New York: Addison-Wesley Publishing Company, 1967.
- Aronson, M. A. A study of the relationship between certain counselor characteristics in client-centered therapy. In W. A. Spencer (Ed.), Group report of a program of research in psychotherapy. University Park: Pennsylvania State University, 1953, 39-54.
- Bandoli, L. R. Leaderless support groups in child protective services. Social Worker, 1977, 22 (2), 150-151.
- Barrak, A., & LaCrosse, M. B. Multidimensional perception of counselor behavior. Journal of Counseling Psychology, 1975, 22, 471-476.
- Barrett-Lennard, G. T. Dimensions of therapist response as causal factors in therapeutic change. Psychological Monographs, XCUI, Whole No. 563, 1962, 34-36.
- Beach, W. A. Personalizing group environments: A conceptual approach toward more effective small group functioning. New York: ERIC Document Reproduction Service No. ED099937, 1974.
- Birdwhistell, R. L. Introduction to kinesics. Louisville: University of Louisville, 1952.
- Birdwhistell, R. L. The language of the body: The natural environment of words. In A. Silverstein (Ed.), Human communication. Hillsdale, N.J.: Halstead Press, 1974.
- Blass, C. D., & Heck, E. J. Selected process variables as a function of client type and cognitive complexity in beginning counselors. Journal of Counseling Psychology, 1978, 25 (4), 257-263.
- Brownlee, J. R., & Bakeman, R. Hitting in toddler-peer interactions. Child Development, 1981, 52 (3), 1076-1079.
- Campbell, P. B. Feminine intellectual decline during adolescence. New York: ERIC Document Reproduction Service No. ED091620, 1974.

- Campbell, P. B. Adolescence intellectual decline. New York: ERIC Document Reproduction Service No. ED087799, 1973.
- Claiborn, C. E. Counselor verbal intervention, nonverbal behavior, and social power. Journal of Counseling Psychology, 1979, 26 (5), 378-383.
- Crosby, F., & Bromley, S. Recent unobtrusive studies of black and white discrimination and prejudice, a literature review. Psychological Bulletin, 1980, 87 (3), 546-563.
- Cottle, W. C. Beginning counseling practicum. New York: Grune and Stratton, 1973.
- Danskin, D. G. Roles played by counselors in their interviews. Journal of Counseling Psychology, 1955, 2, 22-27.
- Darwin, C. The expressions of the emotions in man and animals. New York: Appleton and Co., 1896.
- Davis, S. E. An investigation of client characteristics shown in interview behavior. (Unpublished Ph.D. dissertation, Ohio State University, 1953.)
- Ekman, P. Differential communication of affect by head and body cues. Journal of Personality and Social Psychology, 1965, 2, 726-735.
- Ekman, P., & Friesen, W. V. Nonverbal leakage and clues to deception. Psychiatry, 1969, 32, 88-106.
- Eysenck, H. J., & Eysenck, S. B. G. Manual, Eysenck Personality Questionnaire. San Diego: Educational and Industrial Testing Service, 1975.
- Fedder, R., & Gabaldon, J. No longer deprived. New York: ERIC Document Reproduction Service No. ED041960, 1970.
- Fretz, B. R., Corn, R., & Tuemmler, J. M. Counselor nonverbal behaviors and client evaluations. Journal of Counseling Psychology, 1979, 26 (4), 304-311.
- Friendlander, F. The primacy of trust as a facilitator of further group accomplishment. Journal of Applied Behavioral Science, 1970, 6 (4), 143-157.
- Gay, L. R. Educational research: Competencies for analysis and application. Columbus: Charles E. Merrill Publishing Company, 1976.
- Gelso, Charles. The effect of audio and video recording on clients. Research report No. 2-72. College Park: Counseling Center, University of Maryland, 1972, 1-25.

- Genthner, R. W., & Moughan, J. 'Introverts' and extroverts' responses to nonverbal attending behavior. Journal of Counseling Psychology, 1977, 24 (2), 144-146.
- Ginsburg, H. J. et al. An ethological analysis of nonverbal inhibitors of aggressive behavior in male elementary school children. Developmental Psychology, 1977, 13 (4), 417-418.
- Gitter, A. G. et al. Effects of race, sex, nonverbal communication and verbal communication of perception of leadership. Sociology and Social Research, 1975, 60 (1), 46-57.
- Gladstein, J. Nonverbal communication and counseling/psychotherapy: A review. Journal of Counseling Psychology, 1974, 4 (3), 34-57.
- Gough, H. G., & Heilbrun, A. B. The Adjective Checklist Manual. Palo Alto, Calif.: Consulting Psychologists Press, 1965.
- Graham, J. A., Bitti, P. R., & Argyle, M. A cross-cultural study of the communication of emotion by facial and gestural cues. Journal of Human Movement Studies, 1975, 1, 68-77.
- Groves, J., & Robinson, J. D., II. Proxemic behavior as a function of inconsistent verbal and nonverbal messages. Journal of Counseling Psychology, 1976, 23 (4), 333-338.
- Haase, R. F., & Tepper, D. T. Nonverbal components of empathic communication. Journal of Counseling Psychology, 1972, 19 (5), 417-424.
- Hanna, J. L. Meddlin': Aggression as cultural dissonance in a desegregated school. Paper prepared for annual meeting of American Anthropological Association, November, 1978.
- Harman, R. L. Nonverbal behavior in counseling. The School Counselor, 1971, January, 189-192.
- Harris, T. E., & Smith, R. M. Methods for introducing analysis of conflict theory. New York: ERIC Document Reproduction Service No. ED074542, 1973.
- Hill, C. E., and Gormally, J. Effects of reflection, restatement, probe and nonverbal behaviors on client affect. Journal of Counseling Psychology, 1977, 24 (2), 92-97.
- Hinde, R. A. (Eds.). Non-verbal communication. Cambridge: Cambridge University Press, 1972.
- Hoffman, E. A. An analysis of counselor subroles. Journal of Counseling Psychology, 1959, 6 (1), 61-67.
- Hubble, M. et al. The effect of counselor touch in an initial counseling session. Journal of Counseling Psychology, 1981, 28 (6), 533-535.

- Island, D. D. The development and analysis of categories of nonverbal behavior of counselors in filmed interviews. (Unpublished Ph.D. dissertation, University of Minnesota, 1967.)
- Kehoe, N. Nonverbal communication: male and female perception. Counseling and Values, 1975, 19 (3), 181-185.
- Kerr, B. A., & Dell, D. M. Perceived interviewer expertness and attractiveness: Effects of interviewer behavior and attire and interview setting. Journal of Counseling Psychology, 1976, 23 (6), 553-556.
- LaCrosse, M. B. Nonverbal behavior and perceived counselor attractiveness and persuasiveness. Journal of Counseling Psychology, 1975, 22 (6), 563-566.
- Landsman, T., & Lane, D. Audio-visual media, yes, depersonalization, no. Audio-Visual Instructor, 1963, 8, 128-133.
- Lecomte, C. et al. Counseling interactions as a function of spatial-environmental conditions. Journal of Counseling Psychology, 1981, 28 (6), 536-539.
- Lee, D. Y. L., Halberg, E. T., Hassard, J. H., and Haase, R. F. Client verbal and nonverbal reinforcement of counselor behavior: Its impact on interviewing behavior and postinterview evaluation. Journal of Counseling Psychology, 1979, 26 (3), 204-209.
- Levine, M. H., & Sutton-Smith, B. Effects of age, sex, and task on visual behavior during dyadic interacting. Developmental Psychology, 1973, 9 (3), 400-405.
- Lewis, P. V., & Page, Z. Educational implications of nonverbal communication. ETC, 1974, 31 (4), 371-375.
- Lobato, D. et al. Sensorimotor functioning and prelinguistic communication of severely and profoundly retarded individuals. American Journal of Mental Deficiency, 1981, 85 (5), 489-496.
- Loomis, J. L. Communication, the development of trust, and cooperative behavior. Human Relations, 1959, 12, 305-315.
- Mahl, G. Gestures and body movements in interviews. Research in psychotherapy. Vol. 3. Washington, D.C.: American Psychological Association, 1968.
- Maier, R. A., & Ernest, R. C. Sex differences in the perception of touching. Perceptual and Motor Skills, 1978, 46 (2), 577-578.
- Markel, N. N., Meisels, M., & Houck, J. E. Judging personality from voice quality. Journal of Abnormal and Social Psychology, 1964, 69 (4), 458-463.

- McAllister, A., & Keisler, D. J. Interviewee disclosure as a function of interpersonal trust, task modeling, and interviewer self-disclosure. Journal of Consulting and Clinical Psychology, 1975, 43 (3), 428.
- McDonald, B. A semiology of middle class harassment. A Review of General Semantics, 1979, 36 (3), 223-229.
- Megargee, Edwin I. The prediction of dangerous behavior. Criminal Justice and Behavior, 1976, 3 (1), 3-21.
- Mehrabian, A. Communications without words. Psychology Today, 1968a, September, 43-55.
- Mehrabian, A. Language within language. New York: Appleton-Century-Crofts, 1968b.
- Mehrabian, A. Influence of attitudes from the posture, orientation and distance of the communicator. Journal of Counseling and Clinical Psychology, 1968c, 32, 296-308.
- Mehrabian, A. Significance of posture and position in the communication of attitude and status relationships. Psychological Bulletin, 1969, 71, 359-372.
- Mellinger, G. D. Interpersonal trust as a factor in communication. Journal of Abnormal and Social Psychology, 1956, 52, 304-309.
- Monahan, J. Predicting violent behavior. London: Sage Publications, Inc., 1981.
- Nichtern, S. (M.D.). Has psychiatry failed the acting out and violent adolescent? The Roche report. New York: Hoffman-LaRoche, Inc., 1981.
- Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., & Bent, D. H. Statistical package for the social sciences. New York: McGraw-Hill, 1980.
- Orsagh, T. Empirical criminology interpreting results from aggregate data. Journal of Research in Crime and Delinquency, 1979, July, 294-305.
- Pearce, W. B. Trust in interpersonal communication. New York: ERIC Document Reproduction Service No. ED087069, 1973.
- Poling, E. G. Video-tape recordings in counseling practicum. Counselor Education and Supervision, 1968, 8, 33-38.
- Porter, E. H. The development and evaluation of a measure of counseling interview procedures. Educational and Psychological Measurement, 1943, 3, 105-126, 215-238.

- Prichard, H., & Seals, J. M. A study of manifested counselor nonverbal behavior within counseling subroles. Counselor Education and Supervision, 1973, 13 (2), 150-154.
- Roberts, D., & Renzaglia, F. The influence of a tape recording on counseling. Journal of Counseling Psychology, 1965, 12, 10-16.
- Rogers, C. The interpersonal relationship: The core of guidance. Harvard Educational Review, 1962, 32, 416-429.
- Rotter, J. B. A new scale for the measurement of interpersonal trust. Journal of Personality, 1967, 35, 651-665.
- Rotter, J. B. Interpersonal trust, trustworthiness, and gullibility. American Psychologist, 1980, 35, 1-7.
- Ruesch, J., & Keys, W. Nonverbal communication: Notes on the visual perception of human relations. Los Angeles: University of California at Berkeley Press, 1956.
- Schlesinger, J. S. Nonverbal communication: Information and application for counselors. Personnel and Guidance Journal, 1978, 57 (4), 183-186.
- Schutz, W. C. The interpersonal world. Palo Alto, Calif.: Science and Behavior Books, Inc., 1966.
- Seals, J. M., & Troth, W. A. Identification of counselee subroles. Journal of Counseling Psychology, 1969, 16 (6), 495-498.
- Seay, T. A., & Alterkruse, M. K. Verbal and nonverbal behavior in judgments of facilitative conditions. Journal of Counseling Psychology, 1979, 26 (2), 108-119.
- Seeman, J. A study of the process of non-directive therapy. Journal of Consulting Psychology, 1949, 13, 157-168.
- Selfridge, F. F., & Kolk, C. V. Correlates of counselor self-actualization and client-perceived facilitativeness. Counselor Education and Supervision, 1976, 15 (3), 189-194.
- Sherer, M., & Rogers, R. W. Effects of therapists' nonverbal communication on rated skills and effectiveness. Journal of Clinical Psychology, 1980, 36 (3), 696-700.
- Silker, G. L. The identification of transactional analysis ego states and nonverbal behavior within counseling subroles. (Unpublished Ed.D. dissertation, Oklahoma State University, 1979).
- Smith-Hanen, S. S. Effects of nonverbal behaviors on judged levels of counselor warmth and empathy. Journal of Counseling Psychology, 1977, 24 (2), 87-91.

- Speer, D. Nonverbal communication of affective information. Comparative Group Studies, 1972, 3 (4), 409-423.
- Strong, S. R., & Dixon, D. N. Expertness, attractiveness, and influence in counseling. Journal of Counseling Psychology, 1971, 18 (6), 562-570.
- Strong, S. R., Taylor, R., Gratton, J. C., & Loper, R. G. Nonverbal behavior and perceived counselor characteristics. Journal of Counseling Psychology, 1972, 19 (4), 349-350.
- Sue, D. W., & Sue, D. Barriers to effective cross-cultural counseling. Journal of Counseling Psychology, 1977, 24 (5), 420-428.
- Sue, D. Counseling the culturally different: A conceptual analysis. Personnel and Guidance Journal, 1977, 55, 422-426.
- Sweetland, J. "Illusory correlation" and the estimation of "dangerous behavior." (Unpublished Ph.D. dissertation, University of Indiana, 1972.)
- Tanney, M., & Gelso, C. Effect of recording on clients. Journal of Counseling Psychology, 1972, 19 (4), 349-350.
- Tinsley, H. E. A., & Harris, D. J. Client expectations for counseling. Journal of Counseling Psychology, 1976, 23 (3), 173-176.
- Troth, W. A. In-counseling roles in the secondary school. Guidance Journal, 1967, 6, 261-271.
- Troth, W. A., Hall, G. L., & Seals, J. M. Counselor-counselee interaction. Journal of Counseling Psychology, 1971, 18, 77-80.
- Troth, W. A., & Seals, J. M. Counseling interaction analysis. Focus on Guidance, 1973, 6 (4), 1-6.
- Trout, D. L., & Rosenfeld, H. M. The effect of postural lean and body congruence on the judgment of psychotherapeutic rapport. Journal of Nonverbal Behavior, 1980, 4 (3), 176-190.
- Van Atta, R. Excitatory and inhibition effects of various methods of observation in counseling. Journal of Counseling Psychology, 1969, 16 (5), 433-439.
- Wheless, L. R. Self-disclosure and interpersonal solidarity: Measurement, validation, and relationships. Human Communication Research, 1976, 3, 47-61.
- Woodyard, J. H. The dynamics of counselor nonverbal behavior in the counseling relationship. (Unpublished Ed.D. dissertation, Oklahoma State University, 1978.)

- Wright, W. Relationships of trust and racial perceptions toward therapist-client conditions during counseling. Journal of Negro Education, 1975, 44 (2), 161-169.
- Zabel, R. H. Recognition of emotions in facial expression by emotionally disturbed and nondisturbed children. Psychology in the Schools, 1979, 16 (1), 119-126.

APPENDIX A
MANUAL FOR INTERVIEWERS

MANUAL FOR INTERVIEWERS:

1. You are being asked to serve as an interviewer in a research project being conducted by Perry Hassell. Data generated by this study will hopefully improve the counseling relationship.
2. If you agree to take part in this project, you must agree to keep the identity of the individuals with whom you will be working in strict confidence. What they say to you is a part of a trust relationship. However, you are asked to follow a set interview format which will hopefully cut down on the chance that things will be said that might require them to be shared (e.g., a threat on another person's life, etc.). This interview session will not be seen as a therapy session, but as a one-time interview session. For the purposes of comparison, it is hoped that you will strive to stay within the same format framework throughout each of the interviews that you perform.
3. The youth you interview will be being videotaped, you will not be videotaped.
4. You will be in charge of the interview, it is up to you to generally guide the course the interview follows. Be at ease and enjoy the process as much as you feel comfortable. Do not lead the youth into any deep personal revelations, such is not the goal of an interview. An interview is just a time in which two people get together to exchange thoughts and ideas and to share with one another. It is not a time of deep analysis of thought processes.
5. Once you have read the enclosed interview format, you will be encouraged to ask questions about it and to make certain that you fully understand the process.
6. If you find that this is something that you would care to take part in, and if you will be willing to interview at least ten youth, totally, from this institution and from a local high school, then you will want to sign the attached informed consent form which is stapled to the back of this instruction sheet.
7. For each youth with whom you will be working, an interview format sheet will have been prepared. The following information will be included on that sheet:
 - a. A welcoming statement in which the youth is reminded that he/she is being videotaped. Questions the youth may ask are to be answered rather generally and with an assurance that once the data is gathered a fuller report will be shared with them.
 - b. An interpretation of the FIRO-B will have been prepared. The interpretation will be written as positively as possible, and will hopefully begin the interview on an uplifted basis. Once the brief interpretation has been shared, the youth should be asked if he or she agrees

with the interpretation. The youth should be told that this is only an interpretation of scores, and that its relationship to how he or she actually is may be quite different.

- c. Once feedback from the interpretation of the FIRO-B has been gathered, the youth should be told: "We've been talking about some things that are pretty 'real world', haven't we? You know, FIRO-B scores and things like that are things that concern us here and now, but what if you had three wishes? What if the only wish you could not have would be for more wishes, what do you suppose you'd wish for?". The listing of specific wishes needs to be followed by the questions: "Why did you wish for each of those? Why is (The Wish) important to you?".
- d. Once this topic has been processed, ask the youth to think back on the years of his or her life. In those _____ years, the question is, "What has made you the most happy? What kinds of things have you enjoyed the most?" Ask the second question if the first does not draw some response.
- e. Ask next what has historically made the interviewee the most angry. How did he or she deal with this anger? How did he or she think ("Good" or "Bad") the anger had been handled?
- f. Ask the youth what he or she hopes to be doing in six months?
- g. Ask where and what the interviewee hopes to be doing in five years.
- h. Thank the interviewee for having taken part in the project and remind him or her that the data will be more fully shared in the near future.

APPENDIX B

MANUAL FOR JUDGES

The present study is concerned with the nonverbal behavior, which may be abbreviated NVB, of persons who take part in interviews. Specifically, this is an investigation of the NVB of interviewees. Nonverbal Behavior is defined as body movement which may or may not be associated with verbal speech, but which can be observed and identified by viewing videotape playback of some human event. This study endeavors to research the NVB of adolescents who have taken part in interviews.

As a participant observer-judge for this investigation, you will have the following specific duties: (1) study the Manual for Judges thoroughly; (2) after you are assigned specific NVB's to evaluate in the videotapes, you will have time to practice your selective, observational ability on a demonstration tape; (3) another judge will have been assigned the same NVB's as you, and once the two of you, working separately, have demonstrated a statistical ability to agree upon the tabulation of your assigned NVB's, you will progress along with your judging team to real videotapes from the project; (4) upon the occurrence of your assigned behaviors, you will make a tic mark on the score sheet that will have been provided you and that will have been explained to you in detail in response to any questions you might have; (5) maintain strictest confidence as to the person observed or any content material which may become apparent during your observation.

Island's (1967) Taxonomy of Counselor Nonverbal Behavior will be used to define each of the categories of behaviors for this investigation. The following are excerpts of his description of each category. Please feel free, after having examined the following descriptions, to address the director of the project with your questions of clarification.

Category NV01: Head Movement. Any and all movements of the head are included in this category, including nods, shakes, head gestures, gross and subtle head position changes, except those very slight head movements associated with speaking. Also excluded from this category are head movements resulting from chair movement. The observer in every case decides if the movement was or was not a result of head and neck muscle movements. It is expected that this category would be a numbered, quantitative, frequency occurrence.

Category NV02: Head Support. Any and all occasions when the interviewee supports or partially supports his or her head with the fist, hand, fingers or arm are included in this category. Since it is impossible for the observer to determine if, in fact, the head is being supported by this manner, all questionable occurrences are included, with the general stipulation that the elbow should be resting on something. Examples of this category are such occasions when the fingers or open hand is gently resting against the face or chin, or when one finger is pushing against the cheek, in addition to the more common fist or knuckles resting in support of the chin or cheek. This is a timed category. Each time the time keeper signals that five seconds have passed with the interviewee supporting his head, you will make a tic mark in the appropriate space provided in the score sheet.

Category NV03: Head Support Shift. This information is derived from data gathered in Category NV02. It is not directly tallied from

the videotapes. This category is designed to measure every new occurrence of Category NV02, provided these occurred at least five seconds apart. Thus, while Category NV02 would be recorded every five seconds, the shift to the behavior or out of it would be recorded in Category NV03. This information is used to derive gross shifts in position by number of occurrence.

Category NV04: Lower Face Movements. Any and all movements of the lower face, including pursing the lips, biting and licking the lips, opening and closing the mouth when not speaking, general other mouth movements, moving the tongue inside the lips, moving the nose, grimacing, touching the lips with hands or fingers, comprise this category. Not included are all smiles and laughs. The lower face category defines the area beneath the eyes. This category is a quantitative number category.

Category NV05: Smile. Any and all occurrences of a full-fledged smile, usually with teeth showing, cheeks pouched and wrinkles at the corners of the mouth very pronounced, are included in this category. Teeth do not have to show as a criterion, for what is more important is the pronounced difference in the wrinkles at the corners of the mouth. Slight grins, grimaces, and slight smiles while talking are not counted. Since a smile is somewhat difficult to define for replication, it in effect becomes defined by whatever the observer decides a smile is.

Category NV06: Upper Face Movements. Any and all occurrences of facial movements above the eyes comprise this category, including raising and lowering the eyebrows, presence of wrinkles in the forehead, other movements of the forehead, changes in wrinkles at the corners of the eyes, but it excludes movement of the eye lids themselves, since videotapes are not adequate to allow reliable measures of eye lid movements. This is a quantitative category.

Category NV07: Hand Movements. Any and all occurrences of hand and finger movements are included in this category, even those movements which are very slight.

Category NV08: Arm Movements. Any and all occurrences of significant movement of the elbow or wrist, usually involving a displacement of two or three inches distance, constitutes an arm movement. This category is recorded even if it occurred momentarily and returned to the same position.

Category NV09: Body Position Forward. This category is one of three body positions into which the observer is obliged to categorize the interviewees positions during each five second time period. This category includes positions that range in "forwardness" from a slight leaning forward in the chair from a hypothetical perpendicular plane with the floor, to a very pronounced forward leaning. This very pronounced forward leaning may involve, for example, leaning on his or her knees. Usually both feet are or could be on the floor.

Category NV10: Body Position Upright. This category is one of three body positions into which the observer is obliged to categorize

the interviewees' positions during each five second time period. This category includes a somewhat smaller range of possible positions than the other two body position categories. The posture of the interviewee may vary with regard to whether he or she is sitting more or less vertical or perpendicular to the floor. This position could be slightly more backwards than forward, since many interviewees may appear to maintain an "upright" position while tipped slightly back in a swivel chair.

Category NV11: Body Position Back. This category is one of the three body position categories into which the observer is obliged to categorize the interviewees' positions during each five second time period. This category includes a position of "backwardness" from a slouched backward lean in an upright chair to a pronounced tip of the chair to accentuate the backward lean. One general criterion is that one or both feet of the interviewee would no longer be able to touch the floor, except when in the backward slouch, although the use of this cue is by no means applicable across the breadth of all interviewees, particularly the females.

Category NV12: Body Position Shift. This category is derived from data in Categories NV09, NV10, or NV11, and is not directly tallied from the videotapes. Every occurrence of the beginning of a position as described in these categories constitute a recording for this category.

Category NV13: Talk Momentary. This category is tallied from the sound tapes of the interviewees, not from the videotapes. Momentary talk is defined as the utterance of an understandable English word including single word responses, but not including mumbles, huh-huh, uh-huh, mmmmm, hmmmm, groans, etc. Also not included in this category are protracted utterances of several words in the same speech.

Category NV14: Talk Longlasting. This category is defined as the utterance of several words in the same speech. This is marked by any utterance one sentence long or longer. It is from sound recordings.

Category NV15: Talk Shift. This category is derived from data in Categories NV13 and NV14. It is not tallied directly from the sound recordings, as were they. Every new speech or utterance of a single English language word (as defined above in NV13 and NV14), begun by the interviewee constitutes a recording for this category, provided a time interval of five seconds has separated the speeches or single word utterances. A new speech could be defined as a single word response such as, "Yes", followed by nothing more, or it could be defined as the first word in a three minute speech of continuous words. In both of these examples, one tally would be recorded for this category, since this category confines itself to shifts of speaking behavior.

APPENDIX C

CONSENT FORMS

INFORMED CONSENT FORMS:

(A) For High School Youth Group Volunteers:

I wish to take part in a research project being conducted by Perry Hassell. I volunteer to serve as an interviewee in a one-time interview session that will be videotaped. I understand that the tape will be reviewed for the purpose of extracting data, and then the videotape will be erased. My identity and that of my high school's location will be protected to insure my anonymity.

Signed _____

Parent's Signature _____

(B) For Institutionalized Youth Volunteers:

I wish to take part in a research project being conducted by Perry Hassell. I volunteer to serve as an interviewee in a one-time interview session that will be videotaped. I understand that the tape will be reviewed for the purpose of extracting data, and then the videotape will be erased. My identity and that of this institution will be protected to insure my anonymity.

Signed _____

Student Defender's Signature _____

(c) For Adult Worker Volunteers (Judges and Interviewers):

I wish to take part in a research project being conducted by Perry Hassell. I volunteer to serve as either a videotape judge or as an interviewer. I understand that I may be involved in a one-time interview session with a youth, and that this interview is not to be seen as a therapy session, nor as a part of a longterm series of meetings. I further pledge my confidentiality to keep specific names of people and places associated with this project secret.

Signed _____

APPENDIX D
MASTER TALLY SHEETS BY GROUP MEMBERSHIP
OF RAW DATA

MASTER TALLY SHEET OF FIRO-B AND NVB PERFORMANCE FOR THE GROUP O MEMBERS.
 GROUP MEANS ARE PRINTED AT THE BOTTOM OF EACH VARIABLE COLUMN.

ID#	FB1	FB2	FB3	FB4	FB5	FB6	NV1	NV2	NV3	NV4	NV5	NV6	NV7	NV8	NV9	NV10	NV11	NV12	NV13	NV14	NV15
1	4	4	2	5	5	6	72	0	0	40	92	58	114	60	0	356	4	3	74	42	24
2	3	0	0	4	1	4	92	0	0	64	58	25	87	21	0	360	0	0	25	51	23
3	6	7	0	9	1	5	69	17	34	100	97	28	114	29	144	211	5	10	43	41	21
4	3	2	3	0	2	2	107	0	0	22	93	14	84	19	0	360	0	0	24	57	28
5	6	1	7	6	3	6	38	0	0	64	4	11	104	185	0	360	0	0	7	36	15
6	7	7	3	1	8	8	59	0	0	5	30	11	54	7	0	329	31	4	61	20	14
7	6	6	3	8	2	8	76	0	0	6	10	20	110	33	0	360	0	0	6	41	10
8	4	1	2	1	3	4	124	4	8	72	88	14	78	20	20	340	0	4	24	56	12
9	7	6	1	1	5	6	80	11	10	11	56	13	87	34	291	69	0	11	34	26	5
10	6	8	0	3	7	9	104	0	0	92	83	26	149	51	0	360	0	0	23	30	6
11	4	9	6	6	0	6	96	2	5	56	21	72	20	9	0	360	0	0	6	38	14
12	8	9	1	5	7	9	58	0	0	65	46	2	23	13	0	360	0	0	54	23	10
13	5	1	2	7	3	5	84	0	0	75	49	27	67	47	0	360	0	0	51	35	8
14	3	0	0	1	3	5	64	0	0	58	46	1	103	74	0	360	0	0	5	53	5
15	7	8	1	8	8	9	133	0	0	42	54	26	114	21	0	360	0	0	14	58	5
\bar{X} 's	5.3	4.8	1.8	4.1	4.1	6.1		2.3		51.4		23.2		41.5		327		2.1		40.4	
							83.7		3.8		55.1		87.2		30.3		2.6		30		13.3

MASTER TALLY SHEET OF FIRO-B AND NVB PERFORMANCE FOR THE GROUP 1 MEMBERS.
 GROUP MEANS ARE PRINTED AT THE BOTTOM OF EACH VARIABLE COLUMN.

ID#	FB1	FB2	FB3	FB4	FB5	FB6	NV1	NV2	NV3	NV4	NV5	NV6	NV7	NV8	NV9	NV10	NV11	NV12	NV13	NV14	NV15
1	3	4	2	6	4	6	88	0	0	28	3	23	128	129	0	145	215	6	60	17	8
2	0	0	9	1	1	2	114	0	0	35	2	3	54	89	0	211	149	6	65	15	6
3	4	1	6	8	6	3	60	0	0	109	24	22	95	74	8	58	284	17	66	22	9
4	0	0	5	1	1	4	129	0	0	76	49	57	106	78	0	169	191	4	57	29	9
5	2	0	3	2	4	1	115	3	3	20	3	34	177	138	306	33	21	25	75	17	6
6	1	0	0	7	1	1	78	0	0	29	10	36	66	50	0	138	222	22	64	17	8
7	3	0	8	0	8	6	87	0	0	17	9	31	89	64	5	5	350	8	188	18	14
8	4	0	0	2	1	0	60	0	0	45	1	10	30	30	0	360	0	0	25	10	4
9	4	0	0	1	1	0	110	0	0	49	2	4	96	105	0	171	189	5	29	24	12
10	4	0	3	1	3	3	60	0	0	42	2	3	82	89	0	360	0	0	25	20	6
11	2	7	2	1	1	4	95	0	0	16	3	20	139	88	324	30	0	2	63	17	10
12	3	7	4	2	2	1	57	0	0	36	4	27	92	46	0	360	0	0	46	13	7
13	6	6	0	0	4	5	24	0	0	19	5	2	94	67	0	0	360	0	19	22	6
14	0	3	5	0	0	1	102	5	2	44	13	26	48	95	158	176	26	59	113	22	15
15	7	7	2	0	5	3	86	0	0	76	25	63	145	104	119	121	120	8	90	27	13
\bar{X} 's=	2.6	2.3	3.2	2.2	2.8	2.6	85.1	.5	.3	42.7	24	10.3	96	84.6	61.3	156	142	23	65.6	19.3	8.8

APPENDIX E

NONVERBAL BEHAVIOR TALLY SHEET

Nonverbal Behavior Tally Sheet.

1. Head Movements.	_____	Total: _____
2. Head Support.	_____	Total: _____
3. Head Support Shift.	_____	Total: _____
4. Lower Face Movements.	_____	Total: _____
5. Smile.	_____	Total: _____
6. Upper Face Movements.	_____	Total: _____
7. Hand Movements.	_____	Total: _____
8. Arm Movements.	_____	Total: _____
9. Body Position Forward.	_____	Total: _____
10. Body Position Up.	_____	Total: _____
11. Body Position Back.	_____	Total: _____
12. Body Position Shift.	_____	Total: _____
13. Talk Momentary.	_____	Total: _____
14. Talk Longlasting.	_____	Total: _____
15. Talk Shift.	_____	Total: _____

APPENDIX F

INTERVIEW FORMAT FOR INTERVIEWERS

Interview Format for Interviewers:

- (1) Welcome of interviewee to the research project.
- (2) Ask if there are any questions with regard to the study and remind the interviewee that he or she is currently being both video and audio taped.
- (3) Ask if the interviewee remembers taking the FIRO-B. Tell the interviewee that an interpretation of the FIRO-B answers they provided had been prepared. Ask if the interviewee would like to hear the interpretation. If yes, read the interpretation.
- (4) Ask for feedback with regard to the interviewee's agreement or lack of agreement with the interpretation of the FIRO-B. Ask whether the interpretation fit, and if so, where best and where least.
- (5) Next ask about three wishes. If the interviewee had three wishes and could only not wish for more wishes, for what would he or she wish? Follow this up by asking why he or she chose those particular wishes, what significance did each of those particular wishes have for the interviewee?
- (6) Ask next what has historically made the interviewee the most happy. Be as nondirective with this question as possible. Allow the interviewee to answer the question of what is meant by "what". Ask what it meant to be happy. How did it feel, who was present, etc.
- (7) Ask about what kinds of things have made the interviewee the most angry. How did he or she deal with his or her anger. How did the interviewee feel when he had expressed his or her anger?
- (8) Ask what the interviewee hopes to be doing and where he or she hopes to be doing it in six months.
- (9) Ask where and what the interviewee hopes to be doing in five years.

VITA²

Perry Len Hassell

Candidate for the Degree of

Doctor of Philosophy

Thesis: DIFFERENCES IN NONVERBAL BEHAVIOR AND INTERPERSONAL RELATIONSHIPS OF VIOLENT AND NONVIOLENT ADOLESCENTS

Major Field: Applied Behavioral Studies

Biographical:

Personal Data: Born in Corpus Christi, Texas, October 10, 1948, the son of Carlton and Juanita Hassell.

Education: Graduated from Ponca City High School, Ponca City, Oklahoma, May, 1966; received the Bachelor of Arts degree from Oklahoma State University, Stillwater, Oklahoma, in 1971; received the Master of Divinity degree from St. Paul School of Theology, Methodist, Kansas City, Missouri, in 1974; received the Doctor of Ministry degree from Phillips University Graduate Seminary, Enid, Oklahoma, in 1978; received the Master of Science degree from Oklahoma State University in 1978, with a major in Counseling Psychology; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in December, 1982.

Professional Experience: Served as Pastor, Chaplain, and Campus Minister, the Oklahoma Conference of the United Methodist Church, 1969-present; Teaching Associate, Oklahoma State University, Applied Behavioral Studies Department, 1980-present; Counseling Intern, the Lloyd E. Rader Children's Diagnostic, Evaluation, and Treatment Center, Sand Springs, Oklahoma, 1981-1982; Supervisor, the Crisis Management Center, the Lloyd E. Rader Children's Diagnostic, Evaluation, and Treatment Center, 1982-present.

Organizations: American Personnel and Guidance Association, American College Personnel Association, Oklahoma Personnel and Guidance Association, Oklahoma College Personnel Association.