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Perceived Importance of Selected Nonverbal Cues in an Initial Encounter

Loretta L. Richter

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PERCEIVED IMPORTANCE OF SELECTED NONVERBAL CUES IN AN INITIAL ENCOUNTER

by

Loretta L. Richter

A Thesis Submitted to the Faculty of The Graduate College in partial fulfillment of the requirements for the Degree of Master of Arts Department of Communication

Western Michigan University Kalamazoo, Michigan April 1992
PERCEIVED IMPORTANCE OF SELECTED NONVERBAL CUES
IN AN INITIAL ENCOUNTER

Loretta L. Richter, M.A.
Western Michigan University, 1992

This study attempts to identify nonverbal cues which individuals are aware of using in an initial encounter and to identify the importance of those cues. It also addresses possible differences between men and women in nonverbal cue importance and possible differences based on the sex of the participant's partner. Sixty-two male and female undergraduate students enrolled in communication courses interacted with a stranger and completed questionnaires which pertained to their partner's nonverbal behaviors. Results showed that the most important nonverbal cue for all participants was the amount of eye contact; the least important was body shape. Cues found to have significant differences based on sex of partner were leg/feet movement, dress, physical appearance, and body shape. Further research which incorporates a broad range of nonverbal cues is needed to clarify the role and importance of nonverbal behaviors in impression formation.
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Loretta L. Richter
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Richter, Loretta L., M.A.
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CHAPTER I

INTRODUCTION

Statement of the Problem

A person's impressions and perceptions will affect interactions with others (Berger & Calabrese, 1975; Goffman, 1959; Kemp, Rutter, Dewey, Harding, & Stephenson, 1984; Putnam & McCallister, 1980; Sunnafrank, 1986). If a person is perceived to be friendly and outgoing, responses to that person are likely to be different than if the perception of that person is a negative one. These impressions result from interpretations of information, behaviors, and communications which occur during human interaction. This information is obtained via a multitude of verbal and nonverbal communications, observations, and experiences. But which of these informational cues are selectively decoded during impression formation and which are ignored? Which behaviors are the most salient in forming impressions?

When forming an impression, judgments are made about others on physical, sociocultural, and psychological levels (Burgoon, Buller, & Woodall, 1989). Assessments about a person's age, race, attractiveness, educational level, occupation, temperament, and personality influence
the overall impression one person makes of another. Feldstein (1982) believes that impression formation "refers to a process that enables, or is used by, individuals to develop conjectures or hypotheses about other persons, or, if you would, fictions that represent those persons" (p. 207).

Impressions are formed about others, decisions are made about liking or disliking someone, and judgments about others' attitudes, values, and morals are made after a very short amount of time. Berger and Calabrese (1975) label this initial phase of interpersonal interaction, in which first impressions are formed, as the entry phase. The entry phase is characterized by societal rules which structure the content of communication during initial interactions. Messages exchanged during this phase seldom include more than superficial or "demographic kinds of information" (p. 100.) This phase can vary in length of time depending on the people and on the situation involved. For this study, first impressions will be formed from an interaction between strangers during the entry phase.

Since communication content is generally ritualized and superficial during initial interactions, nonverbal cues can be extremely useful when forming first impressions. In fact, Feldstein (1982) asserts that for first encounters, the way something is said may exert more
influence than what is said. The use of nonverbal messages seems to be especially important when forming impressions about personality. According to Burgoon et al. (1989), inferences made about personality "rely on a broader range of nonverbal cues" (p. 235) than judgments made at the physical and sociocultural levels. In addition, these judgments are made based on stereotypes which may or may not be accurate. Therefore, when attempting to obtain information about which nonverbal messages are used during impression formation and which cues are most salient in making judgments, a broad range of nonverbal cues needs to be included. These cues can fall into the following categories, which Burgoon et al. label as the "most commonly used nonverbal codes" (p. 12): physical appearance (body type, attractiveness, cleanliness, clothing), vocalics (pitch, speech patterns), proxemics (distances between interactants), touch, and body movement (arms and leg movement, posture, smiling/laughing, eye behavior/gaze, and facial expressions).

Research has shown that people form impressions which may influence future behaviors and interactions with others based on very little information. As mentioned, Berger and Calabrese (1975) assert that we rely on superficial information in the entry phase of interpersonal relationships. During initial interaction, people often exchange "low consequence" or "low involvement" kinds of
information. Carrying this a step further, Rubin (1977, 1979) asserts that the type of information exchanged depends on the situational context in which the interaction occurs. For example, in an ambiguous context, which provides little information about the interactants, people exchange low consequence information. In a specific context (i.e., a political rally) people are likely to exchange information related to the context because they are able to infer certain details about each other from the situation. Rubin (1977) goes on to stress, however, that in all encounters there are a number of perceptual cues available from which interactants draw to gather information about one another. It seems likely then that when forming an impression, some cues will be more salient than others depending on the situation and on the context of the interaction.

This notion of salience suggests that it is important to take a broader look at nonverbal cues than simply identifying their importance. In this research, salience refers to the importance of nonverbal messages based on the situation, the context, the timeliness, and the interactants. Argyle and Dean (1965) posit that, according to the equilibrium theory, interactions are affected by approach and avoidance drives. These drives influence certain nonverbal behaviors such as eye contact and smiling as interactants try to maintain an equilibrium.
among them. That is, as the amount of one behavior increases, one or more other behaviors must decrease to maintain a balance among the behaviors. In their study of eye contact, distance, and affiliation, they hypothesized that nonverbal behaviors linked with affiliation would have a level of equilibrium which, if exceeded, would result in feelings of anxiety. An adjustment of behaviors would then be necessary to bring these feelings back into balance. It seems that the salience of nonverbal cues, therefore, depends on the situation and on the interactants involved. As Kemp et al. (1984) assert,

different cues, whether verbal, non-verbal, direct or indirect, all play some part in the process of impression formation. The importance of these cues depends on their availability, their salience, and the type of impression that is required to be formed (p. 143).

Hamilton, Fallot, and Hautaluoma (1978) remind us that these nonverbal cues, like first impressions, are multidimensional in nature. One cue can convey several meanings, or several cues may work together to clarify one message. Further, Burgoon et al. (1989) theorize that "nonverbal cues predominate in the impression formation process" (p. 222). With this in mind, this study was designed to investigate which nonverbal cues dominate during an initial encounter and to identify the rankings of these cues when placed on a continuum of nonverbal cues for males/females combined, males only, and females only.
Purpose of the Study

This study focuses on those nonverbal messages which are used to form a first impression. According to Burgoon et al. (1989), much of the research on nonverbal cues in impression formation "has only investigated one or two nonverbal cues at a time, so that what is known is the impact on impression formation of a fragmentary set of cues" (p. 225). When commenting on the work of Argyle and Dean, Patterson and Sechrest (1970) emphasize the importance of studying the relationships between nonverbal behaviors such as physical proximity, eye contact, and amount of smiling to determine which factors influence impression formation. Feldstein (1982) agrees that "some useful information might be obtained by analyzing and correlating all of the possible nonverbal and vocal cues in the situation with one another and with the impressions" (p. 217). This study, therefore, incorporates a broad range of nonverbal cues and scales the salience of those cues when used in first impression formation. The goal of this project is to identify which nonverbal cues people are aware of using when forming a first impression and to determine the saliency of those cues. Of particular interest is ascertaining the ranking for each cue used during formation of a first impression. From this information, a continuum of nonverbal cues, which ranges
from "of great importance" to "of no importance" to the impression formed, was developed.

In addition, this study attempts to add another dimension to the body of research on the relationship between men and women and nonverbal decoding ability by analyzing and developing a ranking of the scores of men's and the scores of women's nonverbal cue salience. Specifically, an effort was made to determine whether there is a difference in the nonverbal cues used by men and those used by women during impression formation. Also, an analysis was made of the cues used by men when interacting with men and when interacting with women and the cues used by women when interacting with other women and when interacting with men.
CHAPTER II

REVIEW OF THE LITERATURE

First Impressions

As stated at the beginning of this proposal, initial impressions are important because they can affect the way one person interacts with another. Berger and Calabrese (1975) theorize that the interpersonal communication that occurs during impression formation plays an important part in our development of predictions and explanations of others' behaviors. Even though these predictions are not entirely accurate, they nevertheless guide our behavior toward other people. Hastorf, Schneider, and Polefka (1970) agree with Berger and Calabrese that "we need to infer a given other's dispositional properties in order to predict his future behavior" (p. 91). Furthermore, contradictory information may be processed by simply ignoring it or by interpreting it in a way that reinforces the initial impression. Burgoon et al. (1989) suggest that humans make a "template" of their first impressions which guides the way they process additional information. Also, Hastorf et al. (1970) cite research on primacy effects which supports the notion that information presented first carries more weight in developing the final
impression. It seems plausible that impressions made first may also carry more weight in determining a lasting impression of someone. Therefore, first impressions play an important part in future interactions and relationships. They form the basis for interpreting and predicting others' behaviors and for deciding on future behaviors.

Another important aspect of first impressions is that they affect decisions about whether to continue or cease development of a relationship. Sunnafrank (1986) posits that people want to maximize their relationship outcomes and that this is their main concern in initial interactions. Initial perceptions about the costs and rewards of continuing a relationship may affect interest in having future contact with someone. Hastorf et al. (1970) stress that in order to make relationship decisions, perceptions must remain relatively stable. Perceptions are kept stable by restricting conflicting information about others and by being selective in interaction with others. For example, if A forms a bad impression of B, A may avoid B because of the negative impression and deny himself or herself the opportunity of acquiring positive information which could change the initial impression. Hastorf et al. cite the work of Newcomb, who coins this phenomenon "autistic hostility"--"the tendency to cease interaction with and reduce further information about disliked others"
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(p.94). Thus, impressions of others influence decisions about the amount of effort that will be put into a relationship.

A third important feature of first impressions is their potential to become self-fulfilling prophecies. As already discussed, opinions, which are based on very little information, are quickly formed about others. Then when confronted with contradictory information, individuals may become biased in their selection and may not want to give up their first impression. Based on their perceptions, they may then develop expectations which influence how they react and respond to a person which, in turn, influences how that person reacts toward them. Christensen and Rosenthal (1982) report that there is a very large body of literature that attests to the fact that such expectations can have a strong and pervasive impact on the target person and can cause that person to behave in a way that confirms our expectations, thus creating a self-fulfilling prophecy (e.g. Merton, 1948, 1957; Rosenthal, 1969a, 1973; Rosenthal & Rubin, 1978) (p. 75).

In addition, they assert that the self-fulfilling prophecy has been found to be operating in professional settings between doctor/patients, teacher/students, and researcher/subjects, but that few studies have addressed the issue in interpersonal relationships. There seem to be important implications of the role of first impressions in engendering self-fulfilling prophecies that remain to be
studied. Nevertheless, from the research presented, the significance of first impressions in interactions and relationships with others is clear.

Nonverbal Communication

According to Bond, Welkowitz, Goldschmidt, and Wattenberg (1987) little attention "has been given to the importance of nonverbal cues as social information in the formation of impressions" (p. 336). However, researchers have spent considerable time studying the relationships of nonverbal cues on a variety of variables which have social implications. Mehrabian (1971) related nonverbal affiliative behaviors such as eye gaze, head nods, facial expressions, gestures, speech intonation, rate and volume, and posture to amount of conversation between interactants in a waiting situation. He found that amount of conversation is positively correlated with verbal and nonverbal indices of positive or affiliative communication behaviors.

Further, Kleinke (1975) reported findings from numerous studies on the importance of nonverbal cues such as physical attractiveness, gaze, space/distance, body movements, facial expressions, and voice variations in the development of first impressions. According to Kleinke, when subjects were asked to rate attractiveness, they generally agreed on who was attractive and who was not
attractive and consistently used negative adjectives to describe unattractives and used positive adjectives for attractive individuals. These findings were significant across various age groups and among both male and female subjects. Perrin (1921) claims "that the physical characteristics of an individual constitute a large group of the total series of effects produced by that individual upon others" (p. 204). When assessing the correlation between physical elements and appeal of others with whom subjects felt a great deal of affection, Perrin found that static characteristics such as facial beauty, beautiful hands, arms, legs, and feet, pleasing dress, and a beautiful body were less important than his two other groups of physical elements--expressive behavior and affectionate disposition. Similarly, physical attractiveness was found to have a significant main effect on interpersonal attraction variables of dating, marrying, working, and liking (Stroebe, Insko, Thompson, & Layton, 1971). Forgas (1987) examined the effects of positive facial expressions in attractive versus unattractive individuals. Results from this research showed that facial expression was more important in the assessment of an unattractive individual than an attractive one. Forgas argues that smiling behaviors are highly dependent on situational and contextual factors and that physical attractiveness may influence how a smile is interpreted. For example,
Whereas a smile by an attractive person may be decoded as communicating superiority, extraversion, self-confidence, and assertiveness, the same expression could indicate inferiority, shyness, humility, lack of self-confidence, and eagerness to please when displayed by an un-attractive person (p. 486).

In another study involving physical appearance cues, Lennon (1986) used an additive model to analyze the relationship between attraction and clothing cues. She found that clothing/physical appearance cues could be combined to predict impressions regardless of the type of judgment being formed. These findings provide evidence of the importance of physical appearance cues in the formation of first impressions.

When assessing the role of eye contact in impression formation, Stass and Willis (1967) found that significantly more people chose as a partner a person who maintained eye contact and a person with dilated pupils. This led them to the conclusion that their study supported "the generalization that visual contact may be quite important in forming initial impressions" (p. 376). Burgoon, Coker, and Coker (1986) assert that "eye contact is potentially one of the most 'meaning-laden' nonverbal behaviors" (p. 502). They analyzed the relationship of relational meaning to low, normal and high amounts of gaze. From their research they conclude that perceptions of attractiveness and credibility may be influenced by the level of eye gaze. Argyle and Dean (1965) report that
studies by Ekline have shown that more eye contact occurs when people like each other and when they are cooperating with one another. They found that although females consistently gazed more than males, the differences were not significant. Gaze and eye behavior, therefore, are also important cues used in impression formation.

Proxemic and environmental factors are nonverbal cues which may also affect impression formation. In order to determine distance effects on judgments made of others, Argyle and Dean (1965) asked subjects to form an opinion of another person after interactions that occurred at varying distances. It was found that at distances of two feet and six feet, ratings of friendliness, aggressiveness, extraversion, and dominance were equal. The ratings at four feet were highest for all four character traits and lowest at the distance of eight feet. In a study of the effects of temperature and crowding, Griffitt and Veitch (1971) report findings of significantly more negative attraction responses under "hot" and crowded conditions. Therefore, space, crowding and environment are factors that also seem to influence impressions formed about others.

Another nonverbal cue which tends to play an important role in impression formation is vocalics. Addington (1968) examined the relationship of selected vocal characteristics to personality perception and found that voice
quality, rate, and pitch variety were significantly correlated with perceived perception. Further, Crown (1982) provides evidence for the notion that temporal parameters of vocalizations, pauses, switching pauses, and speaking turns are partially responsible for impressions formed about others. In her study she found "that the interpersonal perceptions of a pair of interacting individuals correlate with the speech sounds and silences of both the perceived and the perceiver" (p. 244). In addition to physical appearance, eye contact, and proxemics, vocal variations tend to be important nonverbal cues when forming an impression.

Gender and Nonverbal Messages

Researchers have also looked at relationships between gender and nonverbal encoding and decoding abilities (Hall, 1978; Hall & Halbertstadt, 1981; Zuckerman, De-Frank, Spiegel, & Larrance, 1982). Although there does seem to be a tendency for females to score higher in nonverbal encoding and decoding research, the findings are still inconclusive. Rather than looking for superiority of one sex over the other, Frances (1979) identified and classified eight channels of male/female nonverbal behaviors and assessed differences in these behaviors based on the sex of the conversational partner. She concluded that men and women significantly differ in their use of
certain nonverbal modalities. For example, men used significantly more vocal nonfluencies (ahs, ums) to fill pauses than women. Also, sex differences were noted between personality variables and the laughing/smiling variable. Putnam and McCallister (1980) investigated relationships between sex, gender, and ten nonverbal categories, which included posture, body orientation, head nods, smiling, laughing, eye gaze. They found that the strongest link contributing to nonverbal acts was dependent upon situational factors. That is, both sexes and genders (androgeny) varied their nonverbal behaviors depending upon whether the task they were given to perform was in the feminine or masculine category. These findings, therefore, do support the notion that there are differences between the sexes in nonverbal behaviors. However, the evidence provided thus far is inconclusive as far as male/female nonverbal differences in impression formation are concerned.

In conclusion, nonverbal research has included the areas of physical appearance, eye behavior, proxemics, vocalics, and gender differences. Nonverbal cues have been associated with variables such as affiliative communication, interpersonal attraction, liking, and judgments of credibility. These associations provide evidence that each of the nonverbal cue categories contributes to the important business of forming first impressions.
Summary and Research Questions

As the research cited attests, first impressions can be very important in human relationships. These impressions have an impact on the way we interact with others, our decisions of relationship development, and the potential for developing self-fulfilling prophecies. Furthermore, judgments made about others are often significantly influenced by nonverbal messages which include eye contact, gestures, voice variations, and facial expressions. The literature reports numerous studies on a variety of nonverbal cues used in impression formation. Findings from this literature provide rich information about the relationships between and among specific nonverbal cues and variables such as interpersonal attraction and affiliation. To summarize this information, we already know the following:

1. Physical attractiveness results in better first impressions.

2. Positive facial expressions have a beneficial effect on impressions formed by participants.

3. Participants tend to choose partners with more eye contact and dilated pupils.

4. Smiling behaviors influence judgments about unattractive individuals more than they affect judgments about attractive individuals.
5. Dress styles correlate with stereotypes of certain character traits.

6. Certain voice characteristics correlate with perceived personality characteristics.

7. More eye contact occurs when people like each other and cooperate with one another.

8. Distance of interaction affects impressions formed.

In studying these nonverbal messages, researchers have examined correlations among various communication channels and utilized a variety of methodologies. Ekman, Friesen, O'Sullivan, and Scherer (1980) report that most studies involving nonverbal behaviors and personality judgments involve determining whether verbal or nonverbal cues are more important. In their study of the importance of the face, body and speech, they found that in three separate experimental conditions the importance of the channel used by subjects depended on the type of judgment being made and on the situation in which the judgment was made. Similarly, in a summary of various articles on visual versus verbal communication (Kemp et al., 1984), contradictory findings are reported. The researchers hypothesized that observers would form different impressions under sound and vision versus sound only or vision only and that impressions of audio only participants would be different from face-to-face participants. In the end,
they concluded that visual information has no superiority over verbal information in the impression formation process.

Ekman et al. (1980) assert, however, that studies involving nonverbal messages have often used artificial situations with actors simulating emotions. Researchers (Dion, Berscheid, & Walster, 1973; Hamid, 1968) have also used photographs to identify the impact of nonverbal cues such as dress and physical appearance on impressions formed. When assessing the impact of vocal qualities on perceptions, Addington (1968) had subjects listen to tapes of voices. According to Ekman et al. it is difficult to draw conclusions from the literature because of the diversity in methodologies used to determine channel importance and accuracy.

In attempting to avoid the pitfalls of the artificial research situation, researchers (Argyle & Dean, 1965; Crown, 1982; Ekman et al., 1980; Mulac, Studley, Wiemann, & Bradac, 1987; Patterson & Sechrest, 1970; Putnam & McCallister, 1980) have utilized methodologies which involve face-to-face interactions to identify nonverbal cues. These methods most often involved audio and/or video taping of interaction between participants. However, Feldstein (1982) points out that even when actual interactions are involved, data are obtained most often from observers or judges rating the nonverbal cues.
involved in the interaction. He recommends using "conversations as the stimuli and the conversationalists as the judges" (p. 217). This method, Feldstein points out, results in a variety of salient nonverbal cues having influence on impression formation. Participants asked to interact in a dyad and then immediately questioned about the nonverbal messages used during the interaction would, therefore, be in a position to respond without having to rely on memory or observation.

It seems, then, that a next step in this line of research is to use participants in dyads and ask them about the numerous nonverbal cues which have been reported in the literature as being important during impression formation. This study attempts to identify which nonverbal cues individuals believe they used in an initial encounter with a stranger and to identify the salience of those cues. It also addresses the notion that there may be differences between nonverbal messages used by men and women and that there may be differences in responses to a questionnaire based on the sex of a participant's partner. Therefore, this study will attempt to provide information on the following research questions:

1. After an initial interaction in a dyad with a stranger and as reported on a self-report instrument, what is the resulting ranking of selected nonverbal cues?

2. Is there a difference in the ranking of these
selected cues between men and women combined, men only, and women only?

3. Is there a difference in scores elicited from participants in male/male, female/female, and male/female dyads?

4. After an initial interaction in a dyad with a stranger, what responses will participants give when asked which of their partner's nonverbal behaviors were important in forming their impression of that person?
CHAPTER III

DESIGN AND METHODOLOGY

Subjects

A nonprobability sampling technique was utilized in this study. Participants were 31 male and 31 female college students who were currently enrolled in a communication course at a large midwestern university.

Procedure

Participants volunteered to take part in this study by signing up for a prescheduled research session. A maximum number of 14 students was scheduled to arrive each hour; only one or two sessions were held each day. During the scheduling of volunteers, students were simply told that they would be participating in a study of communication behaviors and that their task would be to interact with one other person and then to complete three questionnaires (Appendix A). Upon arrival for the study, participants were asked to sign a consent form (Appendix B) and then to complete a questionnaire asking their name, academic major, and age. They were also asked to list any friends or acquaintances in the group. This questionnaire is included as Appendix C. Even though much of this type
of research is based on memory recall, it was assumed that it would be beneficial to obtain information about first impressions immediately following formation of an impression rather than relying on participants' memory of a past experience. Therefore, participants were paired by the researcher with a stranger so that data were collected for 20 impressions resulting from male/male dyads, 20 impressions from female/female dyads, and 22 impressions from male/female dyads.

At each session, there were a maximum of 7 dyads. Participants were paired with a stranger and had 10 minutes in which to get acquainted and discuss anything that interested them. They sat in regular classroom desks which had been placed at right angles and were spaced three to four feet apart from the other dyads to prevent distraction.

It was rationalized that the participants would feel less inhibited and more open in completing the questionnaires if they were separated from their partner. Therefore, after their 10-minute conversation, the partners were separated from one another. At this time, participants were asked to complete three questionnaires. The first was an open-ended questionnaire which asked participants to list the nonverbal cues that their partner used which the parties deemed important in forming an impression of their partner. The purpose of this measure
(Appendix D) was to elicit unprompted responses of nonverbal cues which participants are aware of after their interaction with a stranger.

The second measure was a seven-point Likert-type scale which consisted of 18 nonverbal items. These nonverbal cues were identified as being among the most frequently mentioned in the review of the literature and were demonstrated to have statistical significance. When completing this seven-point scale, participants were asked to identify the salience of selected cues they might have used in forming their impression of their partner. These nonverbal cues fell into the channels of physical appearance, voice, proxemics, touch, and body movement—channels which previous researchers have identified as playing important roles during impression formation. They were rated "of no importance" to "of great importance" by participants in forming their impression of their partner. This measure is included as Appendix E. The third questionnaire used (Appendix F) was a trait-adjective scale of perception which was developed with the intention of comparing personality traits with nonverbal cue salience scores in a future study. This study, however, does not address personality traits. Therefore, these data were not analyzed and will not be discussed in this report.
Treatment of the Data

To obtain a ranking of the selected nonverbal cues (research question one), the cue variables were weighed by the participants on the Likert scale and then statistically analyzed to obtain mean scores and standard deviations for each variable for males and females, for males only, and for females only. The variables were arranged in rank order from most important to least important. This rank ordering identified the participants' awareness of cues used in forming their impression and the saliency of those cues for males only, for females only, and for males and females combined.

To identify possible differences in the ranking of these selected cues between men and women combined, men only, and women only (research question two), the mean scores and standard deviations were also compared. Similarly, the mean scores and standard deviations were computed and compared for differences among male/male, female/female, and male/female dyads in an attempt to answer research question three: Is there a difference in scores elicited from participants in male/male, female/female, and male/female dyads?

Research question four addresses unprompted responses given by participants when asked which of their partner's nonverbal behaviors were important in forming their
impression of their partner. To answer this question, participants were also asked to list any nonverbal behaviors they noticed their partner using. The responses given were listed and tabulated to obtain response frequencies. The responses were then categorized under the following headings: (a) the face and head, (b) the body, (c) the voice/sound, (d) touch, (e) physical appearance, (f) artifacts, and (g) distance/pace. These nonverbal categories were chosen because of the specific nonverbal cues given by the participants and because they correspond to the categories used by Burgoon et al. (1989). The categories used in this study deviated from Burgoon et al. only in that their broad category of "kinesics" has been separated into "the face and head" and "the body" to more clearly show the nonverbal awareness sophistication of the participants.

The data were ranked within the categories discussed to illustrate which responses were given most frequently by participants. This unprompted instrument was used in the hope of adding support for past research which has identified the importance of certain nonverbal cues; for instance, the significance of eye contact in impression formation. This unprompted measure was also used in an attempt to provide further support for the categories developed by Burgoon et al. and to provide data which can be used as a comparison between prompted and
unprompted nonverbal awareness. The data collected from this unprompted measure, therefore, add support to the conceptualization of the importance of certain nonverbal cues and to the categories previously developed for those cues.
CHAPTER IV

RESULTS

Awareness of Nonverbal Cues

Because previous researchers had used terms such as "gaze," "eye contact," and "amount or level of eye gaze" to study this particular nonverbal cue, it is possible the participants might see a subtle difference between eye contact and eye behavior. Therefore, both terms "amount of eye contact" and "eye behavior" were used in this study. Mean scores from the seven-point scale completed by participants indicate that among all participants the amount of eye contact was ranked first and eye behavior was ranked second as the most important nonverbal cues. Mean scores for eye contact were 6.18 (SD = .86) for males and females combined, 6.00 (SD = .97) for males only, and 6.35 (SD = .71) for females only.

Table 1 lists the 18 nonverbal cues included on the questionnaire and provides the individual ranking, mean score, and standard deviation for each variable for males and females combined. Tables 2 and 3 include this same information for males only and females only, respectively.

The voice was ranked number 7 for males and females combined with a mean of 4.31 and SD of 1.47; however, the
Table 1
Ranking of Nonverbal Cues From Most Important to Least Important Based on Total Mean Scores

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Nonverbal Cue</th>
<th>Mean Score</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amt of eye contact</td>
<td>6.18</td>
<td>.86</td>
</tr>
<tr>
<td>2</td>
<td>Eye behavior</td>
<td>5.55</td>
<td>.84</td>
</tr>
<tr>
<td>3</td>
<td>Smiling</td>
<td>5.29</td>
<td>1.38</td>
</tr>
<tr>
<td></td>
<td>Facial expressions</td>
<td>5.29</td>
<td>1.05</td>
</tr>
<tr>
<td>4</td>
<td>Pers hygn/clean</td>
<td>4.73</td>
<td>1.54</td>
</tr>
<tr>
<td>5</td>
<td>Grooming</td>
<td>4.42</td>
<td>1.51</td>
</tr>
<tr>
<td></td>
<td>Arm/hand gestures</td>
<td>4.42</td>
<td>1.35</td>
</tr>
<tr>
<td>6</td>
<td>Distance</td>
<td>4.39</td>
<td>1.59</td>
</tr>
<tr>
<td>7</td>
<td>Voice</td>
<td>4.31</td>
<td>1.47</td>
</tr>
<tr>
<td>8</td>
<td>Head tilt/position</td>
<td>4.26</td>
<td>1.34</td>
</tr>
<tr>
<td>9</td>
<td>Body mvmt (general)</td>
<td>4.21</td>
<td>1.45</td>
</tr>
<tr>
<td>10</td>
<td>Posture</td>
<td>4.08</td>
<td>1.57</td>
</tr>
<tr>
<td>11</td>
<td>Laughter</td>
<td>4.02</td>
<td>1.78</td>
</tr>
<tr>
<td>12</td>
<td>Dress</td>
<td>3.71</td>
<td>1.51</td>
</tr>
<tr>
<td>13</td>
<td>Phys appearance</td>
<td>3.55</td>
<td>1.56</td>
</tr>
<tr>
<td>14</td>
<td>Touch</td>
<td>3.26</td>
<td>1.87</td>
</tr>
<tr>
<td>15</td>
<td>Leg/feet mvmt</td>
<td>3.06</td>
<td>1.52</td>
</tr>
<tr>
<td>16</td>
<td>Body shape</td>
<td>2.61</td>
<td>1.44</td>
</tr>
</tbody>
</table>

*Although there were eighteen items included on the questionnaire, nonverbal cues with the same mean score were ranked the same, which reduced the rank total. N = 62
Table 2
Ranking of Nonverbal Cues From Most Important to Least Important Based on Mean Scores of Males Only

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Nonverbal Cue</th>
<th>Mean Score</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amt of eye contact</td>
<td>6.00</td>
<td>.97</td>
</tr>
<tr>
<td>2</td>
<td>Eye behavior</td>
<td>5.58</td>
<td>.72</td>
</tr>
<tr>
<td>3</td>
<td>Smiling</td>
<td>4.97</td>
<td>1.40</td>
</tr>
<tr>
<td></td>
<td>Facial expressions</td>
<td>4.97</td>
<td>1.14</td>
</tr>
<tr>
<td>4</td>
<td>Pers hygn/clean</td>
<td>4.87</td>
<td>1.41</td>
</tr>
<tr>
<td>5</td>
<td>Voice</td>
<td>4.77</td>
<td>1.28</td>
</tr>
<tr>
<td>6</td>
<td>Grooming</td>
<td>4.68</td>
<td>1.49</td>
</tr>
<tr>
<td>7</td>
<td>Posture</td>
<td>4.35</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>Head tilt/position</td>
<td>4.35</td>
<td>1.28</td>
</tr>
<tr>
<td>8</td>
<td>Dress</td>
<td>4.32</td>
<td>1.38</td>
</tr>
<tr>
<td>9</td>
<td>Arm/hand gestures</td>
<td>4.26</td>
<td>1.39</td>
</tr>
<tr>
<td>10</td>
<td>Body mvmt (general)</td>
<td>4.19</td>
<td>1.62</td>
</tr>
<tr>
<td>11</td>
<td>Distance</td>
<td>4.16</td>
<td>1.59</td>
</tr>
<tr>
<td>12</td>
<td>Laughter</td>
<td>4.07</td>
<td>1.86</td>
</tr>
<tr>
<td>13</td>
<td>Phys appearance</td>
<td>4.03</td>
<td>1.66</td>
</tr>
<tr>
<td>14</td>
<td>Touch</td>
<td>3.13</td>
<td>2.01</td>
</tr>
<tr>
<td>15</td>
<td>Leg/feet mvmt</td>
<td>2.84</td>
<td>1.48</td>
</tr>
<tr>
<td>16</td>
<td>Body shape</td>
<td>2.81</td>
<td>1.58</td>
</tr>
</tbody>
</table>

*Although there were eighteen items included on the questionnaire, nonverbal cues with the same mean score were ranked the same, which reduced the rank total. N = 31*
<table>
<thead>
<tr>
<th>Ranking</th>
<th>Nonverbal Cue</th>
<th>Mean Score</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amt of eye contact</td>
<td>6.35</td>
<td>.71</td>
</tr>
<tr>
<td>2</td>
<td>Smiling</td>
<td>5.61</td>
<td>1.31</td>
</tr>
<tr>
<td>3</td>
<td>Facial expressions</td>
<td>5.61</td>
<td>.84</td>
</tr>
<tr>
<td>4</td>
<td>Eye behavior</td>
<td>5.52</td>
<td>.96</td>
</tr>
<tr>
<td>5</td>
<td>Distance</td>
<td>4.61</td>
<td>1.58</td>
</tr>
<tr>
<td>6</td>
<td>Arm/hand gestures</td>
<td>4.58</td>
<td>1.31</td>
</tr>
<tr>
<td>7</td>
<td>Pers hygn/clean</td>
<td>4.58</td>
<td>1.67</td>
</tr>
<tr>
<td>8</td>
<td>Body mvmt (general)</td>
<td>4.23</td>
<td>1.28</td>
</tr>
<tr>
<td>9</td>
<td>Head tilt/position</td>
<td>4.16</td>
<td>1.42</td>
</tr>
<tr>
<td>10</td>
<td>Grooming</td>
<td>4.16</td>
<td>1.51</td>
</tr>
<tr>
<td>11</td>
<td>Laughter</td>
<td>3.97</td>
<td>1.72</td>
</tr>
<tr>
<td>12</td>
<td>Voice</td>
<td>3.84</td>
<td>1.51</td>
</tr>
<tr>
<td>13</td>
<td>Posture</td>
<td>3.81</td>
<td>1.69</td>
</tr>
<tr>
<td>14</td>
<td>Touch</td>
<td>3.39</td>
<td>1.75</td>
</tr>
<tr>
<td>15</td>
<td>Leg/feet mvmt</td>
<td>3.29</td>
<td>1.55</td>
</tr>
<tr>
<td>16</td>
<td>Dress</td>
<td>3.10</td>
<td>1.40</td>
</tr>
<tr>
<td>17</td>
<td>Phys appearance</td>
<td>3.06</td>
<td>1.31</td>
</tr>
<tr>
<td>18</td>
<td>Body shape</td>
<td>2.42</td>
<td>1.28</td>
</tr>
</tbody>
</table>

*Although there were eighteen items included on the questionnaire, nonverbal cues with the same mean score were ranked the same, which reduced the rank total. N = 31
mean for voice for males was 4.77 ($SD = 1.28$), ranked as number five, whereas women ranked the voice number 9 with a mean score of 3.84 ($SD = 1.51$). Mean scores identified the nonverbal cue, body shape, across all participants as the least important cue. For males and females combined, the mean for body shape was 2.61 ($SD = 1.44$); for males only, the mean was 2.81 ($SD = 1.58$); and for females only, the mean was 2.42 ($SD = 1.28$). In addition, the nonverbal cue of distance was ranked number 11 for males only ($X = 4.16$, $SD = 1.59$), number four for females only ($X = 4.61$, $SD = 1.58$), and number six for males/females combined ($X = 4.39$, $SD = 1.59$). See Table 4 for a summary of the nonverbal cues used and of the mean scores, standard deviations, and rankings for all three categories studied: males and females combined, males only, and females only.

<table>
<thead>
<tr>
<th>Nonverbal Cue</th>
<th>M/F Combined X</th>
<th>r</th>
<th>Males X</th>
<th>r</th>
<th>Females X</th>
<th>r</th>
<th>t**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amt eye contact</td>
<td>6.18</td>
<td>1</td>
<td>6.00</td>
<td>1</td>
<td>6.35</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Eye behavior</td>
<td>5.55</td>
<td>2</td>
<td>5.58</td>
<td>2</td>
<td>5.52</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Smiling</td>
<td>5.29</td>
<td>3</td>
<td>4.97</td>
<td>3</td>
<td>5.61</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Facial expres*</td>
<td>5.29</td>
<td>3</td>
<td>4.97</td>
<td>3</td>
<td>5.61</td>
<td>2</td>
<td>2.50</td>
</tr>
</tbody>
</table>

Table 4
Ranking of Nonverbal Cues From Most Important to Least Important for Males/Females Combined, Males Only, and Females Only Based on Mean Scores

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Table 4—Continued

<table>
<thead>
<tr>
<th>Nonverbal Cue</th>
<th>M/F Combined</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>r</td>
<td>X</td>
</tr>
<tr>
<td>Pers hygn/clean</td>
<td>4.73</td>
<td>4</td>
<td>4.87</td>
</tr>
<tr>
<td>Grooming</td>
<td>4.42</td>
<td>5</td>
<td>4.68</td>
</tr>
<tr>
<td>Arm/hand gest</td>
<td>4.42</td>
<td>5</td>
<td>4.26</td>
</tr>
<tr>
<td>Distance</td>
<td>4.39</td>
<td>6</td>
<td>4.16</td>
</tr>
<tr>
<td>Voice*</td>
<td>4.31</td>
<td>7</td>
<td>4.77</td>
</tr>
<tr>
<td>Head tilt/pos</td>
<td>4.26</td>
<td>8</td>
<td>4.35</td>
</tr>
<tr>
<td>Body mvmt (gen)</td>
<td>4.21</td>
<td>9</td>
<td>4.19</td>
</tr>
<tr>
<td>Posture</td>
<td>4.08</td>
<td>10</td>
<td>4.35</td>
</tr>
<tr>
<td>Laughter</td>
<td>4.02</td>
<td>11</td>
<td>4.07</td>
</tr>
<tr>
<td>Dress*</td>
<td>3.71</td>
<td>12</td>
<td>4.32</td>
</tr>
<tr>
<td>Phys appear*</td>
<td>3.55</td>
<td>13</td>
<td>4.03</td>
</tr>
<tr>
<td>Touch</td>
<td>3.26</td>
<td>14</td>
<td>3.13</td>
</tr>
<tr>
<td>Leg/feet mvmt</td>
<td>3.06</td>
<td>15</td>
<td>2.84</td>
</tr>
<tr>
<td>Body shape</td>
<td>2.61</td>
<td>16</td>
<td>2.81</td>
</tr>
</tbody>
</table>

Mean scores which were the same were given the same ranking.

*Significant F value \( N = 31 \) males, 31 females

**t tests were conducted only where significant F values were found (\( p < .05 \))

The scores for all participants, for men only, and for women only were also analyzed to ascertain possible significant differences between the three gender
categories of males and females combined, males only, and females only. The nonverbal cues of facial expressions, voice, dress, and physical appearance were found to have significant $F$ values ($2,121 = 3.07, p < .05$). The $t$ tests were performed only on these variables. Results showed significant differences between the scores of males and females on each of the four variables: facial expressions ($t = 2.50, p < .05$), voice ($t = 2.59, p < .05$), dress ($t = 3.42, p < .05$), and physical appearance ($t = 2.50, p < .05$). No significant differences were found between the three gender categories for the other 14 variables.

These data were also analyzed to determine possible differences in scores based on sex of the participant's partner. Mean scores and standard deviations were computed for each cue variable for responses from male/female dyads, from male/male dyads, and from female/female dyads. Again, amount of eye contact had the highest mean in all three categories: M/F dyads ($X = 6.22, SD = .87$), M/M dyads ($X = 6.00, SD = .97$), and F/F dyads ($X = 6.30, SD = .73$). Likewise, eye behavior received the second highest score for M/F dyads ($X = 5.50, SD = .74$) and for M/M dyads ($X = 5.70, SD = .73$); for F/F dyads, only smiling ($X = 5.80, SD = 1.15$) was higher than eye behavior ($X = 5.45, SD = 1.05$). The nonverbal cue with the lowest mean for male/female dyads and female/female dyads was body shape with a mean of 2.91 ($SD = 1.54$) for M/F dyads and a mean
of 2.00 (SD = .86) for female/female dyads. For male/male dyads, leg and feet movement had the lowest mean (X = 2.50, SD = 1.36). Results for each of the eighteen nonverbal cues are reported in Table 5.

The nonverbal cues which were found to have significant F values (2,59 = 3.23, p < .05) are body shape, leg and feet movement, physical appearance, dress, and eye contact. It should be noted here that there was a significant F value found between dyads for amount of eye contact but not for eye behavior. Even though the difference was small and did not result in a significant difference when the t test was performed, the findings do support the notion that there may be a subtle difference between these two nonverbal cues. The t tests were performed only on the five nonverbal variables found to have significance. Results showed significant differences between scores of male/female and female/female dyads (t = 2.33, p < .05) and male/male and female/female dyads (t = 2.11, p < .05) for body shape; between scores of male/male and male/female dyads for leg and feet movement (t = 2.59, p < .05); between scores of male/male and female/female dyads for physical appearance (t = 2.97, p < .05); and between scores of male/female and male/male (t = 3.33, p < .05) and male/male and female/female (t = 3.46, p < .05) dyads for dress. When t tests were performed on the nonverbal cue, amount of eye contact, there were no

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significant differences found between any of the three dyadic categories. (See Table 5.)

Participants were also asked to list the nonverbal behaviors that they noticed their partner using which were important in forming their impression. The most frequently mentioned nonverbal cues were as follows: 45 people mentioned hand behavior, 43 mentioned eye contact, 30 mentioned smiling, 29 mentioned body position/angle, and 23 mentioned eye behavior. These responses parallel rankings participants gave on the prompted nonverbal cue scale. Hand behavior (arm/hand gestures), eye contact, smiling, and eye behavior were ranked within the top five

Table 5
Mean and Standard Deviation for Each Nonverbal Cue for Each Dyadic Category

<table>
<thead>
<tr>
<th>Nonverbal Cue</th>
<th>M/F</th>
<th>SD</th>
<th>M/M</th>
<th>SD</th>
<th>F/F</th>
<th>SD</th>
<th>t**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facial expres</td>
<td>5.23</td>
<td>1.27</td>
<td>5.00</td>
<td>1.02</td>
<td>5.65</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>Laughter</td>
<td>3.91</td>
<td>1.95</td>
<td>3.95</td>
<td>1.79</td>
<td>4.20</td>
<td>1.64</td>
<td></td>
</tr>
<tr>
<td>Head tilt/pos</td>
<td>4.36</td>
<td>1.50</td>
<td>4.50</td>
<td>1.24</td>
<td>3.90</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>Body shape*</td>
<td>2.91</td>
<td>1.54</td>
<td>2.90</td>
<td>1.65</td>
<td>2.00</td>
<td>.86</td>
<td>2.33</td>
</tr>
<tr>
<td>Arm/Hand gest</td>
<td>4.44</td>
<td>1.34</td>
<td>4.30</td>
<td>1.45</td>
<td>4.40</td>
<td>1.31</td>
<td>2.11</td>
</tr>
<tr>
<td>Smiling</td>
<td>5.05</td>
<td>1.62</td>
<td>5.05</td>
<td>1.23</td>
<td>5.80</td>
<td>1.15</td>
<td></td>
</tr>
<tr>
<td>Leg/feet mvmt*</td>
<td>3.73</td>
<td>1.64</td>
<td>2.50</td>
<td>1.36</td>
<td>2.90</td>
<td>1.33</td>
<td>2.59</td>
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</tbody>
</table>
Table 5—Continued

<table>
<thead>
<tr>
<th>Nonverbal Cue</th>
<th>M/F</th>
<th>SD</th>
<th>M/M</th>
<th>SD</th>
<th>F/F</th>
<th>SD</th>
<th>t**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phys appear*</td>
<td>3.50</td>
<td>1.82</td>
<td>4.20</td>
<td>1.40</td>
<td>2.95</td>
<td>1.19</td>
<td>2.97</td>
</tr>
<tr>
<td>Voice</td>
<td>4.18</td>
<td>1.49</td>
<td>4.90</td>
<td>1.29</td>
<td>3.85</td>
<td>1.50</td>
<td></td>
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<tr>
<td>Distance</td>
<td>4.00</td>
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<td>1.47</td>
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</tr>
<tr>
<td>Posture</td>
<td>4.14</td>
<td>1.73</td>
<td>4.45</td>
<td>1.39</td>
<td>3.65</td>
<td>1.53</td>
<td></td>
</tr>
<tr>
<td>Touch</td>
<td>3.27</td>
<td>1.93</td>
<td>3.10</td>
<td>2.17</td>
<td>3.40</td>
<td>1.54</td>
<td></td>
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<tr>
<td>Grooming</td>
<td>4.46</td>
<td>1.54</td>
<td>4.75</td>
<td>1.55</td>
<td>4.00</td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td>Body mvmt</td>
<td>4.41</td>
<td>1.47</td>
<td>4.30</td>
<td>1.84</td>
<td>3.95</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Dress*</td>
<td>3.32</td>
<td>1.32</td>
<td>4.70</td>
<td>1.30</td>
<td>3.15</td>
<td>1.46</td>
<td>3.33</td>
</tr>
<tr>
<td>Eye behavior</td>
<td>5.50</td>
<td>.74</td>
<td>5.70</td>
<td>.73</td>
<td>5.45</td>
<td>1.05</td>
<td></td>
</tr>
<tr>
<td>Pers hygn/clean</td>
<td>4.64</td>
<td>1.68</td>
<td>4.90</td>
<td>1.33</td>
<td>4.65</td>
<td>1.63</td>
<td></td>
</tr>
<tr>
<td>Amt eye contact*</td>
<td>6.22</td>
<td>.87</td>
<td>6.00</td>
<td>.97</td>
<td>6.30</td>
<td>.73</td>
<td></td>
</tr>
</tbody>
</table>

*Significant F value  
**t tests were conducted only where significant F values were found; eye contact was not found to be significant (p < .05).

It is interesting to note that several participants specifically mentioned eye contact in addition to some other sort of eye behavior such as "eyes shifted to the right a lot," "rolled eyes," and "opened eyes up large." Hand behavior, which parallels the nonverbal cue arm/hand
gestures on the seven-point prompted cue scale, was described by participants as gesturing, handshakes, expressive hand movement, and touching hands together. This nonverbal cue was mentioned by more participants (45) than any other cue, followed closely by eye contact (43). Table 6 lists all of the responses received from this open-ended questionnaire, gives the frequency for each nonverbal response, and ranks the cues within the response categories. The response categories were chosen to follow classifications developed by Burgoon et al. (1989) and to help clarify the findings.

Table 6
Unprompted Nonverbal Cue Responses Given by Participants and Cue Frequency

<table>
<thead>
<tr>
<th>Response Category</th>
<th>Nonverbal Cue</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>the face and head</td>
<td>eye contact</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>smiling</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>eye behavior</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>nodding</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>facial expressions</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>head tilt</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>hair movement/tossin</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>blinking</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>eyebrow movement</td>
<td>1</td>
</tr>
<tr>
<td>the body</td>
<td>hand behavior</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>body position/angle</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>leg/feet behavior</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>posture</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>arm position</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>general body movement</td>
<td>4</td>
</tr>
<tr>
<td>the voice/sound</td>
<td>voice</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>laughing</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 6--Continued

<table>
<thead>
<tr>
<th>Response Category</th>
<th>Nonverbal Cue</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>the voice/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sound--continued</td>
<td></td>
<td></td>
</tr>
<tr>
<td>haptics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>physical appearance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>artifacts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>proxemetics</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- sniffing                          1
- touch                             5
- dress                             4
- cleanliness                       1
- physical appearance               1
- manipulated objects*              6
- distance                          1

*Objects manipulated included items such as jewelry, pencils, sunglasses, and hair.

N = 62
CHAPTER V

DISCUSSION

Limitations

This research attempted to discover participants' awareness of their partner's nonverbal behaviors. To do this, two distinct methods were utilized. The open-ended questionnaire, which was given to participants prior to the Likert scale to elicit unprompted responses of awareness of nonverbal cues, resulted in participants naming 16 out of the 18 nonverbal cues used on the Likert scale. It is possible, however, that participants' responses on the seven-point Likert scale were influenced by the fact that they had previously completed the unprompted questionnaire. In addition, these unprompted data were not separated by gender to compare participants' responses and to identify possible gender differences as was done with the seven-point Likert scale.

Further, this study used a nonprobability sampling technique with subjects who were all college students enrolled in communication courses, which limits the generalizability of the findings. Similarly, the internal analysis of the various dyad compositions only suggests possible differences because of the small number of
participants used.

Implications for Future Research

The following questions were answered by the data collected during this research project and provide insight into the perceived importance of certain nonverbal messages.

1. After an initial interaction in a dyad with a stranger and as reported on a self-report instrument, what is the resulting ranking of selected nonverbal cues?

The data collected on the 18 nonverbal cues confirm past research findings (Burgoon et al., 1986; Stass & Willis, 1967) on the importance of eye contact. Both nonverbal variables, amount of eye contact and eye behavior, received top scores when rated with 16 other nonverbal cues. Support for past research claiming the importance of physical appearance is, however, not as clear. Personal hygiene/cleanliness and grooming cues were rated considerably important in impression formation but body shape was rated least important. Similarly, dress and physical appearance were also rated near the bottom of the list. It seems likely that a number of factors contribute to physical appearance rather than just facial beauty and physique.

With this ranking of nonverbal cues, future research might examine the relationships among and between various
nonverbal cues to determine any significant differences. For example, this study only ranked the selected cues; there was no analysis performed to identify significant differences among those ranked cues. It would be useful to now know whether "amount of eye contact" is perceived to be significantly more important during impression formation than smiling, for instance. Further, is voice or physical appearance significantly more important than eye contact or smiling? This kind of information would further clarify the salience of various nonverbal cues.

In addition, given the rating of the cues from most important to least important, it would be helpful to identify the duration, direction, and intensity of each cue. For example, in this study eye contact and eye behavior were rated as the most important cues. What we don't know, however, is whether participants rated those cues as being important because the length or direction was appropriate or inappropriate to the situation. Did participants feel that eye contact was important in forming their impression because there was too much eye contact or too little? Similarly, was body shape ranked least important because participants had relatively pleasing body shapes, because the interaction time was limited to only ten minutes, or because the cue itself was inconsequential? This information could help identify whether a particular cue is important because it was a dominant factor or because
it was an insignificant factor.

2. Is there a difference in the ranking of these selected cues for men and women combined, for men only, and for women only?

There were no differences found between the scores for men and women combined and men only and for men and women combined and women only. However, there were significant differences identified between men and women for facial expression, voice, dress and physical appearance cues. The findings of differences in the salience of these cues supports some past research and adds some interesting data to the gender issue. For instance, previous research has shown a tendency for women to score higher in encoding and decoding of nonverbal messages. In this study, facial expression cues were more important to women than they were to men in forming a first impression. It would be interesting to identify further associations between nonverbal sensitivity, the importance of facial expressions, and gender preferences.

Prior research has shown that men tend to use more vocal nonfluencies than women. Of interest in this study is the fact that there was a significant difference found between the scores of men (X = 4.90) and the scores of women (X = 3.85) for the voice cue. Perhaps men are more aware of and use their voice more and, therefore, place more importance on the voice in impression formation than
In this study, dress and physical appearance cues were found to be significantly more important in impression formation for men than for women. These findings add another dimension to prior research which has shown the importance of attractiveness and dress in formation of impressions. However, further research is needed to draw conclusions of gender differences in preferences or importance of nonverbal cues used during impression formation.

3. Is there a difference in scores elicited from participants in male/male, female/female, and male/female dyads?

There were differences found in scores based on the gender of a participant's partner. Three of the four nonverbal cues in which significant differences were found fall into the "physical appearance" category: physical appearance, body shape, and dress. Males interacting with males rated dress as more important than did male/female or female/female dyads. Also, males interacting with males gave physical appearance a significantly higher score than did participants in male/female dyads. For body shape, both male/female dyads and male/male dyads rated this cue significantly higher than female/female dyads. These results suggest that men perceive the "physical appearance" cues as more important in impression formation than females. The fourth cue with significant
findings was leg/feet movement in which male/female dyads ranked this cue higher than male/male dyads. Future research aimed at identifying differences between males and females in the importance placed on nonverbal messages, especially the physical appearance cues which are used during initial encounters, is needed to clarify these findings.

4. After an initial interaction in a dyad with a stranger, what responses will participants give when asked which of their partner's nonverbal behaviors were important in forming their impression of that person?

In addition to the 16 items that participants named which were on the Likert-type scale, participants listed nodding, hair tossing, blinking, eyebrow movement, object manipulation, and sniffing. However, only eight out of the 24 nonverbal behaviors listed by the 62 participants received a frequency count of 10 or more. These top eight responses were hand behavior, eye contact, smiling, body position/angle, eye behavior, nodding, leg/feet movement, and posture. All of these nonverbal cues, with the exception of nodding, were included on the seven-point Likert scale. Because one scale might have influenced the other as previously mentioned, this study might be repeated using a method which would eliminate this confounding factor. For instance, administering two similar scales and comparing them for consistencies might be a way to
validate findings in future research.

Conclusion

The importance of first impressions and the role that nonverbal communication plays in impression formation is well-documented. From this knowledge, Burgoon et al. (1989) asked the next obvious question: "What kind of information does one rely on to make inferences and judgments?" (p. 222). Friedman (1978), in his study comparing the strength of verbal versus nonverbal cues, concluded that it is more important to identify which cues matter most to certain individuals in certain situations.

The present study provides some data to begin answering Burgoon's question and to follow up on Friedman's conclusions. Considering the importance of nonverbal messages in relationships (Berger & Calabrese, 1975; Burgoon et al., 1986; Mehrabian, 1971; ), it seems worthwhile to study nonverbal awareness further and to attempt to determine if awareness can be increased. For example, researchers might search for an answer to the question: "Can nonverbal awareness be taught?" It also seems plausible that, if awareness can be taught, prescriptive researchers might develop instruments to assist people in increasing their nonverbal sensitivities. It is possible that improved awareness of nonverbal messages could result in improved human interactions and improved relationships.
Perhaps with further knowledge about nonverbal messages and the role they play in formation of impressions about others, people may learn to adjust their nonverbal behaviors. Increased knowledge may engender more favorable impressions about each other and help avoid some of the pitfalls that result from ill-fated or inappropriate impression formation.
Appendix A

Procedure/Instructions Read by Researcher
Procedure/Instructions Read by Researcher -
Loretta L. Richter

I am a graduate student in the Communication Department conducting a study of communication behaviors as part of my master's thesis, and I am looking for volunteers to participate in the research.

Participation in this study means meeting with me and approximately 11 other students in a classroom in Dunbar Hall. You will be paired with another student and asked to spend 10 minutes talking with that person to get acquainted or talking about anything else that interests the two of you. Afterwards, you will be asked to complete three questionnaires that ask about your previous 10 minute interaction.

Participation in this study is strictly voluntary. However, it will give you an opportunity to experience communication research first-hand. Your participation will be greatly appreciated.

The following dates and times have been scheduled for your convenience....
Appendix B

Consent Form
This experimental study of communication behaviors is being conducted by Loretta Richter, a graduate student in the Department of Communication, as part of her master's thesis.

After answering a few demographic questions, you will be paired with one other person in this room. You will be given 10 minutes in which to get acquainted or discuss anything else that interests you and your partner. When the 10 minutes interaction time is finished, you will be separated from your partner and asked to complete three questionnaires based on the previous 10 minutes of interaction. These questionnaires should take approximately 15 minutes to complete.

Only the researcher will see the responses that you have given, and all the information that you provide will remain confidential. Your name will not be used at any time, and your answers will only be used in combination with the other survey participants' responses. These responses will be statistically analyzed and reported as mean scores only.

You may withdraw from this experiment without negative consequences at any time. Please sign your name below to indicate your willingness to voluntarily participate in this study and to give your approval:

X______________________________ Date ________________________

If you have any problems or questions in the future about this research, please contact Loretta Richter at 323-8726.

Thank you for volunteering to participate in this study of communication behaviors.
Appendix C

Demographic Information Sheet
Please fill in the following information:

1. Your name (please print)______________________________

2. Your academic major ________________________________

3. Are you a freshman, sophomore, junior, senior, or graduate student? (circle one)

4. How old are you? ________________________________

5. Please look at the other students in this room. Name any friends or acquaintances that you have in this group. __________________________________________________________

Thank you for the information. Please turn this sheet in to the researcher now. You will be paired with another person in this room in a moment. Please do not interact with anyone until you are told to do so.
Appendix D

Open-Ended Nonverbal Response Form
Please list the nonverbal behaviors that you noticed your partner using which were important to you in forming your impression of your partner.
Appendix E

Nonverbal Awareness Questionnaire
Your name ________________________________

You have just met a person and by now have formed an impression of that person. Please think about your partner's appearance and behaviors during your interaction and rate each item on the following pages by checking how important the item was to you in forming your impression of this person.

There are seven spaces provided. Please place only one check mark for each line item; spaces range in meaning from "of no importance" (on the far left side) to "of great importance" (on the far right side).

EXAMPLE OF HOW THE ATTACHED QUESTIONNAIRE SHOULD BE COMPLETED:

1. your partner's eye contact

"of no importance"  "of great importance"


2. the way your partner looked

1. your partner's facial expressions
"of no importance"          "of great importance"

2. the way your partner laughed

3. the way your partner held his or her head

4. your partner's body shape

5. your partner's arm and hand gestures

6. your partner's smiling behaviors

7. your partner's leg and feet movements

8. your partner's physical appearance

9. your partner's voice

10. the distance your partner sat from you

11. your partner's posture

12. the way your partner touched you or didn't touch you
13. your partner's grooming

"of no importance"  "of great importance"


14. the way your partner moved his or her body in general


15. the way your partner was dressed


16. the way your partner looked at you


17. your partner's habits of personal hygiene/cleanliness


18. the amount of eye contact your partner used


Was your partner a male or a female? (please circle)

Male  Female
Appendix F

Adjective-Trait Scale
Please describe the person with whom you have just interacted by rating that person on the attached adjective scale. The adjectives listed are opposites; you are to rate where you believe your partner falls on this scale.

EXAMPLE:
SAD

HAPPY
Please rate your partner by putting only one check for each item below.

DECISIVE  __  __  __  __  __  __  __  __  INDECISIVE
UNINTELLIGENT  __  __  __  __  __  __  __  __  INTELLIGENT
BORING  __  __  __  __  __  __  __  __  INTERESTING
WARM  __  __  __  __  __  __  __  __  COLD
DEPENDENT  __  __  __  __  __  __  __  __  INDEPENDENT
INCONSIDERATE  __  __  __  __  __  __  __  __  CONSIDERATE
RESPONSIVE  __  __  __  __  __  __  __  __  UNRESPONSIVE
MEAN  __  __  __  __  __  __  __  __  KIND
DEPRESSED  __  __  __  __  __  __  __  __  CHEERFUL
RESERVED  __  __  __  __  __  __  __  __  OUTGOING
ADJUSTED  __  __  __  __  __  __  __  __  MALADJUSTED
CALM  __  __  __  __  __  __  __  __  EXCITABLE
ATTRACTIVE  __  __  __  __  __  __  __  __  UNATTRACTIVE
NEAT  __  __  __  __  __  __  __  __  SLOVENLY
POISED  __  __  __  __  __  __  __  __  SELF-CONSCIOUS
SENSITIVE  __  __  __  __  __  __  __  __  INSENSITIVE
IMPATIENT  __  __  __  __  __  __  __  __  PATIENT
CANDID  __  __  __  __  __  __  __  __  SECRETIVE
REJECTING  __  __  __  __  __  __  __  __  ACCEPTING
SELFISH  __  __  __  __  __  __  __  __  UNSELFISH
Appendix G

Human Subjects Institutional Review Board Approval
Date: August 7, 1990
To: Loretta L. Richter
From: Mary Anne Bunda, Chair
Re: HSIRB Project Number: 90-07-08

We have received your memo dated August 5, 1990, in response to our July 12, 1990, request for changes in your research protocol. These changes are found to be acceptable. Thus, this letter will serve as confirmation that your research protocol, "Perceived Importance of Selected Nonverbal Cues in an Initial Encounter," has been approved under the exempt category of review by the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

xc: George Robeck, Communication

Approval Termination: August 7, 1991
BIBLIOGRAPHY


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