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DO ACTIONS SPEAK LOUDER THAN WORDS?
AN INQUIRY INTO INCONGRUENT COMMUNICATIONS

by

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B.S., University of Cincinnati, 1963

Submitted to the Department of Speech and
Drama and to the Faculty of the Graduate
School at the University of Kansas in
partial fulfillment of the requirements
for the degree of Master of Arts.

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For the department

October, 1973

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CHAPTER I

INTRODUCTION AND REVIEW OF THE LITERATURE

Human beings engaged in conversation utilize a rich and complex system of nonverbal behaviors to accompany their words. The significance of these behaviors has been the subject of research for many investigators, especially since the early 1950's. This study is an attempt to assess the effects of nonverbal communication on the meanings people create.

An old proverb claims "Actions speak louder than words," pointing up the possibility that a person's words may say one thing, while his actions or nonverbal behaviors may say another. In common parlance, such a contradictory communication is called a "double message" or a "double-edged message." In the literature it is referred to as an "incongruent communication" (Rogers, 1951), an "inconsistent attitude" (Mehrabian, 1971), or a "discrepant message" (O'Neill and O'Neill, 1972).

Not only folk wisdom, but some researchers and scholars as well, suggest that the nonverbal elements of an incongruent communication are the most important and most believable messages, especially in interpersonal communication (Starkweather, 1961; Ruesch, 1963; Giffin and Patton, 1971). Giffin and Patton (1971) claim that it is nonverbal

communication that ultimately defines interpersonal relationships.

This study was designed to assess some of the effects of incongruent communications on the meanings people create. It is an attempt to provide empirical evidence that nonverbal behaviors are perceived and do influence interpersonal communication.

The variables that impinge on any interpersonal exchange are numerous, and reliably replicating an interpersonal communication in a research laboratory was judged nearly impossible. For this reason, a videotaped interaction of an interpersonal exchange between two people was presented to groups of subjects; and their responses to several instruments were gained immediately following the viewing. In this manner, time and the history of a relationship were controlled, these being two of the most influential variables that affect interpersonal communications. Three variables were manipulated: (1) the positive and negative evaluative content of messages; in combination with, (2) the verbal or nonverbal mode of expression; and, (3) the sex of observers.

Relevance of the Study to Speech Communication

The relevance of this study to the speech communication discipline is both theoretical and pragmatic. Consider first some of the challenges to traditional speech

communication theory that are presented by regarding nonverbal behavior as communication. To begin, how shall we define human communication? Shall we include nonverbal behaviors as well as speech behaviors in our definition? If so, where shall we draw the line between codified, symbolic, socially learned behavior and somatic response? The question is further complicated as we realize that somatic responses are culturally conditioned (LaBarre, 1947). The issues of intent and consciousness are raised: shall we include only those intentional, consciously performed behaviors as communication, or shall we recognize also those behaviors performed out of conscious awareness, since they are visible for the inference and interpretation of receivers?

If we enlarge the scope of behaviors to be considered as communication, as Ruesch and Bateson (1951) do when they include "all those processes by which people influence one another," or as Dance (1967) does when he defines communication as "the eliciting of a response," then our models of the communication process may become more complex. The elements of time and/or channels have already been introduced in models suggested by Osgood and Sebeok (1965), Birdwhistell (1970), Dance (1967) and Becker (in Mortensen, 1971).

As we alter our definition of communication and our models of the process, our definition of man as communicator alters also. Acceptance of a theory of communication that

includes multi-channel, multi-modal and multi-level processes (Birdwhistell, 1970) defines man the communicator as a total organismic transactional entity.

There are numerous pragmatic applications that may follow upon the results of this, and similar, studies. First, in any communication situation the practical effects of incongruent communications may be felt. An awareness of this phenomenon and its effects should provide many disciplines with increased communicative capacity. From interpersonal exchanges to the rhetorical criticism of speeches, an awareness of incongruence increases our understanding of what is going on and increases the range of choices for all people as communicators.

Second, implications for cross-cultural communication are significant. If we respond totally, as transactional organisms, to a total communication situation, then we have numerous variables to understand in a cross-cultural exchange. It may not be only at the level of words that communication breakdowns occur, but at the nonverbal level also, where valuing processes are implicit.

Finally, it is possible that an understanding of the pragmatics of incongruent communications will contribute to our understanding of some forms of mental and emotional disturbances in individuals (Ruesch, 1955). The effect of incongruent communications under certain conditions has been investigated as the "double bind" for both disturbed

and normal people (Weakland, 1967; Schuham, 1967; Giffin and Brumback, 1971). Many forms of psychotherapy consider the dynamics and relationship of verbal and nonverbal communication. For example, nonverbal communication may be used by therapists as feedback (McCroskey, 1971); reflective listening requires attentiveness to nonverbal cues (Rogers, 1961); Gestalt therapy involves physiological awareness and the identification of nonverbal cues (Perls, 1969); and bioenergetics therapy utilizes physical interventions (Lowen, 1958).

Definitions

1. Human communication. For the purpose of this study we accept a broad definition of human communication such as that proposed by Barnlund (1962), "the process of creating meaning," or Dance (1967), "the eliciting of a response through verbal symbols," or Giffin (1966), "the oral-aural-visual communicative act in its entirety, including meanings conveyed by words and by means other than words." We accept the position that actions and events have communicative aspects as soon as they are perceived by another person (Ruesch and Bateson, 1951) and that all behavior has message value in an interactional situation (Watzlawick, 1967). We accept that communication may be performed unconsciously (Deutsch, 1947; Ruesch and Bateson, 1951; Ekman, 1969; and Birdwhistell, 1970) and may be

decoded unconsciously as well (Wiener and Mehrabian, 1968). We accept that communication is a complex, dynamic, continuous, irreversible, unrepeatable process (Barnlund, 1962) that is best understood as a transactional system (Watzlawick, 1967; Birdwhistell, 1970). Further, we define human communication as a multi-channel system in which each sensory modality man possesses is an actual or potential channel or infracommunicational system that is abstractable from the whole process but that operates in an interdependent relationship with all other channels in various combinations (Birdwhistell, 1970). Messages are comprehended as clusters of behaviors that form recognizable patterns or gestalten within particular contexts. The pattern of channels activated is in itself a codification and thereby a part of the message (Wiener and Mehrabian, 1968). This definition of human communication recognizes tremendous flexibility in the human communication system. A multi-channel operation may present messages, theoretically, that range from high redundancy to high incongruence.

2. Nonverbal communication. By nonverbal communication, we mean all repertoires of communicative behavior, except for the spoken word. We mean all processes by which we influence each other, create meanings, or elicit responses in each other - except for those generated by the verbal-vocal mode and its representations in writing.

For purposes of this study we will not attempt to distinguish between codified, symbolic behaviors and somatic

responses, but will allow any sign, action or object to stand as communicative if it is perceived as such by a receiver.

3. Congruent communication. A communication that is congruent is one in which information from all participating channels is consistent, harmonious and in agreement, heightening or intensifying one very clear meaning. Messages from both verbal and nonverbal modes form a redundant statement as different clusters of behavior reinforce or complement each other.

4. Incongruent communication. An incongruent communication is one that contains information from various channels that is inconsistent, inconsonant, inappropriate or contradictory. Most often the message (what is said) does not match the tone of voice (how it is said); in addition, body posture and movement may contribute conflicting meaning. An incongruent communication is a confusing one with no single, clear meaning; it is an ambiguous communication containing at least two different messages.

5. Evaluative content of messages. The evaluative content of messages used in this study is either positive or negative. Positive evaluative statements, either verbal or nonverbal, indicate liking, approach, approval, or acceptance. Negative evaluative statements indicate dislike, avoidance, disapproval, or rejection. Positive verbal statements include "I like you" and "I enjoyed the

exercise we just did together." Nonverbal positive statements include open postures, leaning forward, muscular relaxation, frequent eye contact, smiles, head nods and melodic vocal inflection. Negative verbal statements include "I don't like you" and "I did not enjoy the exercise we just did together." Nonverbal negative statements include closed postures, muscular tension, minimal eye contact, facial expressions of boredom and disgust, and flat tones of voice.

Review of the Literature

This review reports literature which is relevant to the decoding of incongruent communications. First, studies focusing on nonverbal responses to a stimulus condition are examined. Then, studies involving nonverbal behaviors as the stimulus condition are reviewed. These studies generally attempt to assess whether information is indeed transmitted over a particular channel, or whether one channel is dominant over another in transmitting particular information. Third, studies concerning the resolution of incongruent communications are discussed.

1. Research on nonverbal behaviors as response.

Research assessing nonverbal behaviors as responses to specific stimulus conditions includes: (1) a study by Sainesbury (1955) using stressful and unstressful conditions in interviews; (2) a study by Dittman (1962) relating patients' moods to nonverbal responses; and, (3) several

studies using the condition of deceit as stimulus (Rosenfeld, 1966; Maier and Thurber, 1968; Ekman and Friesen, 1969; Mehrabian, 1971). Sainesbury found that patients moved and gestured significantly more when communicating affect disturbance and resentment than when communicating unstressful material. Dittman identified five moods and three body areas in his study and found not only that the frequency of movement reliably differentiated moods, but also that different moods were accompanied by distinguishable patterns of movements in different body areas.

Several researchers studied deceitful communications in an effort to identify nonverbal behaviors that occur with dishonesty or deceit. Maier and Thurber (1968) found that judges were able to detect deceit significantly better by listening to audiotapes or reading transcripts than by watching silent films. The researchers concluded that visual cues distracted judges and lowered their proportion of accurate decisions. Ekman and Friesen (1969) found some support for their hypothesis that the body, especially the feet and hands, contains more leakage and cues to deception than the face and head. They claim that we usually disregard the internal or external feedback available in feet, legs and hands, attending more to face-head cues. Three studies provide some support for the hypothesis, but all fail to test the hypothesis directly because: (1) no comparison was made between information conveyed by verbal and nonverbal

channels; (2) no comparison was made between face only and face and words; and, (3) no specific information was available concerning the actual sources of leakage or deception.

Mehrabian (1971) found that subjects were more immediate in their nonverbal behaviors while being deceitful; that is, they showed more liking and approach behaviors. The researcher also found a greater degree of negative feeling was communicated by nonverbal behaviors accompanying a deceitful statement. Neither frequency of eye shift nor postural relaxation differentiated truthful vs. deceitful communicators. Subjects exhibited more pleasant facial expression, especially smiles, under conditions of deceit, a finding consistent with the Mehrabian and Williams (1969) research.

When communicators were deceitful rather than truthful, they gesticulated more and nodded their heads more, spoke at a slower rate, used fewer words, and produced more frequent speech errors (Rosenfeld, 1966). From the studies reported in this section, it may be concluded that variations in nonverbal behavior occur as responses to stress, feeling state or mood, and conditions of deceit or dishonesty.

2. Research on nonverbal behavior as stimulus.

Studies that present nonverbal behaviors as the stimulus and measure responses to them generally aim to assess the meanings that are created and to determine the dominance or relative

importance of a particular mode's contribution to the attribution of meaning. This review groups studies into the following categories: (1) vocal-verbal studies, (2) visual-vocal-verbal studies, and (3) face-body-verbal studies.

a. Vocal-verbal studies. The first group of studies to be considered investigated the potency of vocal and verbal channels for communicating emotion or affect. Luft (1951) had judges predict patient responses on objective and projective test items on the basis of: (1) having listened to audiotapes or (2) having read verbatim transcripts. Although he found no differences between groups for objective tests, judges who heard audiotapes were significantly superior to those who read transcripts in predicting responses on projective tests. Luft therefore suggests that the voice in spontaneous speech tends to externalize significant aspects of the personality which may not be apparent in the content of speech alone.

Soskin and Kauffman (1953) investigated the judgment of emotion in word-free voice samples to test their hypothesis that normal human speech consists of two simultaneous sets of cues - the articulated sound patterns forming words, phrases and sentences, and the discriminable qualitative features of the voice itself. Using filtered tapes to obscure verbal content in two experiments, the researchers found support for their hypothesis that the voice alone,

independent of semantic content, carries important clues about emotional state.

Starkweather (1956) also studied content-free speech, attempting to find information about the speaker. He found judges could determine aggressiveness more reliably than pleasantness in the voice alone in a filtered tape, but not from content alone when presented in the form of a transcript.

Davitz and Davitz (1961) reported that listeners could correctly identify the emotions of speakers reciting the ABC's in one of 10 different feeling states. They found, however, that success was not uniform for all emotions and that not all speakers or listeners were equally skillful in their accuracy for expressing or identifying feelings. In further experiments, Davitz and Davitz attempted to specify the vocal cues associated with specific meanings, but these findings were not generalizable.

Kauffman (as reported by Taber, 1970) studied the relationship between congruence of meanings transmitted verbally and vocally as related to the ambiguity of the total message. Results of his study showed that both verbal and vocal channels carry expressive and persuasive meanings; further, this research indicated a tendency for expressive meaning to be carried by the vocal mode and persuasive meanings to be carried by the verbal band. A significant negative correlation was found (-.61) between the degree of

congruence of judgment of vocal and verbal material and the ambiguity of the total message. Whenever channels were inconsistent in the meanings carried, a greater variability in responses occurred.

Milmoë (1967) recorded physicians' voices as they referred alcoholic patients for further treatment, assuming: (1) that alcoholics are acutely sensitive to subtle, unintentional vocal cues, and (2) that there is a relationship between the emotion expressed in a doctor's voice and his success in getting the alcoholic into further treatment. Although this study was highly complicated and its generalizability is quite limited, it did indicate that affect communication in normal interactions occurs both in the voice alone and in the voice and words together.

From this group of studies, it may be concluded that the voice alone or in combination with words, is a reliable carrier of emotionality.

b. Visual-vocal-verbal studies. Levitt (1965) and Williams and Sundene (1965) compared two communication channels, the visual and the vocal. Levitt (1965) studied the decoding of emotional meanings in the face and voice and found that the decoding of facial and vocal stimuli in combination was only as accurate as the decoding of the facial stimuli alone. Both of these conditions were more accurate than the decoding of the vocal stimuli alone. Levitt concludes that the facial component contributes more

to decoding the total message than does the vocal mode. Williams and Sundene (1965) obtained judgments of the same emotion communicated facially, vocally, and in facial-vocal combinations in a neutral statement. They found that emotion was recognized in all conditions. These two experiments, then, indicated that facial expressions contributed emotional information to total communication.

Studies by Giedt (1955), Maier and Thurber (1968) and Taber (1970) investigated the decoding of communications from three channels - visual, content, and vocal. Giedt (1955) compared observations of: (1) silent films, (2) written transcripts, (3) audiotapes plus transcripts, and (4) sound films. He asked judges to predict responses to incomplete sentences and rate the patients for personality characteristics. He found that those judging by visual cues alone made poorer predictions than would be expected by chance alone. These results directly oppose the results of Levitt (1965). Giedt found an increment in accuracy with all other test conditions, all of which had the verbal content in common. Giedt suggested that visual cues may impair predictions generally, and that some patients are more accurately predicted and rated than others.

Maier and Thurber (1968) investigated the accuracy of judgments of deception when interviews were watched, heard or read. Results showed no differences between the responses of listeners and readers, but showed that both

groups were superior to watchers. This research supports the Giedt work (1955) in concluding that the presence of visual cues caused distraction and reduced the accuracy of judgments. Further, Maier and Thurber conclude that verbal and vocal cues are more effective than visual cues in detecting deceit.

Taber (1970) investigated the decoding of consistent and inconsistent attitudes in facial, vocal and verbal channels in an attempt to determine dominance of channels. She predicted the facial, vocal and verbal modes would be dominant in that order, but found only partial support for the hypothesis since the predicted order did not hold with statistical significance. Taber concluded that the verbal material is the least significant in affect influence and reports that when facial attitudes were negative, they were significantly dominant; but this was not so when they were neutral or positive.

No unequivocal conclusions may be drawn from the studies comparing verbal, vocal and visual modes. While Levitt (1965) and Williams and Sundene (1965) found the visual channel communicated emotions significantly, Giedt (1955) and Maier and Thurber (1968) found that visual cues impaired judgments of emotion. Taber (1970) found all three channels carried emotional meaning.

c. Face-body-verbal studies. Shapiro (1966) and Ekman (1964) studied face, body and verbal modes of

communicating. Shapiro (1966) studied the relationship between judgments of pleasant or unpleasant affect under four conditions: (1) videotape, (2) audiotape, (3) silent videotape and (4) written transcript. He found significant correlations between the videotape condition and each of the other conditions, indicating that judges of the "whole" communication integrated information from the "parts" into their responses. Interestingly, responses to the silent videotape were not in agreement with either the audiotape or written transcript condition. Shapiro concluded that visual and verbal cues of pleasant-unpleasant affect need not be related. He suggested facial expression dominated in the silent video condition and that even when facial information was incongruent with other modes, judges combined the available information into a single response.

Ekman (1964) used pairs of photographs together with speech samples and requested judges to select the photograph which best matched the verbal behavior. In four experiments Ekman found significant accuracy of judgments for those photographs showing the face-head, but no significance for those photographs showing only the body. Ekman concludes that facial expression and body configurations spontaneously enacted in interviews are not random activity or "noise" but have specific communicative value related to the verbal behavior. The Ekman experiments

may be criticized because photographs were used. These eliminated the sequences of acts and movements that occur in ongoing dyadic communication and cannot adequately represent the dynamic process of face-to-face interaction.

Other researchers have studied the communicative potential of the face or head as compared to the body. Kline (1935) asked subjects to judge face and face with body cues in photographs. Initially the combined face and body photographs were judged with higher accuracy, but practice effect obscured any real differences. Dittman, Parloff and Boomer (1965) report that psychologically oriented clinicians were less able to respond to body cues than were trained dancers; psychologists relied more on facial expression for the judgment of emotions. Ekman (1965) suggested that head and body cues provided differential information with apparent emotions to observers. He hypothesized that head and facial cues provide more information about the nature of an emotion, while the body provides more information about the intensity of an emotion. Ekman suggested that acts (readily observable movements with a beginning and an end) tend to convey more information than positions (lack of movement for a discernible period of time) (Ekman, 1967). In one study, Ekman predicted that judges viewing head cues only in photographs would show more agreement about emotions conveyed than judges viewing body cues only. This hypothesis was supported, but certain limits are recognized: (1) the

sample of people photographed was small (5), (2) photographs were taken during stress interviews which are not typical of interactions in the population at large, and (3) photographs freeze acts and cannot adequately represent them.

As a group, these studies are inconclusive in assessing the face as an instrument of affect. Sometimes the face provides valuable information of affect, but at other times facial cues impair affect communication. As far as the body is concerned, no statistically reliable judgments were found for the communicability of positions, and acts were not assessed.

3. Research on the decoding of incongruent communications.

a. Clinical significance. The clinical significance of incongruent communications or inconsistent attitudes in decoding has been stressed by Soskin (1953) and Ekman and Friesen (1967) who viewed this phenomenon as indicative of conflict and difficulty in impulse control. Ruesch (1955) describes the disturbed communication of psychotics as, "During depression the synchronization between nonverbal and verbal systems of denotations is impaired or lost altogether." Bateson (1956) proposed that the incongruent messages of significant others can be a cause of schizophrenia. He proposed the "double bind" theory, claiming that messages bearing contradictory

attitudes, repeated over time, are a cause of disturbed behaviors. Necessary conditions for the double bind of incongruent communications include a sequence of behaviors with negative injunctions and threats of punishment for inappropriate responses in a situation where there is no appropriate response available.

Beakel and Mehrabian (1969) studied incongruence between verbal and postural attitude in the communications of parents to their disturbed children in an effort to test out a part of the double bind theory. They predicted greater incongruence from parents of more disturbed children and less incongruence from parents of less disturbed children, but found no support at all for this prediction. What they did find was that parents of more disturbed children showed more negative attitudes verbally than did parents of less disturbed children. These findings suggest that the positive-negative evaluative content of attitudes communicated verbally, not incongruence, might be a more productive line of inquiry for learning about the relationship between communication patterns and psychopathology.

b. Research on incongruent communications.

Research on incongruent communications has focused largely on the decoding of affect messages in an attempt to determine which channels are dominant over others.

Mehrabian and Wiener (1967) investigated the affect communications of the verbal and vocal channels for the expression of three degrees of attitude - positive, negative and neutral. The researchers expected that when attitude was inconsistent with content, the attitudinal or tonal component would be dominant. They found significant independent effects of content, but the effects for tone were ambiguous due to differences between two speakers. Results were interpreted as supporting the hypothesis, however, with independent effects of content. Mehrabian and Wiener conclude that the dominant component in a two component communication determines the meaning generated; the two conflicting meanings do not remain unresolved, but subordination and superordination occurs.

Mehrabian and Ferris (1967) studied inconsistent attitudes in facial and vocal channels, expecting the decoding from a consistent facial-vocal communication to yield a judgment equivalent to that obtained from decoding the facial channel only. Results showed significant effects due to both facial and vocal attitudes, but no interaction. Facial cues accounted for 41.1% of the total variance and visual cues for 19.3%. The results did not support the hypothesis, and thus contradict the Mehrabian and Wiener (1967) research.

Shapiro (1968) studied the decoding of verbal and nonverbal cues and suggests a high reliability in individual

responses to either facial or linguistic cues. He concluded that individuals can be reliably differentiated according to their responses to facial or linguistic cues. These results, Shapiro claimed, negate the conclusions of Mehrabian and Ferris (1967) who sought to determine dominance of the affect channels.

Mehrabian nevertheless suggested that his work with both Ferris and Wiener indicates the following formula for general evaluation (Mehrabian, 1971):

$$\begin{aligned} \text{Total liking} = & 7\% \text{ verbal liking} + \\ & 38\% \text{ vocal liking} + \\ & 55\% \text{ facial liking.} \end{aligned}$$

Mehrabian suggested that if facial expression is inconsistent with words, the degree of liking conveyed by the facial expression will dominate and determine the impact of the total message. Mehrabian reported that Argyle and his colleagues confirmed these findings and also found support for a similar relationship when the message content referred to dominance. Argyle claimed that a person's nonverbal behavior far outweighs the significance of words when he uses contradictory messages showing dominance-submission. Mehrabian thus generalized to say, "A person's nonverbal behavior has more bearing than his words in communicating feelings or attitudes to others" (Mehrabian, 1971). He rewrote his equation as:

$$\begin{aligned} \text{Total feeling} = & 7\% \text{ verbal feeling} + \\ & 38\% \text{ vocal feeling} + \\ & 55\% \text{ facial feeling.} \end{aligned}$$

He qualified the equation by saying, "the numerical values in the equation are only approximate. However, the order of the importance of words, vocal expression and facial expression is likely to be upheld in future experiments" (Mehrabian, 1971). Research by Taber (1970) failed to support these predictions with statistical significance, although her results were in the order and direction predicted by Mehrabian.

Bugental, Kasware, Love and Fox (1970) studied perceptions of acted videotaped messages which were systematically varied in channels to convey degrees of evaluative content in verbal, vocal and facial expression. Meanings of evaluation were perceived in all channels, and for young children, the visual component was found to be less important than the verbal or vocal messages, with statistical significance being reached only for children's differential perception of women's smiles. The researchers found that the addition of evaluative inputs to a message already containing one non-neutral input acted in a redundant fashion, each input adding a smaller increment in the rated evaluative meaning of the total message.

From these studies of the decoding of incongruent communication, it is impossible to draw conclusions or make any generalizations, despite the fact that Mehrabian does so. Mehrabian's suggested order of dominance has yielded results in the predicted direction (Taber, 1970; Mehrabian and

Wiener, 1967; Mehrabian and Ferris, 1967), but further research is necessary to find statistical significance. We need also recall that Giedt (1955) and Maier and Thurber (1968) both found the visual channel impaired accuracy of affect judgments; however, their studies were not primarily designed as tests to decode incongruent communications. As a whole, the research is inconclusive and contradictory.

Some Directions for Research

Reviewing this literature brings to mind many possible questions to be asked about the decoding of incongruent communications.

The evaluative content of incongruent communications may be an essential element influencing decoding. For example, when the evaluative content of the face was negative, and only then, did Taber (1970) find the face significantly more dominant than the verbal or vocal modes. Only when evaluative content of the face was positive did Bugental et. al., (1970) find the face dominant over vocal and verbal modes. We need further research combining mode of transmission and evaluative content.

We might question what factors predispose receivers to attend selectively to either positive or negative messages. We might also question predispositional factors that could influence the mode receivers rely on both in general, and in specific situations.

When an incongruent communication is perceived, how is the discrepancy resolved - or is it resolved? Do perceivers resolve the incongruence and read only one message, as suggested by Mehrabian and Wiener (1967)? Do they tend to create meaning with greater variability, as suggested by Kauffman (Taber, 1970)? Do they tend to produce no response because the two conflicting messages effectively cancel each other out, as found by Brooks, Brandt and Wiener (1969) when they used lower socio-economic class children as subjects? We also suggest that receivers who are "healthy" recognize discrepant messages in ongoing social interactions and send feedback to the source, questioning his intentions. We also suggest that incongruent communications may carry personal threat and that receivers may simply withdraw from interaction, carrying discrepant meanings with them.

No study has asked whether men and women decode incongruent communications similarly, although one study (Bugental, 1970) found children responded differently to an incongruent woman than to an incongruent man. Any differences would be noteworthy in this era of increasing sex role consciousness.

Rogers (1961) hypothesized that incongruent communications impede the growth and development of interpersonal relations, but no study to our knowledge has questioned which interpersonal attitudes are influenced. Perhaps interpersonal trust is diminished by incongruent communications.

No study so far has elicited the written responses of viewers of incongruent communications and compared these to the written responses of viewers of congruent communications. An analysis of written responses might reveal differences in number of cognitive constructs created in response to the different conditions. Could it be that more information, even though it is contradictory information, is available to a receiver of incongruent communications? Judgments could also be made of written responses regarding the evaluative tendency, positive or negative, reported by subjects viewing incongruent communications.

Much of the research on multi-channel communication to date is not very generalizable to face-to-face communication. For example, matching photographs to audiotape samples, matching captions to cartoons, and predicting the responses of psychological patients to incomplete sentences seem far removed from face-to-face social interaction and the decoding of incongruent communications on the spot.

Hypotheses for the Present Study

This study will test the following hypotheses concerning the decoding of incongruent communications.

1. When verbal and nonverbal behaviors are incongruent, meanings inferred from the interaction by viewers will be dominated by nonverbal cues.

2. Compared to men, women rely more on nonverbal behaviors for their inferences in decoding an incongruent communication.

3. Subjects responding to incongruent communications compared to subjects responding to congruent communications will:

- a. show less trust of the sender in their responses on the Giffin Trust Differential;
- b. use more constructs in writing their impressions of the sender and their descriptions of the communication;
- c. use a higher proportion of situation-specific constructs than general constructs in their written impressions;
- d. use a lower proportion of dispositional, emotional, or motivational constructs in their written impressions; and,
- e. write impressions and communication descriptions that recognize and account for inconsistency.

Chapter Two describes the research methodology employed in the study and Chapter Three reports the results. Chapter Four contains a discussion of the results, describes some trends in the data and presents some conclusions.

CHAPTER II

THE RESEARCH METHOD

The present study was designed to assess some of the effects of incongruent communications, as compared to congruent communications, on the subjects who observed videotape recordings of the two types of communication. Specifically, the study investigated the influence of incongruent communications on the meanings subjects created, on the subjects' perceptions of the sender of the messages, and on the attitudes reflecting interpersonal trust the subjects registered regarding the sender of the messages. The experiment was conducted as a 2 x 2 x 2 factorial design, the independent variables being: (1) the verbal or nonverbal mode of delivery of messages; (2) the positive or negative evaluative content of the messages; and (3) the sex of receivers.

The Stimulus Condition

The stimulus condition for each group of subjects was a videotaped interaction between two actors, a man and a woman, who were allegedly participating in a weekend encounter group at the University of Kansas. The goal of the videotapes was to stimulate spontaneous, face-to-face dyadic

interaction, without sacrificing reliability. The content of the interactions between the man and woman included:

- (1) their general evaluation of their orientation to the task at hand, which was to discuss the "trust walk" exercise they just completed as partners;
- (2) their evaluation of the "trust walk;" and,
- (3) their preferences in relating to each other in the present situation - that is, their like and approach or dislike and avoidance of each other. In all cases, the man was designated as the sender of the incongruent communication and he was focused on more than the woman in the videotape.

Scripts for the videotape were developed from audiotaped recordings of a group of encounter group trainers role-playing the typical incongruent communications they observed in training groups. A script with positive verbal content was adopted; a script with negative verbal content was then created by reversing from positive to negative all evaluative statements. These scripts are included as Appendix A.

To lend credibility to the scripts and to define the encounter group context, an introductory segment was videotaped in which ten alleged participants of an encounter group enacted a trust walk while a narrator verbally defined concepts such as "encounter group" and "trust walk." A trainer subsequently introduced the next exercise, asking the

trust walk dyads to discuss verbally their feelings about the trust walk and their feelings about each other.

Four different patterns of interaction were videotaped to follow this common introduction, each presenting a different combination of the verbal-nonverbal, positive-negative statements. That is, the first tape contained negative verbal statements and negative nonverbal behaviors; the second script contained positive verbal statements and negative nonverbal behaviors, and so on. Table I is a model of the four stimulus conditions. Verbal scripts for tapes one and two were identical, as were the verbal scripts for tapes three and four. An effort was made to keep nonverbal behaviors constant in tapes one and three (negative) and tapes two and four (positive). The Audio-Visual Aids Department of the University of Kansas cooperated in both the taping and playing of these videotapes for the pilot study and the experiment.

Pilot Study

The experiment was subjected to a pilot study in June, 1972, in which eight men and eight women volunteer subjects viewed the videotapes and responded to the questionnaires, two men and two women testing each condition. A debriefing discussion followed and all four tapes were viewed by all the subjects.

TABLE 1

DESIGN OF THE EXPERIMENT

		VERBAL			
		NEGATIVE		POSITIVE	
		MALES	FEMALES	MALES	FEMALES
NONVERBAL	NEGATIVE	NEGATIVE CONGRUENT		VERBAL POSITIVE NONVERBAL NEGATIVE (INCONGRUENT)	
	POSITIVE	VERBAL NEGATIVE NONVERBAL POSITIVE (INCONGRUENT)		POSITIVE CONGRUENT	

The Sample

Eighty one randomly assigned volunteer subjects participated in this experiment during July, 1972. All were enrolled at the University of Kansas for the summer session in introductory courses in speech and drama, education, sociology or business.

Procedure

Subjects viewed one videotape, responded to questionnaires in the order of their appearance in this chapter, and a debriefing session followed. During debriefing, the tape with the same verbal message, but the opposite nonverbal message, was shown. The experimenter answered questions, and revisited one class that was particularly interested in the study.

The Measurements and Their Statistical Analysis

1. Written Impression. Having viewed one videotaped interaction, subjects spent five minutes writing their impressions of the man. The instrument is included as Appendix B. Responses were analyzed by the following: (1) a count of cognitive constructs generated; (2) a classification of those constructs as (a) being dispositional, motivational or emotive characteristics, or (b) pointing to verbal behavior, nonverbal behavior or physical traits; and,

(3) rating the constructs as to whether they referred to general or situation-specific qualities of the man.

2. Description of the Communication. Subjects next wrote their description of what the man meant by his communication to the woman. Appendix C is a sample of this instrument. Cognitive constructs were scored for analysis, as above.

Both the written impression and the description of what was communicated were rated jointly to determine the subjects' responses to the inconsistency. Inconsistency was rated as having been responded to at three levels: (1) no inconsistency indicated; (2) inconsistency indicated but not accounted for; and, (3) inconsistency indicated and accounted for.

Two additional bits of information were noted a posteriori in the responses as present or not present. These were: (1) any mention of sexual motivation or behavior, and (2) any mention of nonverbal behavior or incongruence. For these data, chi square tests for goodness of fit were performed.

3. Semantic differential questionnaire. A ten item semantic differential questionnaire was designed for this study to test subjects' responses to specific content-evaluative statements. Appendix D is a sample of the questionnaire. The instrument was made up of bipolar scales, the end points of each scale being a positive or negative

evaluative statement. Seven differential spaces between the statements allowed responses to show both quality (direction) and intensity (distance from origin) of meaning. To avoid mechanical or patterned responses, the scales were scrambled so that positive poles appeared both left and right.

4. Giffin Trust Differential. The purpose of this questionnaire was to determine subjects' attitudes of interpersonal trust toward the man who sent incongruent communications. The questionnaire consisted of a series of 27 bipolar adjective scales which represented three independent factors involved in interpersonal trust and source credibility (Giffin, 1967). These were: character, dynamism and expertness. Three specific items were drawn from the character factor for separate analysis. These were: honesty, sincerity, and kindness. Appendix E is a sample of the Giffin Trust Differential.

CHAPTER III

RESULTS

The results of this study are presented in three major parts. The first part includes an analysis of the two written responses (the written impression and the communication description). The second section is concerned with interpreting the responses subjects made to the semantic differential questionnaire. Finally, the results of responses to the Giffin Trust Differential are considered.

The Written Responses: Impression and Communication Description

1. Number of constructs. It was predicted that more constructs would be generated by subjects responding to incongruent communications than by subjects responding to congruent communications, indicating that incongruent communications present more information, even though it is conflicting information, than congruent communications. To test this hypothesis, the number of cognitive constructs in the written impressions and the communication descriptions were calculated separately and subjected to an analysis of variance. Then, the construct totals were combined and another analysis of variance was carried out. No significant differences whatsoever were found in the number of constructs

created in response to the stimulus conditions. The hypothesis was not supported. Table 2 presents a summary of the nonsignificant findings of an analysis of variance.

2. Classification of constructs: Dispositional vs. behavioral. The constructs employed by subjects to describe their impressions of the man in the videotape were rated by two independent raters as: (1) dispositional, motivational or emotive; or, (2) verbal or nonverbal behavior or physical trait. The correlation between ratings was .94. It was predicted that subjects would respond to incongruent stimulus conditions with a lower percentage of dispositional constructs than they would to congruent conditions. An analysis of variance, summarized in Table 3, revealed a significant triple interaction ($p < .025$). Table 4 graphs the mean proportion of dispositional constructs in the impressions for the experimental conditions. As may be seen in Table 4, the hypothesis was supported among female subjects only.

3. Classification of constructs: General vs. situation-specific. Constructs in the written impression were next independently rated as either general or situation-specific. Correlation between raters was .86. It was predicted that a higher percentage of situation-specific responses would be made by subjects exposed to incongruent conditions than by subjects exposed to congruent conditions. The analysis of variance is summarized in Table 5.

TABLE 2

SUMMARY OF ANALYSIS OF VARIANCE FOR NUMBER OF CONSTRUCTS
USED IN COMBINED WRITTEN RESPONSES

SOURCE	DF	MS	F	P
Verbal (V)	1	.002	.000	
Nonverbal (NV)	1	6.548	.273	
Sex (S)	1	30.241	1.262	
V x NV	1	.019	.001	
V x S	1	26.424	1.102	
NV x S	1	36.506	1.523	
V x NV x S	1	12.756	.532	

TABLE 3

SUMMARY OF ANALYSIS OF VARIANCE FOR
 CLASSIFICATION OF CONSTRUCTS:
 PROPORTION OF DISPOSITIONAL CONSTRUCTS

SOURCE	DF	MS	F	P
Verbal (V)	1	.013	.434	
Nonverbal (NV)	1	.011	.377	
Sex (S)	1	.007	.246	
V x NV	1	.083	2.810	
V x S	1	.056	1.898	
NV x S	1	.031	1.066	
V x NV x S	1	.194	6.598	.025

TABLE 4

MEAN PROPORTION OF DISPOSITIONAL CONSTRUCTS
FOR VERBAL BY NONVERBAL BY
SEX INTERACTION

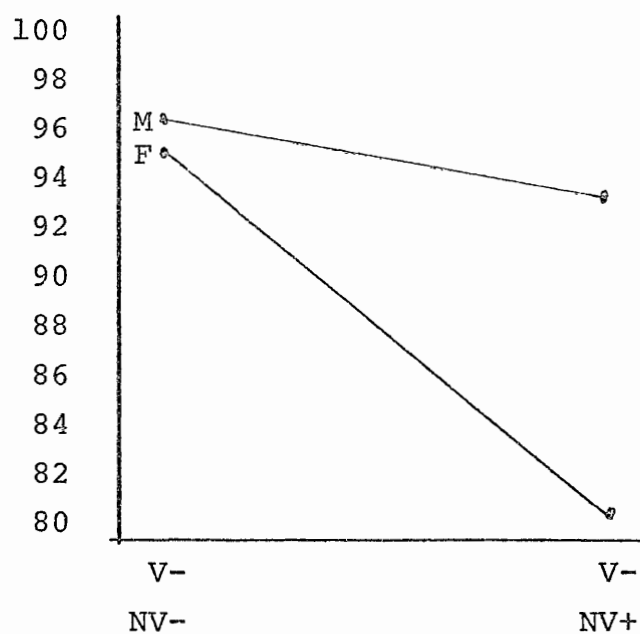
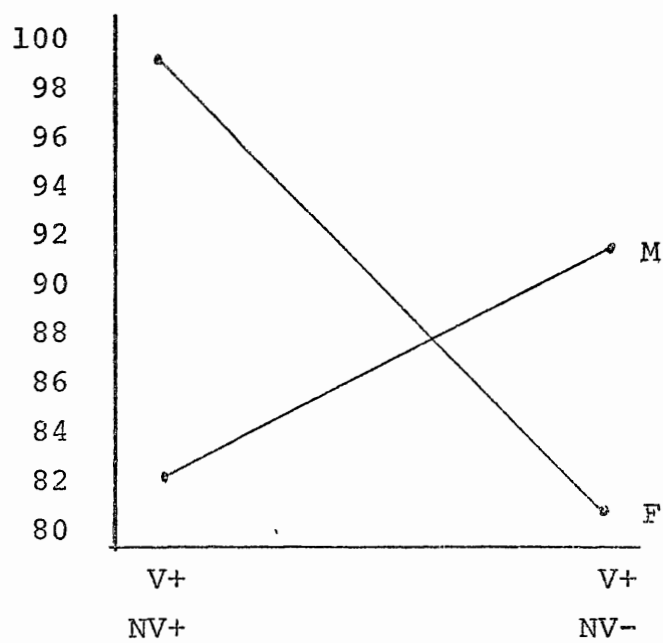


TABLE 5

SUMMARY OF ANALYSIS OF VARIANCE FOR
 CLASSIFICATION OF CONSTRUCTS:
 PROPORTION OF SITUATION-SPECIFIC CONSTRUCTS

SOURCE	DF	MS	F	P
Verbal (V)	1	.097	.582	
Nonverbal (NV)	1	.012	.070	
Sex (S)	1	.092	.552	
V x NV	1	1.027	6.135	.025
V x S	1	.201	1.200	
NV x S	1	.021	.125	
V x NV x S	1	.289	1.725	

A significant verbal by nonverbal interaction ($p < .025$) was found. As illustrated by Table 6, subjects responding to incongruent conditions did produce a higher proportion of situation-specific constructs than subjects responding to congruent conditions, as we predicted. The hypothesis is clearly supported.

4. Ratings of inconsistency in responses. Both the written impression and the description of communication were independently rated for inconsistency in content. Raters first achieved .78 agreement in identifying three levels of inconsistency: (a) consistent; (b) inconsistent, but inconsistency not accounted for; (c) inconsistent with inconsistency accounted for. Since so few responses were scored at level c, levels b and c were combined in the analysis so that subjects whose reports were consistent were compared to subjects whose reports were inconsistent, whether or not that inconsistency was accounted for. Table 7 summarizes the comparisons. It may be seen that female subjects reported more inconsistently in incongruent conditions than in congruent ones ($p < .05$ by Fisher's Exact Test). Male subjects reported more inconsistently in response to incongruent conditions also; however, their reports were considerably inconsistent in response to the positive congruent condition also, leaving only the negative congruent condition significantly different ($p < .05$ by Fisher's Exact Test).

TABLE 6

MEAN PROPORTION OF SITUATION
SPECIFIC CONSTRUCTS FOR
VERBAL BY NONVERBAL INTERACTION

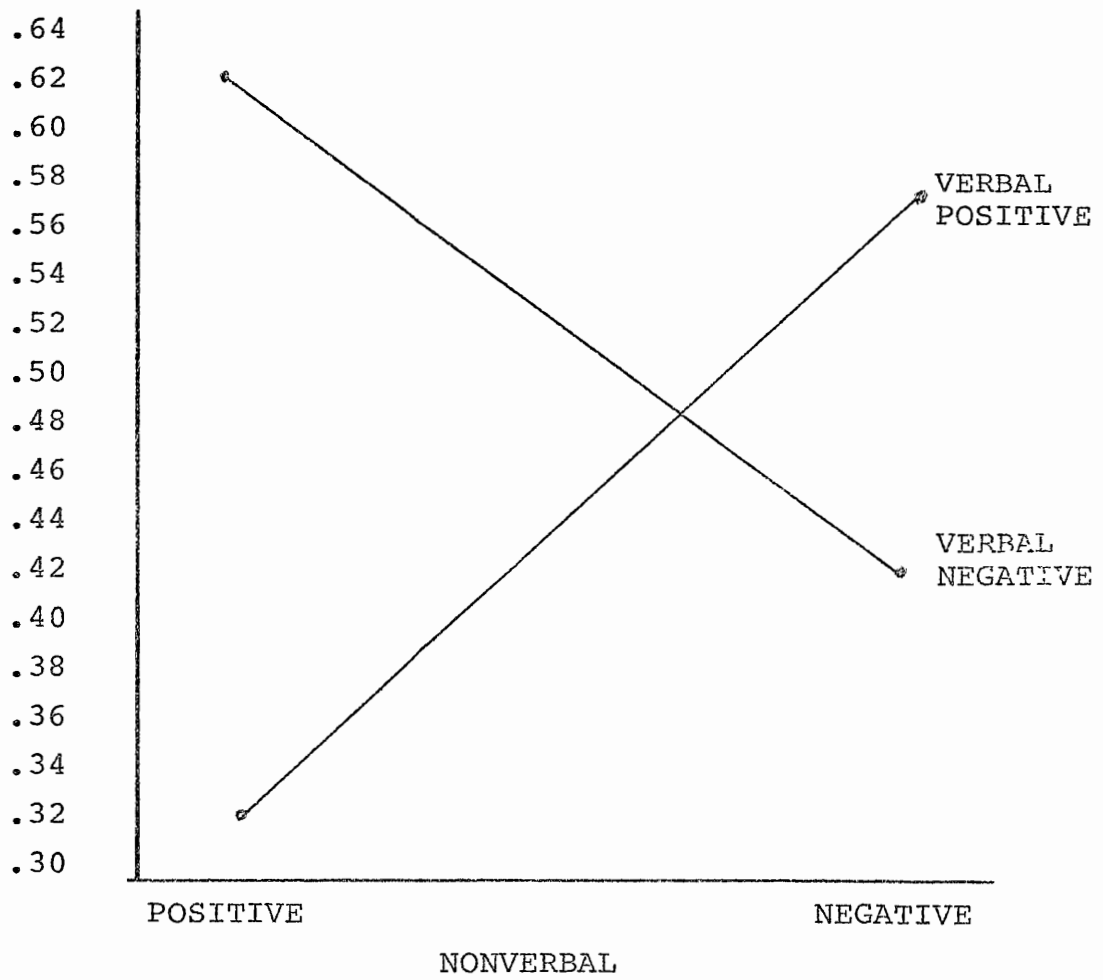


TABLE 7

NUMBER OF MALE AND FEMALE SUBJECTS WHOSE COMBINED WRITTEN RESPONSES
DID OR DID NOT INCLUDE INCONSISTENT CONSTRUCTS

SEX	VERBAL BEHAVIOR	NONVERBAL BEHAVIOR	INCONSISTENCY		P	
			INCONSISTENT	CONSISTENT		
MALES	POSITIVE	POSITIVE	7	5	.01	
		NEGATIVE	10	3		
	NEGATIVE	POSITIVE	7	2		
		NEGATIVE	0	10		
FEMALES	POSITIVE	POSITIVE	2	7	.10	
		NEGATIVE	7	2		
	NEGATIVE	POSITIVE	9	2		.05
		NEGATIVE	1	7		

Summary. Analysis of the written statements of observers of incongruent communications indicate several things about the meanings generated in response to the stimulus conditions. First, the observers all created approximately the same number of constructs to give their impression of the sender and their perception of his message, regardless of the congruence or incongruence of the condition. Second, female observers (but not male observers) responded to incongruent communications with a lower proportion of dispositional constructs than they did to congruent communications. These female subjects reported more verbal or nonverbal behaviors or physical traits than females who responded to congruent conditions. Third, subjects' responses to incongruent communications contained proportionally more situation-specific constructs than their responses to congruent communications. Last, we found responses to incongruent communications included more mention of the inconsistency than responses to congruent communications, with the exception that many males also remarked on inconsistency in the positive congruent condition.

Responses to the Semantic Differential Questionnaire

Our first hypothesis predicted that subjects observing incongruent communications would be influenced more by nonverbal cues than by verbal messages. Subjects' responses to the semantic differential questionnaire indicated

the direction and intensity of meanings reported for each item, enabling us to assess the source of cues interpreted and to examine the relationship between verbal and nonverbal behaviors in many cases.

1. He liked the exercise-He disliked the exercise. Significant main effects for all three independent variables were found in an analysis of variance (verbal, $p < .001$; nonverbal, $p < .01$; and sex, $p < .05$). The analysis is summarized in Table 8. A significant verbal by sex interaction ($p < .025$) is graphed in Table 9. The graph illustrates that the mean female judgment of how much the man liked the exercise was significantly higher ($t = -3.344$, $p < .002$) than the mean male judgment. Females, we conclude, were more responsive to the positive verbal statements than were males.

2. The exercise was easy for him - The exercise was difficult for him. An analysis of variance produced significant main effects for the verbal variable ($p < .001$) and the nonverbal variable ($p < .005$). The results are summarized in Table 10. Two significant interactions were found: a verbal by nonverbal ($p < .01$) and a verbal by sex ($p < .05$). Tables 11 and 12 graph these interactions respectively.

A t-test comparing the simple effects of means for verbal and nonverbal variables showed that variation in nonverbal behavior had a negligible effect on means when the

TABLE 8

SUMMARY OF ANALYSIS OF VARIANCE FOR
 QUESTIONNAIRE ITEM 1: HE LIKED THE EXERCISE -
 HE DISLIKED THE EXERCISE.

SOURCE	DF	MS	F	P
Verbal (V)	1	252.34	81.47	.001
Nonverbal (NV)	1	25.66	8.29	.01
Sex (S)	1	13.52	4.36	.05
V x NV	1	.79	.25	
V x S	1	19.85	6.41	.025
NV x S	1	.16	.05	
V x NV x S	1	1.34	.43	

TABLE 9

VERBAL BY SEX INTERACTION FOR QUESTIONNAIRE ITEM 1:
HE LIKED THE EXERCISE - HE DID NOT LIKE THE EXERCISE.

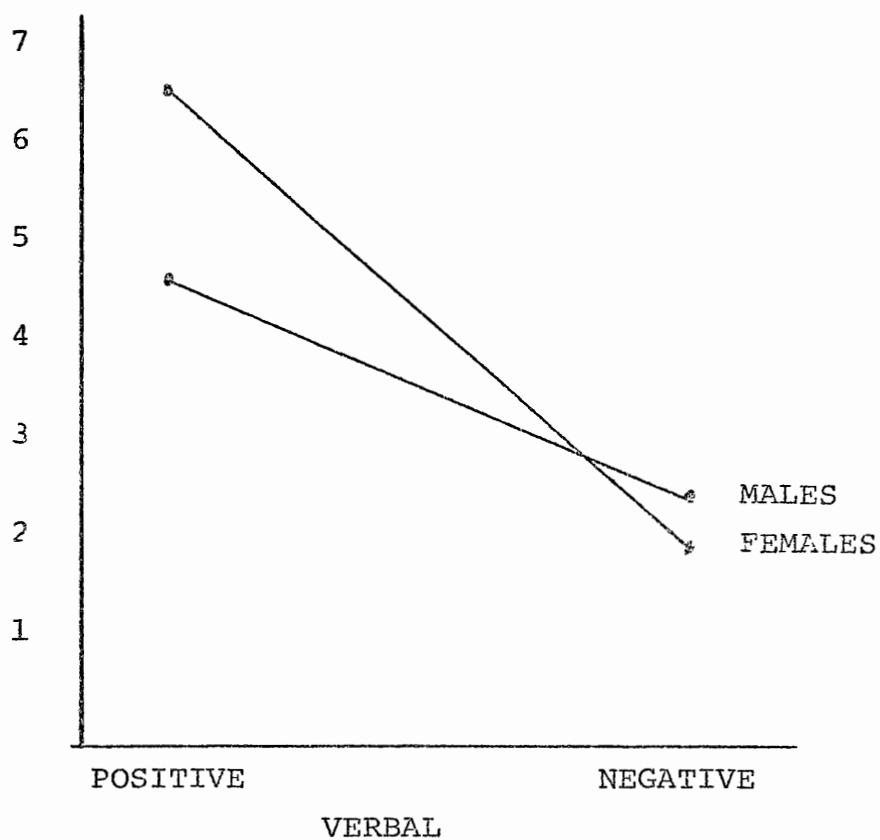


TABLE 10

SUMMARY OF ANALYSIS OF VARIANCE FOR
 QUESTIONNAIRE ITEM 2:
 THE EXERCISE WAS EASY FOR HIM - THE EXERCISE WAS
 DIFFICULT FOR HIM

SOURCE	DF	MS	F	P
Verbal (V)	1	171.71	63.07	.001
Nonverbal (NV)	1	28.06	10.31	.005
Sex (S)	1	2.16	.79	
V x NV	1	20.65	7.59	.01
V x S	1	11.79	4.33	.05
NV x S	1	2.66	.098	
V x NV x S	1	1.88	.69	

TABLE 11

VERBAL BY NONVERBAL INTERACTION FOR
QUESTIONNAIRE ITEM 2:
THE EXERCISE WAS DIFFICULT FOR HIM -
THE EXERCISE WAS EASY FOR HIM.

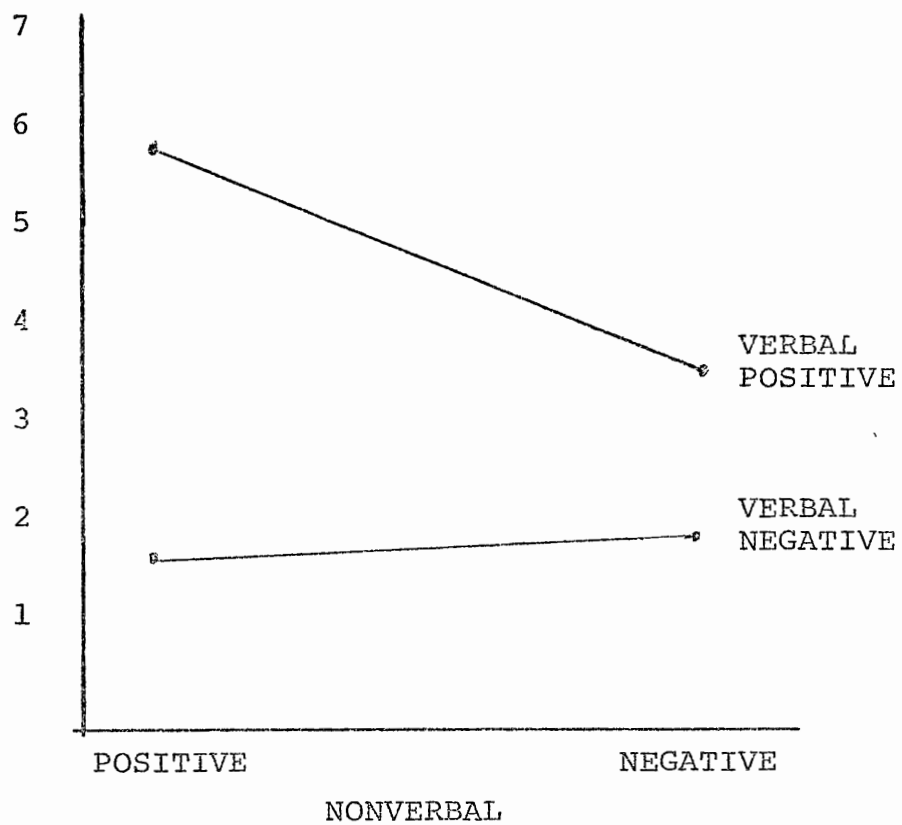
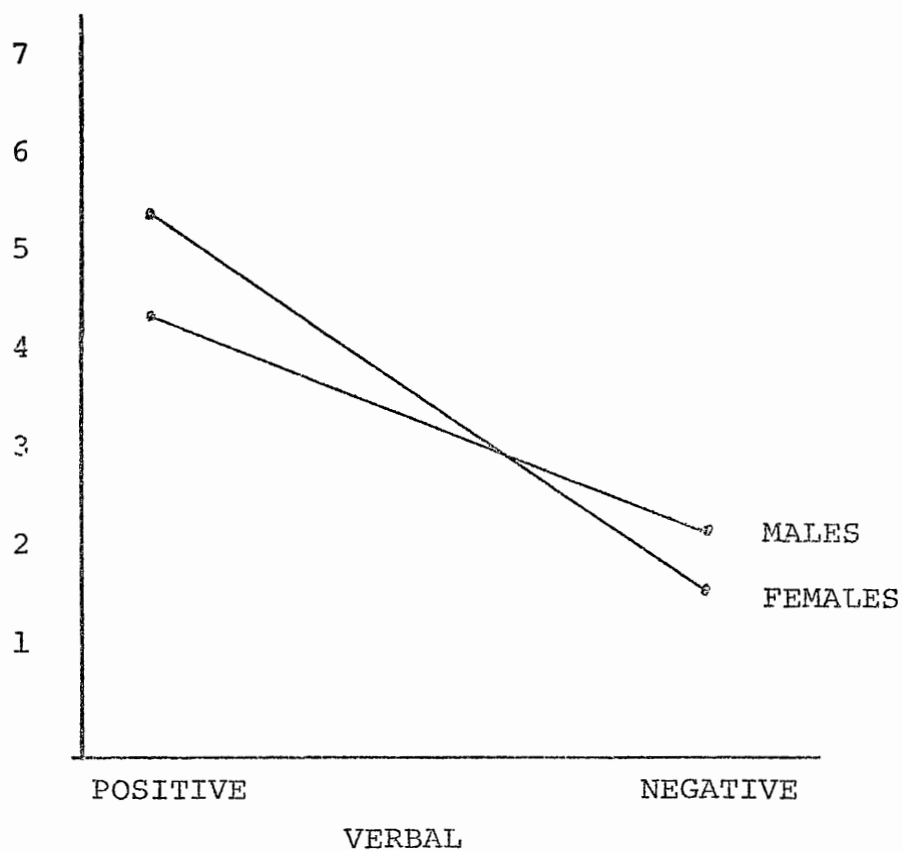


TABLE 12

VERBAL BY SEX INTERACTION FOR
QUESTIONNAIRE ITEM 2:
THE EXERCISE WAS EASY FOR HIM -
THE EXERCISE WAS DIFFICULT FOR HIM.



verbal message was negative; that is, when the man verbally reported that the exercise was difficult for him, the addition of appropriate nonverbal cues did not produce a significant difference in meanings generated. However, when verbal behavior was positive, accompanying negative nonverbal behaviors produced a significantly lower mean rating ($t = -4.392, p < .001$) than when accompanying nonverbal behaviors were positive.

A comparison of means of the two incongruent conditions revealed that the verbal positive - nonverbal negative mean was significantly higher ($t = 3.4541, p < .02$) than the verbal negative-nonverbal positive condition. Results contradict the first hypothesis and we conclude that the verbal message carried weight in both incongruent conditions for this item.

The verbal by sex interaction illustrated by Table 12 showed that females drew significantly more extreme inferences from positive verbal behavior than did men ($t = -2.158, p < .05$).

3. He was happy - He was unhappy. An analysis of variance yielded significant main effects ($p < .001$) for both the verbal and nonverbal variables. Table 13 provides a summary of the analysis. One interaction, verbal by sex, was significant ($p < .025$). Table 14 graphs this data. Again, t-tests revealed that females judged the man as significantly happier in the positive verbal condition than did the males ($t = -2.578, p < .02$).

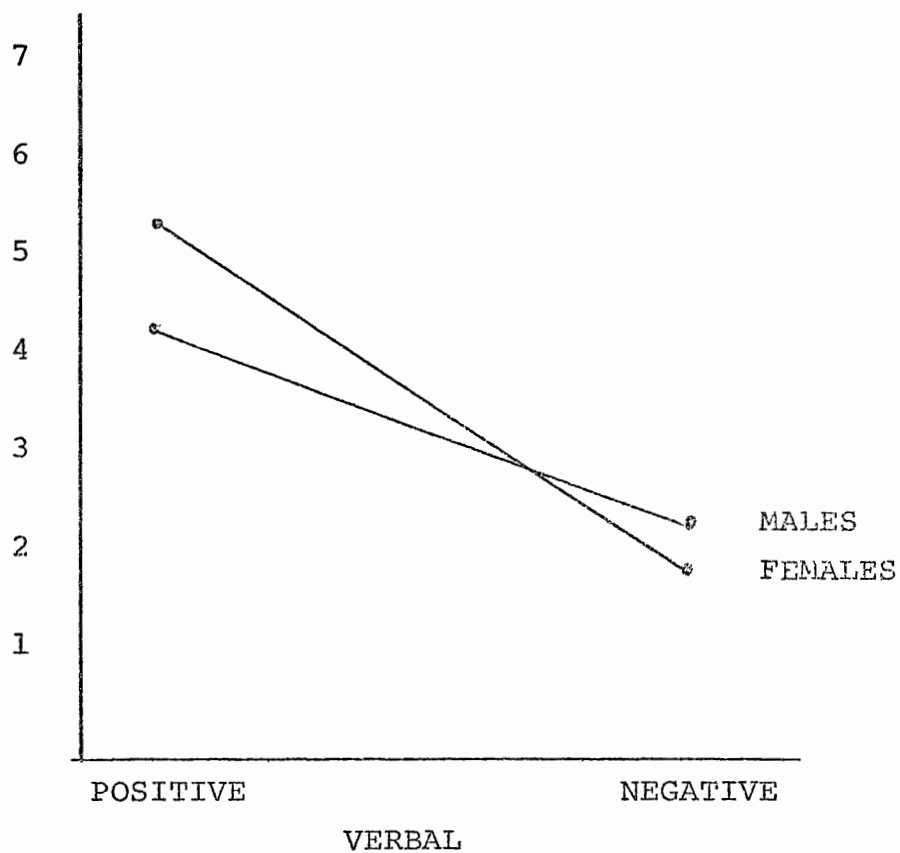
TABLE 13

SUMMARY OF ANALYSIS OF VARIANCE FOR QUESTIONNAIRE ITEM 3:
HE WAS HAPPY - HE WAS UNHAPPY

SOURCE	DF	MS	F	P
Verbal (V)	1	149.8	77.20	.001
Nonverbal (NV)	1	46.88	24.16	.001
Sex (S)	1	2.09	1.08	
V x NV	1	.01	.004	
V x S	1	12.35	6.37	.025
NV x S	1	1.1	.57	
V x NV x S	1	3.6	1.85	

TABLE 14

VERBAL BY SEX INTERACTION FOR QUESTIONNAIRE ITEM 3:
HE WAS HAPPY - HE WAS UNHAPPY.



4. He was attracted to her - He was not attracted to her. Again, significant main effects were found for verbal and nonverbal variables (both $p < .001$). Table 15 summarizes the analysis of variance.

A significant verbal by nonverbal interaction ($p < .01$) is graphed in Table 16. It may be seen that when the verbal message was positive, nonverbal behaviors had a negligible effect. However, when the verbal message was negative, judgments that the man was not attracted to the woman only occurred when the accompanying nonverbal messages were negative; when accompanying nonverbal messages were positive, the mean judgment was significantly higher ($t = -4.362, p < .001$).

When the two incongruent cells were compared, no significant differences were noted between mean judgments. We conclude that verbal and nonverbal cues contributed equally in the influence of inferences subjects made for this item.

5. He wanted to know her better - He did not want to know her better. Table 17 provides a summary of the analysis of variance for this item. A significant verbal main effect ($p < .001$) and a verbal by nonverbal interaction ($p < .025$) were found. Table 18 is a graph of the interaction. Here we found that when the verbal message was positive, the presence of nonverbal cues, either in harmony

TABLE 15

SUMMARY OF ANALYSIS OF VARIANCE FOR
 QUESTIONNAIRE ITEM 4:
 HE WAS ATTRACTED TO HER - HE WAS NOT ATTRACTED TO HER.

SOURCE	DF	MS	F	P
Verbal (V)	1	41.07	12.1	.001
Nonverbal (NV)	1	42.77	12.81	.001
Sex (S)	1	2.87	.86	
V x NV	1	24.77	7.42	
V x S	1	4.91	1.47	
NV x S	1	.03	.008	
V x NV x S	1	.17	.05	

TABLE 16

VERBAL BY NONVERBAL INTERACTION FOR
QUESTIONNAIRE ITEM 4:
HE WAS ATTRACTED TO HER - HE WAS NOT ATTRACTED TO HER.

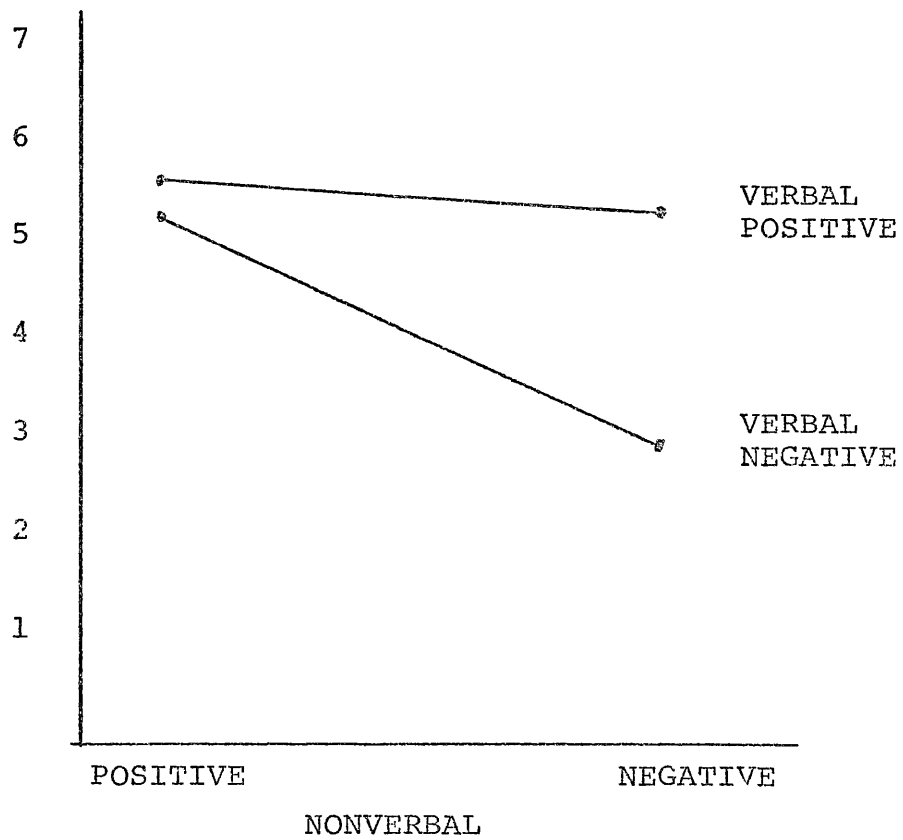


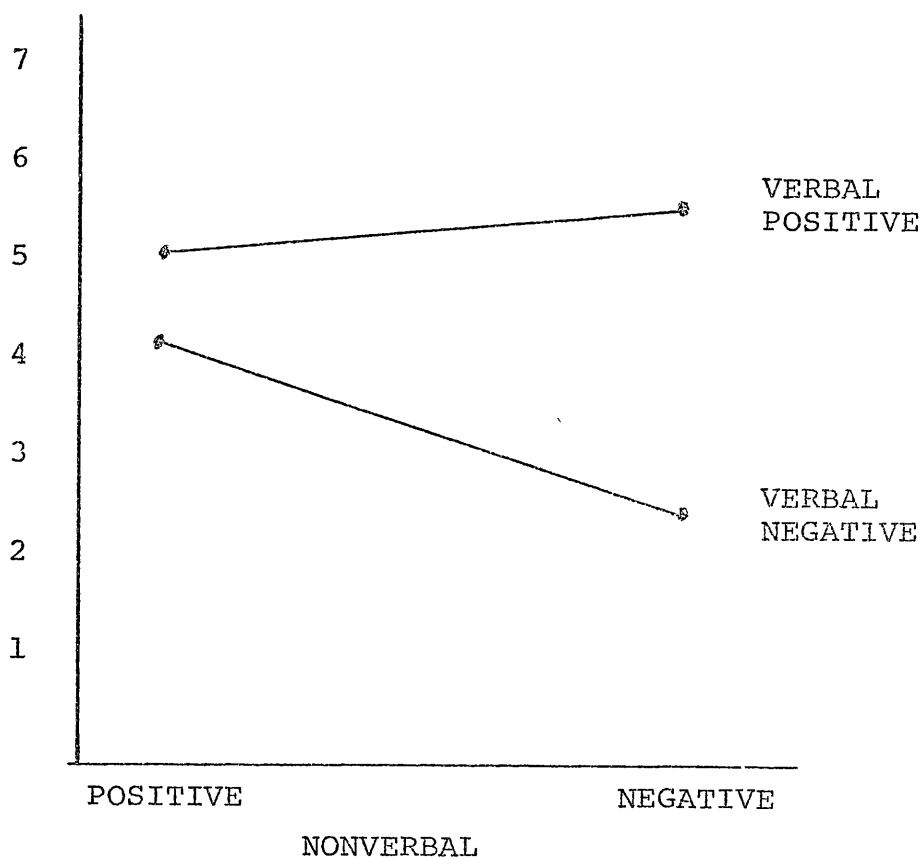
TABLE 17

SUMMARY OF ANALYSIS OF VARIANCE FOR
 QUESTIONNAIRE ITEM 5:
 HE WANTED TO KNOW HER BETTER -
 HE DID NOT WANT TO KNOW HER BETTER.

SOURCE	DF	MS	F	P
Verbal (V)	1	80.62	21.14	.001
Nonverbal (NV)	1	9.41	2.47	
Sex (S)	1	6.16	1.62	
V x NV	1	24.54	6.44	.025
V x S	1	4.74	1.24	
NV x S	1	.82	.21	
V x NV x S	1	.24	.06	

TABLE 18

VERBAL BY NONVERBAL INTERACTION FOR
QUESTIONNAIRE ITEM 5:
HE WANTED TO KNOW HER BETTER -
HE DID NOT WANT TO KNOW HER BETTER.



or in disharmony with the message, had little or no influence. However, when the verbal message was negative, the presence of positive nonverbal cues yielded a significantly higher mean ($t = -2.9172$, $p < .01$) than the negative congruent condition. These results are similar to the results found for questionnaire item 3; it seems as though the presence of any positive cue, verbal or nonverbal, significantly raised mean judgments.

When the means of the two incongruent cells were compared, the verbal positive-nonverbal negative cell mean was significantly higher ($t = -2.2054$, $p < .05$) than the mean of the verbal negative-nonverbal positive cell. Again, we must conclude that the verbal message dominated.

6. He wanted to be right where he was - He wanted to be off somewhere else. For this item an analysis of variance showed a significant verbal effect only ($p < .001$). Subjects apparently believed the verbal message and disregarded nonverbal cues entirely. Since these results were not found in any other data, a closer examination of the item was made. Logically, the question forms a paradox that might render this item invalid. Formal reasoning implies that if the man wanted to be off somewhere else, and if he were congruent with such a verbal statement, he would either have left the scene or would not have been there in the first place. This logical fallacy led this researcher

to discount this item, although a summary of the analysis is provided in Table 19.

7. He was comfortable and at ease - He was not comfortable and at ease. Table 20 is a summary of the analysis of variance for this item. There were significant main effects for the verbal and nonverbal variables ($p < .001$ in both cases) and for the sex variable ($p < .001$). Females judged the man significantly more comfortable than did the males. A significant verbal by nonverbal interaction ($p < .005$) is graphed in Table 21. The graph shows that when the verbal message was negative, accompanying nonverbal behaviors were negligible in their effect, but that when the verbal message was positive, the presence of positive nonverbal cues raised the mean significantly ($t = -5.0888$, $p < .001$).

A comparison of the two incongruent conditions revealed no significant differences between the two mean scores, and we therefore conclude that verbal and nonverbal cues equally influenced meanings generated.

8. He wanted to be with the young woman - He wanted to be alone. Table 22 is a summary of the analysis of variance for this item. A significant main effect was noted for the verbal variable ($p < .001$) and for the nonverbal variable ($p < .005$). Two interaction effects were present. Table 23 includes a graph of the verbal by nonverbal interaction ($p < .01$) and Table 24 includes a graph of the verbal by sex interaction ($p < .05$).

TABLE 19

SUMMARY OF ANALYSIS OF VARIANCE FOR
 QUESTIONNAIRE ITEM 6:
 HE WANTED TO BE RIGHT WHERE HE WAS -
 HE WANTED TO BE OFF SOMEWHERE ELSE.

SOURCE	DF	MS	F	P
Verbal (V)	1	117.35	33.546	.001
Nonverbal (NV)	1	8.16	2.333	
Sex (S)	1	7.302	2.087	
V x NV	1	.002	.001	
V x S	1	7.281	2.081	
NV x S	1	0.705	.202	
V x NV x S	1	5.202	1.487	

TABLE 20

SUMMARY OF ANALYSIS OF VARIANCE FOR
 QUESTIONNAIRE ITEM 7:
 HE WAS COMFORTABLE AND AT EASE -
 HE WAS NOT COMFORTABLE AND AT EASE.

SOURCE	DF	MS	F	P
Verbal (V)	1	98.63	33.1	.001
Nonverbal (NV)	1	41.93	14.07	.001
Sex (S)	1	25.87	8.68	.005
V x NV	1	29.51	9.90	.005
V x S	1	4.02	1.35	
NV x S	1	7.66	2.57	
V x NV x S	1	1.28	.43	

TABLE 21

VERBAL BY NONVERBAL INTERACTION FOR
QUESTIONNAIRE ITEM 7:
HE WAS COMFORTABLE AND AT EASE -
HE WAS NOT COMFORTABLE AND AT EASE,

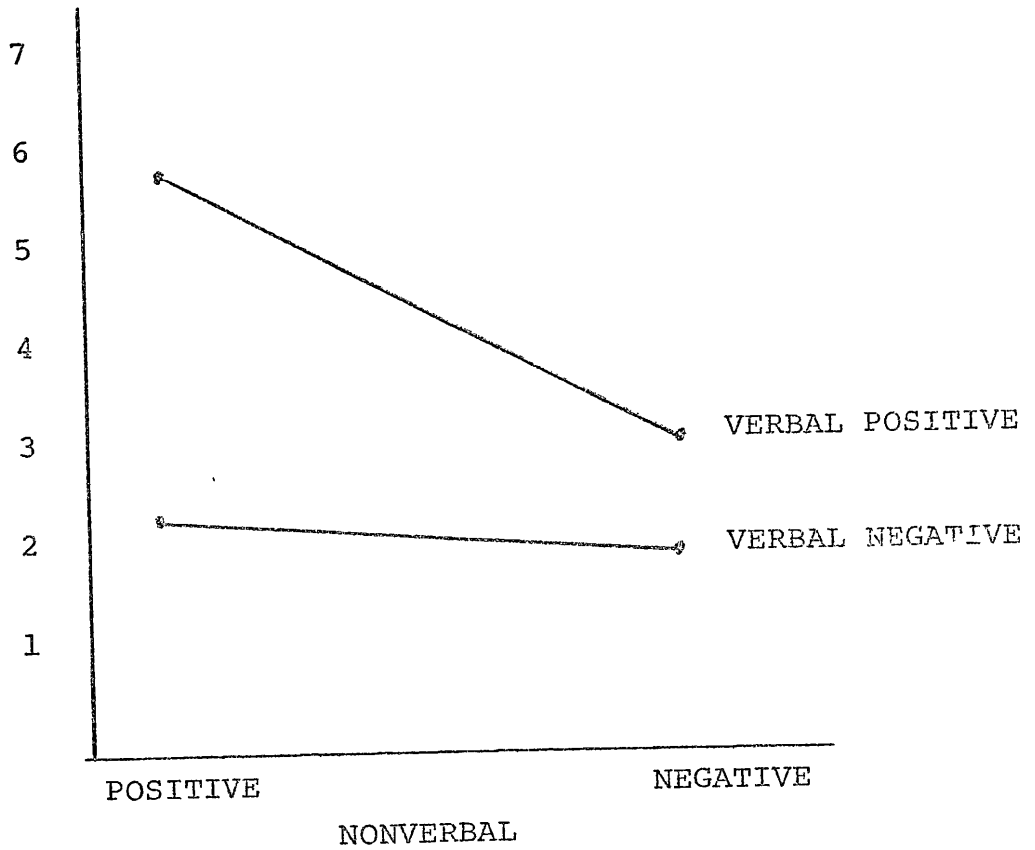


TABLE 22

SUMMARY OF ANALYSIS OF VARIANCE FOR
 QUESTIONNAIRE ITEM 8:
 HE WANTED TO BE WITH THE YOUNG WOMAN -
 HE WANTED TO BE ALONE.

SOURCE	DF	MS	F	P
Verbal (V)	1	63.81	18.41	.001
Nonverbal (NV)	1	30.7	8.86	.005
Sex (S)	1	5.01	1.44	
V x NV	1	26.1	7.53	.01
V x S	1	14.08	4.06	.05
NV x S	1	.66	.19	
V x NV x S	1	4.91	1.42	

TABLE 23

VERBAL BY NONVERBAL INTERACTION FOR
QUESTIONNAIRE ITEM 8:
HE WANTS TO BE WITH THE YOUNG WOMAN -
HE WANTS TO BE ALONE.

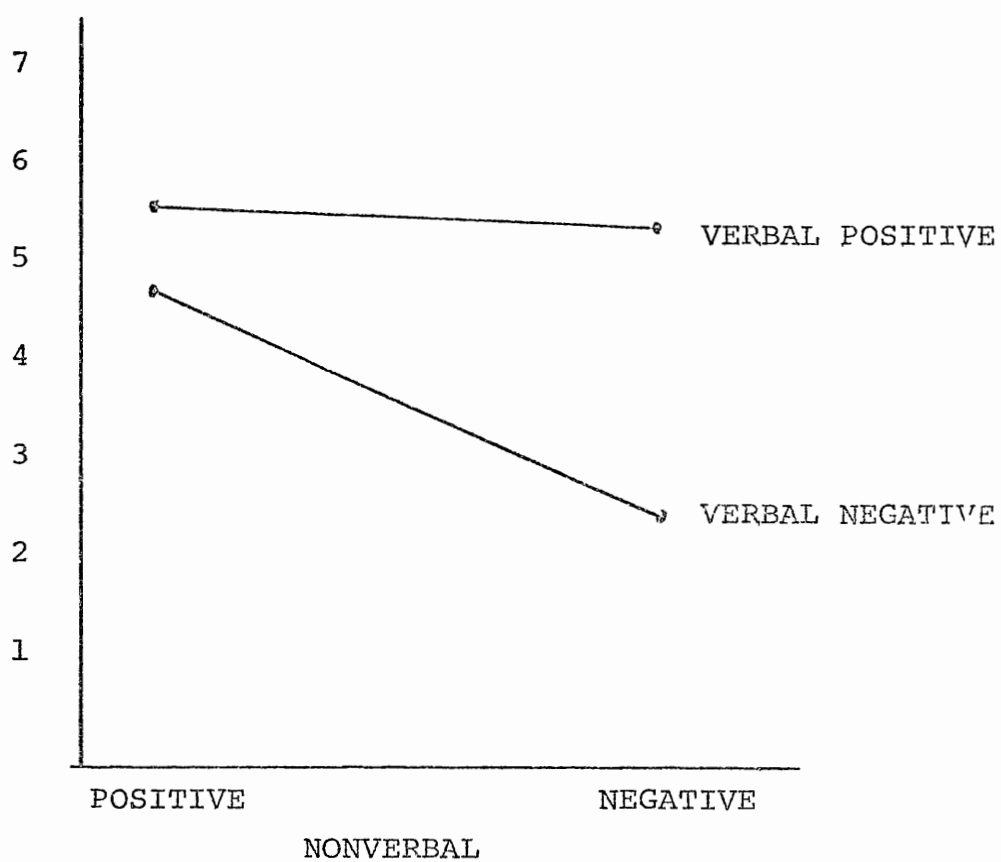
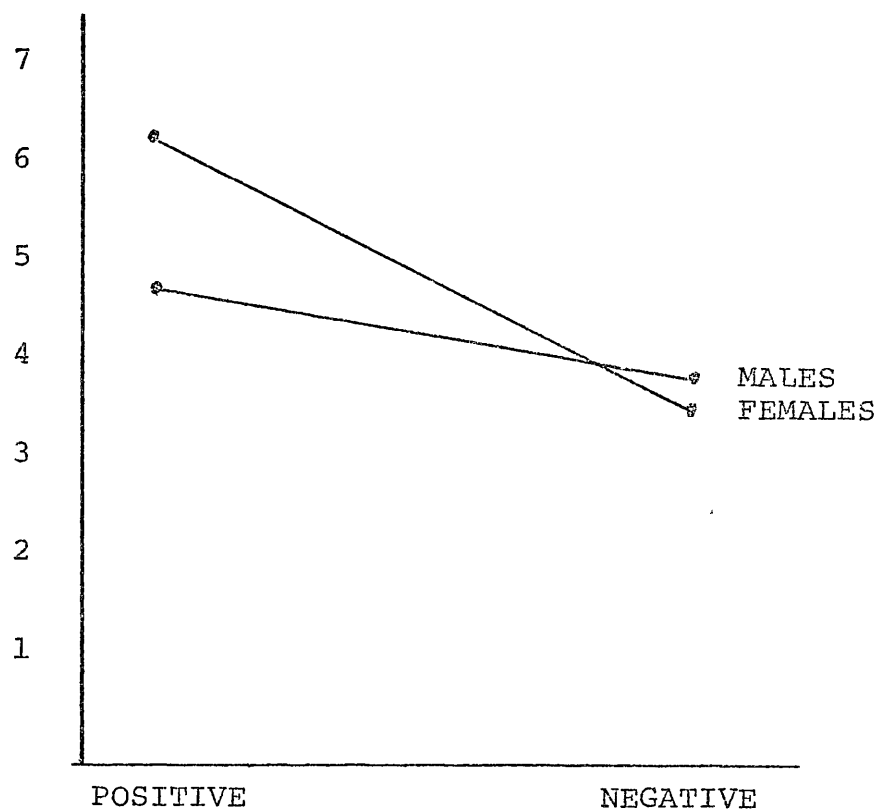


TABLE 24

VERBAL BY SEX INTERACTION FOR QUESTIONNAIRE ITEM 8:
HE WANTS TO BE WITH THE YOUNG WOMAN -
HE WANTS TO BE ALONE.



For the verbal by nonverbal interaction, t-tests showed that when the verbal message was negative, the addition of positive nonverbal cues raised the mean judgments significantly ($t = -3.949$, $p < .001$), but that when the verbal message was positive, nonverbal cues provided no influence.

When the means of the two incongruent cells were compared, there were no significant differences and we again conclude that verbal and nonverbal cues had equal influence on subjects.

The verbal by sex interaction, as graphed in Table 24, indicates that females judged the positive verbal statements of the man significantly higher than did the males ($t = -4.3088$, $p < .001$).

9. He was friendly - He was hostile. A summary of the analysis of variance for this item is included as Table 25. There were significant effects for verbal ($p < .001$) and nonverbal ($p < .005$) variables. One interaction, verbal by nonverbal, was present ($p < .025$); Table 26 graphs this interaction. The graph shows that when the verbal message was negative, the presence of positive nonverbal cues raised the mean significantly ($t = -4.1707$, $p < .001$). Again, it is noted that the presence of any positive cues, verbal or nonverbal in origin, raised the means significantly as compared to the negative incongruent condition.

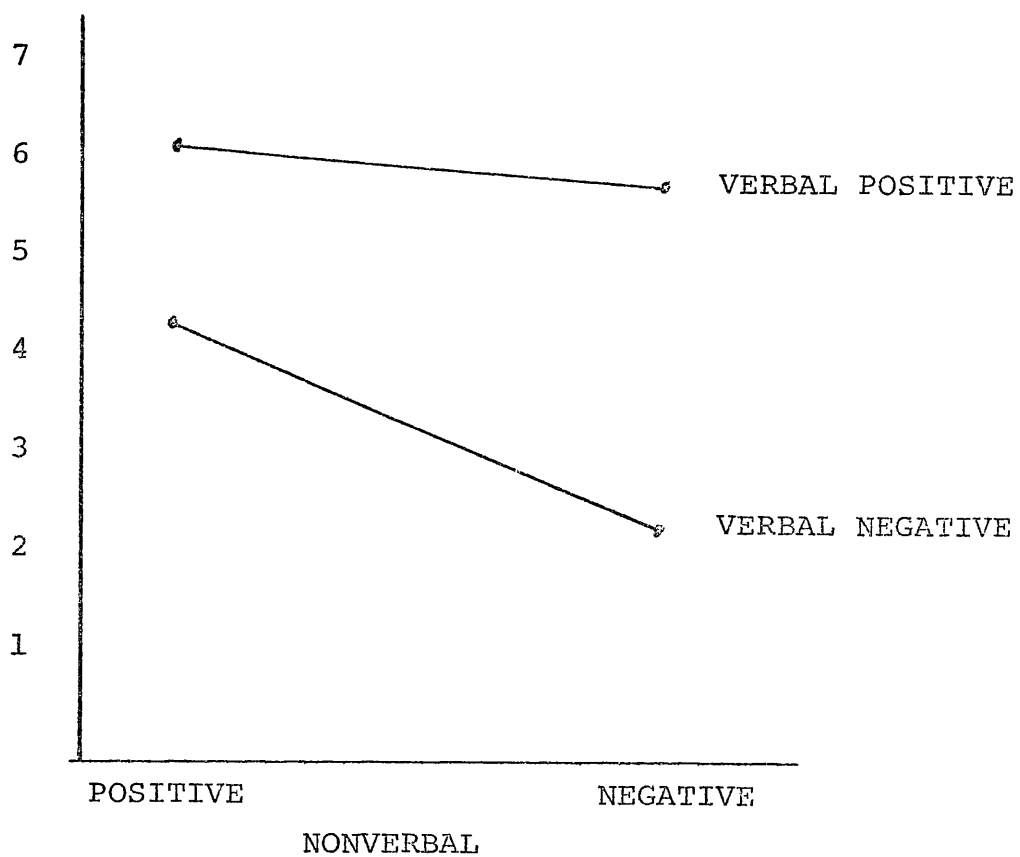
TABLE 25

SUMMARY OF ANALYSIS OF VARIANCE FOR
QUESTIONNAIRE ITEM 9:
HE WAS FRIENDLY - HE WAS HOSTILE.

SOURCE	DF	MS	F	P
Verbal (V)	1	142.11	53.37	.001
Nonverbal (NV)	1	30.57	11.48	.005
Sex (S)	1	6.9	2.59	
V x NV	1	18.76	7.05	.025
V x S	1	2.35	.88	
NV x S	1	.43	.16	
V x NV x S	1	1.24	.47	

TABLE 26

VERBAL BY NONVERBAL INTERACTION FOR
QUESTIONNAIRE ITEM 9:
HE WAS FRIENDLY - HE WAS HOSTILE.



A comparison of the means of the two incongruent conditions revealed that the verbal positive - nonverbal negative condition had a significantly higher mean ($t = 2.8577$, $p < .01$) than the verbal negative - nonverbal positive. We conclude that for this item, verbal messages dominated.

10. He liked the young woman - He did not like the young woman. Table 27 is a summary of the analysis of variance for the last questionnaire item. Significant main effects were found for the verbal variable ($p < .001$) and for the nonverbal variable ($p < .01$). One interaction, a verbal by nonverbal effect, was present ($p < .005$), and this is detailed in Table 28. Again we found familiar results; the presence of any positive cues, verbal or nonverbal in origin, produced higher ratings than were obtained in the negative congruent condition ($t = -4.0947$, -8.6621 , -6.5623 ; all $p < .001$). In particular, when the verbal message was negative, the presence of nonverbal positive cues significantly raised the mean ($t = -4.0947$, $p < .001$).

A comparison of the means for the incongruent cells showed the verbal positive-nonverbal negative to be significantly higher ($t = 2.7723$, $p < .01$) than the verbal negative - nonverbal positive. For this item, we conclude the verbal messages dominated.

Summary. It is obvious that nonverbal cues did not dominate the meanings reported on the semantic differential questionnaire in response to incongruent communications.

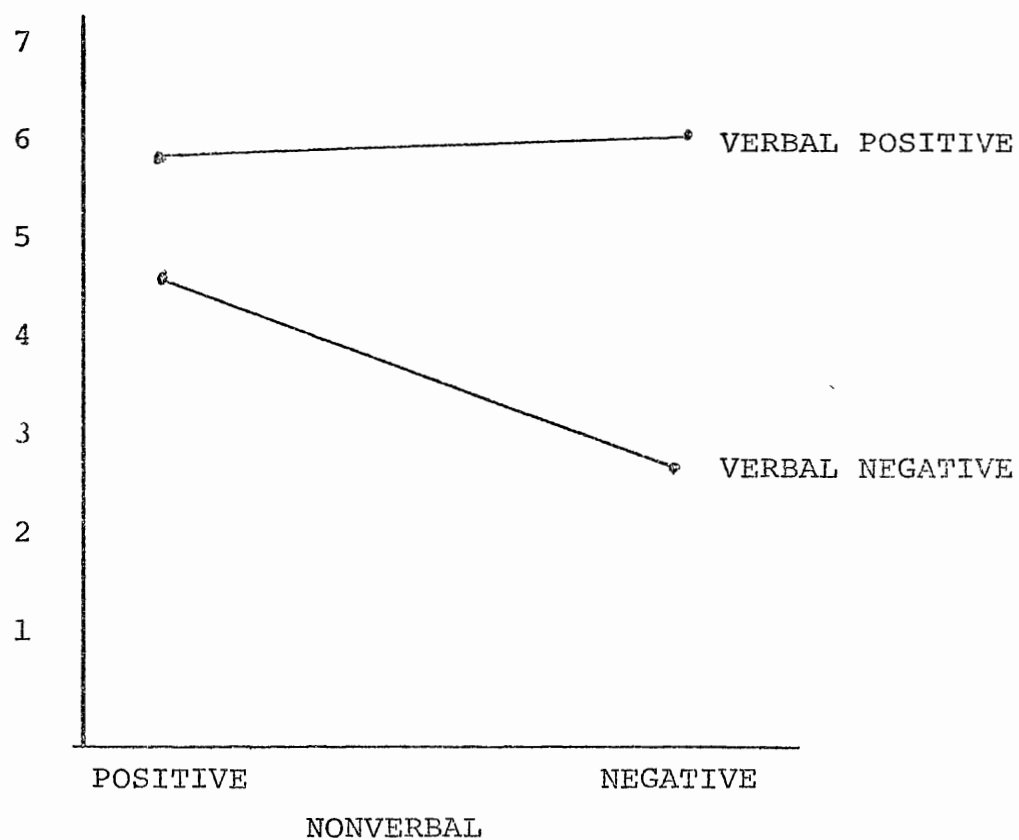
TABLE 27

SUMMARY OF ANALYSIS OF VARIANCE FOR
 QUESTIONNAIRE ITEM 10:
 HE LIKED THE YOUNG WOMAN -
 HE DID NOT LIKE THE YOUNG WOMAN.

SOURCE	DF	MS	F	P
Verbal (V)	1	117.64	43.5	.001
Nonverbal (NV)	1	20.68	7.65	.01
Sex (S)	1	1.4	.52	
V x NV	1	26.63	9.85	.005
V x S	1	5.2	1.92	
NV x S	1	1.07	.4	
V x NV x S	1	.18	.07	

TABLE 28

VERBAL BY NONVERBAL INTERACTION FOR
QUESTIONNAIRE ITEM 10:
HE LIKED THE YOUNG WOMAN -
HE DID NOT LIKE THE YOUNG WOMAN.



Where verbal by nonverbal interactions occurred, the verbal message dominated (four cases) or the verbal and nonverbal messages had equal influence (three cases). In no case did we find nonverbal cues dominant.

The analysis of variance reported for each item revealed some other noteworthy trends. For example, for some items, the presence of any positive cues, regardless of their source, dominated meanings; and, for some items, the presence of any negative cues, regardless of their source, dominated meanings. These findings are interpreted in Chapter 4 under the discussion of a posteriori findings.

Analysis of Responses to the Giffin Trust Differential

This study hypothesized that attitudes of interpersonal trust would be impaired by incongruent communications. We predicted that subjects responding to the Giffin Trust Differential who viewed the incongruent stimulus conditions would score lower mean measures on all three factors than subjects who viewed the congruent stimulus conditions.

1. Character. An analysis of variance for this factor yielded a significant main effect for the verbal variable ($p < .001$) and an interaction effect for the verbal by nonverbal variables ($p < .025$). Table 29 is a summary of the analysis of variance data, and Table 30 illustrates the interaction effects. We found, again, that the presence

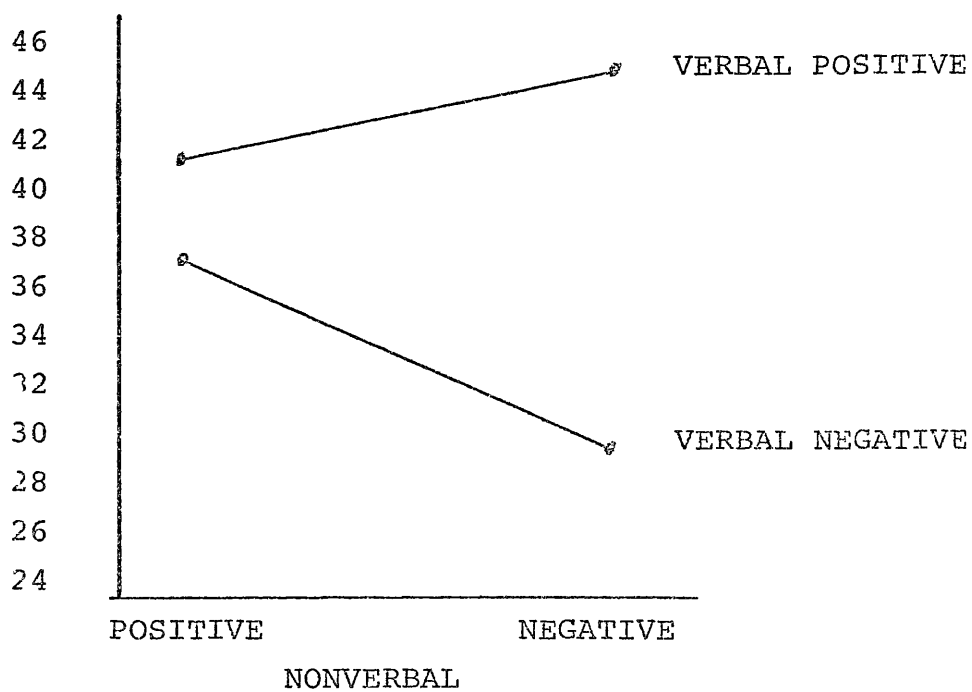
TABLE 29

SUMMARY OF ANALYSIS OF VARIANCE FOR
GIFFIN TRUST DIFFERENTIAL
CHARACTER

SOURCE	DF	MS	F	P
Verbal (V)	1	2038.99	20.64	.001
Nonverbal (NV)		125.75	1.27	
Sex (S)	1	.18	.002	
V x NV	1	593.02	6.00	.025
V x S	1	137.82	1.4	
NV x S	1	.02	.00	
V x NV x S	1	175.9	1.78	

TABLE 30

VERBAL BY NONVERBAL INTERACTION FOR
GIFFIN TRUST DIFFERENTIAL: CHARACTER



of any positive cues, regardless of origin, raised mean judgments of the man's character significantly as compared to the negative congruent group. When the two incongruent cells' means were compared, the cell with the positive verbal message had a significantly higher mean ($t = 2.4832$) than the cell with the negative verbal message. There is no support for the hypothesis that interpersonal trust is impaired by incongruent communications for the factor of character.

2. Dynamism. An analysis of variance is summarized in Table 31. Main effects were present for the verbal variable ($p < .05$), for the nonverbal variable ($p < .025$), and for the sex of subjects ($p < .005$). Females rated the young man significantly higher than men on items included in the dynamism factor. One interaction effect, verbal by nonverbal, was noted ($p < .001$); Table 32 graphs this data. A significant difference is noted between the positive congruent cell and all other conditions. Apparently, the presence of any negative cues, verbal or nonverbal, caused group means to drop significantly when compared with the positive congruent condition. There were no differences between the two incongruent means. Again, we found no support for the hypothesis for this factor.

3. Expertness. An analysis of variance for the expertness factor is summarized in Table 33. Main effects were found for both verbal and nonverbal variables ($p < .005$).

TABLE 31

SUMMARY OF ANALYSIS OF VARIANCE FOR
GIFFIN TRUST DIFFERENTIAL
DYNAMISM

SOURCE	DF	MS	F	P
Verbal (V)	1	462.24	4.965	.05
Nonverbal (NV)	1	642.52	6.902	.025
Sex (S)	1	1075.09	11.55	.005
V x NV	1	2035.83	21.87	.001
V x S	1	52.9	0.57	
NV x S	1	137.76	1.48	
V x NV x S	1	172.47	1.85	

TABLE 32

VERBAL BY NONVERBAL INTERACTION FOR
GIFFIN TRUST DIFFERENTIAL: DYNAMISM

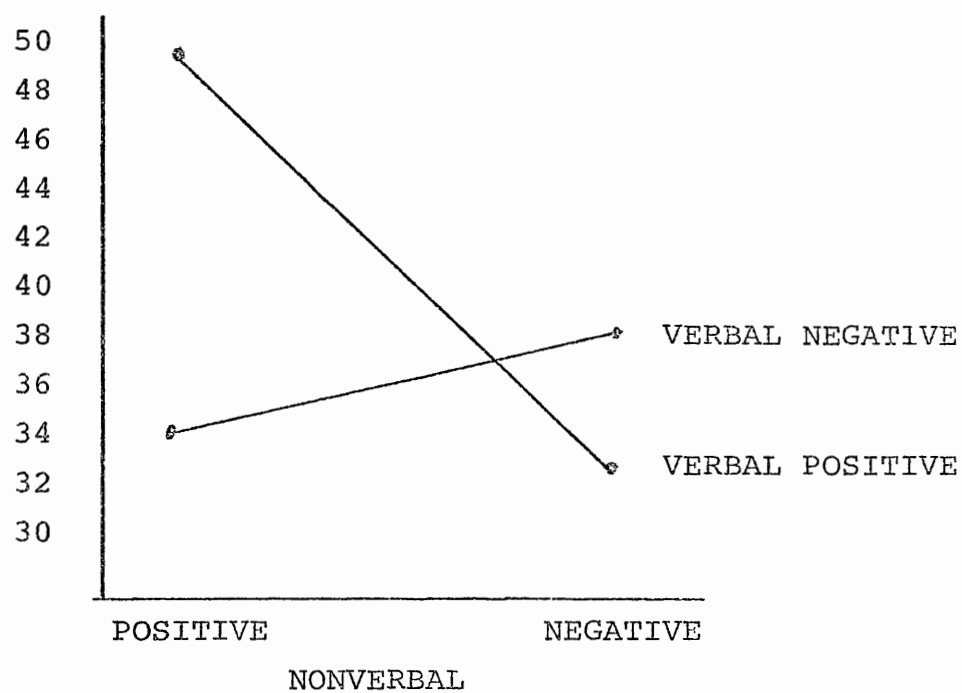


TABLE 33

SUMMARY OF ANALYSIS OF VARIANCE FOR
GIFFIN TRUST DIFFERENTIAL
EXPERTNESS

SOURCE	DF	MS	F	P
Verbal (V)	1	667.34	9.22	.005
Nonverbal (NV)	1	683.95	9.45	.005
Sex (S)	1	10.33	.14	
V x NV	1	238.296	3.29	
V x S	1	25.33	.35	
NV x S	1	26.65	.37	
V x NV x S	1	.18	.002	

In this case, there was no significant interaction, so we conclude that verbal and nonverbal behaviors contributed equally to subjects' judgments of expertness. No support for our hypothesis, however, is evident.

Honesty, Sincerity and Kindness. Three items from the character factor were analyzed separately as we reasoned each might be influenced by incongruent communications. Honesty and sincerity measures were similar under all experimental conditions; apparently subjects' judgments of the man's honesty and sincerity did not depend upon his congruence.

For kindness, however, there were significant main effects for the verbal component ($p < .001$) and the nonverbal component ($p < .01$) and a significant verbal by nonverbal interaction ($p < .001$). Table 34 summarizes the analysis of variance and Table 35 describes the interaction data. The presence of any positive cues, verbal or nonverbal, produced a significantly higher mean for groups when compared to the negative congruent condition. When the two incongruent cells were compared, the cell with the positive verbal message had a significantly higher mean ($t = 2.28, p < .05$). We conclude that the hypothesis failed to be supported by any of these three items extracted from the G.T.D. factor of character.

In short, this experiment indicated that interpersonal trust is not impaired by incongruent communications.

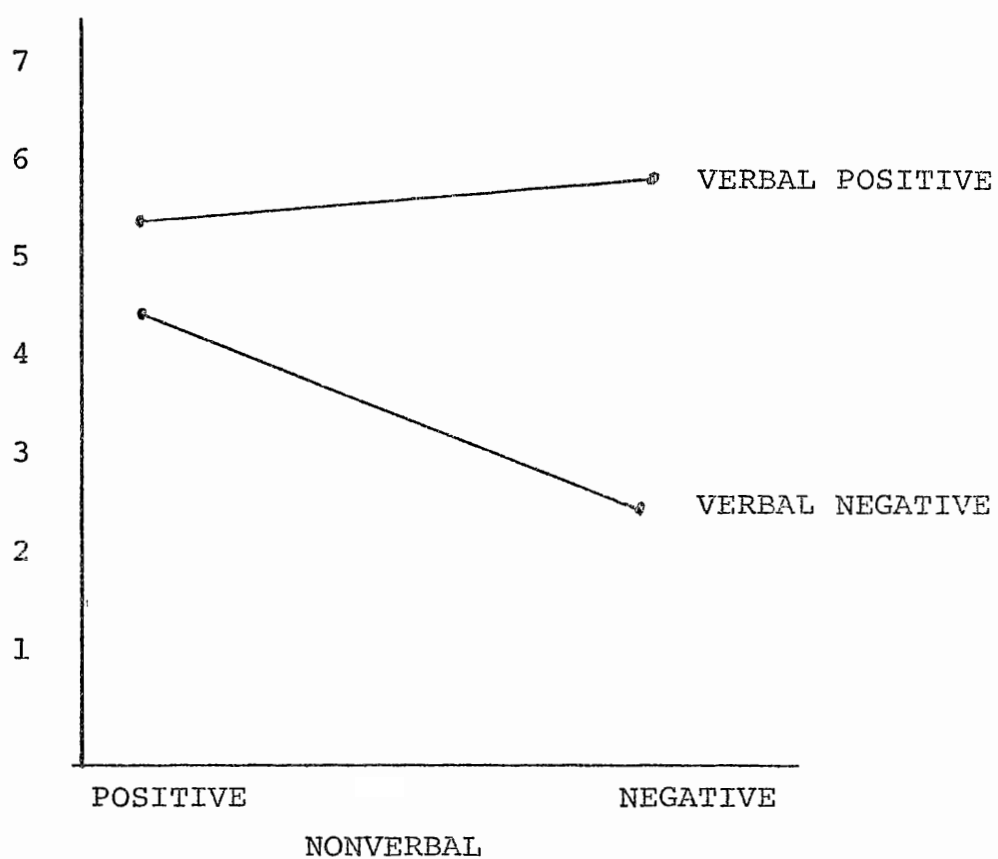
TABLE 34

SUMMARY OF ANALYSIS OF VARIANCE FOR
GIFFIN TRUST DIFFERENTIAL
KINDNESS

SOURCE	DF	MS	F	P
Verbal (V)	1	85.21	36.24	.001
Nonverbal (NV)	1	19.77	8.41	.01
Sex (S)	1	0.6	.25	
V x NV	1	30.78	13.1	.001
V x S	1	4.32	1.84	
NV x S	1	.24	.1	
V x NV x S	1	.02	.006	

TABLE 35

VERBAL BY NONVERBAL INTERACTION FOR
GIFFIN TRUST DIFFERENTIAL: KINDNESS



CHAPTER IV

DISCUSSION

In this chapter the hypotheses set forth in Chapter I are recalled and are either accepted or rejected on the basis of statistical tests performed on the data. Next, the data is examined for some a posteriori findings. Then, some limits to this study are noted. Finally, some conclusions are drawn.

The Hypotheses

1. When verbal and nonverbal behaviors are incongruent, meanings inferred from the interaction by viewers will be dominated by nonverbal cues. Although this hypothesis was well supported by the literature (Mehrabian and Wiener, 1967; Mehrabian and Ferris, 1967; Argyle, as reported by Mehrabian, 1971), the data for this experiment failed to support it at all. Of the nine items on the semantic differential questionnaire (recall, number six was eliminated due to the logical paradox it presented), two had significant main effects for both verbal and nonverbal sources, with no significant interactions; both factors, we conclude, contributed to subjects' inferences on those items. For seven other items, there was a significant ($p < .05$, or better) interaction between verbal and nonverbal

sources. Of these, three items had mean responses for their two incongruent conditions that were statistically indistinguishable. These items included: (1) He was attracted to the young woman - He was not attracted to the young woman, for which any positive communication produced affirmative judgments; (2) He was comfortable and at ease - He was not comfortable and at ease, for which any negative communication produced a negative judgment; and, (3) He wanted to be with the young woman - He wanted to be alone, for which any positive communication produced an affirmative judgment.

Four items had significantly different mean responses to their respective incongruent conditions; in each case verbal cues dominated the direction of meanings subjects scored. These items included: (1) He was happy - He was unhappy; (2) He wanted to know her better - He did not want to know her better; (3) He was friendly - He was hostile; and (4) He liked the young woman - He disliked the young woman.

In short, in no case did nonverbal cues dominate meanings created. Although our predictions were not at all realized, in three cases we have evidence of nonverbal cues providing equal influence on meanings.

2. Compared to men, women rely more on nonverbal behaviors for their inferences in decoding an incongruent communication. This hypothesis, like the first, was not

supported by the data. We found several verbal by sex interactions, but no nonverbal by sex interactions. Therefore, we conclude that there are no differences between men and women in their tendency to respond to nonverbal communication.

However, the sex variable did turn up some other differences which are included in this chapter as a posteriori findings.

3. a. Subjects responding to incongruent communications will show less trust of the sender in their responses on the Giffin Trust Differential. An analysis of responses to the Giffin Trust Differential yielded no significant differences between the mean scores of subjects who viewed congruent communications and those who viewed incongruent communications. For the factor of character, we found a significant verbal effect and a verbal by nonverbal interaction which was carried by the verbal influence. For the factor of dynamism, all three variables had a significant main effect and the verbal by nonverbal interaction showed the influence of any negative cues, regardless of origin, lowered cell means as compared to the positive congruent cell. The factor of expertness yielded significant main effects for verbal and nonverbal variables, but no interaction effect, so we conclude that both variables influenced subjects' judgments of expertness. No support for our hypothesis, however, is indicated by any GTD analysis. Apparently,

incongruent behaviors on the part of the man in the videotape did not at all influence subjects' attitudes of interpersonal trust for him.

3. b. Subjects responding to incongruent communications compared to subjects responding to congruent communications will use more constructs in writing their impression of the sender and their description of the communication. An analysis of variance on the number of constructs for the impression, the communication description, and the two instruments combined revealed no differences. The hypothesis is not supported and the reasoning that incongruent communications provide more information is dismissed.

3. c. Subjects responding to incongruent communications compared to subjects responding to congruent communications will use a higher proportion of situation-specific constructs than general constructs in their written impressions. This hypothesis was supported by the data. An analysis of variance revealed a significant ($p < .025$) verbal by nonverbal interaction, and those subjects responding to incongruent communications produced a significantly greater proportion of situation-specific constructs than those responding to congruent communications. Subjects were more willing to make general statements about the man in the videotape when he was congruent. When he was

incongruent, subjects limited their inferences to the specific situation a greater proportion of the time.

3. d. Subjects responding to incongruent communications compared to subjects responding to congruent communications will use a lower proportion of dispositional, emotional or motivational constructs in their written impressions. An analysis of variance revealed a triple interaction effect in this data, with only women subjects supporting the hypothesis. Women made fewer inferences about the man's disposition when he was incongruent, and reported instead, a higher proportion of verbal and nonverbal behaviors and physical traits. In all conditions, men made inferences about the man's disposition in higher proportions.

3. e. Subjects responding to incongruent communications compared to subjects responding to congruent communications will write impressions and communication descriptions that recognize and account for inconsistency. When both written responses were rated for their degree of inconsistency, greater inconsistency was found in responses to incongruent communications than to congruent communications. However, men's responses to the positive congruent condition were equally inconsistent, meaning that only their responses to negative congruent communications were consistent. Therefore, it is concluded that this hypothesis gained only partial support among male subjects, although it was fully supported by female subjects.

A Posteriori Findings

1. Evidence that both verbal and nonverbal modes were perceived. Our hypotheses assumed that such evidence would be reflected in the dominance of nonverbal cues on the inferences subjects made on the semantic differential questionnaire. Since this was not the case, we looked through the data to assemble what evidence we did find indicating that nonverbal cues were perceived by subjects.

Table 36 is a summary of sources of variance for all data analyzed by analysis of variance. It may be observed that most items had a significant main verbal effect and also had either a significant nonverbal effect, a significant verbal by nonverbal interaction, or a significant verbal by nonverbal by sex interaction. These main and interaction effects indicate that both modes of communication influenced subjects' judgments.

Written responses were analyzed in three ways to search for indications that nonverbal cues were perceived by subjects. Written responses were analyzed for their level of inconsistency, and, since responses to incongruent communications were rated significantly more inconsistent than responses to congruent communications (with the exception of males responding to the positive congruent condition), we have further evidence that the nonverbal mode was perceived.

TABLE 36

SUMMARY OF SOURCES OF VARIANCE FOR
DATA IN THIS EXPERIMENT

ITEM	V	NV	S	VxNV	VxS	NVxS	VxNVxS
He liked exercise,	.001	.01	.05		.025		
Exercise easy,	.001	.005		.01	.05		
He was happy,	.001	.001			.025		
Attracted to her,	.001	.001		.01			
Wants to know better,	.001			.025			
Be where he is,	.001						
Comfortable,	.001	.001	.005	.005			
Wants to be with her,	.001	.005		.01	.05		
Friendly,	.001	.005		.025			
Liked her,	.001	.01		.005			
Character	.001			.025			
Dynamism	.05	.025	.005	.001			
Expertness	.005	.005					
Kindness	.001	.01		.001			
Honesty	-	-					
Sincerity	-	-					
Number of Constructs	-	-	-	-	-		
Classification: Dispositional						.025	
Classification: Situation- Specific				.025			

The written responses were also rated independently by two judges for the dominance of mode in the report, verbal or nonverbal. Only .65 agreement was achieved when raters classified written responses as: (1) clearly consistent; (2) dominated by the verbal mode; (3) influenced by both verbal and nonverbal; and, (4) dominated by nonverbal mode. A tally was made for the two incongruent conditions citing whether subjects emphasized verbal cues over nonverbal ones or vice-versa. As may be seen in Table 37, there was no systematic tendency for either mode to predominate. However, the fact that the nonverbal mode did influence the responses provides further support for the assertion that nonverbal cues, as well as verbal messages, were perceived.

The written responses were judged independently as containing: (1) some mention of either an abstract concept such as "nonverbal communication," "metacommunication," or "body language" or specific mention of contradictory nonverbal behavior; or, (2) no mention of these. A chi square test was significant (chi square value = 18.15; $p < .005$), with more subjects mentioning nonverbal behavior in the incongruent conditions. Table 38 is a summary of the data. We conclude from this test also that nonverbal cues were perceived.

These indications lead us to conclude that nonverbal cues, while perceived, at least by most of the subjects most of the time, did not dominate inferences in responses to the measurement instruments used in this study.

TABLE 37

SUMMARY OF RATINGS OF DOMINANCE OF MODE IN WRITTEN RESPONSES
TO INCONGRUENT CONDITIONS

		CONSISTENT	VERBAL DOMINATED	VERBAL + NONVERBAL INFLUENCE	NONVERBAL DOMINATED
VERBAL POSITIVE -	M	0	3	6	4
NONVERBAL NEGATIVE	F	0	2	7	0
VERBAL NEGATIVE -	M	0	3	6	0
NONVERBAL POSITIVE	F	0	4	4	3

TABLE 38

NUMBER OF SUBJECTS WHO DID OR DID NOT MENTION
NONVERBAL COMMUNICATION IN THEIR WRITTEN RESPONSES

	VERBAL			
	POSITIVE		NEGATIVE	
	NONVERBAL		NONVERBAL	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
MENTIONED	1	8	13	2
NOT MENTIONED	20	14	7	16

$$\chi^2 = 18.15$$

$$p < .025$$

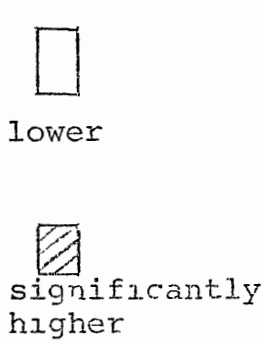
2. Some patterns in the relationship of verbal and nonverbal modes. The significant interactive verbal and nonverbal effects for the analysis of variance on the data in this study (see Table 36 to identify those effects) fell into three different patterns when the means of simple main effects were considered and compared. The first pattern is here named the Positive Influence, since the presence of any positive cues, either verbal or nonverbal in origin, significantly differentiated cells from the negative congruent cell. Table 39 is a model of the Positive Influence and lists the items from the study which exhibited this pattern of response. The items included two related categories of information; first, inferences drawn about the man's attitude and orientation toward the woman; and, second, the character factor from the Giffin Trust Differential. The second seems closely related to the first since the character factor includes such scales as sincere-insincere, honest-dishonest, respectful-disrespectful, selfish-unselfish, patient-impatient; these are most clearly interpreted from the man's behaviors toward the woman.

A second pattern of interaction effects is here called the Negative Influence, since any negative cues whatsoever, be they verbal or nonverbal, produced mean responses significantly lower than the positive congruent condition. Table 40 contains a model of the Negative Influence and lists those items from the study which fell

TABLE 39

VERBAL BY NONVERBAL INTERACTION EFFECTS:
 POSITIVE INFLUENCE

		VERBAL	
		Neg.	Pos.
NONVERBAL	Neg.		▨
	Pos.	▨	▨



 lower
 significantly higher

4. He was attracted to her.

5. He wanted to know her better.

8. He wanted to be with the young woman


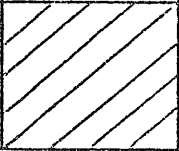

9. He was friendly

10. He liked the young woman.

GTD - Character

TABLE 40

VERBAL BY NONVERBAL INTERACTION EFFECTS:
NEGATIVE INFLUENCE

		VERBAL		
		Neg.	Pos.	
NONVERBAL	Neg.			 lower
	Pos.			 significantly higher

7. He was comfortable and at ease.

GTD - Dynamism

Kindness

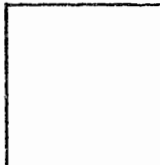
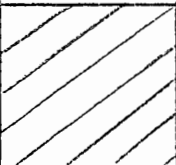





into this pattern of response. The kinds of information obtained here include a judgment about the man's comfort or discomfort, the factor of dynamism from the GTD and the kind-cruel scale from the factor of character from the GTD.

A single item, "the exercise was easy for him - the exercise was difficult for him" had a third kind of pattern, illustrated in Table 41, and here called the Verbal Influence. Significant differences were noted between the verbal positive and verbal negative conditions. This pattern of response is similar to the Negative Influence, the difference being that the verbal positive conditions had significantly higher means than the verbal negative conditions.

From these three patterns of response, it is concluded that when judgments of interpersonal affect and of the man's sincerity were required, the presence of any positive cues significantly influenced meanings. When the scales required judgments of the man's comfort and dynamism, the presence of any negative cues significantly influenced inferences. Finally, on judgments about the man's reaction to the exercise, the verbal message dominated. Generally, it was found that the presence of positive cues, whether verbal or nonverbal, will influence the inferences people make about the attitude, orientation and disposition of another. Character, emotionality and motivation are also likely to be read as positive if any positive cues at all are available. In the case of incongruence, the positive

TABLE 41

VERBAL BY NONVERBAL INTERACTION EFFECTS:
VERBAL INFLUENCE

		VERBAL		
		Neg.	Pos.	
NONVERBAL	Neg.			 significantly higher
	Pos.			 significantly higher
				lower

2. The exercise was easy for him.

words or actions are likely to be the most believable for these categories of information.

Generally, it was found that the presence of any negative cues, verbal or nonverbal, regarding one's level of activity, dynamism, nervousness vs. comfort, cruelty vs. kindness will likely influence meanings inferred by observers of such behavior. In the case of incongruence for these categories of information, it is the negative words or actions that will be most credible.

In the case of one's orientation to a task or project, it was found that the verbal message is the most believable and that a positive verbal message is further enhanced by the presence of positive nonverbal cues. If someone were to say he disliked his task, yet accompany that message by behaviors indicating a positive attitude, those cues would likely be ignored and the verbal report believed.

3. Verbal By Sex Interaction Effects. The results of this study revealed that women were more responsive to positive verbal cues than were men. Table 36 notes that two main effects with no accompanying interaction effects were found for the sex of subjects variable. In each case, females responded to the verbal positive message with significantly higher mean scores than did the males. These items included: (1) He was comfortable and at ease - He was not comfortable and at ease, and (2) The dynamism factor from the Giffin Trust Differential.

Four verbal by sex interactions were found; three fell into the pattern illustrated in Table 42. For the items (1) He liked the exercise - He disliked the exercise, (2) The exercise was easy for him - The exercise was difficult for him, and (3) He was happy - He was unhappy, females responded with significantly higher means to the verbal positive condition than did males. Both males and females responded with higher mean scores in the positive conditions than they did in the negative conditions.

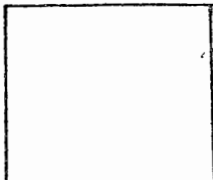
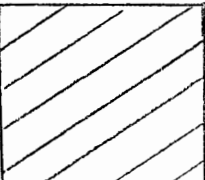

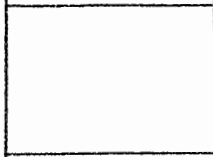
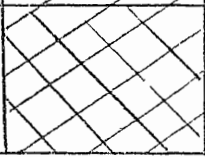


Table 43 illustrates the verbal by sex interaction for item 8, He wanted to be with the young woman - He wanted to be alone. Females responded to verbal cues that were positive with significantly higher mean scores than did males.

4. Nonverbal by Sex Interaction Effects. When classifying cognitive constructs in the written responses as either dispositional-motivational or emotive, or verbal and nonverbal behaviors or physical traits, females were more responsive to nonverbal positive cues. There was a slight trend for females to be more responsive to negative nonverbal cues also.

5. The Mention of Sexual Behavior or Motivation. Since the man and woman in the tape were engaged in immediacy or non-immediacy orientations toward each other, many of their behaviors could have been interpreted as courtship or sexual advance. Written responses were

TABLE 42

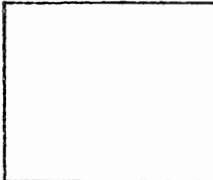
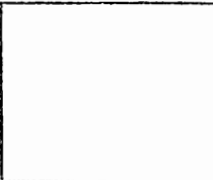

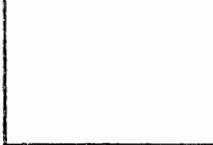


VERBAL BY SEX INTERACTION EFFECTS

		VERBAL INFLUENCE			
		Neg.	Pos.		
Sex	Males				lower
	Females				significantly higher
					significantly higher

1. He liked the exercise.
2. The exercise was easy for him.
3. He was happy.

TABLE 43

VERBAL BY SEX INTERACTION EFFECTS

		NEGATIVE INFLUENCE			
		Neg.	Pos.		
Sex	Males				lower
	Females				significantly higher

8. He wants to be with the young woman.

independently judged by two raters as containing: (1) mention of sexual behavior or motivation, or (2) no mention of sexual behavior or motivation. Table 44 charts this data. No sexual advance was attributed to the negative congruent condition or to the verbal positive-nonverbal negative condition. In the positive congruent condition and the verbal negative - nonverbal positive condition, sexual behavior or motivation were inferred. We can surmise from this finding that sexual advance was perceived only when appropriate nonverbal behaviors were present. This is the only finding in the study that indicates nonverbal cues dominate over verbal cues.

Limits of the Study

There are several limits to this study imposed by the stimulus condition. While the videotape did accomplish the presentation of face-to-face interaction, some subjects commented in their written responses that the tapes were obviously being acted. While the credibility of the tapes may be questioned as "real" or "acted," responses need not necessarily be different for the real and the simulated.

Next, the videotape focused on the communication of the male actor. Female responses thus might be questioned in several ways. First, would females have responded to another male actor in a similar way, or are there idiosyncracies in this man's performance that distinguish

TABLE 44

NUMBER OF SUBJECTS WHO MENTIONED OR
DID NOT MENTION SEXUAL BEHAVIOR OR
MOTIVATION

		VERBAL NEGATIVE		POSITIVE	
		Mention	No Mention	Mention	No Mention
NONVERBAL	Negative	0	18	0	22
	Positive	6	14	6	15

him from other men? Second, would females have responded differentially to an actress as well? We need also ask of the males, would they have responded similarly to another male actor, and would they have responded similarly to a female sender? Only an expansion of this study could answer these questions.

It is possible that some subjects who viewed these tapes may have held attitudes regarding the appropriateness or inappropriateness of public display of courtship behaviors; however, it is not at all obvious how these attitudes might have influenced responses on the instruments used. In any case, random selection should control for this as an intervening variable.

The final limitations imposed by the use of the videotape are that subjects were observers, rather than receivers, and that they did not have an interpersonal relationship with the communicator they were responding to. It is possible that responses of receivers will be different than responses of observers, especially when the variables impinging on interpersonal relationships are added. This research may or may not be generalizable to interpersonal relationships in which communicators know each other, have a shared history, and are familiar with the subtleties of meaning imbedded in words and actions for each other. Since subjects did not know the man in the videotape, and since they had only a brief exposure to him, it is possible that

they may not have been able to make judgments about interpersonal trust. Although this study rejects the hypothesis that interpersonal trust is impaired by incongruent communication, this conclusion is limited to the conditions of this study.

Conclusions

It is concluded that although nonverbal cues were perceived by subjects in this study, these nonverbal cues did not dominate meanings as measured by our instruments. These results run contrary to Mehrabian's proposed formula for dominance of channels (Mehrabian, 1971) and contradict the results of several research projects in the literature that focus on the differential influence of communication channels.

One important difference between this experiment and other experiments in the literature is noted. We attempted here to move from a carefully controlled laboratory study to a more global field study. In an effort to gain as natural an interaction as possible, control over channels was sacrificed, and the total interaction was considered rather than just the sound or just the visual interaction.

A theoretical problem may exist within the design of this study. It is entirely possible that we were grading peas with an egg sorter - that our instruments were not sensitive to the subtleties of nonverbal communication.

Theory holds that many facets of analogical nonverbal communication are not directly translatable to semantic scales or reducible to verbal description. Perhaps this is so.

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APPENDIX A

SCRIPTS FOR VIDEOTAPES

APPENDIX A

SCRIPTS FOR VIDEOTAPES

Common Introduction

Narrator: This videotape is being filmed at a weekend encounter group at the University of Kansas. The participants are residents of Lawrence, Topeka and Kansas City. None of them knew each other before this weekend.

The group is now in its third hour together. They will be spending a total of forty-eight hours together, learning more about themselves and how they relate to each other.

The group has divided into pairs for this exercise which you see in progress. In encounter group language, they are doing a "trust walk" or a "blind walk." One member of the pair is blindfolded and becomes dependent on the other, who leads him through a series of experiences. The entire exercise is conducted without words. After a time, the pairs will reverse roles and the blindfolded member will then lead his partner.

The group is now coming together, having completed the exercise.

Trainer: Okay, now that you have spent the greater part of an hour together, it is very likely that you have begun to know one another and have some feelings about each other; and, there might have been some issues raised that you would like to deal with. So, take the next few minutes and talk over with your partner anything you would like to discuss.

Positive Verbal Script

M: You know, I have never done anything like that before.
It was really great.

F: I feel just a little bit nervous talking to you about it.

M: Oh, no. It was so easy to reach out and find you there.

F: Really? I feel uncomfortable about what we did, and talking to you about it.

M: It was easy. There's a part of you that I know now that I didn't know before, and couldn't have known any other way. I know what it's like to reach out and touch your hand, see into your eyes. It really was easy.
And I didn't know I could enjoy anything like that.

F: I guess I really did enjoy it...the exercise, I mean.
And I enjoyed doing it with you.

M: Good. I'm glad, because I enjoyed doing it with you.
I think you're really fun.

F: Maybe we ought to do what the trainer said, and that is to talk about our present feelings.

M: I'd like to talk about that.

F: I don't feel very relaxed. Do you?

M: Yes, I am relaxed.

F: Well, I'm not.

M: I really wish you could be as ease with it as I am. I like what we did together. I'm comfortable. I'm very happy with things.

F: I guess maybe I'm scared. Sometimes when people first meet me, they don't like me very much; and, I guess I'm afraid that once you get to know me, you won't like me either.

M: I must be different than other people. Because, I like what we did together, and I like you.

Negative Verbal Script

M: I have never done anything like that before. It was really strange.

F: Yeah. I feel kind of strange talking to you about it.

M: But it was a lot worse when we were doing that silly exercise.

F: What do you mean?

M: I just felt incredibly inept and foolish, reaching around, groping, trying to touch you.

F: Really? Why?

M: I just don't go for this proscribed instant intimacy stuff. Okay. I did the exercise, so now I know you better?

F: Well, you know some things about me, don't you?

M: All I know, all I really know about you, is that you have fingers on the ends of your hands, and your palms are all cold and sweaty.

F: You don't even think of me as a person!

M: Sorry. That's just the way it is.

F: I really did enjoy the exercise and I enjoyed doing it with you.

M: I didn't like it at all.

F: Maybe what we ought to do is talk about what the trainer said to do, and that is to talk about our present feelings.

M: Okay, I'm miserable and I don't want to be here.

F: Where do you want to be?

M: Off. Away somewhere, anywhere.

F: Alone?

M: Yes, alone.

F: That really makes me feel uncomfortable.

M: I'm getting pretty tired of it too. But, it is going to be over soon.

F: You're pretty anxious to get out of here.

M: You're right.

F: You know, I get the feeling you really don't like me.

M: Right.

F: You don't like the exercise, and you don't like me.

M: Okay. I don't like the exercise, and I don't like you.

APPENDIX B

WRITTEN IMPRESSION

APPENDIX B

WRITTEN IMPRESSION

We would like to know your impression of the young man in the videotape. Imagine that a close friend of yours wants to know your impression of him. You want to be as helpful as you can by telling your friend everything you know, think and feel about the young man. Write in the space below what you would tell your friend. (Please take no more than five minutes.)

APPENDIX C

COMMUNICATION DESCRIPTION

APPENDIX C

COMMUNICATION DESCRIPTION

Now we would like your description of what the young man in the videotape communicated. Imagine you are telling a close friend of yours what the young man meant while he was communicating with the young woman. For instance, you might recount what he communicated about his feelings for her, his attitude toward the exercise they were doing, and his feelings about being in an encounter group. (Please take no more than five minutes.)

APPENDIX D

INSTRUCTIONS

APPENDIX D

INSTRUCTIONS

On the following pages are some bipolar scales. Here is how you mark these scales:

If you feel that the word or words at either end of the scales describes the young man in the videotape, you should place your mark in the space at that extreme.

Thus, if you felt he is a tall person, you should mark a tall-short scale thus:

tall X : ___ : ___ : ___ : ___ : ___ : ___ short

If you feel he is a short person, you should mark the scale thus:

tall ___ : ___ : ___ : ___ : ___ : ___ : X short

If you feel that the young man is best described as something between the two extremes, mark the appropriate space.

Please place your marks in the middle of the space provided, and not on the boundaries.

Please check every scale. Check each scale only once.

SEMANTIC DIFFERENTIAL QUESTIONNAIRE

He liked the exercise.	___:___:___:___:___:___:___	He disliked the exercise.
The exercise was difficult for him.	___:___:___:___:___:___:___	The exercise was easy for him.
He was happy.	___:___:___:___:___:___:___:	He was unhappy.
He was attracted to the young woman.	___:___:___:___:___:___:___	He was not attracted to the young woman.
He wanted to know her better.	___:___:___:___:___:___:___	He did not want to know her better.
He wanted to be off somewhere else.	___:___:___:___:___:___:___	He wanted to be right where he was.
He was comfortable and at ease.	___:___:___:___:___:___:___	He was not comfortable and at ease.
He wanted to be alone.	___:___:___:___:___:___:___	He wanted to be with the young woman.
He was friendly.	___:___:___:___:___:___:___	He was hostile.
He did not like the young woman.	___:___:___:___:___:___:___	He liked the young woman.

APPENDIX E

GIFFIN TRUST
DIFFERENTIAL

APPENDIX E

GIFFIN TRUST DIFFERENTIAL

SCHOLARLY	___ : ___ : ___ : ___ : ___ : ___ : ___	UNSCHOLARLY
DISRESPECTFUL	___ : ___ : ___ : ___ : ___ : ___ : ___	RESPECTFUL
UNKNOWLEDGEABLE	___ : ___ : ___ : ___ : ___ : ___ : ___	KNOWLEDGEABLE
KIND	___ : ___ : ___ : ___ : ___ : ___ : ___	CRUEL
EMPHATIC	___ : ___ : ___ : ___ : ___ : ___ : ___	HESITANT
PASSIVE	___ : ___ : ___ : ___ : ___ : ___ : ___	ACTIVE
FAST	___ : ___ : ___ : ___ : ___ : ___ : ___	SLOW
MEEK	___ : ___ : ___ : ___ : ___ : ___ : ___	AGGRESSIVE
EXPERT	___ : ___ : ___ : ___ : ___ : ___ : ___	IGNORANT
BOLD	___ : ___ : ___ : ___ : ___ : ___ : ___	TIMID
DISHONEST	___ : ___ : ___ : ___ : ___ : ___ : ___	HONEST
AGGRESSIVE	___ : ___ : ___ : ___ : ___ : ___ : ___	UNAGGRESSIVE
UNINFORMED	___ : ___ : ___ : ___ : ___ : ___ : ___	INFORMED
TRAINED	___ : ___ : ___ : ___ : ___ : ___ : ___	UNTRAINED
GOOD	___ : ___ : ___ : ___ : ___ : ___ : ___	BAD
INEXPERIENCED	___ : ___ : ___ : ___ : ___ : ___ : ___	EXPERIENCED
EDUCATED	___ : ___ : ___ : ___ : ___ : ___ : ___	UNEDUCATED
INTROVERTED	___ : ___ : ___ : ___ : ___ : ___ : ___	EXTROVERTED
ENERGETIC	___ : ___ : ___ : ___ : ___ : ___ : ___	TIRED
SELFISH	___ : ___ : ___ : ___ : ___ : ___ : ___	UNSELFISH
SINCERE	___ : ___ : ___ : ___ : ___ : ___ : ___	INSINCERE
IMMORAL	___ : ___ : ___ : ___ : ___ : ___ : ___	MORAL

PATIENT	___ : ___ : ___ : ___ : ___ : ___ : ___	IMPATIENT
INTELLIGENT	___ : ___ : ___ : ___ : ___ : ___ : ___	UNINTELLIGENT
ILLOGICAL	___ : ___ : ___ : ___ : ___ : ___ : ___	LOGICAL
AWFUL	___ : ___ : ___ : ___ : ___ : ___ : ___	NICE
RESERVED	___ : ___ : ___ : ___ : ___ : ___ : ___	FRANK