



Relationships among selected teacher behaviors and characteristics and student perceptions of teacher warmth, prestige, and effectiveness
by Douglas Nathaniel Smith

A thesis submitted in partial fulfillment of the requirements for the degree of DOCTOR OF EDUCATION
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Abstract:

The intent of this study was to find out if there was any relationship among selected classroom behaviors and characteristics of a sample of teachers at Montana State University and student perceptions of teacher warmth, prestige, and effectiveness. In addition, this study sought to examine the relationships among these teacher behaviors and characteristics and teacher self-ratings and the grades the students expected to receive for the course.

Student volunteers were trained in the use of the Teacher Behaviors and Characteristics Checklist, an instrument developed by the investigator, and then attended three classes of each of the teachers involved in the study during Spring Quarter 1975 in order to count and categorize teacher behaviors and characteristics. Three instruments were administered to the students of these classes—the Authoritativeness Scale, the Scale for Measurement of Counselor Traits, and the Revised Faculty Rating Form. Data relating to the grades the students expected to receive for the course and teacher self-ratings as to the effectiveness of their instruction was also collected.

The hypotheses tested in this study were concerned with the relationships among teacher behaviors and characteristics and five independent measures of teacher performance. These five measures were teacher warmth, teacher prestige, teacher effectiveness, course value—item 33, and course value—item 85. All hypotheses were tested at either the .05 or the .01 level of significance using either the analysis of variance or the Pearson correlation.

Results of this study relevant to the measure of warmth indicated that teachers who were perceived by students as being warmer persons were of higher academic rank, held doctor's degrees, rated themselves between "average" and "above average" in effectiveness, related more of their positive experiences to their class, and tended to dress more in ties and dress pants, sports coats and dress pants, and suits' but did not wear sports coats and suits all of the time. They also positively evaluated student responses less frequently, did not acknowledge student feelings as often, smiled less, and their students spoke less in class and expected to receive lower grades for the course.

Teachers who were viewed with more prestige rated themselves between "average" and "above average" in effectiveness, held doctor's degrees, were expected to give lower grades, and were of higher academic rank—with one notable exception. Instructors received the highest ratings.

RELATIONSHIPS AMONG SELECTED TEACHER BEHAVIORS AND
CHARACTERISTICS AND STUDENT PERCEPTIONS OF TEACHER
WARMTH, PRESTIGE, AND EFFECTIVENESS

by

DOUGLAS NATHANIAL SMITH

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Approved:

Earl N Kings

Chairperson, Graduate Committee

Robert J. Shick

Head, Major Department

Henry L. Parsons

Graduate Dean

MONTANA STATE UNIVERSITY
Bozeman, Montana

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ABSTRACT

The intent of this study was to find out if there was any relationship among selected classroom behaviors and characteristics of a sample of teachers at Montana State University and student perceptions of teacher warmth, prestige, and effectiveness. In addition, this study sought to examine the relationships among these teacher behaviors and characteristics and teacher self-ratings and the grades the students expected to receive for the course.

Student volunteers were trained in the use of the Teacher Behaviors and Characteristics Checklist, an instrument developed by the investigator, and then attended three classes of each of the teachers involved in the study during Spring Quarter 1975 in order to count and categorize teacher behaviors and characteristics. Three instruments were administered to the students of these classes--the Authoritativeness Scale, the Scale for Measurement of Counselor Traits, and the Revised Faculty Rating Form. Data relating to the grades the students expected to receive for the course and teacher self-ratings as to the effectiveness of their instruction was also collected.

The hypotheses tested in this study were concerned with the relationships among teacher behaviors and characteristics and five independent measures of teacher performance. These five measures were teacher warmth, teacher prestige, teacher effectiveness, course value--item 33, and course value--item 85. All hypotheses were tested at either the .05 or the .01 level of significance using either the analysis of variance or the Pearson correlation.

Results of this study relevant to the measure of warmth indicated that teachers who were perceived by students as being warmer persons were of higher academic rank, held doctor's degrees, rated themselves between "average" and "above average" in effectiveness, related more of their positive experiences to their class, and tended to dress more in ties and dress pants, sports coats and dress pants, and suits but did not wear sports coats and suits all of the time. They also positively evaluated student responses less frequently, did not acknowledge student feelings as often, smiled less, and their students spoke less in class and expected to receive lower grades for the course.

Teachers who were viewed with more prestige rated themselves between "average" and "above average" in effectiveness, held doctor's degrees, were expected to give lower grades, and were of higher academic rank--with one notable exception. Instructors received the highest ratings.

Teachers who received higher ratings in effectiveness rated themselves between "average" and "above average" in effectiveness, had classes in which student laughter occurred more frequently, were of higher academic rank, related more of their positive experiences to their class, and dressed less casually, tending to wear ties and dress pants, sports coats and dress pants, and suits. They also positively evaluated student responses less frequently, did not acknowledge student feelings as often, smiled less, and their students spoke less in class.

The results of this study also indicated that warm teachers were viewed with more prestige and were seen as more effective. However, the courses of warm teachers and prestigious teachers were valued less by the students.

Chapter 1

INTRODUCTION

Adult and higher education is a topic of vital interest in our nation today. The day is here when man in a world of increased technology, increased leisure time, and increased social interaction is finding that education is indeed a life-long process. Along with this increased significance of education is a greater need for more and better adult educators.

Probably no aspect of education has been discussed with greater frequency, with as much deep concern, or by more educators and citizens than has that of teacher effectiveness-- how to define it, how to identify it, how to measure it, how to evaluate it, and how to detect and remove obstacles to its achievement But findings about the competence of teachers are inconclusive and piecemeal; and little is presently known for certain about teacher excellence (Biddle and Ellens, 1964:5).

Studies have been done which go far to answer the question as to the sort of procedures which have been found successful in establishing good relationships in a classroom and thus contribute to teacher effectiveness. However, they do not help the teacher to answer other questions which arise on actually encountering students. "Have I the correct sort of personality?" "Will I be able to win and hold their attention?"

It was the intent of this study to determine and describe some of the characteristics which constitute the "correct sort of personality" and will enable an instructor to win and hold the students'

attention.

Two characteristics which may play an important role in the teaching-learning process are personal warmth and social prestige. It appears that warmth or positive regard from others is a genuine need of each individual and thus constitutes a powerful social reinforcer. A teacher who responds to his students in such a way as to contribute positively to their feelings of self-worth becomes an important person to those students and capable of modifying their behavior. The effectiveness of a teacher's social reinforcement and also his potency as a social model are further enhanced if he is held in esteem by his students. In other words, not only is it rewarding to an individual to be around another who expresses positive feelings toward him, it is even more rewarding if that person is of high prestige.

David G. Ryans (1960) notes that it is of interest to consider the kinds of behaviors people remember about teachers and to raise the question of relative importance of such remembered characteristics with respect to behaviors normally assumed to characterize teaching. Using a critical-incidents approach in his teacher characteristics study, Ryan found that most teaching incidents reported (descriptions of actual observed behaviors believed to have contributed to the judgment of superiority or inferiority of the teachers) involved personal or social teacher behaviors, even though directions had given the judges complete freedom in naming critical incidents. He then poses and

answers the following question:

Are personal or social characteristics more important than a teacher's scholarliness, the teaching procedures followed, unique demonstrations, or the content taught? One may well doubt they are more important, but they may be equally important. We question why more people often do not mention incidents involving the teaching learning process per se . . . all of us seek personal reinforcement and it is in the area of the personal or social characteristics of teachers and other persons that we best recall events (Ryans, 1969:72).

It is the contention of the writer that the more a teacher is held in esteem by his students and the more he contributes verbally and nonverbally to their feelings of self-worth the more effective he will be in influencing their behavior. A teacher is thus in a position to reinforce learning in his students in either an appropriate or inappropriate way, either wittingly or unwittingly. For him to be an effective teacher he should be aware of those verbal and nonverbal behaviors which are indicators of warmth and acceptance to his students, and also those characteristics and behaviors which might cause him to be held in esteem by his students.

Asche (1946:258) points out:

We look at a person and immediately a certain impression of his character forms itself in us. A glance, a few spoken words are sufficient to tell us a story about a highly complex matter. We know that such impressions form with remarkable rapidity and with great ease. Subsequent observation may enrich or upset our first view, but we can no more prevent its rapid growth than we can avoid perceiving a given visual object or hearing a melody. We also know that this process, though often imperfect, is also at times extraordinarily sensitive.

It is for these reasons that the characteristics of teacher

warmth and prestige are important aspects of the teacher-learning process and merit investigation.

STATEMENT OF THE PROBLEM

The problem of this study was to find out if there was any relationship among selected classroom behaviors and characteristics of a sample of teachers at Montana State University and student perceptions of teacher warmth, prestige, and effectiveness.

In addition, this study sought to examine the relationships among these teacher behaviors and characteristics and teacher self-ratings and the grades the students expected to receive for the course.

PURPOSE OF THE STUDY

The purpose of this study was to determine some of those interpersonal characteristics and behaviors that make up the personality of a good teacher. In other words, it was concerned with the question, "What personal qualities make a teacher effective?" This research focused on those teacher characteristics and behaviors which seem to be related to the degree to which teachers are held in esteem by their students and the extent to which they are viewed as warm

individuals by their students.

Furthermore, it was the purpose of this study to define the characteristics of warmth and prestige in behavioral terms in order that an individual so desiring might endeavor to incorporate them into his personality.

NEED FOR THE STUDY

A survey of the available literature pertinent to the issues of this study indicated that, although studies have been done which attempted to determine the interpersonal characteristics of a good leader, counselor, or educator, these characteristics, for the most part, were not behaviorally defined and/or were not examined in relation to adult learning.

Much money, time, and effort is involved in the development by our educational system of teachers--hopefully good teachers--in order to provide the best possible educational opportunities for the country's citizens. This task is undertaken without a complete knowledge of what constitutes a good teacher. Teachers themselves do not know what makes them effective and, for the most part, rely on "seat of the pants" technology.

The lack of an adequate, concrete, objective, universal criterion for teaching ability is thus the primary source of trouble of all who would measure teaching. One typical method of attack is to compile a list of broad general traits supposedly desirable for teachers, with respect to which the rater passes judgment on each teacher. This amounts to an arbitrary

definition of good teaching, which is subjective and usually vague, but it does not necessarily lead to a definition of it. Only if the traits themselves can be reliably identified can their possessor be identified as a "good teacher" according to the definition laid down in the scale (Lancelot, Barr, Torgeson, Johnson, Lyon, Walvoord, and Betts, 1935)

After reviewing over 150 articles on the personality characteristics of teachers, Getzels and Jackson (1963:574) concluded that:

Despite the critical importance of the problem and half-century of prodigious effort, very little is known for certain about the nature and measurement of teacher personality, or about the relation between teacher personality and teacher effectiveness. The regrettable fact is that many of the studies so far have not produced significant results.

Another discouraging aspect of the attempt to ascertain what makes a teacher effective is the fact that learning in an educational setting is conditioned by a very large number of variables. These may include such governing factors as intelligence, the pupils' own habits of study, interest, and physical condition. Learning may also be affected by factors associated with the teacher, his personality, voice, dress, clarity of thought and expression, sense of humor, and so on. It is these latter kinds of factors which serve as the focus of this study.

Many studies have examined the flow of verbal interaction between teachers and their students, i.e., the Flanders system. In such studies verbal behaviors are categorized and classrooms are observed in order to encode student and teacher verbal behaviors. In addition to the charting of verbal interactions, attention must be

paid to the nonverbal behaviors of both the teacher and his students in order to obtain a picture of the total interaction process in the classroom.

Hendrix (1960:39) has observed that:

One phase of teaching looming large in things revealed to date is the enormous role played by nonverbal communication between teacher and students. Current research in paralinguistics--especially that involving kinesics--is revealing ways to identify and classify the nonverbal behavior which human beings learn to interpret in each other; it is thus that we produce the complicated stream of communication sometimes accompanying, sometimes independent of words. Such an analysis might enable a teacher to cultivate desirable paralinguistic effects, and to avoid those which are destructive to his work.

There is a need to define teacher interpersonal characteristics in behavioral terms such that a greater insight into the teaching-learning process might be provided. Also, characteristics so described might be more easily taught, more easily learned, and more amendable to experimental analysis.

GENERAL QUESTIONS TO BE INVESTIGATED

It is the intent of this study to obtain information bearing on the following questions.

1. Are there identifiable and quantifiable characteristics and behaviors of teachers which would affect the degree to which they are viewed as warm, and the degree to which they are viewed with prestige?
2. Do observer ratings of teacher behaviors and characteristics differentiate between teachers who are warm and those who are not,

between teachers who are viewed with prestige and those who are not and between effective and non-effective teachers?

3. Do student perceptions of teacher warmth differentiate between effective and non-effective teachers?

4. Do student perceptions of teacher prestige differentiate between effective and non-effective teachers?

GENERAL PROCEDURES

The problem was approached by first determining which instruments were available that would be capable of assessing the characteristics, behaviors, and perceptions needed to answer the general questions. The investigator decided to use the Authoritativeness Scale (McCroskey, 1966), the Scale for Measurement of Counselor Traits (Suvak, 1966), the Revised Faculty Rating Form (Miller and Guinouard, 1966), and the Teacher Behaviors and Characteristics Checklist. The last instrument was developed by the investigator.

The next step was to select, and obtain the cooperation of, the teachers who participated in the study. This was accomplished by obtaining a random sample of all the 300 level courses offered during Spring Quarter, 1975, and then asking the teachers of these courses to participate in the study.

Finally, student volunteers from three sections of Educational Psychology 208 were trained in the use of the Teacher Behavior and

Characteristics Checklist and then attended three classes of each of the teachers during the quarter in order to count and categorize teacher behaviors and characteristics.

The data was collected during the Spring Quarter, 1975, organized, and analyzed following the collection.

This paper has been structured along the following outline. In Chapter 1, an introduction to the problem was presented, a statement of the problem was given, the need and purpose of the study was clarified, and general questions to be investigated were considered. General procedures were described, limitations acknowledged, and a definition of terms were given.

Chapter 2 consisted of a review of selected literature deemed pertinent to the problem and questions presented in Chapter 1. Literature reviewed included that of teacher warmth and its affect upon learning, behavioral cues of warmth, and teacher prestige and its affect upon learning.

Chapter 3 consisted of the research procedures. Included were the description of the community and population, methods of collecting the data, the reliability and validity of the instruments used, and the organization and analysis of the data.

Chapter 4 consisted of the analysis and the results of the data collected.

LIMITATIONS OF THE STUDY

1. This study was limited to Montana State University students enrolled in 300 level courses during Spring Quarter, 1975.

2. The fact that some teachers were unwilling to participate in the study may have been a limiting factor. There is the possibility that a certain type of teacher refuses to cooperate with such a study.

3. Another limitation of this study was the possibility that teacher-student contact outside the classroom colored student perceptions of their teacher.

4. The general student and teacher population at Montana State University may have been a limiting factor. Due to the nature of its curriculum offerings and geographical setting, a certain type of student and/or teacher, not representative of students and/or teachers nationwide, may be attracted to Montana State University.

5. The resources available at the Library of Montana State University may have been a limiting factor. Financial resources available and selection recommended by the faculty limit the scope and variety of resources.

6. The selection of the literature to be reviewed by the investigator may have been a limiting factor. The investigator restricted his review to certain selections and may not have reviewed other appropriate literature.

7. The instruments used to collect the data, the

Authoritativeness Scale, the Scale for Measurement of Counselor Traits, the Revised Faculty Rating Form, and the Teacher Behaviors and Characteristics Checklist may have been limiting factors. Other instruments, unknown to the investigator, might have been more appropriate for the study.

DEFINITION OF TERMS

The following is a list of terms and their definitions as they were used throughout the study.

Behavior. For the purposes of this study, behavior is defined as anything a person does which is observable or recordable, i.e., words, mannerisms, etc.

Characteristic. The term characteristic is defined as those aspects of a person which are not behaviors, i.e., dress, title, etc.

Student Perceptions Questionnaire. This questionnaire consists of the Authoritativeness Scale, the Scale for Measurement of Counselor Traits, and the Revised Faculty Rating Form.

Teacher Behavior and Characteristics Checklist. The Teacher Behavior and Characteristics Checklist was an instrument developed by the investigator to categorize and quantify teacher behaviors in the classroom. This scale consists of eleven categories which enable an

observer to identify and count the frequency of such teacher behaviors as expressing personal concerns, smiling, and attending behaviors.

SUMMARY

A need for investigation in the area of teacher personality and its relation to teacher effectiveness is apparent. Although studies have been done which sought to determine the interpersonal characteristics of a good leader, counselor, or educator, these characteristics, for the most part, were not behaviorally defined and/or were not examined in relation to adult learning.

The investigator viewed this study as an attempt to identify and behaviorally describe those interpersonal characteristics and behaviors that make up the personality of a good teacher. The study had as its focus those teacher characteristics and behaviors which seem to be related to the degree to which teachers are held in esteem by their students and the extent to which they are viewed as warm individuals by their students.

This chapter presented an introduction to the concepts of teacher warmth and prestige and posed several questions relating to the possible effects they may have upon teacher effectiveness. The need for the study, general procedures for conducting the study, limitations, and definitions of terms were presented.

Chapter 2 includes a review of the literature relating to this particular study.

Chapter 2

REVIEW OF LITERATURE

The primary emphasis of this chapter is the review of literature relating to the personal characteristics of warmth and prestige and the role they play in interpersonal communication, especially as they pertain to the teaching-learning process. In addition, this chapter will examine the specific behaviors that convey warmth, that is, those behaviors which tell another that he is regarded in a positive way. The chapter is then organized around the following three themes.

1. Warmth and its affect upon learning. This section is a review of the literature concerned with the characteristics of warmth and the role it plays in interpersonal relationships, especially as it relates to the teacher-student relationship. Teacher warmth is viewed from the framework of learning theory as a powerful reinforcer of student learning. Studies investigating the effectiveness of certain verbal and nonverbal responses of an experimenter in influencing a subject's behavior and in some cases nonverbal behavior are reported.

2. Behavioral cues of warmth. It is the aim of this section to present those studies which attempt to define and specify the behavioral cues of warmth.

3. Prestige and its affect upon learning. This section deals largely with studies of social influence which look at communicator prestige as a factor in how effectively a message is communicated.

That is, to what degree and in what way does the prestige of the communicator affect his ability to modify the behavior of others. Studies relating the prestige of a source to his potency as a social model are also discussed.

WARMTH AND ITS AFFECT UPON LEARNING

If psychotherapy can be looked upon in a general way as a learning process, then it is relevant to this study to consider the theory of personality of Carl R. Rogers (1952:483) which was evolved from the study of adults in therapy.

One of Rogers' basic propositions is that the more an individual is able to attend to, think about, and accept as part of himself the whole range of his responses, the better adjusted he is likely to be, and that his most important self-conceptions are learned through his interactions with other people (Ford and Urban, 1963:410).

Ford and Urban (1963:410) go on to describe Rogers' ideas of "need for positive regard and self-regard":

... another important product of learning involves habits of seeking certain kinds of consequences and affective responses related to them. Here the emphasis is on interpersonal situations and the behavior of other people toward the individual. As the infant becomes aware of himself as an entity different from others, he begins to notice differences in their responses to him and his to them. One important category of such responses Rogers calls "positive regard." This includes such responses as "warmth, liking, respect, sympathy, acceptance," all of which seem to have a common denominator of positive affect, an apparently innately desired response which one seeks to create in

oneself. It is proposed that when the individual notices that others are responding toward him with positive affect, it elicits positive affect in him--it is satisfying.

To put it differently, when others evaluate a child's responses negatively by displaying anger or disapproval, discomforting affective responses are produced in the child. Positive evaluation by others through smiles, approvals, or affective responses, however, produce "satisfying" affect in the child. The child gradually comes to seek the latter and avoid the former. In Rogers' terms, he acquires a need for positive regard.

Harris (1973:68) also contends that individuals have a need for positive regard from others. This positive evaluation or recognition from others he terms stroking. In the "I'm not OK--You're OK" position, which is the universal position of early childhood--a position most of us maintain at least in part the rest of our lives--the person feels at the mercy of others. "He feels a great need for stroking, or recognition, which is the psychological version of the early physical stroking."

That warmth is an important quality in a person which seems to carry more weight than others in establishing a view of an individual's personality was investigated by Asch (1946:258). The basic plan followed in the series of experiments he reported was to read to the subject a number of discrete characteristics, said to belong to a person, with the instruction to describe the impression he formed. It was found that the characteristic "warm-cold" produced striking and consistent differences of impression with the characteristic warmth producing a far more positive impression than the characteristic cold.

Whereas the warm-cold variable had been found by Asch (1946) to produce large differences in the impressions of personality formed from a list of adjectives, Kelly (1950:431) introduced the same variable in the form of expectations about a real person in a classroom setting, and obtained similar results. Before his actual appearance in a classroom as a substitute instructor, the stimulus person was introduced by an experimenter, and a little biographical note about him was passed out to the students randomly in such a manner that they were not aware that two kinds of information was being given out. The two notes were identical, except that in one the stimulus person was described among other things as being "rather cold" whereas in the other form the phrase "very warm" was substituted. It was found that different first impressions were produced by the different expectations, and they were shown to influence the observers' behavior toward the stimulus person. Those observers given the favorable expectation (who, consequently, had a favorable impression of the stimulus person) tended to interact more with him than those given the unfavorable expectation.

In summarizing the statistically significant differences in the way subjects viewed the stimulus person and rated him on a set of fifteen rating scales, Kelly (1950:431) states:

The "warm" subjects rated the stimulus person as more considerate of others, more informal, more sociable, more popular, better natured, more humorous, and more humane. These findings are very similar to Asch's for the characteristics common to both

studies. He found more frequent attributions to his hypothetical "warm" personalities of sociability, popularity, good naturedness, generosity, humorousness, and humaneness. So these data strongly support his finding that such a central quality as "warmth" can greatly influence the total impression of a personality. This effect is found to be operative in the perceptions of real persons.

A study by Lehat-Mandelbaum and Kipnis (1973:250) indicates that teacher consideration is an important factor in the teaching-learning process. They asked college students to describe the behavior of their instructors using an adaptation of Fleishman's Supervisory Behavior Description Questionnaire and to also evaluate their ability to teach. Teacher behaviors were categorized in terms of teacher consideration, which relates to the teacher's personal relationship with students--his attention to emotional and social aspects of students' classroom life--and in terms of teacher initiating structure which refers to an emphasis on the content of the course and the learning tasks. The authors concluded that "the teacher seen as high in consideration by his students was considered to be the superior teacher."

In a study by Dawson, Messe, and Phillips (1972:369), an experimenter manipulated his consideration and initiating structure behaviors while teaching four sections of general psychology, and found that classes taught with high consideration were higher on three dependent measures of performance than students taught with low consideration. Students in classes taught with high consideration performed higher on the submission of annotated bibliographies,

answering test items correctly, and obtaining research credits. In classes taught with high initiating structure, students performed higher on the submission of annotated bibliographies.

Gage (1972:35) examined research using such process measures as the Minnesota Teacher Attitude Inventory and the Flanders' interaction categories and found the following:

- (a.) Teachers differ reliably from one another on a series of measuring instruments that seem to have a great deal in common.
- (b.) These reliable individual differences among teachers are fairly consistently related to various desirable things about teachers...Teachers at the desirable end tend to behave approvingly, acceptantly, and supportively; they tend to speak well of their own students, students in general, and people in general. They tend to like and trust rather than fear other people of all kinds.

Thus, there is evidence which supports the thesis that the characteristic of warmth is important in interpersonal relationships and may be an important factor in determining a teacher's effectiveness. In the teacher-student relationship, teacher warmth and positive regard might be viewed from the framework of learning theory as powerful reinforcers of student learning. There are a number of reports in the literature, generally appearing under a verbal conditioning label, which indicate that teacher or experimenter verbal and non-verbal behaviors which might be construed as signs of approval or regard are effective reinforcers. These studies are an application of learning theory in that they deal with the operant conditioning of verbal behavior.

B. F. Skinner (1957:53) pointed out that:

The effect of this procedure in releasing a response from a specific controlling condition is usually achieved in another way. Instead of using a great variety of reinforcements, each of which is relevant to a given state of deprivation or aversive stimulation, a contingency is arranged between a verbal response and a "generalized conditioned reinforcer." Any event which characteristically precedes many different reinforcers can be used as a reinforcer to bring behavior under the control of all appropriate conditions of deprivation and aversive stimulation. A response which is characteristically followed by such a generalized conditioned reinforcer has dynamic properties similar to those which it would have acquired if it had been followed by all the specific reinforcers of issue.

A common generalized conditioned reinforcer is "approval." It is often difficult to specify its physical dimensions. It may be little more than a nod or a smile on the part of someone who characteristically supplies a variety of reinforcements. Sometimes . . . it has a verbal form: "Right!" or "Good!" Because these signs of approval frequently precede specific reinforcements appropriate to many states of deprivation, the behavior they reinforce is likely to be in strength much of the time.

The effectiveness of certain verbal and nonverbal responses of an experimenter in conditioning a subject's verbal behavior and in some cases nonverbal behavior has been demonstrated in many studies. Weiss, Krasner, and Ullmann (1960:415) experimentally manipulated the emotional atmosphere of examiner reinforcement to determine its effect on interpersonal responsiveness as measured by changes in samples of complex verbal behavior. During reinforced trials, the experimenter verbally reinforced the subject's use of emotional words by saying "mmm-hmm" and nodding his head as if in agreement. The emotional atmospheres were induced by the experimenter during two distinctly different interactions with the subject, each lasting approximately ten

minutes. Half the subjects had been assigned at random to the hostility condition in which they were interviewed by an experimenter who was openly critical, impatient, non-believing, and who frequently expressed his disappointment of the subject's answers, and by implication, questioned the subject's suitability for college work. For comparison the other half of the subjects were exposed to a mildly positive interaction with the same experimenter during which the conversation centered on the subject's interests, aims, and academic work. "Throughout, the experimenter maintained a friendly relaxed atmosphere by expressing interest in the subject." It was found that the induction of a hostile atmosphere significantly reduced responsiveness to conditioning.

Sapolsky (1960:241) provided support for the hypothesis that social reinforcement from a high attraction source is more effective than from a low attraction source in two studies which manipulated high or low attraction between subjects and the experimenter. The subjects in the high attraction group were told, "You will be paired with an experimenter whom you will find congenial. We have developed a questionnaire which enables us to do this." Subjects in the low-attraction group were told, "Usually, we can match people quite well, but in your cases we're going to have some trouble. It's going to take too long to locate someone for you, so I'm assigning you to Miss C. She may irritate you a little, but do the best you can." The effectiveness of

the directions in establishing the two experimental groups was verified after the experimental session by the subject's ratings of the experimenter on a self-anchored sociometric scale. It was found that when there was high attraction between the subject and the experimenter, the reinforcing value of "mmm-hmm" was enhanced as evidenced by a significant increase in the use of first person pronouns which made up the reinforced response class. When the attraction between the subject and the experimenter was low, no increase resulted. When the experimenter left the room and subjects continued construction of tape-recorded sentences, subjects in the low attraction condition exhibited a significant increase in the previously rewarded behavior. It was concluded that the effect of a non-attractive or incompatible experimenter was to suppress or counteract the immediate effectiveness of the positive reinforcement.

Ferguson and Buss (1960:324) investigated operant conditioning of hostile verbs in relation to aggressiveness of the experimenter. Subjects who were instructed to make up a sentence using one verb and one pronoun were verbally reinforced for using hostile verbs. Each of the two experimenters played a neutral role with one group and an aggressive role with the other. "The neutral experimenter was patient, calm, and courteous in an attempt to establish a non-hostile experimental climate. The aggressive experimenter was brusque, unfriendly, impatient, and tended to scowl and sneer." Reports from the subjects

at the termination of the experiment revealed that the two roles (neutral or aggressive) were enacted appropriately. It was found that the aggressiveness of the experimenter significantly affected conditioning: an aggressive experimenter retards learning in comparison to a neutral experimenter.

Employing a verbal conditioning paradigm with verbs of a "mildly hostile" connotation as the reinforced response class, Sarason (1962:376) found that a greater learning effect was obtained from high hostile subjects run by low hostile experimenters. The degree of subject and experimenter hostility was determined by their scores on the Hostility Scale of Sarason's Autobiographical Survey (Sarason, 1958). Sarason pointed out that, "One possibility suggested by these results is that the level of the subjects responsiveness may be influenced by the degree of experimenter-subject compatibility or similarity." The results of a later study by Sarason and Minard (1963:87) indicated that subjects run by high hostile experimenters exhibited a learning effect only in the high prestige condition, that is, when the experimenter was viewed as prestigious by the subject.

In an actual classroom situation, the reinforcement of student responses may take other forms than a teacher simply saying "mmm-hmm," "yeah," or "good" each time the student responds in a way the teacher considers appropriate. Knowles (1973:90) reviewed a study by Flanders and Simon (1969:68) who concluded from their examination of a dozen

studies that:

The percentage of teacher statements that make use of ideas and opinions previously expressed by pupils is directly related to average class scores on attitude scales of teacher attractiveness, liking the class, etc., as well as to average achievement scores adjusted for initial ability.

Matarazzo, Saslow, Wiens, Weitman, and Allen (1964:54)

studied the effect of interviewer headnodding on interviewee speech behavior. In this experiment, a control period of no interviewer headnodding was followed by a period in which the experimental variable was introduced; i.e., each time the interviewee began an utterance, the interviewer nodded his head repeatedly throughout that whole utterance. The results showed that the period of interviewer headnodding was associated with an increase in the average interviewee speech duration.

Cientat (1959:648) reported the effects of nonverbal gestural cues on rate of verbalization in a free-responding conversational situation; the attention to student responses by the professor and a student confederate was varied. Attention or positive reinforcement consisted of students being looked at, whenever they spoke, and being given occasional nods of approbation. Ignorance or negative reinforcement was shown by the professor and a confederate looking away from students when the latter spoke. Cientat found that the amount of time during which a subject spoke was a "positive function of attention and a negative function of inattention."

In another study employing a verbal conditioning paradigm, Matarazzo, Wiens, Saslow, Allen, and Weitman (1964:109), an interviewer's "mmm-hmm" was used as the verbal social reinforcing stimulus. A control period during which the interviewer did not say "mmm-hmm" was followed by a period in which he said "mmm-hmm" throughout each of the subject's utterances. Results indicated that the average interviewee speech duration was greater during the period in which the interviewer said "mmm-hmm" than during the period in which he did not. Two studies by Weiss, Krasner, and Ullmann (1963:423) and Ikman, Krasner, and Ullmann (1963:387) replicated the results of these verbal conditioning procedures employing experimenter headnodding and his saying "mmm-hmm" as social reinforcers. In a study by Krasner, Ullmann, Weiss, and Collins (1961:411) which also demonstrated the verbal conditioning phenomenon, it was noted the two male experimenters obtained significantly greater use of the specified verbal class, emotional words, during reinforced trials rather than operant trials, while the female experimenter obtained group means in the same direction as the two male experimenters, but not to a statistically significant extent. Although the authors do not discuss the point, it is possible that the subjects were influenced to a greater extent by the male experimenters who were Ph.D's in psychology and introduced themselves as "Doctor" than by the female experimenter who had an A.B. in psychology and introduced herself as "Miss," because they viewed the male experimenter

as more prestigious. This point is discussed extensively in the next section of this chapter.

There are many studies of operant conditioning of verbal behavior which offer supportive evidence for the notion that experimenter behaviors which convey acceptance or positive regard, indeed, "signs of approval" as Skinner put it, are effective reinforcers. For example, a study by Krasner (1958:148) reported on thirty studies, all of which follow a Skinnerian paradigm in that the dependent variables are the subject's verbal behavior and the independent variables are generalized conditioned reinforcers intended to bring verbal behavior under the control of the examiner. He reviewed these studies in terms of the different experimenter verbal and nonverbal behaviors employed as reinforcing stimuli. He found the most widely used examiner verbal behavior to be the emission of the "mmm-hmm" sound, while other verbal cues in these studies included "good," "uhha," "yeah," "I see," "that's accurate," "that's right on the button," "that's a good one," "give another please," "you're right," "right," "all right," "fine," "I agree," paraphrase of subject's response, and repetition of subject's response. The gestural cues included headnodding, headshaking, and smiling. A summary of the results of the studies reviewed by Krasner is presented in Table 1, pages 26 and 27, which is similar to the table found in his report.

These studies indicate the effectiveness of social approval as

Table 1

Summary of Results of "Verbal Conditioning" Studies

Author	Reinforcing Stimuli	Class of Behavior Reinforced
	Positive Results	
Ball (1952)	"mmm-hmm"	"animal"
Greenspoon (1954)	"mmm-hmm"	plural nouns
Mandler & Kaplan (1956)	"mmm-hmm"	plural nouns
B. Sarason (1957)	"mmm-hmm"	verbs
I. Sarason (1957)	"mmm-hmm"	"verbal activity" verbs
Mock (1957)	"mmm-hmm," headnod	"mother"
Krasner (1958)	"mmm-hmm," headnod, smile	"mother"
Salzinger & Pisoni (1957) (1957)	"mmm-hmm," "uh-ha," or I see	affect statements
Wilson & Verplank (1956)	"mmm-hmm," "good," or writing	plural nouns, adverbs, or travel verbs
Binder, et al (1957)	"good"	"hostile" verbs
Cohen, et al (1954)	"good"	"I," "we" pronouns
Cushing (1957)	"good"	"like" person in pictures
Grossburg (1956)	"good"	"I," "we" pronouns
Ekman (1958)	"good"	anti-capital punishment response
Hartman (1953)	"good"	"I," "we" pronouns
Hildum & Brown (1956)	"good"	"attitudes"
Klein (1954)	"good"	"I," "we" pronouns
Nuthmann (1957)	"good"	"acceptance of self"
Taffel (1955)	"good"	"I," "we" pronouns
Tatz (1956)	"good"	a pair of digits
Fahmy (1953)	"good-one"	human responses
Spivak & Papajohn (1957)	"right"	autokinetic effect

Table 1 (continued)

Author	Reinforcing Stimuli	Class of Behavior Reinforced
Positive Results		
Wickes (1956)	"fine," "good," or "all right"	movement responses
Wickes (1956)	headnod, smile, or lean forward	movement responses
Ekman (1958)	headnod, smile, or lean forward	movement responses
Verplank (1955)	paraphrase, agree- ment, smile	opinions
Kanfer (1954)	"that's accurate," etc.	autokinetic effort
Hartman (1955)	head shake ^b	"I," "we" pronouns
Mock (1957)	head shake ^b	"mother"
Greenspoon (1955)	"huh-uh" ^b	plural nouns
Daily (1953)	"mmm-hmm"	"I," "we" pronouns
Hildum & Brown (1956)	"mmm-hmm"	"attitudes"
Cushing (1957)	"good"	"dislike" persons in pictures
Daily (1953)	"good"	"I," "we" pronouns
Marion (1956)	"good"	"I," "we" pronouns
Hartman (1955)	headnod	"I," "we" pronouns
Fahmy (1953)	repetition of response	human responses
Fahmy (1953)	"give another one, please"	human responses

a conditioned secondary reinforcer. The question arises as to whether an experimenter can behave too warmly and thus lose his effectiveness as a reinforcer.

Salzinger (1959:66) recognizes this possibility when he states:

While some reinforcement theorists have made an attempt to define a reinforcement independently of its effect upon behavior, such efforts are largely ineffective when applied to secondary reinforcements. With a primary reinforcement like food it is possible to predict its effectiveness from the operation of food deprivation. It is more difficult to find similar operations for secondary reinforcements like the utterance "mmm-hmm," a smile, or a nod of the head.

Notwithstanding this, Gerwitz and Baer (1958:49) made an attempt to use a social deprivation operation. Employing children as subjects they found that when an adult made words and phrases like "Good!" and "Hm'hmm" contingent upon an arbitrarily chosen response, that response was reinforced (i.e., conditioned). It was found, in addition, that this reinforcing effect of approval could be increased when the children experienced a preceding twenty minute period of social isolation, relative to its effectiveness for the same children when they had not been isolated. In a later study, Gerwitz and Baer (1958:165) found that behaviors maintained by social reinforcers are responsive also to a condition of relative satiation for such reinforcers. Results indicated that the reinforcing effectiveness of approval was relatively greatest after Deprivation--a period of social isolation--intermediate after Non-deprivation, and least after Satiation--equated to a condition in which an abundance of approval and social contact is

supplied to a child by an adult. It was concluded that:

. . . a reinforcer appearing to be typical of those in children's social drives appears responsive to deprivation and satiation operations of a similar order as those controlling the effectiveness of reinforcers of a number of the primary drives.

In a study by Simkins (1961:380), subjects were given a series of tests and were subsequently criticized or complimented on their performance depending on the treatment condition to which they were assigned and irregardless of their actual performance. After the fake testing, the subjects were presented with a conditioning task, the learning of hostile verbs. During this time and until the completion of the experiment, the experimenter assumed a neutral attitude with all subjects. The results indicated that the effectiveness of the social reinforcers "good" and "that's fine" were dependent upon the attitude assumed by the experimenter. Subjects who had been responded to in an over-solicitous manner by the experimenter tended to show resistance in being conditioned to use hostile verbs.

Simkins concludes:

Perhaps in the context of extreme social approval a satiation effect occurs so that the usual social reinforcers lose their reinforcing effectiveness The best situation for the learning of hostile materials seems to follow a condition of social disapproval.

It is possible that a teacher might increase his effectiveness by varying his behavior in such a way that at times he expresses warmth and acceptance while at other times he appears aloof or even

angry.

Johnson (1971:571) states:

If the invariant expression of warmth produces interpersonal attraction but does not tend to produce influence, the expression of combinations of warmth and other emotions such as anger may be more successful in inducing cooperative behaviors from the listener. A learning theorist who believes in the inhibition of undesirable behaviors through the use of punishment might suggest that the expression of anger towards undesirable behaviors and the expression of warmth towards desired behaviors may be far more effective in inducing cooperation than the invariant expression of warmth.

Johnson (1971) designed a study which compared the effectiveness of expressing different orders of warmth and/or anger upon the induction of cooperation in the actor and the listener in a negotiating situation. In the listener part of the study, seven female confederates were given four hours of instruction on how to express warmth and anger. In a negotiating situation with one subject, the confederate's role was to express warmth and/or anger. With subjects in the invariant warmth and invariant anger conditions, the confederate's affective expression was consistent for the entire thirty minutes. In the warmth-anger and anger-warmth conditions, the confederate would express one emotion for the first half of the negotiating period and the other emotion during the second half. In this study, behavioral compliance was measured by whether the subject would publicly state acceptance of the confederate's arguments or would publicly state rejection of his own arguments. The data indicated that more behavioral compliance took place in the warmth-anger and the anger-warmth conditions than in the invariant

warmth and the invariant anger conditions. Attitude change concerning the relative merits of the two positions represented was measured by asking the subjects to indicate the extent to which they felt their position was superior to the confederate's. It was found that subjects in the invariant anger and the warmth-anger conditions felt that their positions were more superior than did the subjects in the invariant warmth and the anger-warmth conditions.

The author concludes:

Thus, if one wishes to induce behavioral compliance with one's position, the expression of warmth followed by anger or the expression of anger followed by warmth is more effective than is the expression of invariant warmth or anger But if one also wishes to change the other's private attitudes concerning the relative merits of the two positions, the expression of invariant warmth and the expression of anger followed by warmth is more effective than the expression of warmth followed by anger or invariant anger (1971:575).

Aronson and Linder (1965) proposed that the expression of positive feelings toward another is rewarding to that person, however, the expression of initially negative feelings, followed by the expression of increasingly positive feelings might be even more rewarding.

A statement of their viewpoint follows.

It is conceivable that the sequence of O's behavior toward P might have more impact on P's liking for O than the total number of rewarding acts emitted by O toward P. Stated briefly, it is our contention that the feeling of gain or loss is extremely important--specifically, that a gain in esteem is a more potent reward than invariant esteem, and similarly, the loss of esteem is a more potent "punishment" than invariant negative esteem. Thus, if O's behavior toward P was initially negative but gradually became more positive, P would like O more than he

would had O's behavior been uniformly positive. This would follow even if, in the second case, the sum total of rewarding acts emitted by O was less than in the first case (1965:156).

Aronson and Linder tested their hypothesis in the following manner: In a laboratory experiment, coeds interacted in two person groups over a series of seven brief meetings. After each meeting, the subjects were allowed to eavesdrop on a conversation between the experimenter and her partner in which the latter (actually a confederate) evaluated the subject. These evaluations involved the confederate's expression of either a uniformly positive attitude toward the subject, a uniformly negative attitude toward the subject, a negative attitude which gradually became positive, or a positive attitude which gradually became negative. It is important to note that the positive evaluations in the Positive-Positive condition were qualitatively the same as the final two evaluations in the Negative-Positive condition. However, there was a quantitative difference. Because the number of evaluations was the same in both conditions, the subjects who received only positive evaluations received a greater number of positive reinforcements and fewer negative reinforcements than subjects in the Negative-Positive condition. The Positive-Negative condition was the mirror image of the Negative-Positive condition. In the Positive-Negative condition, the confederate began by stating that the subject seemed interesting, intelligent, and likeable, but by the seventh session she described the subject as being dull, ordinary, etc. In

the Negative-Positive condition, the confederate began by describing the subject as dull, ordinary, not very intelligent, but during the fourth session began to change her opinion about her. Her attitude became more favorable with each successive meeting until, in the seventh interview, it was entirely positive. The major results showed that the subject liked the confederate best when her evaluations moved from negative to positive and least when her evaluations moved from positive to negative. It was concluded that a gain in esteem is more rewarding than continuous positive esteem, and that a loss in esteem is more punishing than constant negative esteem.

One of the explanations of this gain-loss effect advanced by the authors is a cognitive one.

By changing his opinion about P, O forces P to take his evaluation more seriously. If O expresses uniformly positive or uniformly negative feelings about P, P can dismiss this behavior as being a function of O's style of response, i.e., that O likes everybody or dislikes everybody, and that it is his problem. But if O begins by evaluating P negatively and then becomes more positive, P must consider the possibility that O's evaluations are a function of O's perception of him and not merely a style of responding. Because of this he is more apt to be impressed by O than if O's evaluation had been invariably positive. It is probably not very meaningful to be liked by a person with no discernment or discrimination. O's early negative evaluation proves that he has discernment and that he's paying attention to P--that he's neither blind nor bland. This renders his subsequent positive evaluation all the more meaningful and valuable (1965:168).

Sigall and Aronson (1967) extended the findings of Aronson and Linder (1965) into a different area--the area of communication and opinion change. In this experiment a communicator, prior to presenting

his persuasive communication, needed to interact with the subject over a period of time composed of relatively discrete segments. His behavior during this interaction period took one of our forms: the communicator was continually positive, continually negative, positive in the early segments and negative in the remaining segments, or negative early and positive later on. The communicator then presented a standard communication and the subjects' opinions were measured to determine the effects of these prior statements. It was found that the greatest amount of agreement with the communicator was produced by the communicator who had previously expressed a gain in esteem for the recipient. The extent of agreement was next highest in the case of constant positive esteem, followed by invariable negative esteem, with loss in esteem producing the least agreement.

The results of a study on bargaining strategies by Deutsch, Epstein, Canavan, and Gumpert (1967) lend further support to the notion that negative attitudes expressed toward another followed by the expression of positive attitudes in inducing cooperation from that individual. Their experiment studies five behavioral strategies to see which was most effective in eliciting cooperative behavior from someone whose behavior was not initially and persistently cooperative. The effectiveness of the strategies was investigated in a two-person laboratory game which permitted players to act altruistically, cooperatively, individualistically, defensively, or aggressively toward one

another. One of the players in each game was always an accomplice of the experimenter, who followed a predetermined strategy in response to the true subject's behavior in the game. The five strategies employed by the accomplice were termed Turn the Other Cheek, Nonpunitive, Deterrent, Reformed Sinner-Turn the Other Cheek, and Reformed Sinner-Nonpunitive. It was found that the most frequent cooperative responses were made to the accomplices who employed a Reformed Sinner-Turn the Other Cheek strategy. Employing this strategy the accomplice played in a very threatening and aggressive manner during the first fifteen trials of the game but then dramatically changed his behavior by disarming on the sixteenth trial. He then followed a Turn the Other Cheek strategy during which he responded to attacks or threats by altruistic behavior (doing something that rewarded the other) and with cooperative behavior otherwise.

Summary

The literature revealed that the dimension of warmth in the behavior of teachers and examiners has a major influence on the behavior of those with whom they interact. Thus warmth may be an important factor in determining a teacher's effectiveness.

Warmth is an important quality in a person which seems to carry more weight than others in establishing a view of an individual's personality. Warmth from others appears to be a genuine need of each individual and thus constitutes a powerful social reinforcer. Many

studies have demonstrated the effectiveness of minimal verbal and nonverbal cues of a teacher or an examiner in conditioning a subject's verbal behavior and in some cases nonverbal behavior. Some of the cues which can be construed as indicants of warmth or approval are verbal responses such as "mmm-hmm," "good," "okay," "yeah," etc. Nonverbal behaviors shown to be effective reinforcers are head nods and smiles.

Evidence from several studies supports the hypothesis that social reinforcement is more effective when it comes from a warm individual than when it comes from a cold individual. Furthermore it appears that a hostile experimenter retards learning in comparison to a neutral experimenter.

It may be, however, that a teacher or an examiner can behave too warmly and thus lose his effectiveness as a reinforcer. It appears that behaviors maintained by social reinforcers are responsive to a condition of relative satiation for such reinforcers. The results of several studies suggest that a source might be more effective in producing behavior change in another by expressing different orders of warmth and/or anger. The expression of initially negative feelings toward another followed by the expression of increasingly positive feelings might be more rewarding to that person than the expression of invariant warmth.

BEHAVIORAL CUES OF WARMTH

The dimension of warmth in the behavior of teachers and examiners has been cited as having a major influence on the behavior of those with whom they interact. It is this wide range of influence which makes warmth an important variable for investigation. However, in spite of the widespread use of the concept of warmth, there has been no clear definition or specification of the behavioral correlates of this variable. Although global measures of warmth utilizing rating scales have been used in many studies, it is the aim of this section of the present paper to review those studies which attempt to define and specify the behavioral cues of warmth.

In a study by Johnson (1971:571), the following definition was used in training his actors to express warmth.

Warmth can be expressed both verbally and nonverbally. Verbal expressions such as "That's good," or "That's an interesting thought," are statements of warmth. Nonverbally, warmth can be expressed through tone of voice, facial expression, and gestures; for example, leaning toward the other person, looking directly into his eyes, smiling, and a friendly tone of voice all communicate warmth. Warmth can mean several different things. In expressing warmth in this experiment we would like you to express warmth in a way which means acceptance of the other person.

Bayes (1972:33) attempted to define interpersonal warmth in behavioral terms by determining the association between global ratings of warmth and objective measures of specific behavioral cues obtained independently.

Those cues found to be most closely related to warmth ratings were (1) frequency of smiling, the single best predictor, and (2) number of positive statements about other people. A factor analysis identified two factors, the first an evaluative one of positive response to others and the second an activity level factor. The author concluded that "warmth may be tentatively defined as positive response to others, actively conveyed."

After a number of studies performed with college students, Albert Mehrabian (1968:52) came to this conclusion:

I tell you that feelings are communicated less by the words a person uses than by certain nonverbal means--that, for example, the verbal part of a spoken message has considerably less effect on whether a listener feels liked or disliked than a speaker's facial expression or tone of voice In fact, we've worked out a formula that shows exactly how much each of these components contributes to the effect of the message as a whole. It goes like this: Total Impact = .07 verbal + .38 vocal + .55 facial.

Through the use of an electronic filter, Mehrabian was able to measure the degree of liking communicated vocally. The filter eliminated the higher frequencies of recorded speech, so that words were unintelligible but most vocal qualities remain. Mehrabian found that people were able to judge rather easily and with a significant amount of agreement the degree of liking conveyed by the filtered speech. Given one communication, one group judged the amount of liking conveyed by a transcription of what was said, the verbal part of the message. A second group judged the vocal component, and a third group judged the impact of the complete recorded message. It was

found that when the verbal components of a message agree (both positive or both negative), the message as a whole was judged a little more positive or a little more negative than either component by itself. But when vocal information contradicted verbal, vocal won out.

Some of the other results of Mehrabian's research indicated: posture is used to indicate liking--the more a person leans toward his addressee, the more positively he feels about him. Relaxation of posture is a good indicator of attitude--a speaker relaxes either very little or a great deal when he dislikes the person he is talking to, and to a moderate degree when he likes the person. Also standing close to your partner and facing him directly indicates positive feelings.

In a study of Haase and Tepler (1972:417), twenty-six counselors with an average of 1,500 hours counseling experience rated forty-eight combinations of eye contact, trunk lean, body orientation, distance, and predetermined verbal empathy message on a modification of the Truax-Carkhuff empathy scale. Results showed "that maintaining eye contact, forward trunk lean, close distance, and medium--and high--rated verbal empathy all independently contribute to higher levels of judged empathy

Using photographs of a masked male model as stimuli, James (1932:405) asked his subjects about the attitude being expressed by each posture and the portions of the posture which were most

significant. His findings support the hypothesis that a forward lean communicates a relatively positive attitude (i.e., attentive interest), whereas a backward lean or turning away communicates a more negative attitude.

Machotka (1965:33) informally noted relationships between several postural variables and attitudes. In his study, drawings of groups of people who had assumed various postures relative to one another were judged by subjects who were asked to infer social relationships. He found that openness of arms indicates warmth and that eye contact indicates concern with the addressee.

Argyle and Kendon (1967:74) summarized some of the research literature to the effects of eye contact in interpersonal communication. They report an unpublished study by Weisbrod (1965) who studied eye contact pattern in a group. She found that those individuals in the group who looked most at a speaker were rated by the speaker as instrumental to his goals and as valuing him more. She also found that a speaker feels more powerful when he receives more eye contact from his addressees. Furthermore, those individuals who were looked at most by speakers in the group saw themselves, and were seen by other group members, as being more powerful in the group than those who were looked at less.

Another study reported by Argyle and Kendon on the perceptions of being looked at is that of Mehrabian (Winer and Mehrabian, no date),

where the experimenter interviewed two subjects simultaneously, but spent more time looking at one subject than at the other. The subjects were then asked to rate the attitude of the interviewer toward them, and it was found that the subject who received the most looking judged the experimenter to be more positive toward her than the subject who was looked at less.

Three other unpublished studies reported by Argyle and Kendon lend support to the notion that the degree of eye contact between a speaker and his addressee is related to the amount of positive regard conveyed to the addressee. Kendon (1964) found that subjects thought that an interviewer who did not look at them for part of the interview had lost interest in what they were saying. Exline and Kendon (1965) found that individuals are judged as more "potent" when they do not look while the subject is speaking as compared to a condition in which they do look while he is speaking. Exline and Eldridge (1965) showed that subjects judge a speaker as more sincere if he looks at them when he speaks than if he does not.

The experimental introduction and manipulation of a warmth variable is incorporated in the design of several studies some of which are cited elsewhere in the paper. The effectiveness of the manipulation of the warmth variable in these studies was usually checked by asking the subjects to rate the degree to which they felt liked or the degree to which they viewed the person supposedly expressing warmth as

