THE RELATIONSHIP BETWEEN COMMUNICATION SENSITIVITY AND SELECTED TYPES OF AGGRESSION

By

PATRICIA TULLIS TUCKER

Bachelor of Arts
University of Nevada
Reno, Nevada
1968

Master of Arts
University of New Mexico
Albuquerque, New Mexico
1972

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 EDUCATION
July, 1977

THE RELATIONSHIP BETWEEN COMMUNICATION SENSITIVITY AND SELECTED TYPES OF AGGRESSION

Thesis Approved:

J. D. Hughey

Thesis Adviser

Thomas A. Harman

Arlee Johnson

Fred Jewell

Norman N. Durham

Dean of the Graduate College

PREFACE

This study attempts to define the relationship between communication sensitivity and selected types of aggression. The primary objective of this study is to determine if this relationship is significant, and if the nature of the relationship is inverse. The possibility of influence from the factors of sex, class in college, and college or occupational choice is explored.

A debt of gratitude is owed to Dr. Jim D. Hughey for the development of one measuring device used, and for the many suggestions he has offered in this area over the past six years. I am also deeply in debt to Dr. Arlee Johnson for the many hours he spent with me in the computer center, and the assistance he gave to the statistical portion of this work. I also wish to thank my committee chairman, Dr. Fred Tewell, and Dr. Thomas Karman, for their time and effort. To Mr. and Mrs. Keith Marshall go my thanks, as this report would not have been typed and printed without their aid.

I also want to pay tribute to my parents for their helpful nagging and support, and my son Ned for letting me develop my patience and love. A special thanks goes to my husband, Gary, for all of his support and hours of tabulating data, and to his parents for their hospitality.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

Overview of the Study

This study was undertaken in an attempt to determine if a relationship existed between communication sensitivity and selected types of aggression. Two inventories were used to measure communication sensitivity and selected types of aggression. Scores from these inventories were used to determine if a relationship existed between the two variables and, if so, what type of relationship existed.

The Problem Defined

Concern of social scientists with aggression in our society has been very widespread due, in part, to the prevalence of aggressive behavior. Recently, this concern has not been so much with aggression of a collective nature as with individual aggressive behavior.[1]

Aggression generally follows a particular pattern, and

---

[1]Some typical examples of discussions of collective violence are: Fred R. Crawford, ed., Violence and Dissent in Urban America (Atlanta: Southern Newspaper Publishers Association Foundation, 1970); and Henry Bienen, Violence and Social Change (Chicago: University of Chicago Press, 1968).

this pattern can be examined.[2] There are indications that this pattern was due to the inability of aggressive individuals to communicate effectively with others and/or to be sensitive to the needs and views of others in a communication situation.[3] This study investigated the relationship which existed between selected types of aggression and communication sensitivity.

There are three underlying propositions that formed the bases of this study. First, the proposition was made that communication sensitivity was a theoretically important concept. Keltner has pointed out the importance of sensitivity to effective communication, and he said that communication sensitivity is a "prerequisite" to most speech-communication efforts.[4] Henry Clay Smith also discussed the concept of communication sensitivity, and he stated that communication sensitivity is "the ability to predict what an individual will feel, say and do about you, himself, and others."[5]

In addition, Evans noted that an individual who is sensitive in a communication situation is "typically nonverbal

---

[2]Hans Toch, Violent Men (Chicago: Aldine Publishing Company, 1969), pp. 1-33.

[3]Ibid., p. 22.

[4]John W. Keltner, Interpersonal Speech Communication (Belmont, Calif.: Wadsworth Publishing Co., Inc., 1970), p. 26.

[5]Henry Clay Smith, Sensitivity to People (New York: McGraw-Hill Book Co., 1966), p. 3.

oriented, receiver supportive, and concerned with exchanging feelings with other communicators."[6] In a similar vein, communication sensitivity has been viewed as involving the core characteristics of empathy, respect, and genuineness.[7] Communication sensitivity, then, is a prevalent concept in the communication literature, and its measurability has been demonstrated in a number of studies.[8]

The second proposition was that aggression was a theoretically important concept. There were a number of types of behavior which could be classified as aggressive. For example, both direct and indirect aggression should be considered since they are different reactions to a situation of frustration.[9] Verbal aggression was also important, however, for aggression is expressed in a number of ways.

> One of the earliest lessons human beings learn as a result of social living is to suppress and restrain their overtly aggressive reactions . . . although these reactions may be temporarily

---

[6]John Robert Evans, "A Study of the Relationship Between Communication Sensitivity and Conversational Effectiveness" (unpub. Ed.D. dissertation, University of New Mexico, 1970), p. 12.

[7]Kenneth A. Wallston and Lawrence J. Weitz, "Measurement of the Core Dimensions of Helping," Journal of Counseling Psychology, 22 (1975), pp. 567-569.

[8]Among them are the following studies: Evans; Harold Peter Menninger, "An Analysis of Administrator and Student Leader Views of Student Discontent and Solutions on One University Campus" (unpub. Ed.D. dissertation, University of New Mexico, 1970); and William Patrick Neal, "Demographic, Personality and Nonverbal Perception Correlates of Communication Sensitivity" (unpub. M.A. thesis, University of New Mexico, 1970).

[9]John Dollard, et al., "Frustration and Aggression,"

> compressed, delayed, disguised, displaced, or otherwise deflected from their immediate and logical goal, they are not destroyed.[10]

One of the ways that physically aggressive behavior can be disguised is through the use of verbal aggression. Aggression, then, is a distinct concept, and aggressive behavior can be categorized into a number of distinct types of behavior. Aggression is a measurable concept, and it has been measured in a number of studies.[11]

The third proposition was that there was a theoretical basis for indicating a relationship between communication sensitivity and aggression. Hans Toch had worked with a number of highly aggressive individuals, and he pointed out that such individuals have a fairly low ability to role play. He concluded that the aggressive individual is low

---

The Dynamics of Aggression (New York: Harper and Row, 1970), pp. 20-32.

[10]Ibid., p. 24.

[11]Among them are the following studies: A. Buss has conducted many studies in the area of aggression, and he has used the Buss-Durkee Inventory. For a discussion of these studies see A. Buss, The Psychology of Aggression (New York: Wiley, 1961). See also: Gorden B. Forbes and Shirley Mitchell, "Attribution of Blame, Feelings of Anger, and Director of Aggression in Response to Interracial Frustration Among Poverty-Level Female Negro Adults," The Journal of Social Psychology, 83 (1971), pp. 73-75; William D. Gentry, "Biracial Aggression: I. Effect of Verbal Attack and Sex of Victim," The Journal of Social Psychology, 88 (1972), pp. 75-82; and Edwin I. Megargee, "Undercontrolled and Overcontrolled Personality Types in Extreme Antisocial Aggression," Psychological Monographs: General and Applied, 80 (1966), pp. 1-29. There are many more studies in this field, but the preceding studies apply to my particular area of study and/or are interesting examples of work in the field of aggression.

in his ability to empathize.[12]

Keltner considered empathy an essential part of sensitivity in the communication situation.

> To be sensitive to others, one must be able to empathize with them; that is, we must be able to perceive another person's feelings, thoughts, and behavior as if they were our own.[13]

Keltner, then, pointed out that sensitivity is a "prerequisite" for effective communication. A relationship between aggression and communication sensitivity is hypothesized because individuals who are aggressive tend to have a low ability to empathize, and empathy is a portion of communication sensitivity.[14]

Significance of the Study

In determining the relevance of this study to the field of communication theory, it is necessary to determine the justification for examining the following:

1. Communication sensitivity;
2. Aggression;
3. The value of an examination of communication sensitivity and aggression to the communication field.

---

[12]Toch, p. 22.

[13]Keltner, p. 29.

[14]Toch, p. 22. See also Thomas R. Kane, Joanne M. Joseph, and James T. Tedeschi, "Person Perception and the Berkowitz Paradigm for the Study of Aggression," Journal of Personality and Social Psychology, 33 (1976), pp. 663-673; and Bradley S. Greenberg, "The Effects of Language Intensity Modification on Perceived Verbal Aggression," Communication Monographs, 43 (1976), pp. 130-140.

The importance of both the recognition and examination of communication sensitivity is widely accepted. This subject will be covered in greater depth in Chapter Two, but selected aspects should be noted at this point. Almost all types of communication are dependent upon a sensitivity to people. Recently John W. Keltner pointed out the importance of the concept of communication sensitivity to the student of communication theory. He stated:

> We have recognized that one may communicate with himself but . . . most of our communication efforts are directed toward other people. Thus, a sensitivity to other people is prerequisite to most of our speech communication efforts.[15]

Since the student of communication theory does, in fact, study communication, and since communication sensitivity is important for most of our speech communication efforts, communication sensitivity does have value for the student of communication theory, and it is also important for the student of communication theory to study aggressive behavior.

Aggression in individuals is worthy of study because it is both common and self-destructive.[16] Also, there are indications that aggressive individuals have a different degree of communication sensitivity than do non-aggressive individuals, and since communication students are interested

---

[15]Keltner, p. 26.

[16]Lawrence C. Kolb, "Violence and Aggression: An Overview," Dynamics of Violence, Jan Fawcett, ed. (Chicago, Ill.: American Medical Association, 1971), pp. 7-18. See also p. 193 for Fawcett's comments.

in communication sensitivity, they should also be concerned with aggressive behavior. Since one distinct type of aggression is verbal, aggression should be of special interest to the student of communication theory.

Aggression and communication sensitivity, then, are important concepts to study. The significance of the present study was its attempt to do two things. First, an attempt was made to validate the existing theory which indicated that there was a relationship between communication sensitivity and aggression. Second, the study was intended to have practical application for the student of communication theory, the teacher, and anyone else who works with people.

Limitations of the Study

This study was delimited in the time dimension to the fall of 1974. The fall semester was selected for the study because the students enrolled in a particular class were to be used as subjects, and this class generally has a larger enrollment in the fall semester than at any other time.

The subjects to be used in the study were limited to the students enrolled in a basic speech course, Oklahoma State University's Introduction to Speech Communication, Speech 2713. This choice was based on several factors. First, the sample was readily available for study. Second, as previously indicated, the course has a large enrollment. For these reasons, the use of the students enrolled in

Speech 2713 seemed justified.[17]

General Methodology and Organization of the Paper

The general methodology of this investigation was essentially ex post facto in nature. Kerlinger defines ex post facto research in the following manner:

> That research in which the independent variable or variables have already occurred and in which the researcher starts with the observation of a dependent variable or variables. He then studies the independent variables in retrospect for their possible relations to, and effects on, the dependent variable or variables.[18]

Since the study made no attempt to assign the subjects' sex or communication sensitivity as factors, there was no attempt to control these independent variables. In conducting the study and evaluating the data, the principles for ex post facto research were used. The study made no attempt to show that a lack of communication sensitivity in any way caused aggressive behavior. Instead the study attempted to determine if a relationship existed between the two variables.

---

[17]This course represented 4.299 percent of the total university enrollment and 5.226 percent of the university's undergraduate enrollment. The following distribution of undergraduate students was present in the fall semester of 1974:

	2713	O.S.U.
Males	65.138%	61.194%
Females	34.861%	38.805%
Lower classmen	70.566%	51.872%
Upper classmen	29.311%	48.237%

[18]Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1964), p. 360.

The remainder of this report is divided into four chapters. Chapter Two, "A Review of the Literature," will be devoted to an examination of the literature and research regarding communication sensitivity and aggression. The research exploring whether a possible relationship between these two areas existed will also be presented. Three specific types of aggression will be discussed. They are: verbal aggression, direct physical aggression, and indirect aggression.

In Chapter Three, "Methodology," a discussion will be provided of subject selection, the measuring devices used, and the method of data analysis used. In addition, the procedures followed in both the main and pilot studies were discussed.

A discussion of the results of the study will be provided in Chapter Four, "Results and Discussion." The findings of the study will be summarized in Chapter Five, "Summary, Implications, and Conclusions." Conclusions and implications which were drawn from the investigation will also be given in this chapter.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Theorists in the areas of communication, psychology, social psychology, and counseling have long considered communication sensitivity as a necessary condition for effective interpersonal communication. Communication sensitivity refers to responsiveness to others in a communication situation. As Rogers and Roethlisberger expressed it, this sensitivity to people is the gateway to understanding.[1]

The relationship of aggression to communication sensitivity will be developed in this chapter. The individual low in communication sensitivity tended to be verbally oriented, sender oriented, rigid in viewpoint, and non-adaptable. Similar characteristics which made him low in sensitivity can be found in the aggressive individual.

This chapter is organized into four sections. Each section deals with one of the following four questions:

1. From what theoretical framework does the concept of communication sensitivity evolve, or what is communication sensitivity?

---

[1]Rogers and Roethlisberger, pp. 46-52.

2. From what theoretical framework does the concept of aggression evolve, or what is aggression?

3. Is there a basis in the literature for inferring a relationship between communication sensitivity and aggression?

4. Does the factor of gender influence the relationship between communication sensitivity and aggression?

The first section of this chapter deals with the first question and provides a review of the literature on communication sensitivity. A review of the literature on aggression comprises the second section of the chapter and answers question two. A review of the literature which indicates a possible relationship between these two areas follows in section three. Finally, subjects' sex or gender is discussed in the last section as a factor which might influence the relationship between communication sensitivity and aggression.

To provide a perspective for the theoretical discussion, definitions of "communication sensitivity" and "aggression" are provided. The definition of aggression involves a definition of physical aggression, indirect aggression, and verbal aggression.

Therefore, the following problem is considered in this chapter: What relationship existed between selected types of aggression and communication sensitivity?

Communication Sensitivity

Definition

The sensitive communicator was defined in terms of the behavior he demonstrated.

> A sensitive communicator refers to one who is supportive, empathetic, nonverbally oriented and concerned with the feelings of others more than with the specific words he uses.[2] He is generally receiver oriented.

The sensitive communicator could also "predict the reactions of an individual to himself, his messages, other people, and the messages of other people."[3] A sensitive communicator could be contrasted with an insensitive communicator, for the latter was verbally rather than nonverbally oriented, evaluative rather than supportive, and concerned with influencing rather than understanding.[4]

The above behaviors did not imply that the sensitive communicator relied on nonverbal cues to the exclusion of the verbal message. The above definition also did not imply that the sensitive communicator only listened and never spoke. The definition instead says that the focus of the behaviors involved was the following: 1. The sensitive communicator was aware of both verbal and nonverbal cues while the less sensitive communicator was primarily aware

---

[2]Evans, p. 3.

[3]Jim D. Hughey and Arlee W. Johnson, Speech Communication: Foundations and Challenges (New York: Macmillan Pub. Co., 1975), p. 391.

[4]Rogers and Roethlisberger, pp. 46-47.

of verbal cues.[5] 2. While the sensitive communicator may at times have been evaluative, he realized that he needed to be supportive of the other person. He was more supportive than he was evaluative, and the less sensitive communicator was more evaluative than he was supportive. The elements are not mutually exclusive, but the continuous emphasis on one area over another helped determine communication sensitivity.[6] 3. While the sensitive communicator may at times have tried to convince the other person in the communication situation of his point of view, he was also concerned with the other's point of view, and he would strive for mutual understanding. Once again, the difference between the highly sensitive communicator and the less sensitive communicator was the emphasis which each placed on the objectives for a communication encounter.[7]

In conclusion, the following elements were involved in a definition of the sensitive communicator: 1. The ability to predict the responses of another person in a communication situation; 2. the ability to empathize with the other person; 3. the ability to create a supportive communicative climate; 4. the ability to monitor not only verbal but nonverbal cues in a communication encounter; and 5. the ability to demonstrate concern with the other's purpose for the communication encounter.

---

[5]Ibid.

[6]Evans, pp. 3-6.

[7]Hughey and Johnson, pp. 383-384.

The Literature

While communication sensitivity had been defined, it was also necessary to focus on some specific behavioral areas of communication sensitivity. Before describing these behaviors, however, several generalizations were drawn about communication sensitivity. These generalizations follow:

First, Neal's research indicated there was a difference between the communication attitude and behavioral characteristics of more sensitive communicators and less sensitive communicators.[8] His ambitious work correlated demographic and personality factors with communication sensitivity. Second, Hughey and Johnson found that more sensitive communicators were better able to predict accurately communication behavior than less sensitive communicators;[9] and, finally, Evans' research presented evidence that there was a higher degree of satisfaction from a conversation with a more sensitive communicator than from a conversation with a less sensitive communicator.[10] These were similar to the three skills which Brofenbrenner felt were essential to communication sensitivity. These three interdependent skills were:

1. Social Sensitivity: the ability to recognize through direct observation the behavior, or psychological states of another person or group.

---

[8]Neal, pp. 82-87.

[9]Hughey and Johnson, pp. 382-383.

[10]Evans.

> 2. Predictive Skills: the ability to forecast actions or psychological states that are not being directly observed . . . .
> 3. Role-taking: the ability to act or feel in the manner of another person (imitation) or to act or feel in accordance with the expectations of the other person (responsiveness).[11]

With these generalizations about communication sensitivity in mind, the literature on communication sensitivity was presented in this chapter, using the organizational framework devised by Hughey and Johnson. The first area of the communication sensitivity model was the purpose of the communicator. The sensitive communicator would enter a communication encounter with the belief that there were many specific purposes in a communication situation. Furthermore, he believed that the ultimate outcome of the encounter should be mutual understanding. The less sensitive communicator, on the other hand, entered the communication situation determined to influence the other person. This intent was usually to persuade the "listener," and the speaker felt the communication was successful only if he achieved his purpose.[12]

This view of communication purposes was essentially the same as Rogers and Roethlisberger's barriers and gateways pattern of communication. The barrier pattern involved a person who attempted to explain his views to the listener. He did not view communication as an exchange of ideas but

---

[11]Urie Brofenbrenner, John Harding, and Marry Gallwey, "The Measurement of Skill in Social Perception," Talent and Society, David C. McClelland, et al., eds. (New York: D. Van Nostrand, 1958), p. 97.

[12]Hughey and Johnson, pp. 383-384.

as a chance to explain his ideas to another person and to gain the agreement of the other person. In this pattern of communication, the communicator's goals were to change the listener's views. The gateway pattern involved a person who attempted to listen in an unclear situation. The listener was aware that the exchange will be centered around feelings, not ideas. He attempted to listen and understand fully. The listener felt that the purpose of a communication was for the parties to express their differences, and the listener attempted to reinforce feelings which will help the communication.[13]

There was also a contrast between the two types of communicators with regard to communicative climate. The more sensitive communicator was more likely to create a supportive rather than a defensive climate. This involved being open. Drefus said, "It is the willingness to explore with oneself and with another, with honest responsibility."[14] Gibb added a further dimension to the area with his research of those elements which lead to the development of a defensive climate in an interpersonal communication situation. Gibb found that attitudes of evaluation, control, strategy, neutrality, superiority, and certainty would lead to defensiveness on the part of the respondent. However, if one wished to be supportive or sensitive to the needs of the other party in a

---

[13]Rogers and Roethlisberger, pp. 46-52.

[14]Edward A. Drefus, "Openness: An Examination and Formulation," Journal of Existentialism, 7 (1967), pp. 309-317.

communication encounter, the behaviors of description, problem orientation spontaneity, empathy, equality, and provisionalism would foster this attitude.[15]

Kahn and Cannell described a supportive climate by saying the communicator provided nonevaluative support, was permissive of the other's views, and demonstrated sympathetic understanding.[16] Rogers indicated that the communicator must be permissive, and he must let the other party feel free from any coercion. The communicator, then, must have projected the attitudes of willingness to listen, willingness to understand, and willingness to accept.[17] Shoben indicated the importance of being friendly, of being warm, and of conveying emotional closeness. The sensitive communicator was permissive and non-judgmental; he allowed the other to feel safe to say whatever he wanted to say.[18] These areas, then, composed the second area of the communication sensitivity model, communicative climate.

The third area of the communication sensitivity model was composed of the characteristics of the transmitter role.

---

[15]Jack R. Gibb, "Defensive Communication," Small Group Communication, Robert S. Cathcart and Larry A. Samovar, eds. (Dubuque, Iowa: Wm. D. Brown Pub., 1970), p. 305.

[16]Robert L. Kahn and Charles F. Cannell, The Dynamics of Interviewing (New York: John Wiley and Sons, Inc., 1957), pp. 65-92.

[17]Carl R. Rogers, Counseling and Psychotherapy (Boston: Houghton Mifflin, 1941), pp. 87-89.

[18]Edward J. Shoben, Jr., "Some Observations on Psychotherapy and Learning," Psychotherapy, Theory and Research, O. Hobart Mowrer, ed. (New York: Ronald Press, 1953), p. 283.

Hughey and Johnson indicate that the sensitive communicator is more concerned with the other person in the communication than he is with himself.[19] Miller and Steinberg stated that concern for the other person or the receiver in a communication situation would involve adapting to the other's message rather than forcing him to adapt to yours, and would involve listening more than you talk.[20] The sensitive communicator talked, but he emphasized listening rather than speaking. This was similar to the receiver orientation recommended by Fiedler for effective client-therapist communication[21] and also involved the receiver orientation of Barnlund's constructive communication relationship.[22] The less sensitive communicator, on the other hand, focused on what he had to say in the communication situation.

The sensitive communicator also tried to adapt to the communication situation. He avoided stylized verbal behavior and strived to choose wording appropriate to the situation. He understood that an idea could be stated in many

---

[19] Hughey and Johnson, pp. 385-386.

[20] Mark Steinberg and Gerald R. Miller, "Interpersonal Communication: A Sharing Process," Communication and Behavior, Hanneman and McEwer, eds. (Reading, Mass.: Addison Wesley Publishing Co., 1975), pp. 126-147.

[21] Fred E. Fiedler, "Quantitative Studies on the Role of the Therapists' Feelings Toward Their Patients," Psychotherapy, Theory and Research, O. Hobart Mowrer, ed. (New York: Ronald Press, 1953), p. 351.

[22] Barnlund, pp. 638-640.

ways; he used an appropriate way.[23] The less sensitive communicator attempted to "get others to adapt their transmissions to his frame of reference or is detached or withdrawn from the interaction."[24]

The less sensitive communicator also placed the main emphasis on the words he used in transmitting his message. The sensitive communicator placed more emphasis on the nonverbal element of message transmission.[25]

The fourth element of communication in the sensitivity model was the receiver role. Just as concern with the nonverbal element was important for the sensitive communicator when he was a transmitter, it was important for the sensitive communicator when he was a receiver. The importance of the listener attending to nonverbal cues cannot be overemphasized.[26] In fact, Smith found that the only way to measure sensitivity was to examine nonverbal monitoring. The ability of an individual to identify feelings and emotions through picking up nonverbal cues was an indication of a high degree of sensitivity.[27] Davitz also found that communication of

---

[23]Roderick P. Hart and Don M. Burks, "Rhetorical Sensitivity and Social Interaction," Speech Monographs, 39 (June, 1972), pp. 76-88.

[24]Hughey and Johnson, p. 389.

[25]Ibid., pp. 385-386.

[26]Charles M. Galloway, "Nonverbal--the language of sensitivity," Theory Into Practice, 13 (1974), pp. 380-383.

[27]Henry Clay Smith, Sensitivity to People (New York: McGraw-Hill Book Company, 1966), p. 4.

emotional meaning was largely carried through the nonverbal channels; it was the sensitive communicator who could effectively "listen" for these cues and reflect back the emotional content.[28] The less sensitive communicator responded more to the words or what was said rather than the nonverbal or how it was said. The less sensitive communicator was, therefore, likely to miss part of the communication message and, therefore, be unable to respond appropriately.

In addition to monitoring the nonverbal element of communication, the sensitive communicator in the receiver role had to become actively involved in the communication situation. Rogers talked about the responsibility of the listener to engage in active listening. He said that this responsibility involved the following:

> He does not passively absorb the words which are spoken to him. He actively tries to grasp the facts and feelings in what he hears, and he tries, by his listening, to help the speaker work out his problems.[29]

The sensitive communicator focused on feelings in the communication situation. Carkhuff said the effective listener reflected feelings and attitudes,[30] and Rogers indicated that the sensitive communicator helped the speaker understand

---

[28] Joel R. Davitz, "The Communication of Emotional Meaning," Communication and Culture, Alfred G. Smith, ed. (New York: Holt, Rinehart and Winston, 1966), pp. 467-480.

[29] Rogers, Counseling and Psychotherapy, p. 85.

[30] Truax and Carkhuff. See also Betty D. Meador and Carl Rogers, "Client-Centered Therapy," for a discussion of the same topic area.

the facts and feelings as a result of his own cues.[31] The active listener did not help the speaker determine a course of action. Instead, the emphasis should have been on the reflection of feelings which have been monitored, not on the evaluation of the content of a message. Weaver and Strausbaugh discussed the problem of evaluation when they stated:

> Usually when we think of someone as a poor listener we mean that he does not hear what we say. It is presumed that this process of reception is impaired if we decide early in the communication situation that what the other fellow is saying doesn't amount to much. This immediate evaluation sets up a chain reaction that colors one's response to a speaker.[32]

The response of the listener, then, was going to influence what the speaker or communicator had to say. Nichols and Stevens indicated that by our manner of responding we determined to a large extent what we were going to learn through listening.[33] The sensitive communicator, then, listened for understanding and reflected the feeling of the other communicator while the less sensitive communicator listened for information and reflected his own feelings and evaluations. However, just because the sensitive communicator listens for information and reflects feelings does not mean he agrees with what the speaker says. The sensitive

---

[31]Rogers, Counseling and Psychotherapy, pp. 85-89.

[32]Carl H. Weaver and Warren L. Strausbaugh, Fundamentals of Speech Communication (New York: American Book Co., 1964), p. 245.

[33]Ralph G. Nichols and Leonard A. Stevens, Are You Listening? (New York: McGraw-Hill Book Co., Inc., 1957), p. 39.

communicator, in order to be able to understand and reflect feelings, placed a high priority on being an effective listener. The less sensitive communicator "gives a higher priority to his being an effective speaker than an effective listener."[34]

This kind of active involvement or listening would have led to development of an effective "between" as described by Poulakas. He stated that the "between" was the interaction between the sender and the receiver. Particularly if there was effective communication taking place, the between was more than the sum of the parts brought to the encounter by the communicators.[35] The low sensitive communicator did not contribute as much as the high sensitive communicator to the development of the between since he remained withdrawn and aloof from the situation.

Miller and Steinberg gave the following characteristics for developing the "between" type of bonding for two communicators: 1. One should be understanding rather than controlling; 2. One should listen more than one talks; 3. One should adapt to the other's message rather than forcing him to adapt to yours; and 4. One should accommodate oneself to the communication circumstances rather than trying to define the situation for the other person.[36] These

---

[34]Hughey and Johnson, p. 389.

[35]John Poulakas, "The Components of Dialogue," Western Speech, XXXVIII (Summer, 1974), pp. 207-210.

[36]Mark Steinberg and Gerald R. Miller, "Interpersonal

characteristics of effective communication lead to bonding or the developing of an effective "between."

The degree of sensitivity of an individual was related to the ability of the individual to understand, to communicate with, and to maintain rapport with another individual.[37] In other words, communication sensitivity was related to empathy. In terms of the receiver role, in fact, the ability to empathize with another has been called the single most important ingredient in interpersonal functioning.[38] Empathy, a widely described concept,[39] had been defined as "the accuracy with which an individual predicts the verbal responses of another."[40] High predictive accuracy could be equated with high empathic skill. When empathy was "conceived of as a crucial determinant of interpersonal communication effectiveness . . . it involves the ability to identify ways the

---

Communication: A Sharing Process," Hanneman and McEwer, eds. Communication and Behavior (Reading, Mass.: Addison-Wesley Pub. Co., 1975), pp. 133-197.

[37]Fred E. Fiedler, "A Comparison of Therapeutic Relationships in Psychoanalytic, Nondirective and Adlerian Therapy," Interpersonal Communication: Survey and Studies, Dean C. Barnlund, ed. (Boston: Houghton Mifflin, 1968), p. 675. While this article deals with therapeutic communication, they are discussing the same characteristics of communication sensitivity.

[38]Dale M. Jackson, "Implications of Empathy Research for Speech Communication," (unpub. Ph.D. dissertation, Indiana University, 1974).

[39]A good review of the research on empathy is provided in Deutsch, pp. 267-287. See also Schultz, pp. 181-183.

[40]Gerald R. Miller and Mark Steinberg, Between People: A New Analysis of Interpersonal Communication (Chicago: Science Research Associates, 1975), p. 169.

actual behaviors and attitudes of an individual differ from the behaviors and attitudes of others."[41] Miller and Steinberg found in their work with students that the sensitive communicator was high in the ability to empathize with others while the less sensitive communicator was not. The degree of communication sensitivity in a situation might be summarized as follows:

> The research suggests that the more genuine, accepting, open, and empathic each person is, and the more each values the experience of the other, the more likely it is that their communication will contribute to the effective functioning and personal growth of each.[42]

The fifth element of the communication sensitivity model was how the communicator sequences his communication encounters. The sensitive communicator accepted role shifts in the communication situation, and he was willing to adapt to a changing communication environment.[43] In fact, "the sensitive communicator entered into a human encounter with the ability to accurately take into account what is going on, to size up the situation effectively, and to evoke an appropriate response."[44] The less sensitive communicator was unable to effectively understand the shifting communication process and was rigid in his manner of approach to communication. The more sensitive communicator adapted to the

---

[41] Ibid., p. 173.

[42] Barnlund, p. 641.

[43] Hart and Burke, pp. 76-88.

[44] Hughey and Johnson, p. 382.

other's approach, organization, and message content.

Finally, the sensitive communicator could effectively detect and cope with barriers to communication while the less sensitive communicator could not.[45] Specifically, the sensitive communicator recognized and took into account that (1) his senses are prone to error, (2) he selectively perceives reality, and (3) he has a tendency to treat his inferences as though they are observations. Furthermore, the sensitive communicator did not assume that everyone assigns meaning to words in the same way he does, nor did he make the assumptions of "allness" and "isness."[46]

In summary, the sensitive communicator had the following characteristics:

1) He believed there are many specific purposes in a communication situation.

2) He was likely to create a supportive climate through nonevaluative support, warmth, and emotional closeness.

3) As a transmitter he was more concerned with the other person than he was with himself.

4) As a receiver he was concerned with the nonverbal portion of the message, he was an active listener, he empathized with the other person, and he focused on feelings.

5) He was willing to adapt to a changing communication environment.

6) He was able to effectively detect and cope with barriers to communication.

---

[45] Ibid., p. 389.

[46] Ibid.

Aggression

Definition

Variations in the definition of aggression were many. Aggression had been defined in many ways: Some authors defined aggression solely in terms of the behaviors involved; other theorists defined aggression in terms of assumptions about the instigators, the emotional elements, or the intent of the aggressor.

The definition provided by Buss focused strictly on the behavior involved in aggression. He stated: "Aggression is defined as a response that delivers noxious stimuli to another organism."[47] The problem with this definition is that it focused strictly on behavior. No inference was made about the aggressor's intent. Rather, emphasis was placed on the effect on the recipient. Buss' definition might reasonably have been argued to apply to the case of a woman who knocks over a flower pot while dusting a window. The flower pot falls over and injures a pedestrian.[48] Was this aggression?

For the purposes of this study, the following types of acts were not considered as acts of aggression: 1) accidental harming of others; 2) nonhuman behavior; 3) behavior where pain was inflicted in order to help others; and 4) fantasized aggressive behavior. While one may daydream of

---

[47]Buss, p. 1.

[48]Kaufman, p. 3.

injuring someone else, this may be caused by anxiety rather than by pure wish fulfillment.[49] Even if the daydreaming were a case of wishful thinking, it was not considered aggressive, as it was intent with no observable behavioral elements. There was no noxious stimuli delivered, and the target did not perceive any noxious stimuli as being present.

The following were, however, considered as elements of aggression: 1) when an aggressor initiated an attack and expected to injure another individual but failed because of an intervening variable or because of defense by the target; 2) when aggression was in the line of duty (such as aggression by a policeman or military man). While the actions of "line of duty" aggressors did not fall into the angry aggression category developed by Dollard, this type of aggression did fulfill the behavioral definition of Buss.[50]

The element of intent needed to be considered in terms of the definition used in this study. The intent to injure another either to see the target suffer, or because the other person was in the way, was considered a part of the concept of aggression. If this desire or intent were omitted and if a strictly behavioral definition were used, one was merely describing an observed event and not considering the inner state of the aggressor. This study attempts to

---

[49]Ibid., p. 5.

[50]Dollard, p. 11. This study defines aggression in terms of having a purpose to inflict injury.

define aggression in terms of: 1) the behaviors involved; 2) the emotional concomitants; and 3) the inferred intent of the aggressor. Aggression was therefore defined as that behavior "directed against a living target, . . . who has an expectation or subjective probability greater than zero of reaching the object and of imparting a noxious stimulus to it, or both. (No stipulation is made that the target could not also be the attacker himself.)"[51]

The term "aggression" was not to be confused with the term assertion. A study by Bate defined assertive speaking as "appropriately emotionally honest, direct, self-enhancing, and expressive," yet aggressive speaking was defined as "inappropriately emotionally honest, direct, self-enhancing at expense of another, expressive."[52] Galassi and Galassi further supported this distinction when they attempted to correlate the College Self-Expression Scale, a measure of assertiveness, and the aggression-hostility scales of the Buss-Durkee Inventory. They found that, "The only significant and positive correlation was between the assertiveness scale and the verbal aggression scale for the female sample. The other Buss-Durkee scales were either unrelated or inversely related to assertiveness."[53] These researchers did

---

[51]Kaufman, pp. 10-11.

[52]Barbara Bate, "Assertive speaking: an approach to communication education for the future," Communication Education, 25 (1976), p. 54.

[53]John P. Galassi and Merna D. Galassi, "Relationship Between Assertiveness and Aggressiveness," Psychological Reports, 36 (1975), p. 352.

emphasize, however, that the "total aggression-hostility scale is unrelated to the assertiveness scale in both the male and female samples."[54] Aggression and assertion, then, were assumed to be distinctly different concepts.

This study did not attempt to express a value judgment on the use of the behaviors under examination. It was not assumed that aggression was bad and communication sensitivity was good, and the reverse was also not assumed. This study, in fact, expected that no value judgment would be expressed.

At this point the specific types of aggression dealt with in this study will be defined. In line with the frustration-aggression hypothesis there were a number of aggressive responses. The strongest aggressive response evoked by frustration was a response of direct aggression. Weaker types of frustration, or frustration moderated by inhibitions to aggression, lead to more indirect types of responses. These indirect modes of response would take many forms, including indirect, physical, or verbal aggression.[55] Direct or physical aggression was dealt with first, then indirect aggression, and the definitions section was concluded with a definition of verbal aggression.

Direct Aggression

Direct aggression was defined as an assault against a

---

[54]Ibid., p. 353.

[55]Leonard Berkowitz, Roots of Aggression (New York: Atherton Press, 1969), pp. 104-131.

target by means of body parts or weapons. This direct aggression may have had two kinds of results. The first type or result might have been that a barrier was removed or the source of a "noxious stimulus" was eliminated. The second type of result of direct aggression was to cause pain or injury to the other party.[56]

Indirect Aggression

Indirect aggression expanded the area of aggression to the point that the aggressor was attempting to deliver the noxious stimuli, not directly to an organism or target, but to an organism surrogate. From the aggressor's vantage point, this was beneficial as it allowed the aggressor to avoid counterattack. Avoidance of counterattack was possible because the target found it difficult to identify the aggressor. Indirect aggression required the presence of "mediating responses that serve to relate an attack on a substitute or symbol of the victim to attack against the victim himself."[57] In other words, there must have been for the aggressor cues which relate the target to the intended victim. If the attacker felt that the harm done to the target (burning a house down, for example) would not hurt the intended victim, there was little likelihood of the action occurring. In this case, the aggression was

---

[56]Buss, pp. 4-6.

[57]Ibid., p. 8.

not likely to take place as the intent was not to burn the house down but to cause harm to the owner of the house.

Verbal Aggression

Threats, criticism, and verbal abuse would leave no physical injury. Thus it was hard to define verbal aggression in the same terms that have been used for physical aggression. Some theorists have used the rather vague term of psychic injury. However, that designation was avoided here. Verbal aggression was defined as "a vocal response that delivers noxious stimuli to another organism."[58] The noxious stimuli delivered in verbal aggression was either the rejection or the threat of the victim.

Aggression in the rejecting category labeled the target as aversive, bad, and unwanted. While the rejection could have been of a nonverbal nature, it was more often of a verbal nature and may have taken the following three forms: direct and unvarnished dismissal; a hostile remark; and the three subcategories of criticism, derogation and cursing.[59]

A verbal threat was defined as a "response that symbolizes, substitutes for, or is anticipatory of subsequent attack."[60] The threat used acquired its aggressive

---

[58] Ibid., p. 6.

[59] Ibid.

[60] Ibid., p. 7.

connotation because the victim associated the threat with aggressive responses.

The Literature

A review of the literature on aggression indicated many characteristics as components of the aggressive individual. The first area which was considered here was the area of demographic factors which influence aggression. The second area dealt with personality factors. These factors included intelligence level, ability to handle verbal exchanges, anxiety level, and sophistication. Also the areas of view of self, view of communication, and relationship to groups and individuals were discussed. The demographic factors were discussed first.

The factor of age was found to be significant in an aggression study reported by Parry. The study, which focused on aggression in the driving environment, found that younger drivers are significantly more aggressive than older drivers.[61] This difference was also reflected in the differences in the arrests for different age groups. For example, there were less than half the number of arrests for the 45-49 year olds than there were for the 25-29 year olds.[62]

In terms of social class membership, a number of

---

[61]Meyer H. Parry, Aggression on the Road (London: Tavistock Publications, 1968), pp. 100-108.

[62]Information Please Almanac, p. 732.

studies found that upper and middle class people were more aggressive than lower class people.[63] This was not clearly the case, however, when other factors were taken into consideration. When social class was controlled, educational level was found to be inversely related to aggression.[64] A descriptive study by Roberts found that this was consistent with the educational level of the prison population. The prison population had an average educational level of eighth grade. Only 3.1 per cent of the prison population had one to three years of college, and 0.8 per cent had four or more years of college. This is opposed to 27.1 per cent of the prison population having nine to eleven years of school.[65]

Eron, Walder, and Lefkowitz found there was a positive relationship between mobility orientation and aggression, and occupation had a significant relationship to aggression.[66] In rank ordering frequency of offenses by occupational groups with the most frequent first Hooten indicates the following: Extractive, Laborer, Factory, Skilled trades, Transportation, Trade, Personal service,

---

[63]Parry, pp. 111-113. See also, Leonard D. Eron, Leopold O. Walder, and Monroe M. Lefkowitz, Learning of Aggression in Children (Boston: Little, Brown and Company, 1971), pp. 130, 142-143.

[64]Ibid., pp. 132-133, 142-143.

[65]Albert R. Roberts, Sourcebook on Prison Education (Springfield, Ill.: Charles C. Thomas, 1971), p. 29.

[66]Eron, Walder, and Lefkowitz, pp. 132, 142-143.

Clerical, Semi-professional, Public service, and Professional.[67] Roberts also indicated that the largest portion of the prison population was unskilled.[68] A final factor noted here was that ethnicity was an important variable. Children of parents who recently arrived, or whose parents arrived, in the United States were less aggressive at home and more aggressive in school than children whose parents had been in the country for generations.[69]

The aggressive individual, then, was found to differ in some important demographic respects from the non-aggressive individual. However, studies of personality factors and aggression yielded mixed findings. A number of studies reported that in terms of personality factors there was no significant difference between the aggressive individual and the non-aggressive individual. Gibbens found that violent offenders and non-offenders did not differ in terms of personality traits, and that the personality patterns demonstrated were not common to a single offender type.[70] In a similar study which focused on minority aggression, the same conclusions were drawn by Curtis.[71] The National Commission

---

[67]E. A. Hooten, The American Criminal (Cambridge, Mass.: Harvard University Press, 1939), p. 83.

[68]Roberts, p. 29.

[69]Eron, Walder, and Lefkowitz, pp. 142-143.

[70]D. C. Gibbens, Changing the Law Breaker (Englewood Cliffs, N. J.: Prentice-Hall, 1965), pp. 106-132.

[71]Lynn A. Curtis, Violence, Race and Culture (Lexington, Mass.: Lexington Books, 1975), p. 26.

on the Causes and Prevention of Violence even went so far as to state that the victims of aggression did not differ in a significant way from the aggressors.[72] It is important to note, however, that all three studies were dealing only with direct physical aggression or violence, and all three reports were focusing on specific subcultures where violence was accepted behavior.

Other studies which were reported in the literature indicated that there were some significant differences between aggressive and non-aggressive individuals on specific personality and behavior traits.

Intelligence level appeared to have little effect on an individual's aggression or lack thereof.[73] While Eron, Walder and Lefkowitz reported that parents with high authoritarian attitudes rated themselves as being more aggressive than did parents with lower authoritarian attitudes,[74] Burdick and Nettler reported a strong negative relationship between aggression and authoritarianism.[75] While it had to be taken into account that the Eron study was based on self

---

[72]National Commission on the Causes and Prevention of Violence, To Establish Justice, To Insure Domestic Tranquility (Washington, D. C.: U. S. Government Printing Office, 1969), pp. 24-25.

[73]Mitchell M. Berkum and Harry A. Burdick, "Effect of Preceding Rosenzweig's PF Test with the TAT," Journal of Clinical Psychology, (XX), 1964.

[74]Eron, Walder, and Lefkowitz, pp. 131-132.

[75]Harry A. Burdick and Joan S. Nettler, "Four Motive Measures," Paper for American Psychological Association Convention, Los Angeles, September, 1964.

rating by the subjects, the conclusion had to be that the evidence was still out on intelligence level and authoritarianism as they relate to aggression.

Toch in his study using both prisoners and policemen reported that violence-prone individuals or aggressive individuals had difficulty in handling verbal exchanges, while non-aggressive individuals did not.[76] Parry in studying aggressive drivers found that individuals who were highly aggressive were also highly anxious.[77] Turner and Simons in a controlled laboratory study found that the more sophisticated an individual was the less aggressive he would be. They said that this was due to subjects being increasingly able to modify their aggression as they became more sophisticated.[78] While Turner and Simons essentially equated sophistication with being "test wise," there were a number of general implications which were drawn from this study. The most important of these was that an individual's general level of sophistication might serve to mediate aggressive behavior if the sophistication level were high.

There was also a difference between aggressive individuals and non-aggressive individuals in terms of how they viewed themselves, how they viewed communication situations,

---

[76]Toch, p. 139.

[77]Parry, pp. 100-113.

[78]Charles W. Turner and Lynn Stanley Simons, "Effects of Subject Sophistication and Evaluation Apprehension on Aggressive Responses to Weapons," Journal of Personality and Social Psychology, 30, 1974, pp. 341-348.

and how they related to groups and individuals. Toch indicated that the aggressive individual viewed himself as being both weak and insignificant, and he said that this differed from the non-aggressive individual who had a fairly good self-concept.[79] The aggressive individual also viewed human relationships as being power-centered and one-way affairs, rather than a two-way exchange relationships as viewed by the non-aggressive individual. The aggressor "...sees other people as tools designed to serve his needs; ... he feels vulnerable to manipulation."[80] Both of these views were part of a power-centered view of human relationships.

Scarpetti found that individuals who responded to a threatening situation with repression and denial were not very aggressive. He said that this was because of the "repressor's" tendency to use avoidance in a threatening situation or to give a friendly counterresponse. The indication was that these individuals responded as if they had been rewarded rather than threatened by the situation. Scarpetti called an individual who responded to a threatening situation with an admission of and an exaggeration of the threat, a "sensitizer." He stated that the sensitizer responded to an aggressive threat with an aggressive counterresponse.[81] The conclusion which was drawn from this

---

[79]Toch, pp. 137-138.

[80]Ibid., p. 183.

[81]William L. Scarpetti, "Autonomic Concomitants of Aggressive Behavior in Repressors and Sensitizers: A Social

study is that differences in this personality trait, how one dealt with a perceived threat, influenced one's tendency to be aggressive.

Fite found that the strength of an individual's friendships influenced the likelihood of his aggression.[82] An individual without strong ties or friendships was more likely to be aggressive than an individual who had a number of close friends. Although Fite studied children, she found that a child's status in the group influenced his aggressiveness. The size of the group, how long the individual had been in the group, the development of friendships, and the individual's inclusion in group activities all combined to determine the child's status in a group. A low status individual was more likely to be aggressive than was a child with high group status.[83] Finally, Fite found that an outgoing individual was more likely to be aggressive because he was more likely to expose himself to criticism and the imposition of rules.[84]

In summary, the aggressive individual was found to have the following characteristics:

Learning Approach," Journal of Personality and Social Psychology (30, 1974), pp. 772-781.

[82]Mary Delafield Fite, "Aggressive Behavior in Young Children and Children's Attitudes Toward Aggression," Genetic Psychology Monographs (22, 1940), pp. 151-319.

[83]Ibid.

[84]Ibid.

DEMOGRAPHIC FACTORS

1. The aggressive individual was more likely to be young, not highly educated, oriented toward upward mobility, working class or unskilled, and having strong ethnic ties.

BEHAVIOR CHARACTERISTICS

2. The aggressive individual has difficulty in handling verbal exchanges.

3. The aggressive individual may be highly anxious and relatively unsophisticated.

4. The aggressive individual views himself as both weak and insignificant.

5. The aggressive individual views human relationships as being power-centered, one-way affairs.

6. The aggressive individual is more likely to exaggerate the nature of a perceived threat, than he is to deny the existence of the perceived threat.

7. The aggressive individual is less likely to have strong friendship ties, and he is more likely to have low status in the group to which he belongs.

8. The aggressive individual is likely to be outgoing.

The Aggression-Sensitivity Relationship

In this section of Chapter Two an attempt was made to review the literature which indicated a possible relationship between communication sensitivity and aggression. The concepts of aggression and communication sensitivity were found to have many similarities. The first area of common

ground was the process nature of both concepts. While communication sensitivity has long been viewed as a process,[85] the area of aggression is increasingly becoming viewed in the same manner. While earlier studies in the area of aggression viewed the aggressive act as having a beginning and ending, being uni-directional, and being initiated by the aggressor, this viewpoint was being modified.[86] The field of victimology which has come into vogue at a number of universities indicates the input of the victim to the violent act. Aggression is no longer viewed as having a specific beginning and ending, and the aggressive act is now viewed as being prompted by something in the victim as well as the aggressor, rather than just a function of the aggressor.[87] Toch's work with prisons and policemen showed that aggression could no longer be viewed as being uni-directional, but was instead a function of the interaction between the aggressor and the victim.[88] Both communication sensitivity and aggression have a process nature.

In addition, both communication sensitivity and aggression are concepts which depend heavily on the importance of perception. The importance of nonverbal cues in the area

---

[85]Hughey and Johnson, pp. 16-18.

[86]Dollard viewed aggression as being uni-directional and initiated by the aggressor. Both Freud and Lorenz among others, viewed aggression as having a beginning and ending.

[87]"Is the Victim Guilty?" Time, July 5, 1971, p. 42.

[88]Toch, pp. 5-7.

of communication sensitivity has already been discussed, but the nonverbal element was also important in terms of aggression. Gari Lesnoff-Caravaglia found that while aggressive individuals were less responsive to and aware of nonverbal cues, the nonverbal element may even have affected the role of victim.[89]

Perception, or the ability to respond to the cues of another individual in a communication situation, has been viewed as an integral part of communication sensitivity. In fact, empathy had been defined as "the accuracy with which an individual predicts the verbal responses of another."[90] The ability to predict another's intention, and accurately predict that intention, also played a vital role in the development of an aggressive response. Individuals were, according to Nickel, more likely to give an aggressive response if they felt that another individual intended to attack and punish them.[91] This was particularly detrimental as, unless one is highly sensitive, only a portion of the available cues would be likely to be monitored. This would mean that the conclusion drawn about another's intention might well have been based on a limited number of cues.

---

[89]Gari Lesnoff-Caravaglia, "Violence Training," Contemporary Education, 45 (1974), pp. 292-295. Unattractive children are more likely to be the victims of physical aggression than are attractive children.

[90]Miller and Steinberg, Between People: A New Analysis of Interpersonal Communication, p. 169.

[91]Ted W. Nickel, "The attribution of intention as a critical factor in the relation between frustration and aggression," Journal of Personality, 42 (1974), pp. 482-492.

There were also different kinds of perception abilities involved in an evaluation of aggression. Saine stated that:

> The ability to detect conflict and the ability to assess the magnitude of conflict may be two different cognitive processes. Just because an individual is able to judge that conflict has occurred or will occur does not necessarily imply that he is able to rate the severity of the conflict . . . high complexity subjects are more sensitive to conflict than lows, implying here an ability to judge accurately the magnitude of conflict.[92]

In addition, conflicts resulting from perception of others "often involve elements . . . such as roles, trust, and differences in attitudes and values."[93] An individual's ability, then, to monitor the available cues in a communication situation and to respond on the basis of an evaluation of those cues was vital in both the areas of communication sensitivity and aggression.

It was important at this point to examine what might be termed the communication nature of an aggressive incident. As previously pointed out, any communication situation involves a number of possible responses. The highly sensitive communicator would monitor a broad range of available cues and use this information in determining an appropriate response. A highly sensitive communicator, then, should have a broad range of possible responses. The low sensitive communicator, on the other hand, would monitor

---

[92]Thomas J. Saine, "Perceiving Communication," Speech Monographs, 41 (March, 1974), pp. 49-56.

[93]Robert J. Doolittle, "Orientations to Communication and Conflict," Modcom (Chicago: Science Research Associates, 1976), p. 16.

a limited number of cues, and then be forced to determine an appropriate response based on limited information. Given this limited input, it is little wonder that the individual who was low in communication sensitivity would be more likely to have made an inappropriate response than would a person high in communication sensitivity.

In developing an aggression-sensitivity model four elements needed to be considered: First, the conditions the individual brought with him to the aggressive incident; second, communication interaction which occurred in the communication situation; third, the aggression itself; and, finally, the effect on the aggressor following the aggressive incident.

Involved in the conditions the individual brought with him to the situation, are three main areas. First, the aggressive individual has a low degree of communication sensitivity. This involved the following:

a. The individual was non-supportive and was evaluative of the other.

b. The individual did not really listen to what the other had to say but concentrated on achieving his own ends in the situation.

c. The individual had a low degree of ability to judge the significance of what he perceived.

d. The individual had a low range of evaluative positions.

e. The individual had a low ability and desire to predict the response, needs, and perceptions of the other.

f. The individual had a low desire for verbal

> interaction with the other, but in such interaction would be verbally rather than nonverbally oriented.

Second, the individual brought with him a set of needs and incentives; and, third, the individual brought with him his previous patterns of interaction in a communication situation. More specifically, if the individual had previously been involved in similar aggressive behavior, he brought the behavior pattern and a set of perceptions with thim that had been influenced by his previous encounters.

With regard to the interactions which occur in the communication situation, the individual first had a set of communication responses. These communication patterns, including a., c., d., and e. above, were engaged.

Response and/or pressure by the receiver in the communication situation led to a defensive reaction by the aggressive individual and a narrowing of the possible positions that he would take in the communication situation. May indicated that in the cycle of aggression, language was the first element to degenerate, and conversation was changed to verbal aggression. After obscenity and threats fail, language degenerated to a point where physical aggression, direct or indirect, was the recourse.[94]

The third step of the communication situation, the aggression itself, then occurred. The individual viewed his aggression as not only justified but as the only possible

---

[94]Rollo May, Power and Innocence: A Search for the Sources of Violence (New York: W. W. Norton & Co., 1972), pp. 65-81.

solution and end to the communication situation. The aggression may have taken a direct physical form, or it may have been displaced or reduced to take the form of indirect or verbal aggression.

Finally, the conclusion of an aggressive incident would be the reinforcement of the individual. The individual was generally reinforced for his solution to the communication situation by having his needs and incentives met.[95]

The nature of the aggressive incident, then, was that it operated on a spiral. Early in the interaction a number of alternatives were open, but the alternatives narrow until aggression was the chosen response. It should be noted at this point that after an individual had engaged in a number of aggressive patterns, the intervening steps may be bypassed, and the initial stimulus may lead directly to aggression. Before the response becomes that immediate, however, there were a number of places at which the tempo of the situation could be lessened. For example, Greenberg found that if a verbally aggressive individual used modifiers lessening the intensity of his verbal aggression, even though the level of aggression remained the same, he would not be perceived as being as aggressive.[96]

This would, in turn, help prevent the situation from

---

[95]Patricia Tullis, "A Violence-Proneness Model," (unpub. manuscript, Oklahoma State University, 1972).

[96]Greenberg, pp. 130-140.

becoming more aggressive and moving to a physical level. What had occurred was that the individual was presented with a number of communication alternatives. He was, therefore, offered the choice to respond to the intensity rather than the level of aggression in determining his response. As these alternatives were eliminated, an individual was more likely to see only further aggression as the available route. Alternatives, then, needed to be available in communication situations.[97] The individual who was low in communication sensitivity was less likely to see these alternatives, and therefore more likely to respond to a situation with aggression.

Finally, the social context of a communication situation is important to the concepts of communication sensitivity and aggression. When aggression was a response to a communication situation where the other individual was the initial aggressor, this is not called aggression, but was seen as being socially justified.[98]

The possible aggression-sensitivity relationship which was developed here was largely inferred from the material presented in the earlier sections of the chapter. There was, however, a research basis for inferring possible relationship between communication sensitivity and aggression.

---

[97]Marlowe H. Smaby and Armas W. Tamminen, "Counselors Can Be Assertive," Personnel and Guidance Journal (April, 1976), pp. 421-424.

[98]Kane, Joseph, and Tedeschi, pp. 664-667.

A 1971 study on violence proneness and communication sensitivity hypothesized that there would be an inverse relationship between the two variables. A basic *t*-test, large sample method, analysis of data resulted in a *t* of 2.684. This indicated a significance beyond the .05 level.[99]

A replication study in 1973 revealed similar results. Once again it was hypothesized that there would be an inverse relationship between communication sensitivity and aggression. Results of statistical testing, a correlation coefficient (*r*), showed an inverse relationship with *r* = .3110. This *r* is significant beyond the .05 level.[100] These studies dealt with the concept of violence proneness rather than aggression. Violence proneness involved only the physical aspect of aggression, it had only been studied with male subjects, and it focused on the likelihood of further violence. However, the concepts were similar, and since the hypothesis was confirmed in both studies, there was a basis in research for inferring a possible relationship between communication sensitivity and aggression. An extensive examination of the literature on communication sensitivity and aggression revealed that these are the only studies dealing with the hypothesized relationship.

The final question to be answered in this chapter was:

---

[99]Patricia Tullis, "Violence Proneness and Communication Sensitivity," (unpub. manuscript, Oklahoma State University, 1971).

[100]Deborah Wilson, "A Study of the Relationship Between Violence Proneness and Communication Sensitivity," (unpub. manuscript, Oklahoma State University, 1973).

"What other factors might influence the relationship between communication sensitivity and aggression?"

Influencing Factors

A number of factors have been investigated with regard to their relationship to communication sensitivity, and a number have been investigated with regard to aggression.[101] Given the population under study and research methodology, there was only one factor which seemed to require special attention in this investigation. This was the area of subjects' sex.

The presence of sex differences in aggression was widely accepted. The studies that compare aggression in males and females have found that males are more aggressive. This has been found to be especially true in terms of physical aggression, while females have been found more likely to be indirectly aggressive.[102] These gender differences were reflected in the norms on the BDI. Male subjects consistently scored higher on physical and verbal aggression than did female subjects. On the other hand, female subjects consistently had a higher score on indirect aggression.[103] The differences by sex in aggression were readily apparent

---

[101]Some of the factors considered on aggression have been race, sex, age, similarity to aggressor, etc. Some of the factors considered on communication sensitivity have been satisfaction, personality variables, physical setting, etc.

[102]Buss, p. 283.

[103]Ibid., pp. 176-179.

in the arrest records in the United States. In 1973 males accounted for 84.7 per cent of arrests, and females only accounted for 15.3 per cent. The percentages were even more uneven on violent crime. Males accounted for 94.6 per cent of the burglaries and 86.8 per cent of the arrests for aggravated assault.[104] Sex was not only a factor influencing aggression, for the sex of the subject influenced communication sensitivity as well. The norms on the CSRI consistently showed males as lower in communication sensitivity than females.[105] The sex variable, then, is one that seemed to affect both communication sensitivity and aggression.

Chapter Two attempted to fulfill the following requirements. The literature involving aggression and communication sensitivity was reviewed, possible aggression-sensitivity relationship was developed from the literature, and the possible influence of the factor of sex was examined. This chapter, then, posed and answered the four questions which lead to the hypotheses under examination.

---

[104] Information Please Almanac, Atlas and Yearbook (New York: Simon and Schuster, 1976), p. 732.

[105] See Table III.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this chapter is to explain the methodology used in this study. While some time has been spent in the first chapter describing the measuring instruments which were used, these inventories will be discussed in more detail in this chapter. This chapter will focus on the following areas: subject selection, measuring instruments, pilot study procedures, main study procedures, and the method of data analysis. The norms on the measuring instruments are also examined. This was done to assure that the norms for O.S.U. students were similar to those found with other groups, and that the measuring devices would therefore be appropriate for the sample used in this study.

Sample Selection

The subjects used in this study were students enrolled in Introduction to Speech Communication, Speech 2713, at Oklahoma State University during the fall semester of 1974. Each student completed both the Conversation Self-Report

Inventory and the Buss-Durkee Inventory. Those students who were absent on the day the inventories were administered were not used as subjects. Of the eight hundred and twenty-nine students enrolled in the course, seven hundred and thirty-six students completed the test. Students who took the test but failed to complete both of the inventories were excluded from the sample. Once students in both of these categories had been eliminated, there was a sample size of seven hundred and three subjects. In addition to the fact that the subjects used were readily available, a desire for a large sample size led to the selection of the sample used. In the fall of 1974 there were eight hundred twenty-nine students enrolled in the class, in contrast with approximately seventy-five students enrolled in the course during the summer of 1974. In the spring semester of 1974 the enrollment was seven hundred fifty-six students, and the enrollment in the course in the spring is generally smaller than it is in the fall.[1] Selection of the fall semester for conducting the study, then, was based on the size of the sample. Random selection of subjects was deemed too costly in terms of number of subjects, as random

---

[1]The figures on general university enrollment and enrollment in Speech 2713 were provided by the registrar's office at Oklahoma State University, October, 1974. Speech 2713 enrollment in the fall semester of 1974 represented 4.299 percent of the university enrollment, and 5.226 per cent of the university's undergraduate enrollment. The following distribution of students was present in the fall semester of 1974: Males-2713 65.138%, O.S.U. 61.194%; Females-2713 34.861%, O.S.U. 38.805%; Lower classmen-2713 70.566%, O.S.U. 51.872%; Upper classmen-2713 29.311%, O.S.U. 48.237%.

selection would reduce the number of subjects per cell.

Measuring Devices

Buss-Durkee Inventory

The Buss-Durkee Inventory, BDI, seems to be unique among aggression-hostility inventories. Other inventories are omnibus instruments which tap a variety of hostile attitudes and aggressive behaviors and combine all of these into a single score.[2] The assumption seems to be that all aggressive behaviors can be lumped into one class. The Buss-Durkee Inventory assumes, on the other hand, that there is a difference among types of aggressive behavior. The inventory makes the assumption that it is necessary and useful to divide aggressive behavior into sub-classes, and it divides such behavior into eight sub-classes or factors. As Buss points out:

> With the exception of Schultz's scale, all the aggression-hostility inventories reviewed previously have been omnibus instruments. They tap a variety of hostile attitudes and aggressive behaviors and combine all of these into a single score. The unstated assumption made in using a single summary score is that hostile-aggressive behaviors do not need to be divided into subclasses. Thus a suspicious, nonassaultive person might receive the same score as a nonsuspicious, assaultive person.[3]

In addition to the fact that the Buss-Durkee Inventory is

---

[2]Buss, p. 169. An examination of the literature on aggression, and an examination of the Sixth Mental Measurement Yearbook support Buss' conclusion.

[3]Ibid.

divided into subclasses, three of the inventory subclasses are those of the particular focus of this study. An extensive examination of the current literature on aggression indicates that there are no other non-projective instruments available which so clearly deal with the three subcategories of aggression which are the focus of this study.

The eight factors of the Buss-Durkee Inventory are: Direct Aggression or Assault, Indirect Aggression, Irritability, Negativism, Resentment, Suspicion, Verbal Aggression, and Guilt. Each of the eight factors is scored independently. After initial inventory construction of 105 items, an item analysis yielded a 75 item inventory.[4] A factor analysis was computed on the final form of the inventory. The eight scales were scored, and product-moment correlations were computed among them for men and women. None of the women's correlations was above .50, and only two of the men's were above .50, indicating that the various scales are tapping at least partially independent classes of behavior. In terms of stability, when a retest was run after a five-week interval, the following product-moment correlations for the two testings were: Direct .78; Indirect .72; and Verbal .72. These correlations indicated moderate stability.[5]

Through a number of studies using college students and

---

[4]Ibid., pp. 171-175.

[5]Ibid.

non-student populations, the norms for men and women on each of the scales has been established. The main two conclusions which can be drawn from the student scores are that "there are no consistent regional differences, and the scores are slightly higher when the inventory is taken anonymously than when it is signed."[6] This would indicate only that subjects would be more willing to express aggression if their statements were anonymous. While there were some differences between the college population norms and the psychiatric patient norms, the difference is consistent with the behavior of the disturbed individuals.[7] Even with the psychiatric patients, however, the inventories which were taken by anonymous groups had higher scores than the inventories where the groups signed the inventories. This corroborates the findings of the student samples. Norming data for Oklahoma State students was obtained, and this enabled comparisons across time and geographic location with the university groups Buss studied. This norming data also provided additional basis for hypothesizing in terms of sex and aggression.

Norming data was generated from the data collected for

---

[6]Ibid., p. 177.

[7]The conclusions drawn from the norming data are in the Buss book, pp. 175-179. These conclusions are based on six studies. The four college samples are from Indiana University, University of Pittsburgh, Washington State College, and Duke University. The psychiatric patient samples are from Carter Memorial Hospital, Indianapolis, and Eastern State Hospital, Medical Lake, Washington.

the pilot study and the data collected for the main study. The norms for physical and verbal aggression were higher for men than they were for women. This would lead to the specific hypothesis that men would be significantly more aggressive in these areas than women would be. The norming data present in Table I shows that women scored higher than men in terms of indirect aggression. This would lead to the specific hypothesis that women would be significantly more indirectly aggressive than men.

TABLE I

NORMS ON THE BUSS-DURKEE INVENTORY
OSU 1974

Scale	No. of Items	Men (N=483)	Women (N=263)
Physical	10	4.3	2.5
Indirect	9	4.7	4.9
Verbal	13	6.8	5.9

The norms which were found with Oklahoma State University students were comparable with the norms found in four student signed studies reported on by Buss.

The norms in Table II were based on signed inventories,

and Buss also reports on unsigned responses. As the responses in this study were signed, only the signed responses of Buss were used as a basis of comparison. The norms with Oklahoma State University students were consistent with the norms reported by Buss. The consistency of the norms on this inventory indicated that use of the inventory was suitable with Oklahoma State University subjects.

TABLE II

NORMS ON THE BUSS-DURKEE INVENTORY
FOUR STUDENT POPULATIONS

College	Type of Aggression	Men	Women
Indiana University	Physical	5.1	3.3
University of Pittsburgh		4.6	2.9
Washington State College		5.2	3.1
Indiana University	Indirect	4.5	5.2
University of Pittsburgh		4.2	4.6
Washington State College		4.8	5.0
Indiana University	Verbal	7.6	6.8
University of Pittsburgh		7.2	6.0
Washington State College		7.3	5.8
Duke University		7.9	6.4

One area which needs to be considered in an inventory which involves a behavior having strong social sanctions is the tendency for the subjects to slant their responses in a socially desirable direction. The Buss-Durkee Inventory attempted to minimize this variable. The method used in dealing with this variable was careful item construction based on three techniques.

> In attempting to facilitate respondents' admitting socially undesirable behavior, three item-writing techniques were employed: First, assume that the socially undesirable state already exists and ask how it is expressed . . . . This procedure emphasizes a report of behavior and tends to minimize the value judgements associated with hostility. Second, provide justification for the occurrence of aggression . . . . When the item provides a rationale for aggression, the subject's defensive and guilt reactions are reduced. . . . Third, use idioms . . . as they should be readily accepted and admitted.[8]

This method of item construction seemed to be fairly successful, for when scale values for social desirability were obtained and correlations were run the product-moment r's were .27 for the men and .30 for the women. These are considerably lower than those found by many working with inventories involving social desirability.[9]

---

[8]Ibid., pp. 170-171.

[9]Ibid., pp. 179-180. It should also be noted that an example of a higher correlation between social desirability and the probability of endorsing the items can be found in the conclusion drawn by A. L. Edwards, "The relationship between the judged desirability of a trait and the probability that the trait will be endorsed." Journal of Applied Psychology, 1953 (37), pp. 90-93. He found the correlation between social desirability and the probability of endorsing items to be .87. Later studies have confirmed the importance of social desirability as an uncontrolled variable.

The current study used three of the eight factors of the Buss-Durkee Inventory, those being the areas dealing with Direct Aggression or Assault, Indirect Aggression, and Verbal Aggression. The inventory sections on Resentment and Suspicion deal with hostility rather than aggression, and as these were outside of the focus of this study they were excluded.[10] The Guilt category deals with the relationship of the inhibiting influence of guilt to the expression of hostility and aggression. As the exploration of this relationship is outside of the scope of this study, this category was also omitted. The areas of Irritability and Negativism were also not included as areas of study. One reason for limiting the areas of study was to keep testing time minimal and within reason for the course time allotted for the testing. The three categories which were used consisted of thirty-two items. The forty-three items covering the other five factors were not used. The physical aggression portion of the inventory consists of ten items, the indirect aggression portion consists of nine items, and the verbal aggression portion consists of thirteen items. These items utilized an accurate-inaccurate forced choice format. The approximate completion time of the inventory was 15 minutes.

---

[10]Ibid., p. 170. This conclusion is indicated both by the literature reviewed and the results of the factor analysis conducted on the inventory.

Conversation Self-Report Inventory

The Conversation Self-Report Inventory, CSRI, was constructed to provide an inventory which would be capable of measuring the communication sensitivity of an individual in both the role of speaker and listener.[11] As discussed in Chapter One, this inventory has its origin in Rogers and Roethlisberger's two patterns of communication. The CSRI is the best non-projective instrument available for use in studying communication sensitivity.

In determining the usefulness of the Conversation Self-Report Inventory, one of the first major studies to use the CSRI, the Neal dissertation, gave the following information:

> An extensive examination of the interpersonal communication literature, and of the Sixth Mental Measurement Yearbook suggests that the Conversation Self-Report Inventory is currently the only non-projective instrument available for the study of sensitivity in communication.[12]

An examination of the current interpersonal communication literature reinforces Neal's statement. The only other non-projective instrument currently in use is the Facial Meaning Sensitivity Test. The FMST is used in the area of non-verbal communication to determine sensitivity to facial expression. There is no reliability and validity data

---

[11] William Patrick Neal, "Demographic, Personality and Nonverbal Perception Correlates of Communication Sensitivity," p. 64.

[12] Ibid., pp. 12-13.

available on this measure. The nonverbal element is only partially tested with the FMST, and nonverbal is only a portion of communication sensitivity.[13] The CSRI was selected for use in this study since it is the only instrument available which clearly measures communication sensitivity.

After initial inventory construction by Dr. J. D. Hughey of 260 items, an item analysis yielded a 60-item inventory. This form, 369/A revised, was later reduced by the inventory developer to the 40-item form (771L) used in this study. The initially constructed forms of the test were administered to over 500 students, and form 1169L of the best was administered to over 2000 students. Form (771L) has also been administered to several thousand students. Form (771L) of the CSRI has been used extensively in testing speech communication students at Oklahoma State University, and norms for both men and women have been compiled. The general consistency of these norms indicates the inventory is suitable for use with Oklahoma State University students.

The data collected during the summer and fall of 1974 also resulted in the additional compilation of norming data on the Conversation Self-Report Inventory. These norms are presented in the following table as are the norms for

---

[13]Dale G. Leathers, Nonverbal Communication Systems (Boston: Allyn and Bacon, Inc., 1976), pp. 26-32.

Oklahoma State University students prior to this study. The norms which were found with Oklahoma State University students were similar to the norms found in three other studies reported by Hughey.[14]

TABLE III

NORMS ON THE CONVERSATION SELF-REPORT INVENTORY

Sample		Total	Men	Women
OSU 2713 1970-1973	(N=625)	20.47	19.12	23.12
OSU 2713 Summer 1974	(N=43)	19.00	17.39	20.90
OSU 2713 Fall 1974	(N=703)	18.73	17.86	20.36

The CSRI is scored by subtracting the number of less sensitive responses from the total number of items to achieve a numerical score. The less sensitive items were determined by the item analysis and checks of validity. Scores on the measure may range from 0 to 40. The inventory was mainly

[14]Jim D. Hughey, "Conversation Self-Report Inventory Norms," (unpub. data, Oklahoma State University, 1973). He reports the following means with non-OSU students. University of New Mexico: Total 20.8, Males 18.86, Females 23.1. Arizona State: 19.3. Police Academy Males: 20.6.

self-administered, and the approximate completion time of the inventory was 20 minutes. The format of the inventory was forced choice with four alternatives for each item.

The Conversation Self-Report Inventory has been extensively pretested. The reliability of Form 1169L of the CSRI is r=.830. Also, the predictive validity of this form of the CSRI has been established in several studies.[15] Content validity was assured in the development of the inventory, by the use of expert opinion in the construction of items. Data on concurrent validity were obtained on Form 1169L.[16] Construct validity was obtained on the 369A/Revised form.[17]

Pilot Study Procedures

During the summer session of 1974, the Conversation Self-Report Inventory and the Buss-Durkee Inventory were given to all students enrolled in Introduction to Speech Communication 2713. This enabled the researcher to obtain data which could be used for tentative norms on the Buss-Durkee Inventory with Oklahoma State University students.

---

[15]Some studies which establish predictive validity are: Jane Roberts, "An Investigation of the Relationship of Communication Behavior and Insight" (unpub. manuscript, University of New Mexico, 1969). William P. Neal, "An Investigation of the Relationship Between Receiver Sensitivity and Receiver Effectiveness" (unpub. manuscript, University of New Mexico, 1969). Patricia Tullis, "Violence Proneness and Communication Sensitivity."

[16]Neal, "Demographic, Personality and Nonverbal Perception Correlates of Communication Sensitivity."

[17]Ibid., pp. 69-70.

The completion of both inventories was possible in the normal routine of the classroom setting.

During the normal classroom routine, students enrolled in Speech 2713 took a "Diagnostic and Advanced Standing Test." This test was designed to determine conversation feelings and behaviors, as well as to determine what competencies the student might possess in Speech Communication 2713. Since a number of instructors would administer the test, the instructions were always printed and read to minimize variance in test administration. The test was always given in the normal class period, and the number of students in each class or group was about thirty. The students were told that "different people think different things about the items, no alternative is more correct than any other. We simply want to know which choice you consider best typifies your actual conversation feelings and behavior . . . . Our purpose is to determine how to best tailor the instruction in this course to your own communication style."[18] Since the CSRI is routinely given as a portion of the Diagnostic and Advanced Standing Test, the only variation from normal classroom procedure required by this study was the addition of the BDI to the test and changing a few words in the instructions.

After all students had completed the inventories, the Conversation Self-Report Inventory was scored. The top

---

[18]Appendix A.

third, middle third, and bottom third of the scores were identified. These three groups of scores were compared in terms of their BDI scores in an attempt to determine if there is a relationship between communication sensitivity and aggression. The pilot study allowed the researcher not only to collect norming data for OSU students on the Buss-Durkee Inventory, but it also served as a "test run" of the main study. A test run was desired in order to pinpoint any potential problem areas which might occur in the main study. Since no problems were encountered in conducting the pilot study, no changes were made in the procedures planned for conducting the main study.

Main Study Procedures

The main study was conducted in a manner similar to the pilot study. During the fall semester of 1974, the Conversation Self-Report Inventory and the Buss-Durkee Inventory were given to all students enrolled in Speech Communication 2713. These inventories were given as part of the routine class work when the students took the Diagnostic and Advanced Standing Test, which is part of the early course routine. Once again the class size was about thirty, and the test was administered in the individual course sections by the ten instructors of the course.

The following attempts were made to control for external factors. All of the subjects were tested on two consecutive days to allow for as little time variation as

possible. Since 2713 labs were run on two days rather than one, not all of the students could be tested on the same day. Since the testing was conducted as part of the regular classroom work, the test should not have been threatening, and no additional cover informaton was deemed necessary. As the instructions were given by a number of different instructors, the instructions were printed and read by the instructors. This was done to minimize individual variations in the manner of giving instructions. Since this was also the usual procedure for giving the instruction on the Diagnostic and Advanced Standing Test in preceding semesters, only minor changes were needed in the usual printed instructions. (See Appendix A for the instructions provided each instructor.)

Permission to use human subjects for research was sought from the University Research Foundation. The researcher was assured by the University Research Foundation that this study was in keeping with the Oklahoma State University policy on research and, therefore, that it did not violate the rights of the research subjects.

Once the students had completed both the Conversation Self-Report Inventory and the Buss-Durkee Inventory, those papers which were incomplete were eliminated. The remaining seven hundred and three inventories were divided into three sensitivity groupings based upon CSRI scores. The aggression scores from the Buss-Durkee Inventory for these three groups were then compared using an Analysis of

Variance statistical model.

This study used both male and female subjects. Since data are available on the Conversation Self-Report Inventory for both male and female subjects, and norms on the Buss-Durkee Inventory are available for both male and female subjects, both groups were used. The use of female subjects allows the work on the concept of aggression to be broadened and perhaps allows research to begin to focus even more on types of aggression associated with sex of subjects.

Statistical Analysis

In order to determine whether there was a statistically significant relationship between aggression and communication sensitivity, a 2 x 3 analysis of variance model was used.[19] The independent variables were sex and communication sensitivity. Communication sensitivity had three levels: High, middle, and low. High sensitivity consisted of those scoring in the top third of the sample, middle sensitivity consisted of those scoring in the middle third of the sample, and low sensitivity consisted of those scoring in the bottom third of the sample.

---

[19]B. J. Winer, Statistical Principles in Experimental Design (New York: McGraw-Hill, 1962), p. 268.

CHAPTER IV

RESULTS AND DISCUSSION

Introduction

This chapter presents the results of the statistical analysis of data obtained in both the pilot study and the main study. The results of the pilot study are presented in written and tabular form. Finally, the results of the main study are presented in written and tabular form, and a discussion of these results follows. The raw data from the pilot study may be found in Appendix E, and the raw data from the main study may be found in Appendix F.

Results of the Pilot Study

During the summer of 1974, the Conversation Self-Report Inventory and the Buss-Durkee Inventory were given to all students enrolled in Introduction to Speech Communication 2713 at Oklahoma State University. The papers of those students present on the day the test was given were checked, and any papers which were not completed were eliminated. This left a sample size of forty-three subjects. These subjects were divided into thirds on the basis of CSRI scores, fourteen subjects were included in the high and low

CSRI groups, and fifteen subjects were included in the middle group. The range and mean of CSRI scores for each group are presented in Table IV.

TABLE IV

PILOT STUDY SCORES ON CSRI
RANGE-MEAN

	Low	High	Mean
Low group	7	16	12.00
Middle group	16	22	18.87
High group	22	35	26.21

A 2 x 3 analysis of variance of the BDI scores was used to examine the relationship of aggression with sex and communication sensitivity. Sex and communication sensitivity were independent variables, and aggression was the dependent variable.

Statement of Hypotheses

It was hypothesized that there would be an inverse relationship between communication sensitivity and each of three types of aggression. Physical aggression, indirect

aggression, and verbal aggression will now be considered.

Physical Aggression. The following hypotheses were related to the area of physical aggression:

1. It was hypothesized that the high communication sensitivity group would score significantly lower on physical aggression than would the middle sensitivity group.

2. It was hypothesized that the high communication sensitivity group would score significantly lower on physical aggression than would the low sensitivity group.

3. It was hypothesized that the middle sensitivity group would score significantly lower on physical aggression than would the low sensitivity group.

4. It was hypothesized that females would score significantly lower than males on physical aggression.

TABLE V

GROUP MEANS ON PHYSICAL AGGRESSION

	Low CSRI	Middle CSRI	High CSRI
Male	5.18	4.67	3.83
Female	3.00	3.44	2.13

TABLE VI

ANALYSIS OF VARIANCE ON
PHYSICAL AGGRESSION

Source	df	MS	F
Sex	1	26.27	2.52
Communication Sensitivity	2	4.80	.46
Sex*Communication Sensitivity	2	.12	.01
Within group	37	10.41	

There was no significant difference in any of the relationships and no significant interaction among the variables.

Indirect Aggression. The following hypotheses were related to indirect aggression:

1. It was hypothesized that the high communication sensitivity group would score significantly lower on indirect aggression than would the middle communication sensitivity group.

2. It was hypothesized that the high communication sensitivity group would score significantly lower on indirect aggression than would the low sensitivity group.

3. It was hypothesized that the middle sensitive group would score significantly lower on indirect aggression than would the low sensitivity group.

4. It was hypothesized that females would score significantly higher than males on indirect aggression.

TABLE VII

GROUP MEANS ON INDIRECT AGGRESSION

	Low CSRI	Middle CSRI	High CSRI
Male	5.73	4.67	4.50
Female	5.67	3.78	5.38

TABLE VIII

ANALYSIS OF VARIANCE ON INDIRECT AGGRESSION

Source	df	MS	F
Sex	1	.00	.00
Communication Sensitivity	2	6.59	1.60
Sex*Communication Sensitivity	2	2.36	.60
Within group	37	3.96	
TOTAL	42		

As indicated in the above table, there was no significant relationship indicated. There was also no interaction among the variables.

Verbal Aggression. The following hypotheses were related to verbal aggression:

1. It was hypothesized that the high communication sensitivity group would score significantly lower on verbal aggression than would the middle sensitivity group.

2. It was hypothesized that the high communication sensitivity group would score significantly lower on verbal aggression than would the low communication sensitivity group.

3. It was hypothesized that the middle sensitivity group would score significantly lower on verbal aggression than would the low sensitivity group.

4. It was hypothesized that females would score significantly lower than males on verbal aggression.

TABLE IX

GROUP MEANS ON VERBAL AGGRESSION

	Low CSRI	Middle CSRI	High CSRI
Male	7.64	7.50	5.50
Female	6.34	4.78	5.38

TABLE X

ANALYSIS OF VARIANCE ON
VERBAL AGGRESSION

Source	df	MS	F
Sex	1	17.21	3.59
Communication Sensitivity	2	7.28	1.52
Sex*Communication Sensitivity	2	5.14	1.07
Within group	37	4.80	
TOTAL	42		

Once again, as shown in the preceding table, there was no significant difference in any of the relationships. There was also no significant interaction among the variables.

Discussion

While the data collected in the summer of 1974 revealed no significant difference among the variables, the following factors indicated that the main study would reflect some significance in the relationships. 1) An examination of the means on each level of communication sensitivity for each of the three types of aggression indicated that there was a relationship. 2) The means

indicated that this relationship was especially pronounced in the areas of verbal and physical aggression. 3) The larger sample size of the fall study would tend to maximize the likelihood of detecting a significance in the relationships and determining the direction of the relationships if such a significance existed.

An examination of the means on the three types of aggression scores for males and females also indicated that the relationship between sex and aggression should be studied. Once again, if such a relationship existed, the larger sample size of the main study would be more likely to indicate the significance of the hypothesized relationship.

Results of the Main Study

On two consecutive days during the fall semester of 1974, the Conversation Self-Report Inventory and the Buss-Durkee Inventory were given to all students enrolled in Speech Communication 2713. Subjects were divided into thirds on the basis of CSRI scores. Two hundred and thirty-four subjects were included in each of the high and the low CSRI groups. Two hundred and thirty-five subjects were included in the middle CSRI group. There were four hundred and sixty males and two hundred and forty-three females. The range and mean of CSRI scores for each group are indicated in the following table.

TABLE XI

MAIN STUDY SCORES ON CSRI
RANGE-MEAN

	Low score	High score	Mean
Low group	5	16	12.32
Middle group	16	21	18.51
High group	21	35	25.36

The BDI scores for the three communication sensitivity groups were then compared in an attempt to determine a possible relationship between communication sensitivity and selected types of aggression. These scores were also compared for males and females in an attempt to determine the influence of the sex variable on the hypothesized relationship. A 2 x 3 analysis of variance was used with sex and CSRI being the independent variables and the three types of aggression being the dependent variables.

Statement of Hypotheses

It was hypothesized that there would be an inverse relationship between communication sensitivity and aggression. More specifically, this hypothesis applied to the physical, indirect, and verbal areas of aggression, and each of these types of aggression will be considered in turn.

Physical Aggression. The following hypotheses related to the area of physical aggression:

1. It was hypothesized that the high communication sensitivity group would score significantly lower on physical aggression than would the low sensitivity group.

2. It was hypothesized that the high communication sensitivity group would score significantly lower on physical aggression than would the middle sensitivity group.

3. It was hypothesized that the middle sensitivity group would score significantly lower on physical aggression than would the low sensitivity group.

4. It was hypothesized that females would score significantly lower than males on physical aggression.

TABLE XII

GROUP MEANS ON PHYSICAL AGGRESSION

	Low CSRI	Middle CSRI	High CSRI
Male	4.79	4.16	3.67
Female	2.98	2.60	2.25

TABLE XIII

ANALYSIS OF VARIANCE ON
PHYSICAL AGGRESSION

Source	df	MS	F
Sex	1	385.59	87.24**
Communication Sensitivity	2	43.41	9.82**
Sex*Communication Sensitivity	2	2.02	.46
Within groups	697	4.42	
TOTAL	702		

**p .01

There was a significant difference between communication sensitivity groups and physical aggression at the .01 level of significance. (See Table X.) There was also a significant difference between males and females at the .01 level of significance. This relationship was in the predicted direction with males being more physically aggressive than females. There was, however, no interaction between sex and communication sensitivity.

It was possible that the levels of sensitivity would stair-step, and this was only partially indicated by the findings of the study (see Table XI). The Newman-Keuls test found that there was a significant difference between

the low CSRI and high CSRI groups. There was also a significant difference between the low CSRI and middle CSRI groups, but there was not a significant difference between the middle CSRI and high CSRI groups. No clear distinction seems indicated between the middle and high groups of CSRI scores, but these two groups of scores are significantly different from the low group. This indicated, then, where the significance lies in the relationship found with the analysis of variance. The significance is between the low CSRI group and both the high and middle CSRI groups.

TABLE XIV

NEWMAN-KEULS ON PHYSICAL AGGRESSION

	High CSRI	Mid-CSRI	Low CSRI
High CSRI	--	.53	1.30**
Mid-CSRI	--	--	.77**

**p .01

The data support the conclusion that there was an inverse relationship between communication sensitivity and physical aggression.

Indirect Aggression. The following hypotheses related to the area of indirect aggression:

1. It was hypothesized that the high communication sensitivity group would score significantly lower on indirect aggression than would the low sensitivity group.

2. It was hypothesized that the high communication sensitivity group would score significantly lower on indirect aggression than would the middle sensitivity group.

3. It was hypothesized that the middle sensitive group would score significantly lower on indirect aggression than would the low sensitivity group.

4. It was hypothesized that females would score significantly higher than males on indirect aggression.

TABLE XV

GROUP MEANS ON INDIRECT AGGRESSION

	Low CSRI	Middle CSRI	High CSRI
Male	4.82	4.70	4.53
Female	4.93	5.22	4.85

There was not a significant difference between levels of communication sensitivity for indirect aggression. (See

Table XII.) There was, however, a significant difference between males and females, and this difference was significant at the .05 level. The mean for males on indirect aggression was 4.68, while the mean for females on indirect aggression was 5.00, so females are significantly more indirectly aggressive than males. There was, then, a significant relationship only with regard to sex of subject on indirect aggression, and there was no interaction between sex and communication sensitivity.

TABLE XVI

ANALYSIS OF VARIANCE ON
INDIRECT AGGRESSION

Source	df	MS	F
Sex	1	15.14	4.06*
Communication Sensitivity	2	4.04	1.08
Sex*Communication Sensitivity	2	2.02	.54
Within group	697	3.73	
TOTAL	702		

*p .05

Verbal Aggression. The following hypotheses related to the area of verbal aggression:

1. It was hypothesized that the high communication sensitivity group would score significantly lower on verbal aggression than would the low sensitivity group.

2. It was hypothesized that the high communication sensitivity group would score significantly lower on verbal aggression than would the middle sensitivity group.

3. It was hypothesized that the middle sensitivity group would score significantly lower on verbal aggression than would the low sensitivity group.

4. It was hypothesized that females would score significantly lower than males on verbal aggression.

TABLE XVII

GROUP MEANS ON VERBAL AGGRESSION

	Low CSRI	Middle CSRI	High CSRI
Male	7.27	6.63	6.39
Female	6.65	5.98	5.83

TABLE XVIII

ANALYSIS OF VARIANCE ON
VERBAL AGGRESSION

Source	df	MS	F
Sex	1	56.53	9.15**
Communication Sensitivity	2	39.87	6.45**
Sex*Communication Sensitivity	2	00.00	0.00
Within group	697	6.18	
TOTAL	702		

**p .01

TABLE XIX

NEWMAN-KEULS ON VERBAL AGGRESSION

	High CSRI	Mid-CSRI	Low CSRI
High CSRI	--	.24	.97**
Mid-CSRI	--	--	.73*

**p .01
*p .05

There was a significant difference between communication sensitivity and verbal aggression (see Table XIII). The level of significance in this relationship was .01. There was also a significant relationship between sex and verbal aggression, with men being more verbally aggressive than females. This relationship was significant at the .01 level and was in the predicted direction. There was, however, no interaction between sex of subject and communication sensitivity.

There was a significant difference between the low CSRI and high CSRI groups (see Table XIV). There was also a significant difference between the low CSRI group and the middle CSRI group, but there was no significant difference between the middle CSRI group and high CSRI group. While there seemed to be no clear distinction between the middle and high groups of CSRI scores, these groups of scores were significantly different from the low CSRI group of scores. This indicated that the significance in the relationship found with the analysis of variance was between verbal aggression and the low CSRI group and a middle-high CSRI group.

There was an inverse relationship between communication sensitivity and verbal aggression.

Discussion

As was indicated by the tables in the preceding section, a significant relationship between the levels of

communication sensitivity for physical aggression was found. This relationship was hypothesized to be inverse in nature, and this was the type of relationship which was indicated. One basis for the hypothesis was the assumption that individuals who are able to operate effectively in a communication situation have a number of communication alternatives available to them. The individual who is high in communication sensitivity has a variety of response patterns available to him, and he is aware of both verbal and nonverbal cues.[1] This being the case, the individual with a high level of communication sensitivity should be low in terms of physical aggression. This study supported this contention.

On the other hand, the individual who is low in communication sensitivity, and therefore has fewer alternative patterns of behavior available to him, is more likely to be aggressive. This individual would at times seem to choose an aggressive response because of the lack of any perceived alternative, and the feeling of being "backed into a corner" or having no other choice. The low sensitivity individual may enter a communication situation feeling as if there are no alternatives. Due to his lack of awareness of nonverbal cues and the messages of the other person, he may be unaware of or unable to respond to his communication alternatives, and he may see physical

---

[1] Evans, p. 12.

aggression as an adequate communication response.[2] This being the case, the individual may sometimes choose a physically aggressive means of response. This conclusion is supported by the findings of this study.

While this inverse relationship between communication sensitivity and physical aggression was found to exist, the Newman-Keuls test indicated that the difference in communication sensitivity was between the two top groups of people's CSRI scores on the one hand and the bottom CSRI group of people's scores on the other hand. This test, however, could distinguish no difference between the top two groups of scores. This would indicate that only if one is low in communication sensitivity would physical aggressiveness be more likely.

This study found no significant relationship between communication sensitivity and indirect aggression. There was, however, a significant relationship between sex and indirect aggression. Females were found to be more aggressive in indirect aggression than were males. This may indicate that the elements tapped in the indirect aggression factor are socially accepted outlets for females.[3] While it is not generally acceptable in our society for women to get into fist fights, it seems acceptable and even expected behavior for women to gossip.[4] The difference

---

[2]Toch, pp. 5-7, 103-104.

[3]Buss, p. 283.

[4]Ibid.

which was found, then, may be readily explained in terms of social standards.

This study found a significant relationship between communication sensitivity and verbal aggression. This relationship was hypothesized to be inverse in nature, and this was the type of relationship which was found. The hypothesis was based on the assumption that there is a difference in the communication patterns of verball aggressive individuals and sensitive communicators.[5] The sensitive communicator is nonverbally oriented, is receiver oriented, and is supportive.[6] On the other hand, the verball aggressive individual is verbally oriented, and tries to persuade and convince.[7] The difference in these two patterns would indicate that if one operated in terms of a sensitive pattern of communication, he would not be likely to operate in an aggressive pattern of conversation. He might, however, be assertive and yet be a sensitive communicator. The difference between aggression and assertion is covered in Chapter Two.

While this inverse relationship between communication sensitivity and verbal aggression was found to exist, the Newman-Keuls test could distinguish no real difference between the two top groups of communication sensitivity

---

[5]Wilson, pp. 1-10.

[6]Evans, p. 12.

[7]Buss, pp. 6-7.

scores. The conclusion can be drawn that only if one is low in communication sensitivity would verbal aggression be more likely.

The sex of the subject was found to be a significant variable with regard to all three types of aggression. The relationship of sex to indirect aggression has already been discussed, and the relationship of sex to physical and verbal aggression will be considered here. With regard to both physical and verbal aggression males were found to be more aggressive than females. In terms of physical aggression this can perhaps be explained as being due to the nature of the social sanctions on aggression. With the exception of some subcultures in our society, physical aggression is not accepted behavior for females.[8] It is a more acceptable type of behavior for males.[9]

While there are not the same type of social sanctions against verbal aggression for females, there was also a strong male bias on this factor. Men in this study were more verbally aggressive than women, and they were also lower in terms of mean scores on communication sensitivity. This would indicate that men would be more likely to have a communication behavior pattern consistent with aggression, and women in the study would be more likely to have a

---

[8]Ibid., p. 283.

[9]Monica D. Blumenthal et al., Justifying Violence: Attitudes of American Men (Ann Arbor, Mich.: Braun-Brumfield Institute for Social Research, 1972) has a discussion of what they view as the largely male trait of aggression.

response pattern consistent with the sensitive communicator.

In conclusion, the following hypotheses were supported by the results of the study:

1. It was hypothesized that there would be an inverse relationship between communication sensitivity and physical aggression.

2. It was hypothesized that females would score significantly lower than males on physical aggression.

3. It was hypothesized that females would score significantly higher than males on indirect aggression.

4. It was hypothesized that there would be an inverse relationship between communication sensitivity and verbal aggression.

5. It was hypothesized that females would score significantly lower than males on verbal aggression.

The hypothesis that there would be an inverse relationship between communication sensitivity and indirect aggression was not supported by the study.

CHAPTER V

SUMMARY, IMPLICATIONS, AND CONCLUSIONS

This study was undertaken to determine the type of relationship, if any, that exists between the variable of communication sensitivity and that of aggression, In considering aggression three specific types of aggression were considered. These three types of aggression were physical or direct aggression, indirect aggression, and verbal aggression.

In an attempt to evaluate this relationship, the students in Oklahoma State University's Speech 2713 class, Introduction to Speech Communication, were administered the Conversation Self-Report Inventory and the Buss-Durkee Inventory as part of their regular classroom work. Three levels of communication sensitivity were studied in conjunction with three types of aggression, using an analysis of variance model to evaluate the relationship. Also analyzed was the relationship of sex to the three types of aggression.

The hypothesized relationship between communication sensitivity and aggression was that the relationship would be inverse in nature. The hypothesized relationship between sex and aggression was that male subjects would be

more aggressive than would be female subjects. A brief summary of the findings on these hypotheses follows.

Summary of Findings

Hypothesis Number One

It was hypothesized that there would be an inverse relationship between communication sensitivity and physical aggression.

The analysis of variance indicated that there was a significant difference between levels of communication sensitivity for physical aggression. This was an inverse relationship, and it was significant at the .01 level. A Newman-Keuls analysis of the levels of communication sensitivity indicated that there was a difference between high and low sensitivity. There was also a difference between middle and low sensitivity, but there was no significant difference between middle and high sensitivity.

Hypothesis Number Two

It was hypothesized that there would be an inverse relationship between communication sensitivity and indirect aggression.

The analysis of variance indicated that there was no significant relationship between communication sensitivity and indirect aggression.

Hypothesis Number Three

It was hypothesized that there would be an inverse relationship between communication sensitivity and verbal aggression.

The analysis of variance indicated that there was a significant difference between levels of communication sensitivity for verbal aggression. This was an inverse relationship, and it was significant at the .01 level. The relationship between the levels of communication sensitivity once again indicated that there was no significant difference between the middle and high sensitivity groups.

Hypothesis Number Four

It was hypothesized that males would be more physically and verbally aggressive than females, and less indirectly aggressive than females.

This hypothesis was supported with regard to both physical and verbal aggression. On physical aggression there was a significant relationship with sex at the .01 level, and on verbal aggression there was a significant relationship with sex at the .01 level. In both cases males were more aggressive than females. On indirect aggression there was a significant relationship with sex at the .05 level, and females were found to be more aggressive than males in this element.

Conclusions and Implications

The most important conclusion involved the relationship between communication sensitivity and aggression. The fact that individuals who are high in communication sensitivity are lower in physical aggression supports some of the studies discussed in Chapter Two. This material indicates that students who are able to deal with situations in an effective manner in terms of communication, are less likely to resort to aggressive behavior as a means of dealing with communication situations.[1]

This has many implications for the student of communication. While this study makes no attempt to develop a causal relationship, it does imply that we may be able eventually to predict an indvidual's behavior pattern on the other variable. If this level of predictability were reached, one should be able to predict from a communication sensitivity score the likelihood of aggressive behavior.

This would mean that something could eventually be done to modify aggressive behavior. As Toch has suggested in this area, it is essential that individuals who are identified as aggressive should go through a training program of role playing and communication encounters.[2] This type of training would hopefully develop the sensitivity of the individual in the training, and might, therefore,

---

[1]Wilson, pp. 1-10.

[2]Toch, pp. 204-283.

show him avenues other than physical aggression for dealing with his problems. Once he has established alternate behavior patterns, he might be less likely to respond with physical aggression.

Raymond Navaco also has suggested the training devices of role playing, relaxation therapy, and developing a task-orientation as means of teaching an aggressive individual to turn to alternatives rather than responding with physical aggression.[3] While both Toch and Navaco are dealing with individuals who have been identified as aggressive, it would be advantageous to begin with an identification on the basis of sensitivity rather than aggression.

The development of the ability to empathize is also important in developing training to reduce or prevent aggression. Ervin Staub has found that aggressive children, as well as others, have little training in empathy, and he expresses the view that such training would be helpful.[4] The development of empathy between an aggressive individual and his therapist has also been found to be essential before effective therapy for the reduction of aggression can take place.[5] Deardorff, et al., also found a significant

---

[3]Raymond W. Navaco, Anger Control (Lexington, Mass.: Lexington Books, 1975), pp. 45-51.

[4]Ervin Staub, "The Learning and Unlearning of Aggression," The Control of Aggression and Violence: Cognitive and Psychological Factors, Jerome L. Singer, ed. (New York: Academic Press, 1971), pp. 92-121.

[5]Charles H. King, "Counter-transference and Counter-experience in the treatment of Violence Prone Youth," American Journal of Orthopsychiatry, 46 (1976), pp. 43-52.

relationship between the ability to empathize and aggressive behavior.[6] Training designed to develop the ability to empathize in low sensitivity individuals, then could be an important factor in the reduction of physically aggressive behavior. The hoped for effect of the types of training discussed is to reduce aggressive behavior by "providing opportunities and teaching skills to achieve socially acceptable goals in a socially acceptable manner, so that alternative, aggressive ways of seeking rewards and accomplishing goals will be minimized."[7]

While physical aggression may be immediately damaging, verbal aggression can hurt its victim also. Training for the verbally assaultive person, then would also be helpful in providing insight into alternate communication routes for dealing with situations. These alternate communication routes would broaden the limited range of choices perceived to be open to the verbally assaultive individuals when dealing with problem situations.[8] Anthony, Gormally, and Miller report that it is essential to predict the communication level of individuals in order to effectively develop a human relations training program.[9] Once an individual's

---

[6]Deardorff et al., pp. 453-455.

[7]Staub, p. 120.

[8]See the case studies in Toch for some interesting examples of both verbal and physical aggression. These examples also include a discussion of the aggressor's perspective of the encounter.

[9]William A. Anthony, James Gormally, and Henry Miller,

communication pattern is known, a communication training program can be developed which will meet his needs and assist the individual in developing multiple behavior patterns. The training of verbally aggressive individuals and physically aggressive individuals can only take place if they can be identified. It would be preferable for society that these individuals be identified by some other means than their aggressive behavior. This is why the identification, at some time, of possibly aggressive individuals on the basis of their communication sensitivity scores would be advantageous.

For teachers, the findings in this study have implications. Identifying a student's level of communication sensitivity might enable the teacher to predict behavioral tendencies of the student. This knowledge would be useful in the classroom. For example, by obtaining the student's communication sensitivity scores a teacher might be able to identify students who would have difficulty working in groups, who would become defensive under a question-answer session, or who would be likely to resort to sarcasm.

A number of specific suggestions have been made for use by the teacher in dealing with aggressive individuals. Neil Kirschner and Louis Levin suggest that behavioral reinforcement is an effective means of modifying aggressive behavior. Specifically they suggest the use of the

---

"Prediction of human relations training outcome by traditional and non-traditional selection indices," Counselor Education and Supervision, 14 (1974), pp. 105-111.

individual behavior contract, the use of positive reinforcement, and the use of group reinforcement. They suggest working with a group of aggressive individuals and developing a group behavior contract. Once again the method of behavior rehearsal or role playing was suggested for the reduction of hostility and aggression.[10] These techniques might well be used with either physically or verbally aggressive individuals, and they might well be used with low sensitivity groups to attempt to prevent aggression. Since this study found a significant relationship between communication sensitivity and verbal and physical aggression, this type of training program might well be indicated when low sensitivity is identified. However, this would not be justified without further studies which increase the level of predictability. The type of training programs discussed in this chapter could be used by the teacher to develop the communication skills of individuals and maximize the alternate behavior patterns available to them. The use of a wide range of alternative communication behaviors is essential.[11]

A number of conclusions can be drawn with regard to

---

[10]Neil M. Kirschner and Louis Levin, "A direct school intervention program for the modification of aggressive behavior," Psychology in the Schools, 12 (1975), pp. 202-208.

[11]Barbara Bate, "Assertive speaking: an approach to communication education for the future," Communication Education, 25 (1976), p. 59.

sex of subject and the relationship to aggression. Since there is a significant difference between males and females for physical, verbal, and indirect aggression, one can conclude that it is important for a study on aggression to use both male and female subjects. One reason that indirect aggression may reflect a higher level of female aggression than male aggression is that it seems to be an accepted outlet for both males and females. While there are social sanctions, with the exception of some subcultures, against females engaging in physical violence, the same kind of social sanctions do not seem to apply to indirect aggression. The conlcusions reached in this study, then, are consistent with the behavior pattern of our society.

This study found that male subjects were more aggressive than female subjects in terms of both physical and verbal aggression. Buss, in fact, suggests that "human aggression is essentially a problem for men, not women."[12] Buss argues that men do not aggress against women for the reason that the socialization process has taught them that this is not proper. He further suggests the possibility of teaching boys that there is no difference here between men and woman. In other words, he suggests that society socialize individuals in such a way that all humans are inappropriate

---

[12]Arnold H. Buss, "Aggression Pays," The Control of Aggression and Violence: Cognitive Psychological Factors, Jerome L. Singer, ed. (New York: Academic Press, 1971), p. 16.

as objects of aggression.[13] This study suggests that women should also be included in the socialization process, and the process should also modify aggression in terms of indirect aggression and verbal aggression.

Recommendations for Further Research

In light of the conlcusions drawn in this study there are a number of areas which need to be explored with further research. First, a different type of sample needs to be studied. This study used University students, and a different type of sample should be used in replication studies. This would enable the researcher to determine if the results obtained were an isolated phenomenon based on the type of college population used.

Further research also needs to be undertaken to explain other personality and cultural factors which might influence the relationship between communication sensitivity and aggression. Some possible areas for study would be an examination of the factors of subjects' class in college and subjects' major in college or occupational goal. An individual's affiliation with a subculture which accepts violence might also be studied as a possible related factor.

Additional research also needs to be done with non-university samples. Due to the use of convenience sampling,

---

[13]Ibid., pp. 16-17.

university students are the most common subjects used, both for research involving communication sensitivity and research involving aggression. This, of course, means that the generalizability of the research in this area is not as great as it would be if a variety of types of subjects had been used by researchers. Therefore, the use of different types of subjects would be advantageous. For example, the use of subjects known to have the characteristic of aggression, perhaps prisoners, would provide additional insight into the variable of communication sensitivity and its relationship to aggression. Other sample groups which might be used as subjects include the military, policemen, clergy, factory workers, civil service personnel, the general adult population, etc. Only with replication with different types of subjects will the generalizability of this study be increased and predictability of the relationship be strengthened.

In attempting to determine if the relevant behavior can be modified with education, research needs to be done to determine if behavior is changed by a communication sensitivity program. Related research needs to be done to see if this training program results in a decrease in aggressive behavior.

A great deal of research needs to be done with regard to the variables of sex of subject. Since this study has indicated a difference in the type of aggression used by males and females, this difference needs to be further

explored. This would allow more valid conclusions to be drawn with regard to the differences on aggression for males and females.

Additional research also needs to be conducted to determine the social acceptability for males and females of different types of aggression. In line with this, the existing social inhibitions for various types of aggression need to be determined in an effort to use these inhibitions in training programs. Perhaps these social inhibitions could be applied to other areas of aggression in order to reduce aggression. This could be combined with training in communication sensitivity to develop alternate behavioral responses as previously discussed. In line with this examination, the difference between assertion and verbal aggression needs to be explored further.

The variable of a subject's status or class in school needs to be fully examined. Also, the variable of a student's major in college or occupational choice needs to be fully examined. There were indications in the literature and in the raw data used in this study that class and college should have some effect on communication sensitivity and aggression.[14] Some implications for research on class in school can be drawn. Research could be done to determine if universities are, in this area, fulfilling the role

---

[14]The means on both class and college from the data collected for this study indicated that these areas need further examination. The area of major in college is particularly worthy of further study with regard to physical

of the teaching of values.[15] If colleges and universities do, in fact, attempt to modify behavior, a study finding no significant difference on aggression or communication sensitivity between upper and lower class students might indicate a lack of effective behavior modification. This would be worth study. One implication for research on college association would be to determine if students in some colleges are more aggressive than those in other colleges. If this were the case, the possibility of including communication sensitivity training in the curriculum of highly aggressive college populations could be considered.

Finally, this study needs to be replicated a number of times with many different populations, for only with repeated replication can the likelihood of error be diminished, and the study can only then be used with reservations for the purpose of generalization. The findings drawn in this study indicate that the area of the relationship between communication sensitivity and aggression is one which is worthy of exploration. There are also a number of factors which may influence the relationship, and these factors need to be explored.

---

aggression. The College of Home Economics had a physical aggression mean of 2.94, and the College of Agriculture had a physical aggression mean of 4.36. A t test on physical aggression for the Colleges of Agriculture and Home Economics resulted in a t of 3.02 which was significant beyond the .01 level.

[15]Staub says that they should be teaching values to reduce aggression, pp. 117-119.

The indications are, then, that sensitivity in communication may well be a forward step in the reduction of aggression in mankind, and the possibility of understanding this reduction is within the grasp of future researchers.

A SELECTED BIBLIOGRAPHY

Books

Bandura, Albert. Aggression: A Social Learning Process. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973.

Barnlund, Dean C. Interpersonal Communication: Survey and Studies. Boston: Houghton Mifflin, 1968.

Bell, Daniel. The Reforming of General Education. New York: Doubleday, 1968.

Berkowitz, Leonard. Aggression: A Social Psychological Analysis. New York: McGraw-Hill, 1962.

_____, ed. Roots of Aggression. New York: Atherton, 1969.

Bienen, Henry. Violence and Social Change. Chicago: University of Chicago Press, 1968.

Blumenthal, Monica D. et al. Justifying Violence: Attitudes of American Men. Ann Arbor, Michigan: Braun-Brumfield Institute for Social Research, 1972.

Brofenbrenner, Urie, John Harding, and Mary Gallwey. "The Measurement of Skill in Social Perception," Talent and Society. Eds. David C. McClelland et al. New York: D. Van Nostrand, 1958.

Buss, Arnold H. "Aggression Pays," The Control of Aggression and Violence: Cognitive Psychological Factors. Ed. Jerome L. Singer. New York: Academic Press, 1971.

Buss, Arnold H. The Psychology of Aggression. New York: John Wiley and Sons, Inc., 1961.

Crawford, Fred R., ed. Violence and Dissent in Urban America. Atlanta: Southern Newspaper Publishers Association Foundation, 1970.

Curtis, Lynn A. Violence, Race and Culture. Lexington, Mass.: Lexington Books, 1975.

Davitz, Joel R. "The Communication of Emotional Meaning," Communication and Culture. Ed. Alfred G. Smith. New York: Holt, Rinehart and Winston, 1966.

Dollard, John et al. Frustration and Aggression. New Haven: Yale University Press, 1939.

Doolittle, Robert J. "Orientations to Communication and Conflict," Modcom. Chicago: Science Research Associates, 1976.

Eron, Leonard D., Leopold O. Walder, and Monroe M. Lefkowitz. Learning of Aggression in Children. Boston: Little, Brown and Company, 1971.

Feshbach, Seymour. "The Stimulating vs. Cathartic Effects of a Vicarious Aggressive Activity," Aggression, Hostility, and Violence: Nature or Nurture. Eds. Terry Maple and Douglas Matheson. New York: Holt, Rinehart and Winston, 1973.

Fiedler, Fred E. "A Comparison of Therapeutic Relationships in Psychoanalytic, Nondirective and Adlerian Therapy," Interpersonal Communication: Survey and Studies. Ed. Dean C. Barnlund. Boston: Houghton Mifflin, 1968.

_____. "Quantitative Studies on the Role of the Therapists' Feelings Toward Their Patients," Psychotherapy, Theory and Research. Ed. O. Hobart Mowrer. New York: Ronald Press, 1953.

Gibb, Jack R. "Defensive Communication," Small Group Communication. Eds. Robert S. Cathcart and Larry A. Samovar. Dubuque, Iowa: Wm. D. Brown, 1970.

Gibbens, D. C. Changing the Law Breaker. Englewood Cliffs, New Jersey: Prentice-Hall, 1965.

Hooten, E. A. The American Criminal. Cambridge, Mass.: Harvard University Press, 1939.

Hughey, Jim D. and Arlee W. Johnson. Speech Communication: Foundations and Challenges. New York: Macmillan Publishing Co., 1975.

Information Please Almanac, Atlas and Yearbook. New York: Simon and Schuster, 1976.

Kahn, Robert L. and Charles P. Cannell. The Dynamics of Interviewing. New York: John Wiley and Sons, Inc., 1957.

Kaufmann, Harry. Aggression and Altruism. New York: Holt, Rinehart and Winston, 1970.

Keltner, John W. Interpersonal Speech Communication. Belmont, California: Wadsworth Publishing Company, Inc., 1970.

Kerlinger, Fred N. Foundations of Behavioral Research. New York: Holt, Rinehart and Winston, 1964.

Kolb, Lawrence C. "Violence and Aggression: An Overview," Dynamics of Violence. Ed. Jan Fawcett. Chicago, Ill.: American Medical Association, 1971.

Leathers, Dale G. Nonverbal Communication Systems. Boston: Allyn and Bacon, Inc., 1976.

May, Rollo. Power and Innocence: A Search for the Sources of Violence. New York: W. W. Norton and Co., 1972.

Meador, Betty D. and Carl R. Rogers. "Client Centered Therapy," Current Psychotherapies. Ed. Raymond Corsini. Itasca, Ill.: Peacock Publishing, Inc., 1973.

Miller, Gerald R. and Mark Steinberg. Between People: A New Analysis of Interpersonal Communication. Chicago, Ill.: Science Research Associates, 1975.

National Commission on the Causes and Prevention of Violence. To Establish Justice, To Insure Domestic Tranquility. Washington, D. C.: U. S. Government Printing Office, 1969.

Navaco, Raymond W. Anger Control. Lexington, Mass.: Lexington Books, 1975.

Nichols, Ralph G. and Leonard A. Stevens. Are You Listening? New York: McGraw-Hill Book Co., Inc., 1957.

Parry, Meyer H. Aggression on the Road. London: Travistock Publications, 1968.

Roberts, Albert R. Sourcebook on Prison Education. Springfield, Ill.: Charles C. Thomas, 1971.

Rogers, Carl R. Counseling and Psychotherapy. Boston: Houghton Mifflin, 1941.

Shoben, Edward J., Jr. "Some Observations on Psychotherapy and Learning," Psychotherapy, Theory and Research. Ed. O. Hobart Mowrer. New York: Ronald Press, 1953.

Smith, Henry Clay. Sensitivity to People. New York: McGraw-Hill Book Co., 1966.

Staub, Ervin. "The Learning and Unlearning of Aggression," The Control of Aggression and Violence: Cognitive and Psychological Factors. Ed. Jerome L. Singer. New York: Academic Press, 1971.

Steinberg, Mark and Gerald R. Miller. "Interpersonal Communication: A Sharing Process," Communication and Behavior. Eds. A. Hannon and D. McEwer. Reading, Mass.: Addison Wesley Publishing Co., 1975.

Toch, Hans. Violent Men. Chicago, Ill.: Aldine Publishing Co., 1969.

Truax, C. B. and R. R. Carkhuff. Toward Effective Counseling and Psychotherapy. Chicago, Ill.: Aldine Publishing Co., 1967.

Weaver, Carl H. and Warren L. Strausbaugh. Fundamentals of Speech Communication. New York: American Book Co., 1964.

Winer, B. J. Statistical Principles in Experimental Design. New York: McGraw-Hill Book Co., 1962.

Periodicals

"Is the Victim Guilty?" Time. July 5, 1971, p. 42.

"Study Finds Girls Active in Crime." Tulsa Daily World. July 22, 1974, B-1.

"Violence: A Way of Life." The Columbus Ledger. March 18, 1975, A-1 & 2.

"Violence: Friends and Strangers." The Columbus Ledger. March 19, 1975, A-1 & 8.

"Violence: Prisons 'Create' Enemies." The Columbus Ledger. March 21, 1975. A-1 & 16.

Unpublished Materials

Burdick, Harry A. and Joan S. Nettler. "Four Motive Measures." (American Psychological Association Convention Paper, 1964.)

Evans, John Robert. "A Study of the Relationship Between Communication Sensitivity and Conversational Effectiveness Within a Physical Education Setting." (Unpub. dissertation, Ed.D., University of New Mexico, 1970.)

Hughey, Jim D. "Conversation Self-Report Inventory Norms." (Unpub. data, Oklahoma State University, 1973.)

Jackson, Dale M. "Implications of Empathy Research for Speech Communication." (Unpub. dissertation, Ph.D., Indiana University, 1974.)

Menninger, Harold Peter. "An Analysis of Administrator and Student Leader Views of Student Discontent and Solutions on One University Campus." (Unpub. dissertation, Ed.D., University of New Mexico, 1967.)

Neal, William P. "An Investigation of the Relationship Between Receiver Sensitivity and Receiver Effectiveness." (Unpub. manuscript, University of New Mexico, 1969.)

_____. "Demographic, Personality and Nonverbal Perception Correlates of Communication Sensitivity." (Unpub. M.A. thesis, University of New Mexico, 1970.)

Roberts, Jane. "An Investigation of the Relationship of Communication Behavior and Insight." (Unpub. manuscript, University of New Mexico, 1969.)

Tullis, Patricia. "A Violence Proneness Model." (Unpub. manuscript, Oklahoma State University, 1972.)

_____. "Violence Proneness and Communication Sensitivity." (Unpub. manuscript, Oklahoma State University, 1971.)

Wilson, Deborah. "A Study of the Relationship Between Violence Proneness and Communication Sensitivity." (Unpub. manuscript, Oklahoma State University, 1973.)

Journals

Anthony, William A., James Gormally, and Henry Miller. "Prediction of human relations training outcome by traditional and non-traditional selection indices," Counselor Education and Supervision. 14 (1974), 105-111.

Bate, Barbara. "Assertive speaking: An approach to communication education for the future." Communication Education. 25 (1976), 59.

Berkum, Mitchell M. and Harry A. Burdick. "Effect of Preceding Rosenzweig's PF Test with the TAT." Journal of Clinical Psychology. 20 (1964), 67-74.

Deutsch, F. "Empathy: Historic and Current Conceptualizations, Measurement, and a Cognitive Theoretical Perspective." Human Development. 18 (1975), 267-287.

Drefus, Edward A. "Openness: An Examination and Formulation." Journal of Existentialism. 7 (1967), 309-317.

Edwards, A. L. "The Relationship Between the Judged Desirability of a Trait, and the Probability that the Trait Will be Endorsed." Journal of Applied Psychology. 37 (1953), 90-93.

Fite, Mary Delafield. "Aggressive Behavior in Young Children and Children's Attitudes Toward Aggression." Genetic Psychology Monographs. 22 (1940), 151-319.

Forbes, Gordon B. and Shirley Mitchell. "Attribution of Blame, Feelings of Anger, and Direction of Aggression in Response to Interracial Frustration Among Poverty-Level Female Negro Adults." The Journal of Social Psychology. 83 (1971), 773-778.

Galassi, John P. and Merna D. Galassi. "Relationship Between Assertiveness and Aggressiveness." Psychological Reports. 36 (1975), 350-354.

Galloway, Charles M. "Nonverbal--the language of sensitivity." Theory Into Practice. 13 (1974), 380-383.

Gentry, William D. "Biracial Aggression: I. Effect of Verbal Attack and Sex of Victim." The Journal of Social Psychology. 88 (1972), 75-82.

Greenberg, Bradley S. "The effects of Language Intensity Modification on Perceived Verbal Aggressiveness." Communication Monographs. 43 (June, 1976), 130-140.

Hart, Roderick P. and Don M. Burks. "Rhetorical Sensitivity and Social Interaction." Speech Monographs. 39 (June, 1972), 76-88.

Kane, Thomas R., Jeanne M. Joseph, and James T. Tedeschi. "Person Perception and the Berkowitz Paradigm for the Study of Aggression." Journal of Personality and Social Psychology. 33 (1976), 664-667.

King, Charles H. "Counter-transference and Counter-experience in the treatment of Violence Prone Youth." American Journal of Orthopsychiatry. 46 (1976), 43-52.

Kirschner, Neil M. and Louis Levin. "A direct school intervention program for the modification of aggressive behavior." Psychology in the Schools. 12 (1975), 202-208.

Lesnoff-Caravaglia, Gari. "Violence Training." Contemporary Education. 45 (1974), 292-295.

Leventhal, D. B. et al. "Effect of Sex-Role Adjustment on the Expression of Aggression." Journal of Personality and Social Psychology. 8 (1968), 393-396.

Megargee, Edwin I. "Undercontrolled and Overcontrolled Personality Types in Extreme Antisocial Aggression." Psychological Monographs: General and Applied. 80 (1966), 1-29.

Nickel, Ted W. "The attribution of intention as a critical factor in the relationship between frustration and aggression. Journal of Personality. 42 (1974), 482-492.

Pigg, Roger and R. G. Geen. "Self-Directed Aggression and Similarity Between Frustration and Aggression." Journal of Abnormal Psychology. 78 (1971), 241-244.

Poulakos, John. "The Components of Dialogue." Western Speech, XXXVIII (Summer, 1974), pp. 207-210.

Rogers, Carl R. and F. J. Roethlisberger. "Barriers and Gateways to Communication." Harvard Business Review. 30 (1952), 46-47.

Saine, Thomas J. "Perceiving Communication." Speech Monographs. 41 (1974), 49-56.

Scarpetti, William L. "Autonomic Concomitants of Aggressive Behavior in Repressors and Sensitizers: A Social Learning Approach." Journal of Personality and Social Psychology. 30 (1974), 772-781.

Schultz, John L. "Empathy: Revised and Updated." Vocational Guidance Quarterly. 24 (1975), 181-183.

Smaby, Marlowe H. and Armas W. Tamminen. "Counselors Can Be Assertive." Personnel and Guidance Journal. 42 (April, 1976), 421-424.

Turner, Charles W. and Lynn Stanley Simons. "Effects of Subject Sophistication and Evaluation Apprehension on Aggressive Responses to Weapons." Journal of Personality and Social Psychology. 30 (1974), 341-348.

Wallston, Kenneth A. and Lawrence J. Weitz. "Measurement of the Core Dimension of Helping." Journal of Counseling Psychology. 22 (1975), 567-569.

Worchel, Stephen. "The effect of three types of arbitrary thwarting on the instigation to aggression." Journal of Personality. 42 (1974), 300-318.

APPENDIX A

ORAL INSTRUCTIONS

SPEECH COMMUNICATION 2713: ORAL INSTRUCTIONS FOR THE DIAGNOSTIC AND ADVANCED STANDING MEASURE.

Here are the instructions for taking the Diagnostic and Advanced Standing Measure. To be sure that I cover all the essential points, I'll read them to you.

1. Be sure you indicate your name, section number, and instructor in the appropriate spaces on the answer sheet.

2. Place all responses on your answer sheet. Do not mark on the booklet.

3. The first 72 items concern the way you feel about and behave in the most common of all communicative situations--the conversation. We would like for you to read each item and decide which of the four alternatives is most characteristic of your own feelings and behavior.

Since different people think different things about the items, no alternative is more correct than any other. We simply want to know which choice you consider best typifies your actual conversation feelings and behavior.

Please be as honest and candid as possible. Our purpose is to determine how to best tailor the instruction in this course to your own communication style.

4. The remaining items in the booklet concern the competencies you may already possess in Speech Communication 2713. Items are keyed to three of the unit objectives in the course. Do the best job you can on each block of items. Work on each block as it appears in the booklet. Do not skip around.

The reason is that your instructor scores each block of items separately. There is no total score for the measure: There are three separate scores -- one for each block of items. If you correctly respond to 80% of the items in a block, you have demonstrated the desired level of competence for the unit objective represented by that block of items. In other words, you have passed that objective; your instructor will automatically record a pass for that unit objective on your record sheet.

So do the best job you can on each block.

5. Don't worry if you don't have time to complete all of the questions. If you have responded acceptably to all of the previous blocks of items, we will give you the opportunity to finish up the measure at a date announced by your instructor.

So be thorough in your responses.

6. In summary, the first 72 items constitute the diagnostic portion of the measure. These items should not take more than 25 minutes to respond to. Help yourself in the course by being as frank and candid as you can.

The remaining items constitute the advanced standing portion of the measure. Work each item as it is presented and be thorough in your responses.

7. At the end of the period, we will collect both the booklet and answer sheet. You may begin.

APPENDIX B

DIAGNOSTIC MEASURE

FORM 973A DIAGNOSTIC AND ADVANCED STANDING MEASURE

THE FOLLOWING 17 ITEMS REFER TO MOST CONVERSATIONS YOU HAVE BEEN IN

1. When there is a difference of opinion, I believe most conversations are successful when:
    1. each speaker is direct and to the point.
    2. an exchange of feelings on the matter takes place.
    3. people change their minds on the topic in one way or another.
    4. people agree on the issues in question.

2. In most conversations, I relate myself to the other person by:
    1. making certain I am directly facing him.
    2. acting as if I like the other person whether I do or not.
    3. speaking with a pleasant tone of voice.
    4. accepting his ideas and building on them.

3. In most conversations, when controversial topics are being talked about:
    1. I try to control my emotions by maintaining a calm outward appearance.
    2. I find it difficult to disagree with another person by expressing my real opinions on the matter.
    3. I am able to disagree in an agreeable way.
    4. I become very biased when certain subjects are brought up.

4. In most conversations:
    1. I often tend to ramble.
    2. I don't give much weight to information from a person I consider inexpert.
    3. I am concerned about how the other person will receive what I have to say.
    4. I place more reliance on the words I use to convey meaning than I do my vocal, facial, and hand expressions.

5. In most conversations:
    1. I nod my head to indicate I understand the other person.
    2. I feel I can learn something from the other person if I really listen.
    3. I feel I am usually understood by others.
    4. I often find it difficult to accept other people's ideas.

6. In most conversations:
    1. I am more concerned with the words a speaker uses than the emphasis in his voice and expression on his face.
    2. I depend on the speaker's vocal, facial, and hand expressions to explain the largest part of his meaning.
    3. I am distracted by a person's mannerisms, such as excessive eye-blinking.
    4. I consciously modulate the tone of my voice.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

7. In most conversations:
   1. I'm usually in the background and seldom in the "spot light."
   2. I'm filled with nervous energy.
   3. I look the other person directly in the eye when we talk.
   4. I show enthusiasm for the other person and his ideas.

8. In most conversations:
   1. I try to abstain from letting others know what I think about what is being said.
   2. I find myself using other people's ideas without indicating the source of them.
   3. I listen to a person even if I think he doesn't really have anything to say.
   4. I speak in a crisp, business-like manner.

9. In most conversations:
   1. I avoid repeating what I've said before.
   2. I find it very easy to mentally experience whatever the other person is describing.
   3. I fail to really explain my views.
   4. I appear to be indifferent about what's going on.

10. When I have important things to do and someone starts a conversation, I most often:
   1. become quiet and uncommunicative.
   2. tell him, "I'm busy now, contact me later."
   3. try to see things from the other person's viewpoint.
   4. try to hurry things along so we can get the conversation over with.

11. In most conversations:
   1. I express interest in the subject at hand.
   2. I accurately "size-up" what is <u>really</u> going on.
   3. I can make the other person think I'm listening while I'm really thinking of something else.
   4. I react to the words the speaker uses rather than the ideas he expresses.

12. In most conversations, when personal matters concerning the other person are being discussed:
   1. I convey truthful information and expect others to do the same.
   2. I hold to my views steadfastly.
   3. I show a disregard for social convention.
   4. I am able to remain open-minded throughout the conversation.

13. In most conversations:
   1. my ability to improvise is a real asset.
   2. I use quite a bit of slang.
   3. my posture is very relaxed.
   4. I am eager to listen.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

14. In most conversations:
    1. I look directly at the other person.
    2. I try to help the other person out by correcting the language he uses.
    3. I am rather easily distracted from what the speaker is saying by other things occurring at the same time.
    4. I try to involve the other person as much as possible.

15. In most conversations:
    1. I tend to "tune out" on people I can't trust.
    2. I am very objective about the views I express.
    3. I let my expectations become apparent to other people.
    4. I avoid prejudging what the other person is saying.

16. In most conversations:
    1. I use words that are meaningful in terms of the other person's background.
    2. I don't talk when subjects come up that I don't know about.
    3. I believe a large vocabulary helps conversational effectiveness.
    4. I am conscious of my posture.

17. In most conversations:
    1. I ask the other person for his ideas frequently.
    2. I use a great deal of vocal expression.
    3. I use my hands a lot to help express my meanings.
    4. I try to keep my hand movements inobtrusive.

THE FOLLOWING 3 ITEMS REFER TO MANY CONVERSATIONS YOU HAVE BEEN IN.

18. In MANY conversations, I actually:
    1. have a hard time understanding others.
    2. tend to get bored.
    3. invite criticism from the other person.
    4. tend to get hostile.

19. In MANY conversations, various people have indicated in one way or another that:
    1. I use varied and interesting vocabulary words.
    2. I am considerate of other people's communication faults.
    3. I am critical of the views others express.
    4. I over-react when certain subjects are brought up.

20. In MANY conversations, various people have indicated in one way or another that:
    1. I have good vocal quality.
    2. I'm adaptable.
    3. I appear to be neat and well-groomed.
    4. I express my ideas in a dynamic manner.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

THE FOLLOWING 15 ITEMS REFER TO MOST CONVERSATIONS YOU HAVE BEEN IN.

21. In most conversations, I usually:
    1. make a point to appear calm.
    2. get totally involved in what I am talking about or listening to.
    3. uphold my opinions with vigor.
    4. talk quite a bit about myself.

22. In most conversations:
    1. I communicate better to those who are frank and honest.
    2. I feel I have failed to communicate unless the other person understands and accepts my ideas.
    3. I am very direct and to the point.
    4. I talk with the other person, not at him.

23. In most conversations:
    1. I am extremely eager to talk.
    2. I reassure the other person that I understand him by restating what he says.
    3. I interrupt others when I have something important to contribute.
    4. I tend to be dogmatic when I know I am right.

24. In most conversations:
    1. I place as much reliance on my vocal, facial, and hand expressions to convey meaning as I do the words I use.
    2. I don't listen very closely.
    3. I make no attempt to hide my emotions from other people.
    4. I am extremely frank and honest.

25. In most conversations, when I present an argument for a certain point of view:
    1. my views and opinions usually "win out" in the end.
    2. I think being understood is more important than convincing the other person I am correct.
    3. I convey truthful information and expect others to do the same.
    4. I am not completely relaxed--I possess some muscle tension.

26. In most conversations:
    1. I try to bolster up the ego of the other person whenever I can.
    2. I try to help the other person out by correcting his mistakes.
    3. when the other person is searching for the right word, I usually supply just the one he was looking for.
    4. I seldom hesitate giving specific advice on personal problems.

27. In most conversations, I believe:
    1. telling a person what he wants to hear helps put him at ease.
    2. emotional tensions can be reduced by letting the other person have his say.
    3. silence from the other person usually means he understands me.
    4. the subject of conversation is more important than the way it is talked about.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

28. In most conversations:
    1. I am as objective as possible by not getting very involved in what is going on.
    2. I listen primarily for facts.
    3. I listen primarily for ideas and underlying feelings.
    4. I don't often give encouragement to the other person.

29. In most conversations, when I feel friction developing between me and the other person:
    1. I find it difficult to give my opinions in a way that doesn't insult the other person.
    2. I repeat my statements so that he will catch my intended meaning.
    3. I try to find out his expectations and point out areas of common agreement.
    4. I compete with him to win the dominant position.

30. In most conversations:
    1. I can tell if a person is really listening by his facial expressions.
    2. I let the tone of my voice reflect my mood and the mood of the conversation.
    3. I think it is more important to understand the other person's ideas than to be convinced he's right.
    4. I nod my head to indicate I understand the other person.

31. After a conversation has been going for some time:
    1. I get very tired if it drags on too long.
    2. I let the other person use as much time as it takes to make his point clear.
    3. when I know what the other person is going to say next, I interject my comment before he completely finishes his comment.
    4. I seldom comment on what is being said.

32. In most conversations, I listen to the other person's questions so that:
    1. it will appear I am interested in what he is saying.
    2. I will know what to say next.
    3. I can tell what he doesn't understand.
    4. he will be more receptive when I ask questions.

33. In most conversations:
    1. I try to avoid touching the other person.
    2. I tend to make inappropriate comments.
    3. I am not distracted by the other person's mannerisms.
    4. I tend to be suspicious of other people's motives.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

34. In most conversations:
    1. I tell people about things that interest me because this is the same information that usually interests them.
    2. I assume that I will understand the other person and he will understand me.
    3. I try to change the subject when a topic comes up which disturbs me.
    4. I choose topics of conversation which will interest the other person.

35. In most conversations, I try to avoid misunderstanding by:
    1. presenting my ideas in an organized manner.
    2. speaking in terms of the other person's frame of reference.
    3. speaking distinctly and loudly enough to be heard by all participants.
    4. avoiding revealing information which will be unfavorably received by others.

THE FOLLOWING 5 ITEMS REFER EITHER TO MANY OR SOME CONVERSATIONS YOU HAVE BEEN IN.

36. In MANY conversations:
    1. I make each contribution as brief as possible.
    2. people have a hard time trying to understand me.
    3. I don't talk to people who represent a threat to me.
    4. I find it difficult or impossible to look the other person in the eye.

37. In MANY conversations:
    1. I could care less about what is being said.
    2. I usually answer troublesome questions in a round-about way.
    3. I seem to build hostility in the other person by not agreeing with him.
    4. I lean toward the other person when I am speaking or listening.

38. In MANY conversations:
    1. people have indicated that I speak above the listener's level of understanding.
    2. I am really not interested in what is being said.
    3. I attempt to turn the conversation to subjects that interest me.
    4. I am the one to clarify troublesome points.

39. In MANY conversations, various people have indicated in one way or another that:
    1. I'm a thoughtful conversationalist.
    2. I fail to follow the main topic of conversation.
    3. I seldom act illogically,
    4. I force my viewpoint on the listener.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

40. In SOME conversations:
    1. I feel like I'm being forced to speak by others when I would prefer to listen.
    2. People have accused me of conveying false information.
    3. I am often evasive.
    4. I find it very difficult to trust the other person.

The following 32 items should be answered as T if the statement applies to you, and F if the statement is inaccurate for your behavior.

41. Once in a while I cannot control my urge to harm others.

42. I can think of no good reason for ever hitting anyone.

43. If somebody hits me first, I let him have it.

44. Whoever insults me or my family is asking for a fight.

45. People who continually pester you are asking for a punch in the nose.

46. I seldom strike back, even if someone hits me first.

47. When I really lose my temper, I am capable of slapping someone.

48. I get into fights as often as the next person.

49. If I have to resort to physical violence to defend my rights, I will.

50. I have known people who pushed me so far that we came to blows.

51. I sometimes spread gossip about people I don't like.

52. I never get mad enough to throw things.

53. When I am mad, I sometimes slam doors.

54. I never play practical jokes.

55. When I am angry, I sometimes sulk.

56. I sometimes pout when I don't get my own way.

57. Since the age of ten, I have never had a temper tantrum.

58. I can remember being so angry that I picked up the nearest thing and broke it.

59. I sometimes show my anger by banging on the table.

60. When I disapprove of my friends' behavior, I let them know it.

61. I often find myself disagreeing with people.

62. I can't help getting into arguments when people disagree with me.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

63. I demand that people respect my rights.

64. Even when my anger is aroused, I don't use "strong language."

65. If someone annoys me, I am apt to tell him what I think of him.

66. When people yell at me, I yell back.

67. When I get mad, I say nasty things.

68. I could not put someone in his place, even if he needed it.

69. I often make threats I don't really mean to carry out.

70. When arguing, I tend to raise my voice.

71. I generally cover up my poor opinion of others.

72. I would rather concede a point than get into an argument about it.

BLOCK 3.2: HOW WELL DO YOU LISTEN?

Select the alternative that best describes what the person administering this Measure said at the beginning of this period.

73. Why should you have been as candid as possible on the first 40 items?
    1. The responses are graded.
    2. The responses help in tailoring the instruction to you.
    3. Honesty is the policy.
    4. None of the above.

74. What is the most common of all communicative situations?
    1. Interviewing
    2. Discussion
    3. Conversation
    4. Public Speaking

75. In order to be exempted from a portion of this course, you must get ? of the items in a block correct.
    1. 60%
    2. 70%
    3. 80%
    4. 100%

76. In a fifty minute period, you are expected to:
    1. finish the complete measure.
    2. be thorough in your responses.
    3. both of the above.
    4. none of the above.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

77. In order to successfully complete a block of items in the advanced standing part of the Measure, a student must:
    1. demonstrate competence in the unit objective represented by the block of items.
    2. have had speech in high school.
    3. work rapidly.
    4. none of the above.

BLOCK 4.4: A SPEECH COMMUNICATION BREAKDOWN

READ THIS CASE STUDY

At 9:30 this morning, a policeman was about to enter a doctor's office to get an allergy shot to diminish his violent hayfever attacks. As he was about to enter the office, he saw a neatly dressed man staggering across the street. Two cars had to cram on the brakes to prevent hitting the man. The policeman heard the man yelling incoherently. The policeman identified the man's behavior pattern as drunkenness. Although the policeman could not make out the man's words, he was sure the man was making insulting remarks about the police. The policeman arrested the man for being drunk and disorderly. At the time of arrest, the man, a diabetic, was in insulin shock, was frightened, and was trying to ask for help. In the drunk tank at the jail, he went into coma and was close to death before someone noticed the medical information on a bracelet around the man's wrist and secured medical aid.

78. While the man in the case study was unable to output effectively, the policeman was unable to input information as effectively as he might have. In other words:
    1. the policeman was unable to detect information effectively.
    2. some stimuli impinging upon his sensory receptors were not registered as information by his receptors.
    3. some information which was registered by his sensory receptors was filtered out before it was passed along to the brain.
    4. all of the above.

79. The policeman's input structures are his:
    1. eyes, ears, nose, tongue, and skin.
    2. central nervous system and brain.
    3. all of the above.
    4. none of the above.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

80. After he had input information about the man, the policeman was unable to process the information as effectively as he might have. In other words:
    1. his thinking and/or memory functioned inappropriately.
    2. he had trouble in identifying data, classifying data, determining relationships among data, and/or solving problems posed by his data.
    3. there were problems associated with his information storage and/or retrieval.
    4. all of the above.

81. The policeman's processing structures are his:
    1. sensory organs and brain.
    2. central nervous system and brain.
    3. brain and vocal mechanism.
    4. vocal mechanism and hearing mechanism.

82. Which of the following are inputting barriers that can be inferred from the case study?
    1. faulty assumptions and signal reactions
    2. faulty assumptions and fact-inferences confusion
    3. signal reactions and sensory limitations
    4. sensory limitations and selective perception

83. Which of the following are processing barriers that can be inferred from the case study?
    1. faulty assumptions and selective perception
    2. faulty assumptions and fact-inferences confusion
    3. signal reactions and sensory limitations
    4. sensory limitations and selective perception

84. Which of the following is a sensory limitation the man might have had?
    1. a speech defect
    2. a reading disability
    3. a hearing loss
    4. a writing problem

85. Because he was frightened and in a state of heightened emotions, the man might not have been aware that the cars had to cram on their brakes. Even if he was clearly looking in the direction of the cars, he might have "seen" only the policeman. When stimuli are registered as information by the sense receptors but this information is filtered out before it is registered in our conscious awareness, this phenomena is called:
    1. fact-inferences confusion.
    2. faulty assumptions.
    3. sensory limitations.
    4. selective perception.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

86. If the man "jumped to the conclusion" that the policeman would automatically help him and if he acted upon this conclusion as if it were a certainty--without considering the probability of the policeman misinterpreting his behavior, we have an example of:
    1. fact-inferences confusion.
    2. faulty assumptions.
    3. sensory limitations.
    4. selective perception.

87. If the man recognized the policeman and remembered him as the helpful, nice boy who used to deliver his newspaper, he might infer that the policeman would help him now. What faulty assumption is this inference based upon?
    1. Words have meaning.
    2. It is possible to know everything about something.
    3. Things don't change.
    4. It is possible to categorize things into rigid, mutually exclusive categories.

88. If a woman on the sidewalk heard the man say, "I need a shot, I need a shot," and if she replied, "There's a bar around the corner," she would have been basing her reply on the assumption that:
    1. words have meaning.
    2. it is possible to know everything about something.
    3. things don't change.
    4. it is possible to categorize things into rigid, mutually exclusive categories.

89. If the woman then thought to herself, "I wonder where that old drunk got those nice clothes he is wearing," and if, in order to preserve her image of what a drunk should look like, she concludes he stole them, her reasoning is based upon the faulty assumption that:
    1. words have meaning.
    2. it is possible to know everything about something.
    3. things don't change.
    4. it is possible to categorize things into rigid, mutually exclusive categories.

90. Because of his hayfever, the policeman probably could not tell whether or not the man had alcohol on his breath. From this we can infer one of the barriers to effective communication. It is:
    1. fact-inferences confusion.
    2. faulty assumptions.
    3. sensory limitations.
    4. selective perception.

91. In this case, a strategy for overcoming the above barrier is to:
    1. seek external verification.
    2. be aware of your own psychological state.
    3. calculate the risk of being wrong before taking action.
    4. search for differences rather than similarities.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

92. To the extent that the policeman "saw" only the man's staggering behavior and "heard" his yelling and to the extent that he failed to "see" that the man was neatly dressed, we have an example of:
    1. fact-inferences confusion.
    2. faulty assumptions.
    3. sensory limitations.
    4. selective perception.

93. For this one, a strategy for overcoming the above barrier is to:
    1. seek external verification.
    2. be aware of your own psychological state.
    3. calculate the risk of being wrong before taking action.
    4. search for differences rather than similarities.

94. To the extent that the policeman based his decision to arrest the man for being drunk on the premise that "only drunks stagger and yell incoherently," we have an example of:
    1. facts-inferences confusion.
    2. faulty assumptions.
    3. sensory limitations.
    4. selective perception.

95. A corrective for the above barrier is to:
    1. seek external verification.
    2. be aware of your own psychological state
    3. calculate the risk of being wrong before taking action.
    4. search for differences rather than similarities.

96. To the extent that the policeman jumped to the conclusion that the man was drunk and to the extent that he acted upon his conclusion as if it were certain, we have an example of:
    1. fact-inferences confusion.
    2. faulty assumptions.
    3. sensory limitations.
    4. selective perception.

97. And for this last barrier, the policeman might have:
    1. sought external verification.
    2. been aware of his own psychological state.
    3. calculated the risk of being wrong before taking action.
    4. searched for differences rather than similarities.

BLOCK 5.3: SELF CONCEPTS AND INFORMATION-GETTING INTERVIEW

If a statement is appropriate, place an "A" on the answer sheet. If the statement is inappropriate, place an "I" on the answer sheet.

98. The information-getting purpose refers primarily to finding out about relationships among inanimate objects and things.

99. There are only a relatively few possible general speech communication purposes and fewer possible specific purposes.

BE SURE AND ANSWER EVERY QUESTION EVEN IF THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

100. In most speech communication encounters, there is only one specific purpose.

101. One of the purposes for listening is information-getting.

102. There is a direct positive relationship between learning and information-getting.

103. Generally speaking, the more an interviewer relies on closed questions, the less control he has over the direction of the interview; the more he relies on open questions, the more control he has over the direction of the interview.

104. Generally speaking, open questions elicit greater responsiveness from interviewees, and closed questions lead to more restricted responses.

105. The interviewer should first attempt to develop trust and rapport during the substantive part of the interview.

106. A favorable communicative climate exists when the interviewee feels free to say whatever he wants to say without fear of judgment on the part of the interviewer.

107. An interview may be described as a conversation with a purpose.

108. Self concepts affect communication in terms of the self-fulfilling prophesy.

109. "What do you think about the weather we've been having?" is an example of a closed question.

110. Our self concepts are primarily determined on the basis of our view of self as a physical object rather than the reflected appraisal of others.

In the following, indicate which alternative is the most accurate and/or appropriate statement.

111. Under what conditions should "leading questions" be used in the information-getting interview?
    1. They should never be used under any conditions.
    2. While not recommended for general use, leading questions can be used to guage commitment to a response or position.
    3. Leading questions can be used whenever there is a need to establish a favorable communicative climate.
    4. Leading questions should be frequently used as a way of getting into the substantive part of the interview.

BE SURE AND ANSWER EVERY QUESTION EVEN THOUGH THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

112. Question-asking:
    1. occurs in the substantive part of the interview.
    2. requires a harmony between verbal and nonverbal messages.
    3. is an important part of the interviewer's role as a transmitter.
    4. is a basic strategy for discovering self concepts of human transceivers.
    5. all of the above.

113. The effective interviewer relates the purpose of the interview to the interviewee in order to:
    1. create a favorable communicative climate.
    2. provide the opportunity for interviewee motivation.
    3. establish the frame of reference for the interview.
    4. all of the above.
    5. none of the above.

114. Which of the following is <u>not</u> one of the self concept aspects of transceiver analysis?
    1. Status
    2. Identity
    3. Ego Involvement
    4. Group Affiliations
    5. Roles

115. Which of the following is a method for discovering information about the self concepts of transceivers?
    1. Direct observation.
    2. Corresponding or talking with a mutual acquaintance.
    3. Collecting printed material about the transceiver.
    4. Interviewing the transceiver.
    5. All of the above.
    6. None of the above.

116. Which of the following is characteristic of general and specific purposes?
    1. There are relatively few speech communication purposes.
    2. There are more possible general purposes than specific purposes.
    3. There are many possible purposes.
    4. None of the above.

117. A person's self concept affects communication in terms of the selection of:
    1. messages to be transmitted.
    2. messages to be received.
    3. messages to be processed.
    4. all of the above.

BE SURE AND ANSWER EVERY QUESTION EVEN THOUGH THE PREFERENCE FOR ONE ALTERNATIVE OVER THE OTHERS IS VERY SLIGHT.

APPENDIX C

ANSWER SHEET AND GRADING KEY

SPEECH COMMUNICATION 2713: DIAGNOSTIC AND ADVANCED STANDING MEASURE

ANSWER SHEET

CSRI: A_____ 3.2_____ (3)

CSRI: B_____ 4.4_____ (16)

BDI _____ 5.3_____ (16)

To be filled in by instr.

Name _____

Course Section _____

Instructor's Name _____

CSRI	CSRI	BDI	BDI
1. 2	21. 2	41. T	61. T
2. 4	22. 4	42. F	62. T
3. 3	23. 2	43. T	63. T
4. 3	24. 1	44. T	64. F
5. 2	25. 2	45. T	65. T
6. 2	26. 1	46. F	66. T
7. 4	27. 2	47. T	67. T
8. 3	28. 3	48. T	68. F
9. 2	29. 3	49. T	69. T
10. 3	30. 3	50. T	70. T
11. 1	31. 2	51. T	71. F
12. 4	32. 3	52. F	72. F
13. 4	33. 3	53. T	
14. 4	34. 4	54. F	
15. 4	35. 2	55. T	
16. 1	36. 1	56. T	
17. 1	37. 4	57. F	
18. 3	38. 4	58. T	
19. 2	39. 1	59. T	
20. 3	40. 1	60. T	

CSRI TOTAL

BDI TOTAL

APPENDIX D

RAW DATA CODE

RAW DATA CODE

1. OBS--Each subject has a number.

2. SX--Male=1; Female=2.

3. CSRI--score on Conversation Self-Report Inventory.

4. LVL--1=low CSRI; 2=middle CSRI; 3=high CSRI.

5. CLS--1=upper class; 2=lower class.

6. COL--1=Arts & Science; 2=Education; 3=Business; 4=Agriculture; 5=Home Economics; 6=Other; 7=Engineering.

7. PHYS--score on BDI physical aggression scale.

8. IND--score on BDI indirect aggression scale.

9. VERBAL--score on BDI verbal aggression scale.

APPENDIX E

RAW DATA - PILOT STUDY

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL
01	1	24	3	2	1	8	5	7
02	1	31	3	1	4	6	6	7
03	1	28	3	2	1	1	5	4
04	1	26	3	1	1	3	5	5
05	1	25	3	1	3	2	1	3
06	1	22	3	2	4	3	5	7
07	2	25	3	1	3	2	5	2
08	2	29	3	1	3	1	8	10
09	2	35	3	1	1	1	1	3
10	2	29	3	2	2	1	6	3
11	2	22	3	1	3	3	7	6
12	2	23	3	2	2	3	6	9
13	2	24	3	1	3	2	4	4
14	2	24	3	1	3	4	6	6
15	2	18	2	1	1	4	7	4
16	2	20	2	1	1	1	1	6
17	2	19	3	1	3	0	3	6
18	2	18	2	1	3	6	3	6
19	2	18	2	1	3	8	0	6
20	2	19	2	2	3	2	7	1
21	2	22	2	2	3	5	3	5
22	2	20	2	1	3	1	6	4
23	2	16	2	1	3	4	4	5
24	1	19	2	2	3	5	5	11
25	1	18	2	1	3	5	4	9
26	1	20	2	1	1	4	4	4
27	1	20	2	1	4	6	5	9
28	1	18	2	2	1	3	5	6
29	1	18	2	1	1	5	5	6
30	2	16	1	1	1	3	7	6
31	2	12	1	1	3	4	5	7
32	2	9	1	1	3	2	5	6
33	1	16	1	1	2	3	6	4
34	1	15	1	1	3	5	3	7
35	1	15	1	2	4	4	2	7
36	1	11	1	2	3	5	8	6
37	1	12	1	2	1	6	5	5
38	1	13	1	1	3	8	8	10
39	1	15	1	2	3	8	6	8
40	1	10	1	2	3	2	4	8
41	1	7	1	1	3	3	6	11
42	1	8	1	2	3	6	8	8
43	1	9	1	2	3	7	7	10

APPENDIX F

RAW DATA - MAIN STUDY

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
1	1	9	1	2	3	7	5	3	11
2	1	9	1	1	3	2	5	3	11
3	1	13	1	2	3	4	1	7	11
4	1	15	1	1	4	8	2	9	11
5	1	16	1	2	3	1	6	5	11
6	1	12	1	1	3	5	6	7	11
7	1	12	1	2	3	3	1	3	11
8	1	6	1	1	3	7	8	10	11
9	1	6	1	1	7	6	3	8	11
10	1	8	1	2	1	3	5	8	11
11	1	13	1	1	3	5	4	11	11
12	1	14	1	1	3	5	1	4	11
13	1	16	1	1	3	1	3	5	11
14	1	16	1	1	3	3	2	3	11
15	1	16	1	1	5	2	3	4	11
16	1	11	1	1	3	4	0	8	11
17	1	12	1	2	3	5	2	8	11
18	1	12	1	2	2	4	5	5	11
19	1	16	1	1	6	6	8	11	11
20	1	15	1	1	4	6	4	5	11
21	1	15	1	2	1	5	3	3	11
22	1	12	1	2	4	6	4	11	11
23	1	12	1	1	3	5	3	8	11
24	1	12	1	1	1	4	5	8	11
25	1	16	1	2	3	4	6	9	11
26	1	15	1	1	3	6	3	6	11
27	1	15	1	1	3	0	5	5	11
28	1	14	1	1	3	1	8	6	11
29	1	11	1	1	3	7	5	11	11
30	1	11	1	1	3	5	6	9	11
31	1	11	1	1	3	6	8	8	11
32	1	11	1	2	1	6	4	6	11
33	1	9	1	2	1	9	3	4	11
34	1	8	1	1	3	8	7	9	11
35	1	11	1	2	4	8	4	9	11
36	1	5	1	1	3	6	8	11	11
37	1	14	1	2	4	4	5	5	11
38	1	6	1	1	4	3	4	6	11
39	1	16	1	1	3	4	3	9	11
40	1	15	1	1	3	3	3	5	11
41	1	14	1	1	3	8	5	7	11
42	1	13	1	2	1	5	3	4	11
43	1	12	1	1	1	0	3	4	11
44	1	12	1	2	3	1	5	4	11
45	1	11	1	1	1	2	3	4	11
46	1	11	1	1	2	1	2	2	11
47	1	9	1	1	1	4	1	3	11
48	1	8	1	1	2	9	8	10	11
49	1	12	1	1	3	4	4	8	11
50	1	13	1	2	2	5	4	10	11
51	1	13	1	1	3	2	4	6	11
52	1	14	1	1	3	6	4	7	11
53	1	13	1	2	2	8	6	12	11
54	1	13	1	1	1	5	1	5	11
55	1	11	1	1	3	6	6	8	11

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
56	1	12	1	2	3	3	5	5	11
57	1	10	1	2	4	4	2	4	11
58	1	8	1	2	1	8	3	12	11
59	1	16	1	1	3	4	8	7	11
60	1	15	1	1	1	6	7	3	11
61	1	15	1	1	4	4	7	9	11
62	1	13	1	2	1	5	8	10	11
63	1	10	1	2	7	5	3	9	11
64	1	10	1	1	4	7	6	11	11
65	1	16	1	1	4	4	6	11	11
66	1	15	1	1	3	2	2	8	11
67	1	15	1	2	3	5	5	8	11
68	1	15	1	1	1	6	8	10	11
69	1	13	1	1	3	10	3	13	11
70	1	13	1	1	3	9	5	11	11
71	1	12	1	1	3	7	4	5	11
72	1	11	1	1	3	1	4	6	11
73	1	11	1	1	3	10	6	9	11
74	1	10	1	2	1	0	4	9	11
75	1	14	1	1	1	6	5	9	11
76	1	15	1	1	3	6	7	6	11
77	1	15	1	1	1	5	7	9	11
78	1	13	1	1	3	6	7	5	11
79	1	14	1	1	3	6	5	10	11
80	1	11	1	1	3	5	6	5	11
81	1	12	1	1	7	2	6	3	11
82	1	12	1	1	3	4	8	11	11
83	1	12	1	1	4	4	3	8	11
84	1	10	1	1	1	5	3	6	11
85	1	16	1	1	3	1	5	8	11
86	1	16	1	1	5	5	4	7	11
87	1	16	1	1	4	4	5	5	11
88	1	9	1	2	3	4	9	7	11
89	1	10	1	1	3	9	6	10	11
90	1	11	1	1	1	1	9	6	11
91	1	9	1	2	4	6	3	6	11
92	1	15	1	1	3	8	3	7	11
93	1	15	1	2	3	6	2	7	11
94	1	15	1	1	3	5	1	4	11
95	1	15	1	1	3	5	9	10	11
96	1	15	1	2	3	1	4	7	11
97	1	14	1	1	7	2	4	7	11
98	1	14	1	1	3	3	8	12	11
99	1	13	1	1	4	8	8	10	11
100	1	13	1	1	1	2	7	3	11
101	1	14	1	1	1	5	6	8	11
102	1	9	1	2	3	4	6	8	11
103	1	8	1	2	3	7	8	10	11
104	1	8	1	1	1	8	6	10	11
105	1	14	1	2	3	4	4	7	11
106	1	15	1	2	3	2	3	2	11
107	1	10	1	1	2	4	8	5	11
108	1	14	1	2	3	3	6	5	11
109	1	15	1	2	3	0	4	8	11
110	1	11	1	1	4	5	4	7	11

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
111	1	12	1	1	5	2	5	9	11
112	1	11	1	1	3	3	6	6	11
113	1	10	1	1	1	4	4	10	11
114	1	9	1	1	3	7	7	8	11
115	1	9	1	1	1	6	5	3	11
116	1	7	1	1	4	6	6	13	11
117	1	7	1	2	2	4	2	6	11
118	1	15	1	2	4	7	5	12	11
119	1	15	1	1	1	6	5	11	11
120	1	16	1	1	3	4	3	8	11
121	1	13	1	1	1	2	4	6	11
122	1	10	1	2	3	2	8	4	11
123	1	15	1	1	1	7	6	8	11
124	1	15	1	2	2	3	5	9	11
125	1	15	1	1	1	4	4	6	11
126	1	13	1	2	5	2	1	5	11
127	1	15	1	1	1	6	6	8	11
128	1	13	1	1	3	5	3	7	11
129	1	14	1	1	3	5	5	3	11
130	1	15	1	2	1	4	8	5	11
131	1	13	1	1	1	6	6	8	11
132	1	8	1	2	4	2	6	11	11
133	1	12	1	1	3	5	4	6	11
134	1	12	1	1	3	5	3	7	11
135	1	9	1	2	4	7	2	7	11
136	1	7	1	1	3	1	4	10	11
137	1	12	1	1	1	1	7	11	11
138	1	14	1	2	3	7	4	9	11
139	1	12	1	2	1	6	6	9	11
140	1	8	1	1	1	3	2	5	11
141	1	13	1	1	3	6	6	4	11
142	1	14	1	1	1	3	6	9	11
143	1	15	1	1	5	2	3	6	11
144	1	14	1	1	3	5	6	8	11
145	1	8	1	1	3	4	2	4	11
146	1	2	1	1	1	8	4	13	11
147	1	8	1	1	1	7	5	11	11
148	1	10	1	2	4	7	6	10	11
149	1	7	1	2	3	6	3	3	11
150	1	14	1	1	3	6	8	8	11
151	1	13	1	2	5	6	8	4	11
152	1	13	1	2	3	9	8	6	11
153	1	14	1	1	3	5	1	4	11
154	1	13	1	1	4	4	1	7	11
155	1	8	1	1	3	2	5	3	11
156	1	10	1	1	1	5	6	7	11
157	1	10	1	1	4	7	8	10	11
158	1	8	1	2	1	7	2	7	11
159	1	15	1	2	3	8	2	9	11
160	1	15	1	1	4	8	2	9	11
161	1	10	1	1	6	2	8	4	11
162	1	7	1	2	3	7	8	10	11
163	1	10	1	2	3	5	6	7	11
164	1	12	1	2	1	5	6	7	11
165	1	10	1	1	4	2	8	4	11

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
166	1	6	1	2	1	8	3	12	11
167	1	12	1	1	1	3	5	5	11
168	1	15	1	1	1	7	6	8	11
169	1	12	1	1	1	3	5	5	11
170	1	8	1	1	4	8	3	12	11
171	1	5	1	2	2	7	6	8	11
172	1	7	1	1	1	6	6	13	11
173	1	12	1	1	3	3	5	5	11
174	1	7	1	1	3	6	5	12	11
175	1	13	1	1	3	3	5	5	11
176	1	10	1	1	6	4	2	4	11
177	1	14	1	2	3	5	5	8	11
178	1	15	1	1	3	6	7	3	11
179	1	14	1	1	4	6	5	10	11
180	1	17	2	1	3	6	7	9	12
181	1	17	2	2	6	4	4	11	12
182	1	20	2	1	4	6	5	5	12
183	1	21	2	1	1	7	7	9	12
184	1	20	2	2	1	1	6	7	12
185	1	19	2	1	1	8	9	10	12
186	1	17	2	1	3	3	4	6	12
187	1	17	2	1	2	4	5	6	12
188	1	20	2	1	3	3	8	3	12
189	1	21	2	1	1	5	2	6	12
190	1	20	2	1	3	2	2	2	12
191	1	19	2	1	3	4	2	3	12
192	1	19	2	1	3	5	5	3	12
193	1	19	2	2	3	2	5	8	12
194	1	18	2	1	3	1	5	3	12
195	1	18	2	2	3	5	4	7	12
196	1	17	2	1	3	8	9	12	12
197	1	18	2	2	1	0	3	5	12
198	1	17	2	2	1	8	8	6	12
199	1	17	2	1	3	5	3	9	12
200	1	19	2	2	3	1	2	3	12
201	1	19	2	2	3	4	5	6	12
202	1	19	2	1	6	5	2	9	12
203	1	21	2	1	1	3	6	8	12
204	1	20	2	1	4	6	6	6	12
205	1	18	2	1	3	2	2	7	12
206	1	18	2	1	3	4	6	4	12
207	1	17	2	1	2	3	6	9	12
208	1	17	2	1	1	5	2	8	12
209	1	21	2	2	1	4	3	6	12
210	1	20	2	1	1	4	6	10	12
211	1	19	2	1	1	1	1	5	12
212	1	16	2	1	3	3	6	6	12
213	1	19	2	1	3	2	5	7	12
214	1	21	2	1	1	7	7	12	12
215	1	20	2	1	3	5	2	8	12
216	1	19	2	1	1	5	6	6	12
217	1	19	2	1	4	3	6	3	12
218	1	17	2	1	4	1	6	1	12
219	1	18	2	1	3	7	5	11	12
220	1	17	2	2	3	9	6	13	12

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
221	1	17	2	1	3	6	3	4	12
222	1	21	2	1	5	4	1	6	12
223	1	18	2	1	3	9	4	8	12
224	1	17	2	2	1	4	3	4	12
225	1	17	2	1	4	4	6	9	12
226	1	20	2	1	1	3	2	6	12
227	1	19	2	1	3	7	3	4	12
228	1	19	2	1	3	4	5	8	12
229	1	17	2	1	3	6	5	5	12
230	1	20	2	1	1	1	5	5	12
231	1	20	2	1	1	3	4	9	12
232	1	19	2	1	3	2	5	5	12
233	1	16	2	1	3	6	5	7	12
234	1	16	2	1	3	7	9	12	12
235	1	16	2	2	3	7	6	5	12
236	1	16	2	1	3	3	4	8	12
237	1	16	2	1	3	4	8	11	12
238	1	18	2	2	4	9	1	6	12
239	1	18	2	1	4	8	4	5	12
240	1	18	2	1	3	0	6	10	12
241	1	19	2	2	3	4	9	5	12
242	1	19	2	1	3	5	4	7	12
243	1	21	2	1	1	5	8	6	12
244	1	21	2	1	1	3	6	2	12
245	1	16	2	1	3	4	5	10	12
246	1	18	2	1	4	7	2	8	12
247	1	18	2	1	1	3	4	5	12
248	1	19	2	2	4	2	4	7	12
249	1	19	2	2	1	5	2	2	12
250	1	20	2	1	1	7	6	9	12
251	1	20	2	1	3	7	7	8	12
252	1	20	2	1	4	6	3	5	12
253	1	21	2	1	3	3	2	5	12
254	1	21	2	1	4	7	1	7	12
255	1	19	2	1	4	2	1	3	12
256	1	20	2	1	4	4	9	9	12
257	1	21	2	1	1	2	4	8	12
258	1	21	2	2	3	4	4	9	12
259	1	17	2	2	1	2	6	10	12
260	1	17	2	2	3	5	3	2	12
261	1	19	2	2	2	1	3	4	12
262	1	20	2	1	3	7	4	6	12
263	1	20	2	1	4	4	7	10	12
264	1	18	2	1	3	7	5	10	12
265	1	18	2	1	3	3	4	6	12
266	1	17	2	1	2	2	6	7	12
267	1	17	2	2	1	5	4	6	12
268	1	20	2	1	4	7	4	7	12
269	1	18	2	2	5	2	7	8	12
270	1	18	2	1	3	6	4	9	12
271	1	17	2	1	1	5	4	3	12
272	1	18	2	2	1	3	4	4	12
273	1	20	2	2	1	3	3	6	12
274	1	21	2	1	4	6	3	3	12
275	1	20	2	1	3	4	4	9	12

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
276	1	17	2	1	1	5	5	10	12
277	1	21	2	1	3	4	2	5	12
278	1	19	2	1	7	2	3	8	12
279	1	18	2	2	7	4	5	5	12
280	1	20	2	2	3	0	3	6	12
281	1	20	2	1	4	2	1	3	12
282	1	20	2	2	4	0	0	0	12
283	1	10	2	2	5	5	7	7	12
284	1	21	2	1	4	5	4	6	12
285	1	19	2	1	3	4	5	8	12
286	1	19	2	1	1	0	5	6	12
287	1	17	2	1	3	7	5	6	12
288	1	19	2	1	3	5	5	6	12
289	1	16	2	1	3	2	4	6	12
290	1	16	2	1	1	2	9	11	12
291	1	18	2	2	4	5	5	6	12
292	1	16	2	1	3	3	4	8	12
293	1	18	2	1	4	5	5	5	12
294	1	21	2	2	4	6	3	6	12
295	1	17	2	2	5	0	7	5	12
296	1	18	2	1	4	6	8	7	12
297	1	18	2	1	3	7	6	11	12
298	1	20	2	1	3	3	4	6	12
299	1	18	2	1	4	1	7	9	12
300	1	21	2	1	3	3	9	7	12
301	1	20	2	1	3	6	5	8	12
302	1	20	2	1	1	7	8	9	12
303	1	18	2	1	3	2	5	5	12
304	1	16	2	2	1	1	3	5	12
305	1	19	2	1	6	3	8	3	12
306	1	18	2	2	4	4	7	7	12
307	1	18	2	1	3	4	4	11	12
308	1	19	2	1	6	6	5	5	12
309	1	18	2	1	7	4	6	4	12
310	1	21	2	1	1	6	4	10	12
311	1	17	2	2	3	4	6	4	12
312	1	18	2	1	3	5	2	9	12
313	1	16	2	1	3	4	3	8	12
314	1	17	2	2	4	2	6	8	12
315	1	16	2	1	7	1	6	1	12
316	1	18	2	1	1	3	4	6	12
317	1	17	2	1	1	5	4	6	12
318	1	18	2	2	6	3	4	6	12
319	1	16	2	1	4	4	6	11	12
320	1	21	2	1	3	6	3	6	12
321	1	16	2	1	3	4	8	7	12
322	1	18	2	1	3	7	5	11	12
323	1	19	2	1	3	2	5	5	12
324	1	17	2	1	3	6	5	5	12
325	1	17	2	2	3	6	5	6	12
326	1	20	2	1	3	3	2	6	12
327	1	20	2	2	3	3	2	6	12
328	1	26	3	1	3	3	6	7	13
329	1	24	3	1	3	6	6	11	13
330	1	24	3	1	1	0	3	4	13

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
331	1	27	3	1	3	5	4	5	13
332	1	27	3	1	3	0	2	5	13
333	1	30	3	2	6	3	3	10	13
334	1	35	3	1	3	3	6	5	13
335	1	21	3	1	1	2	6	6	13
336	1	22	3	1	5	3	5	9	13
337	1	25	3	1	3	3	7	5	13
338	1	28	3	1	4	0	2	6	13
339	1	27	3	1	4	4	3	3	13
340	1	27	3	1	1	2	5	3	13
341	1	26	3	2	3	6	7	5	13
342	1	25	3	1	3	2	1	5	13
343	1	25	3	1	1	3	2	4	13
344	1	23	3	1	2	0	4	9	13
345	1	29	3	2	3	4	5	7	13
346	1	28	3	1	3	3	4	6	13
347	1	21	3	1	3	10	3	8	13
348	1	22	3	1	3	0	4	6	13
349	1	23	3	1	5	6	5	11	13
350	1	25	3	1	3	3	5	4	13
351	1	23	3	2	1	4	5	5	13
352	1	31	3	2	3	5	3	5	13
353	1	27	3	2	3	6	5	6	13
354	1	24	3	1	3	3	5	10	13
355	1	23	3	2	1	5	5	4	13
356	1	21	3	1	3	4	7	8	13
357	1	22	3	2	3	7	3	6	13
358	1	23	3	1	3	3	6	5	13
359	1	23	3	1	3	4	7	6	13
360	1	22	3	2	1	3	5	9	13
361	1	22	3	2	4	5	6	6	13
362	1	28	3	1	4	6	5	11	13
363	1	30	3	1	3	6	3	8	13
364	1	33	3	2	3	0	3	3	13
365	1	31	3	1	4	1	3	3	13
366	1	26	3	1	3	3	4	3	13
367	1	22	3	2	3	3	5	5	13
368	1	25	3	2	1	7	5	3	13
369	1	22	3	1	3	2	3	6	13
370	1	22	3	2	7	4	4	9	13
371	1	27	3	1	3	6	7	10	13
372	1	26	3	2	1	3	4	6	13
373	1	22	3	1	7	5	8	12	13
374	1	21	3	2	2	6	3	6	13
375	1	30	3	1	4	3	3	3	13
376	1	24	3	2	1	6	5	8	13
377	1	23	3	1	3	4	3	6	13
378	1	28	3	2	1	2	2	6	13
379	1	24	3	2	4	3	7	8	13
380	1	22	3	1	4	3	8	7	13
381	1	21	3	1	3	4	5	8	13
382	1	27	3	2	7	1	6	5	13
383	1	27	3	1	6	2	4	5	13
384	1	27	3	1	4	2	2	4	13
385	1	22	3	1	5	5	5	6	13

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
386	1	24	3	1	2	5	6	7	13
387	1	25	3	2	3	3	2	6	13
388	1	25	3	1	3	6	6	9	13
389	1	24	3	2	1	7	4	8	13
390	1	28	3	1	1	0	5	6	13
391	1	23	3	1	3	3	7	3	13
392	1	22	3	2	4	4	3	4	13
393	1	29	3	2	1	3	2	4	13
394	1	23	3	1	1	3	6	7	13
395	1	25	3	2	6	4	8	6	13
396	1	25	3	2	3	3	2	4	13
397	1	22	3	1	3	0	0	2	13
398	1	26	3	2	2	2	5	5	13
399	1	27	3	2	4	3	3	8	13
400	1	22	3	1	1	3	5	7	13
401	1	24	3	1	3	1	3	4	13
402	1	24	3	1	1	5	7	6	13
403	1	25	3	1	3	8	3	5	13
404	1	26	3	1	1	9	5	8	13
405	1	27	3	2	3	7	5	8	13
406	1	27	3	2	1	6	9	8	13
407	1	23	3	2	5	2	3	8	13
408	1	28	3	2	6	4	7	4	13
409	1	28	3	1	3	6	2	8	13
410	1	29	3	1	3	7	5	9	13
411	1	30	3	1	1	7	9	12	13
412	1	22	3	1	1	1	4	6	13
413	1	21	3	1	3	5	2	6	13
414	1	21	3	1	1	6	4	10	13
415	1	22	3	1	1	6	4	11	13
416	1	23	3	1	3	4	2	5	13
417	1	25	3	1	1	2	8	9	13
418	1	26	3	1	3	2	6	8	13
419	1	27	3	2	3	1	4	5	13
420	1	27	3	1	4	1	3	9	13
421	1	23	3	1	1	7	6	8	13
422	1	23	3	1	4	6	6	7	13
423	1	23	3	1	4	7	6	6	13
424	1	22	3	1	3	4	4	6	13
425	1	22	3	1	1	2	1	3	13
426	1	32	3	1	3	2	3	4	13
427	1	22	3	2	1	6	7	6	13
428	1	27	3	1	3	3	3	3	13
429	1	24	3	1	1	2	8	10	13
430	1	22	3	1	3	5	7	10	13
431	1	24	3	2	3	3	2	5	13
432	1	24	3	2	1	6	8	9	13
433	1	23	3	1	6	2	3	5	13
434	1	26	3	1	1	2	3	5	13
435	1	23	3	2	3	4	1	5	13
436	1	30	3	1	5	0	5	5	13
437	1	17	3	1	6	2	9	8	13
438	1	26	3	1	1	3	6	8	13
439	1	22	3	1	4	3	4	5	13
440	1	32	3	1	1	2	3	4	13

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
441	1	24	3	2	3	0	2	2	13
442	1	22	3	2	1	2	7	4	13
443	1	23	3	1	4	6	5	9	13
444	1	23	3	1	3	0	4	3	13
445	1	28	3	1	1	5	4	9	13
446	1	24	3	1	3	4	6	6	13
447	1	23	3	1	1	6	2	2	13
448	1	24	3	2	3	2	4	7	13
449	1	23	3	1	3	9	6	11	13
450	1	33	3	1	1	3	3	10	13
451	1	26	3	1	1	3	6	7	13
452	1	27	3	2	3	5	4	5	13
453	1	22	3	1	3	3	5	8	13
454	1	27	3	2	4	0	2	6	13
455	1	29	3	1	7	4	3	3	13
456	1	29	3	2	3	7	5	9	13
457	1	22	3	1	3	5	2	6	13
458	1	28	3	1	4	0	5	6	13
459	1	24	3	1	3	3	7	8	13
460	1	32	3	2	1	4	5	7	13
461	2	13	1	1	1	4	4	4	21
462	2	10	1	1	3	0	3	4	21
463	2	14	1	1	1	2	5	9	21
464	2	16	1	1	2	0	7	3	21
465	2	11	1	1	3	5	7	10	21
466	2	9	1	2	7	10	5	8	21
467	2	15	1	1	3	3	4	11	21
468	2	14	1	1	3	6	5	7	21
469	2	10	1	1	5	3	6	8	21
470	2	15	1	2	1	5	4	6	21
471	2	15	1	1	5	8	1	7	21
472	2	13	1	1	3	4	6	7	21
473	2	13	1	1	7	3	0	5	21
474	2	13	1	2	3	3	8	3	21
475	2	13	1	1	2	6	6	6	21
476	2	13	1	1	3	0	5	4	21
477	2	15	1	1	1	1	5	4	21
478	2	14	1	1	4	6	3	8	21
479	2	14	1	1	3	1	7	6	21
480	2	15	1	1	3	1	5	4	21
481	2	14	1	1	1	1	4	7	21
482	2	10	1	1	4	1	6	5	21
483	2	16	1	1	5	0	5	6	21
484	2	15	1	1	1	2	6	10	21
485	2	15	1	1	3	2	7	5	21
486	2	15	1	1	3	1	4	7	21
487	2	11	1	1	3	0	4	3	21
488	2	16	1	1	3	0	6	10	21
489	2	14	1	1	3	3	2	3	21
490	2	14	1	1	1	5	4	9	21
491	2	15	1	1	1	2	2	5	21
492	2	14	1	2	3	2	4	8	21
493	2	14	1	1	2	2	4	6	21
494	2	15	1	1	3	4	6	5	21
495	2	15	1	1	1	3	6	12	21

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
496	2	13	1	2	1	5	7	8	21
497	2	11	1	1	1	0	5	9	21
498	2	16	1	2	3	3	7	9	21
499	2	12	1	1	1	2	6	7	21
500	2	11	1	1	2	0	5	7	21
501	2	15	1	1	2	4	4	4	21
502	2	15	1	2	1	5	7	4	21
503	2	15	1	1	3	3	7	7	21
504	2	15	1	1	3	5	7	8	21
505	2	14	1	1	4	3	4	8	21
506	2	12	1	1	1	4	3	7	21
507	2	10	1	1	3	3	7	6	21
508	2	12	1	2	5	6	8	11	21
509	2	14	1	2	1	6	4	7	21
510	2	13	1	1	1	3	1	5	21
511	2	12	1	1	1	5	3	7	21
512	2	14	1	2	3	1	4	7	21
513	2	11	1	2	1	2	6	7	21
514	2	15	1	1	1	4	4	8	21
515	2	10	1	2	5	1	6	5	21
516	2	18	2	1	1	1	4	7	22
517	2	21	2	1	3	1	2	3	22
518	2	18	2	1	1	2	5	5	22
519	2	19	2	1	3	1	3	2	22
520	2	20	2	1	3	4	6	6	22
521	2	20	2	1	3	6	9	8	22
522	2	20	2	1	1	5	6	6	22
523	2	17	2	1	1	6	7	6	22
524	2	18	2	1	3	1	6	5	22
525	2	20	2	1	3	1	4	7	22
526	2	20	2	1	1	5	3	8	22
527	2	21	2	1	5	4	3	3	22
528	2	18	2	1	1	1	8	5	22
529	2	16	2	1	1	3	6	7	22
530	2	16	2	2	3	4	6	10	22
531	2	20	2	2	1	4	6	9	22
532	2	18	2	2	1	8	6	8	22
533	2	21	2	1	3	2	2	3	22
534	2	21	2	2	1	1	5	4	22
535	2	19	2	1	2	1	4	4	22
536	2	18	2	1	1	3	4	4	22
537	2	21	2	1	1	3	4	3	22
538	2	20	2	1	1	2	5	9	22
539	2	18	2	1	3	1	5	4	22
540	2	16	2	1	3	3	7	6	22
541	2	19	2	1	4	0	4	8	22
542	2	18	2	1	3	2	5	3	22
543	2	20	2	1	3	7	5	7	22
544	2	18	2	1	3	1	3	8	22
545	2	18	2	1	1	1	5	0	22
546	2	17	2	1	1	1	6	5	22
547	2	20	2	1	3	1	5	2	22
548	2	20	2	1	1	2	7	7	22
549	2	20	2	1	3	6	6	9	22
550	2	19	2	1	1	5	4	9	22

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
551	2	21	2	1	3	3	3	2	22
552	2	16	2	1	1	1	5	4	22
553	2	16	2	2	1	7	2	10	22
554	2	17	2	1	1	5	3	8	22
555	2	19	2	1	1	3	8	6	22
556	2	16	2	1	2	4	8	8	22
557	2	21	2	1	3	2	5	7	22
558	2	17	2	1	1	1	3	5	22
559	2	21	2	2	1	1	5	3	22
560	2	20	2	1	1	1	5	8	22
561	2	17	2	1	3	2	5	3	22
562	2	17	2	2	1	3	8	4	22
563	2	18	2	1	1	3	5	7	22
564	2	19	2	1	3	2	6	4	22
565	2	20	2	1	1	0	7	6	22
566	2	20	2	2	2	1	8	10	22
567	2	18	2	1	3	2	3	4	22
568	2	17	2	1	1	4	4	8	22
569	2	19	2	1	3	4	5	6	22
570	2	21	2	1	1	0	7	4	22
571	2	20	2	1	3	4	4	4	22
572	2	18	2	2	3	4	7	5	22
573	2	16	2	1	3	3	7	5	22
574	2	18	2	1	3	5	6	8	22
575	2	16	2	1	1	2	7	10	22
576	2	18	2	2	3	2	4	4	22
577	2	18	2	2	2	5	4	6	22
578	2	18	2	1	3	4	7	7	22
579	2	19	2	1	3	1	6	8	22
580	2	19	2	1	1	8	8	9	22
581	2	17	2	1	3	1	5	4	22
582	2	17	2	1	1	0	3	9	22
583	2	17	2	1	5	5	7	5	22
584	2	16	2	1	3	1	7	6	22
585	2	16	2	1	3	3	5	8	22
586	2	20	2	1	1	2	8	9	22
587	2	18	2	1	1	4	4	12	22
588	2	19	2	1	5	1	5	3	22
589	2	16	2	1	5	5	2	10	22
590	2	17	2	2	3	2	8	9	22
591	2	20	2	1	5	1	6	4	22
592	2	17	2	1	2	3	4	7	22
593	2	16	2	1	2	1	4	4	22
594	2	16	2	1	3	0	7	3	22
595	2	21	2	2	3	1	3	2	22
596	2	19	2	1	3	1	4	7	22
597	2	21	2	2	3	1	5	5	22
598	2	21	2	1	1	1	5	5	22
599	2	20	2	1	3	1	4	7	22
600	2	20	2	1	1	0	7	6	22
601	2	19	2	1	2	2	6	4	22
602	2	17	2	2	1	4	4	8	22
603	2	23	3	1	5	6	8	9	23
604	2	23	3	1	3	3	4	5	23
605	2	23	3	2	3	5	6	6	23

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
606	2	21	3	1	2	1	8	5	23
607	2	21	3	1	5	1	5	5	23
608	2	22	3	1	5	1	8	10	23
609	2	23	3	1	1	1	5	8	23
610	2	27	3	1	1	10	5	2	23
611	2	26	3	1	2	5	4	10	23
612	2	25	3	1	5	8	7	6	23
613	2	32	3	1	3	2	2	3	23
614	2	29	3	1	1	3	7	9	23
615	2	26	3	1	4	2	1	6	23
616	2	27	3	2	3	2	3	4	23
617	2	27	3	1	3	5	5	8	23
618	2	30	3	1	7	2	6	3	23
619	2	32	3	1	3	0	6	2	23
620	2	26	3	1	3	2	4	7	23
621	2	21	3	1	2	3	5	5	23
622	2	24	3	1	1	2	5	5	23
623	2	22	3	1	5	3	4	8	23
624	2	24	3	1	4	2	8	6	23
625	2	23	3	1	3	1	2	8	23
626	2	22	3	2	1	1	6	2	23
627	2	26	3	1	5	1	7	6	23
628	2	26	3	1	3	3	5	11	23
629	2	26	3	1	1	1	5	9	23
630	2	24	3	1	3	3	6	5	23
631	2	24	3	1	3	5	7	2	23
632	2	30	3	1	3	2	4	6	23
633	2	25	3	2	3	4	8	8	23
634	2	24	3	1	3	0	2	4	23
635	2	24	3	2	1	1	3	6	23
636	2	24	3	1	3	2	8	10	23
637	2	22	3	2	3	2	7	3	23
638	2	28	3	2	4	2	5	4	23
639	2	22	3	1	3	3	3	8	23
640	2	21	3	2	1	1	7	8	23
641	2	21	3	1	3	1	5	9	23
642	2	33	3	1	1	1	4	7	23
643	2	31	3	1	3	1	1	6	23
644	2	24	3	1	3	0	6	4	23
645	2	28	3	2	1	0	5	4	23
646	2	25	3	1	3	1	4	3	23
647	2	25	3	2	1	3	7	6	23
648	2	24	3	2	2	3	5	6	23
649	2	25	3	2	3	5	7	11	23
650	2	24	3	1	2	1	2	1	23
651	2	23	3	1	3	6	5	8	23
652	2	23	3	1	3	2	3	5	23
653	2	23	3	1	1	0	7	6	23
654	2	23	3	1	3	2	8	8	23
655	2	22	3	1	6	3	6	9	23
656	2	22	3	2	1	6	5	8	23
657	2	29	3	1	5	3	6	6	23
658	2	29	3	2	3	0	5	7	23
659	2	29	3	2	1	0	1	1	23
660	2	29	3	1	1	3	5	6	23

RAW DATA

OBS	SX	CSRI	LVL	CLS	COL	PHYS	IND	VERBAL	GROUP
661	2	32	3	1	3	2	6	8	23
662	2	26	3	1	1	3	8	6	23
663	2	31	3	2	1	1	4	3	23
664	2	25	3	2	3	2	4	8	23
665	2	24	3	1	1	3	7	10	23
666	2	23	3	1	3	0	2	2	23
667	2	21	3	1	1	2	5	7	23
668	2	21	3	1	3	6	3	7	23
669	2	27	3	2	5	2	8	7	23
670	2	32	3	2	5	0	4	8	23
671	2	29	3	1	1	2	2	4	23
672	2	22	3	1	1	3	5	7	23
673	2	26	3	1	3	0	5	3	23
674	2	28	3	2	3	2	5	7	23
675	2	28	3	1	3	2	5	5	23
676	2	35	3	1	3	0	2	1	23
677	2	25	3	1	1	3	6	3	23
678	2	28	3	1	3	2	2	3	23
679	2	31	3	1	3	3	5	6	23
680	2	25	3	1	3	3	6	5	23
681	2	30	3	1	3	0	4	2	23
682	2	24	3	2	1	2	5	5	23
683	2	28	3	1	3	0	3	6	23
684	2	27	3	1	1	3	8	6	23
685	2	26	3	1	3	2	2	4	23
686	2	26	3	1	1	3	3	6	23
687	2	30	3	1	1	2	5	6	23
688	2	26	3	1	1	1	3	8	23
689	2	26	3	2	1	0	4	3	23
690	2	22	3	1	1	3	4	5	23
691	2	22	3	2	3	3	4	5	23
692	2	31	3	1	5	1	4	3	23
693	2	25	3	2	2	2	4	8	23
694	2	33	3	2	5	0	2	2	23
695	2	22	3	1	2	1	5	8	23
696	2	22	3	1	3	3	5	5	23
697	2	22	3	2	2	5	5	4	23
698	2	25	3	2	3	3	8	6	23
699	2	26	3	1	1	2	6	8	23
700	2	22	3	2	1	3	3	8	23
701	2	23	3	1	1	3	3	8	23
702	2	33	3	1	3	1	4	6	23
703	2	31	3	1	1	1	4	4	23

APPENDIX G

STATISTICAL ANALYSIS

RAW DATA
GROUP=11

VARIABLE	N	MEAN	STANDARD DEV	VARIANCE	SUM	CORRECTED SS	LOW	HIGH	C.V. %
SX	179	1.000000	0.0	0.0	179.000000	0.0	1.000000	1.000000	0.0
CSRI	179	11.988827	2.895151	8.381897	2146.000000	1491.977654	2.000000	16.000000	24.149
LVL	179	1.000000	0.0	0.0	179.000000	0.0	1.000000	1.000000	0.0
CLS	179	1.318436	0.467176	0.218254	236.000000	38.849162	1.000000	2.000000	35.434
COL	179	2.798883	1.346572	1.813257	501.000000	322.759777	1.000000	7.000000	48.111
PHYS	179	4.787709	2.225911	4.954680	857.000000	881.932961	0.0	10.000000	46.492
IND	179	4.821229	2.066696	4.271232	863.000000	760.279330	0.0	9.000000	42.867
VERBAL	179	7.268156	2.703648	7.309711	1301.000000	1301.128492	2.000000	13.000000	37.199

GROUP=12

SX	148	1.000000	0.0	0.0	148.000000	0.0	1.000000	1.000000	0.0
CSRI	148	18.486486	1.696280	2.877367	2736.000000	422.972973	10.000000	21.000000	9.176
LVL	148	2.000000	0.0	0.0	296.000000	0.0	2.000000	2.000000	0.0
CLS	148	1.256757	0.438327	0.192131	186.000000	28.243243	1.000000	2.000000	34.878
COL	148	2.932432	1.426962	2.036220	434.000000	299.324324	1.000000	7.000000	48.661
PHYS	148	4.168919	2.116950	4.481476	617.000000	658.777027	0.0	9.000000	50.779
IND	148	4.702703	2.015111	4.060673	696.000000	596.918919	0.0	9.000000	42.850
VERBAL	148	6.628378	2.558912	6.548033	981.000000	962.560811	0.0	13.000000	38.605

GROUP=13

SX	133	1.000000	0.0	0.0	133.000000	0.0	1.000000	1.000000	0.0
CSRI	133	25.082707	3.135924	9.834017	3336.000000	1298.090226	17.000000	35.000000	12.502
LVL	133	3.000000	0.0	0.0	399.000000	0.0	3.000000	3.000000	0.0
CLS	133	1.330827	0.472290	0.223058	177.000000	29.443609	1.000000	2.000000	35.488
COL	133	2.864662	1.531398	2.345181	381.000000	309.563910	1.000000	7.000000	53.458
PHYS	133	3.669173	2.187159	4.783664	488.000000	631.443609	0.0	10.000000	59.609
IND	133	4.533835	1.913069	3.659831	603.000000	483.097744	0.0	9.000000	42.195
VERBAL	133	6.390977	2.325206	5.406585	850.000000	713.669173	2.000000	12.000000	36.383

GROUP=21

SX	55	2.000000	0.0	0.0	110.000000	0.0	2.000000	2.000000	0.0
CSRI	55	13.418182	1.862803	3.470034	738.000000	187.381818	9.000000	16.000000	13.883
LVL	55	1.000000	0.0	0.0	55.000000	0.0	1.000000	1.000000	0.0
CLS	55	1.218182	0.416818	0.173737	67.000000	9.381818	1.000000	2.000000	34.216
COL	55	2.600000	1.534782	2.355556	143.000000	127.200000	1.000000	7.000000	59.030
PHYS	55	2.981818	2.215191	4.907071	164.000000	266.981818	0.0	10.000000	74.290
IND	55	4.927273	1.793554	3.216835	271.000000	173.709091	0.0	8.000000	36.401
VERBAL	55	6.654545	2.204525	4.859933	366.000000	262.436364	3.000000	12.000000	33.128

GROUP=22

SX	87	2.000000	0.0	0.0	174.000000	0.0	2.000000	2.000000	0.0
CSRI	87	18.540230	1.655186	2.739642	1613.000000	235.609195	16.000000	21.000000	8.928
LVL	87	2.000000	0.0	0.0	174.000000	0.0	2.000000	2.000000	0.0
CLS	87	1.172414	0.379930	0.144346	102.000000	12.413793	1.000000	2.000000	32.406
COL	87	2.195402	1.179664	1.391607	191.000000	119.678161	1.000000	5.000000	53.733
PHYS	87	2.597701	1.937751	3.754878	226.000000	322.919540	0.0	8.000000	74.595
IND	87	5.218391	1.680430	2.823844	454.000000	242.850575	2.000000	9.000000	32.202
VERBAL	87	5.977011	2.415921	5.836675	520.000000	501.954023	0.0	12.000000	40.420

RAW DATA
GROUP=23

VARIABLE	N	MEAN	STANDARD DEV	VARIANCE	SUM	CORRECTED SS	LOW	HIGH	C.V. %
SX	101	2.000000	0.0	0.0	202.000000	0.0	2.000000	2.000000	0.0
CSRI	101	25.722772	3.452879	11.922376	2598.000000	1192.237624	21.000000	35.000000	13.423
LVL	101	3.000000	0.0	0.0	303.000000	0.0	3.000000	3.000000	0.0
CLS	101	1.277228	0.449862	0.202376	129.000000	20.237624	1.000000	2.000000	35.222
COL	101	2.584158	1.394757	1.945347	261.000000	194.534653	1.000000	7.000000	53.973
PHYS	101	2.247525	1.796697	3.228119	227.000000	322.811881	0.0	10.000000	79.941
IND	101	4.851485	1.856804	3.447723	490.000000	344.772277	1.000000	8.000000	38.273
VERBAL	101	5.831683	2.379367	5.661386	589.000000	566.138614	1.000000	11.000000	40.801

VITA[2]

Patricia Tullis Tucker

Candidate for the Degree of

Doctor of Education

Thesis: THE RELATIONSHIP BETWEEN COMMUNICATION SENSITIVITY AND SELECTED TYPES OF AGGRESSION

Major Field: Higher Education Minor Field: Speech

Biographical:

Personal Data: Born Ames, Iowa, June 17, 1946, the daughter of Mr. and Mrs. H. E. Tullis.

Education: Graduated from Wooster High School, Reno, Nevada, in June, 1964; received Bachelor of Arts degree in Speech and Pre-Law from the University of Nevada in 1968; received certification in Speech Pathology from the University of Nevada in 1969; received Master of Arts degree in Speech from the University of New Mexico in 1972; enrolled in the doctoral program at Oklahoma State University 1970-1976; completed requirements for the Doctor of Education degree at Oklahoma State University in July, 1977.

Professional Experience: Intern at the State Speech and Hearing Clinic, 1968-1969; Graduate Debate Assistant at University of New Mexico, 1970; Graduate Teaching Assistant at Oklahoma State University, 1970-1972; Graduate Excellence Award at Oklahoma State University, 1970-1972; Instructor at Oklahoma State University, 1972-1974; Adjunct Professor at Georgia State University, 1976-1977.