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Interpersonal attraction as a function of sex differences
and saliency of verbal and nonverbal information

by

Timothy Alan McGaughey

A Dissertation Submitted to the
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The Requirements for the Degree of
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ABSTRACT

This experiment investigated the effect of receiving verbal and non-verbal information on interpersonal attraction. Since women have been reported to give more weight to nonverbal information and men to verbal information (e.g., Zahn, 1975), it was predicted that when both verbal and nonverbal evaluative cues are presented about another, women's attraction will be more affected by the level of the nonverbal evaluative cue and men's will be more affected by the level of the verbal evaluative cue.

Subjects were randomly assigned to 1 of 16 experimental conditions in a 2^4 factorial design. The independent variables were: (1) the confederate's sex; (2) the confederate's level of competency (verbal cues); (3) the confederate's level of friendliness (nonverbal cues); and (4) the subject's sex. Competency was varied by written biographic material which showed the confederate to be competent or incompetent. Friendliness was varied by a videotaped interview in which a male or female confederate was friendly or nonfriendly; the confederate's dialogue was standardized. The content and the channel of the stimulus information (i.e., verbal competency and nonverbal friendliness) were purposely confounded in order to appear analogous to realistically encountered stimuli. Both of these conditions were presented to subjects in a counterbalanced order. Subjects rated their attraction toward the confederate on bipolar evaluative adjectives.

The results showed that women differed from men by: (1) being more affected by the confederate's level of competency; (2) being more affected by the confederate's nonfriendliness (while liking the friendly confederate

at the same level as the men did); and (3) giving enhanced ratings when both cues were either positive or negative. These differences are seen as due to women's increased affiliation skills. This would make women's attraction more affected by a larger range of person-related stimuli than men's. A person's level of affiliation skills is seen as mediating the number and type of cues' effect on interpersonal attraction.

Results also indicated that when men rated the female confederate and women rated the male confederate (cross-sex conditions), the cross-sex confederate's deviation from sex-appropriate stereotypes caused the subject to have less attraction for the confederate. This occurred regardless of contrasting positive information. Thus the negative cue for the cross-sex confederate (incompetency for males and nonfriendliness for females) masked the positivity of the other cue (respectively, friendliness for males and competency for females). This masking did not occur for same-sex groups; the saliency of the cue for each subject sex determined the level of attraction.

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INTRODUCTION

Briefly, step into the following scene: you are at a large cocktail party; people are milling around, talking with one another, drinking and having fun. Because of the crowd, you step back into a corner, and suddenly you focus on one person. You haven't met him before, but you remember several guests talking about him. He's new in town, but as usual, there is a great amount of information available about him. He's pretty successful for his age; you understand he's a new executive with a prosperous firm in town. He's also won a number of different kinds of awards, sports and debating, you think. Apparently, he must have been in debating, for that's what he seems to be doing now; people around him are giving him rather strained looks. He must have had too much to drink, because he is now rather loud and abusive.

The question is now put to you: given what you know and can see about this person, what is your attitude toward him; how much do you like him?

This scenario basically presents the focus of this research: when multiple input is presented about a person, what affects attraction? In this case there were two basic types of channels of input: (1) the verbal channel, which consisted of information received through words, such as biographic information, and (2) the nonverbal channel, which consisted of visual and other cues perceived through the senses. In ordinary situations, the types of cues which are received are multiple, both in terms of content and channel. If verbal and nonverbal channels are designated as two basic generic classifications of encoded stimuli, then one channel

might have more weight in the attraction process for a person. This difference in how a person weighs a particular channel might be augmented by his or her particular skill in decoding the channel.

The area of interpersonal attraction attempts to clarify the processes and stimuli which affect people's liking for each other. If the processes are to be understood then the research in attraction must be analogous to situations and occurrences that are encountered in ordinary settings. This is not a call for mundane realism (Aronson & Carlsmith, 1969), but rather for a recognition, not only of the possible differences between the way information can be encoded in a situation (viz., through verbal and nonverbal channels), but also of the types of information which are most likely to be encountered through the respective channels. Thus to understand the attraction process, the evaluative stimulus, with both its particular content and its manner of transmitting in the environment, must be taken into account.

Fortunately, the definition of attraction is more agreed upon by researchers than the causes of attraction. The definition used in this study is the positivity of a person's attitudes toward another (Levinger, 1974; Levinger & Snoek, 1972). This allows attraction to be specifically measured by attitude scales, and also makes the findings relevant to other concepts, such as sentiments, actual behavior, and even belongingness states, such as Heider's (1958) unit relationships. Using this definition of attraction, the focus of this research examines how a person's attraction to another is affected when receiving both verbal and nonverbal evaluative cues about the other. To keep the results as analogous to

nonlaboratory phenomena as possible, the type of information which is most likely to be encountered through a particular channel must be used.

This issue is further complicated because there is evidence that there are sex differences in sensitivity to verbal and nonverbal information (Exline & Winters, 1965; Mehrabian, 1972; Mehrabian & Ksionzky, 1972; Zahn, 1973, 1975). Since these differences exist, then this may mean that men and women are differentially sensitive to different kinds of evaluative input about another. Thus attraction to another would not only vary because of the channel or level of evaluative cue, but also because men and women differ in the effect that verbal and nonverbal information would have on them. This has important implications for interpersonal attraction.

In the next chapter these issues are discussed. There, the argument is pursued that much research done in the area of interpersonal attraction may have little generalizability to nonlaboratory settings because the manner in which the variables are encountered in ordinary settings has not been seriously considered. Concern for the process basically distinguishes between the use of verbal and nonverbal information. Differences between these channels are explored, and this is followed by an explication of how sex differences may have an effect on the ability of verbal and nonverbal channels to determine attraction. Specific hypotheses are then made regarding the influence of sex and channel differences on interpersonal attraction.

REVIEW OF THE LITERATURE

Interpersonal attraction is an area that has generated much interest. Scholarly reviews (e.g., Berscheid & Walster, 1969; Byrne, 1969, 1971; Huston, 1974; Lott & Lott, 1965; Murstein, 1971) have posited many determinants of attraction. Competency appears to be one such determinant. There has been ample documentation that being competent not only makes a person more influential and prestigious, but also makes that person better liked (Aronson, Willerman, & Floyd, 1966; Berkowitz, 1969; Deaux, 1972; Gibbs, 1969; Helmreich, Aronson, & LeFan, 1970; Kelley & Thibaut, 1969; Shaw & Gilchrist, 1955; Tajfel, 1969). This is true of both men (Aronson, Willerman, & Floyd, 1966) and women (Deaux, 1972; Spence & Helmreich, 1972).

However, several studies (Hagen & Kahn, 1975; McGaughey & Hagen, Note 1) have found that the effect of competency on attraction is mediated by the actual context of the situation. Hagen and Kahn found that when men observed a competent woman, liking for her was much greater than for an incompetent woman, but when men actually interacted with her, the woman's level of competency had little effect on their attraction. McGaughey and Hagen found when men and women interviewed a female confederate who varied factorially both her level of friendliness and competency, women's attraction was affected by both the female confederate's competency and friendliness. Men's attraction was affected only by her level of friendliness; competency was again unimportant in determining men's attraction. In both studies, the extent to which competency affected the subjects' attraction depended both on the sex of the

interactors and on what the interactors did. Thus the ability for competency to determine attraction was attenuated by the setting in which it was presented.

It is important that those variables which modified competency's effect were ones due to the other person's actual behavior, e.g., friendliness, or to the other person's characteristics, e.g., sex. When competency was anchored within the specific context of the person, its ability to affect interpersonal attraction was sometimes lessened. The area of interpersonal attraction is faced with trying to predict when and under what circumstances variables (such as competency) affect a person's attraction. Yet most studies cannot give more than trivial understanding to the attraction process because researchers have been greatly concerned about internal validity, while ignoring questions of external validity (Levinger & Snoek, 1972). Campbell (1957) referred to an experiment's having internal validity if the experimental manipulations were responsible for the changes in the dependent measures. He also discussed external validity which is the generalizability of the experimental results to particular settings and populations. The problem is that when attraction variables are conceptualized for the laboratory, the process of how these variables are presented in the actual context of an ordinary situation is not often considered. If results are to be generalizable to situations outside of the laboratory, then the form in which people are most likely to encounter them should be maintained. For reasons of internal validity, most variables are manipulated in ways to hold the stimulus constant and unvarying; that generally means removing the variable from the context of the person. But many variables which affect

attraction are mediated by the person's actual behavior or characteristics. To increase the external validity of the results of attraction studies, variables in the manner in which they commonly occur should be used.

However, in nonlaboratory settings, the content of a variable and the manner in which the variable is encountered are often confounded. This is a problem which must be faced by researchers working with naturally occurring stimuli (cf., Jensen & Figueroa, 1975). Within the area of interpersonal attraction, one such important variable is how much a person thinks another likes him or her (perceived attraction). Newcomb (1961) found that this was a potent determinant of attraction when individuals were actually living with each other. The confounding occurs because the perceived attraction is communicated mainly through nonverbal and paralinguistic behaviors, which Mehrabian (1972) has called implicit communication. Research has shown that over 90% of perceived attraction is communicated by implicit cues, whereas only 7% of the variance for the message was accounted for by the actual words used (Mehrabian & Ferris, 1967; Mehrabian & Wiener, 1967). This perceived attraction can be considered as showing friendliness or liking to another.

Unfortunately, most research using attraction for another (Aronson & Linder, 1965; Aronson & Worchel, 1966; Byrne & Griffitt, 1966; Byrne, Rasche, & Kelley, 1974; Lamberth & Craig, 1970; Lamberth, Gay, & Dyck, 1972) has manipulated this variable as the number of positive and negative personal evaluations which have been either written or read to the subject. These studies may have very limited generalizability to nonlaboratory settings, not because verbal statements cannot affect liking, but rather because in the natural environment, showing attraction toward another is

confounded with nonverbal behaviors. The use of nonverbal channels to communicate attraction might create a very different message from attraction communicated verbally. The content of two messages might be the same, but the process of encoding the messages through different channels, verbal and nonverbal, would make them very different phenomena. For example, A might tell B that he likes B, but he could do it either by writing B a letter or holding B's hand. In either case, the content would be the same, but the effect of receiving the content verbally or nonverbally might make the message very different.

Watzlawick, Beavin, and Jackson (1967) have suggested that the nonverbal message of attraction for another is potent in affecting attraction precisely because it is nonverbal. This means that the nonverbal channels are especially relevant in communicating accurate information about interpersonal relationships (for which attraction is very pertinent). The ability of nonverbal channels to relate information about relationships is considered to be due to their continuous, nondiscrete presentation of stimuli; this contrasts with the discrete processing of verbal cues (Bakan, 1971; Barnlund, 1968; Ornstein, 1972; Spiegel & Machotka, 1974; Watzlawick et al., 1967; Wilden, 1972). Since relationships imply dynamic, changing states, cues which are continuous and changing (nonverbal cues) would give more accurate information regarding the relationship than the sequential, discontinuous cues (verbal cues) would. Given these differences in processing, especially with the implications for interpersonal relationships and, subsequently, attraction, the effect of verbal and nonverbal information on attraction is not known. People in ordinary situations do get multiple input about others; that input is both verbal and

nonverbal. Would there be any difference in evaluating information because some cues are verbal, other nonverbal? Some research has suggested that women might be more influenced by the nonverbal cues than the verbal ones (Mehrabian, 1972). This would have important implications for the area of interpersonal attraction, since it suggests that the influence of evaluative cues, encoded verbally and nonverbally, would be dependent on the sex of the decoder.

Although some research has been done on the effect of verbal and nonverbal information presented separately (Hagiwara, 1975; Lampel & Anderson, 1968), there has been no systematic investigation of these variables with regard to sex differences. If there are differences in the effects of channel usage and its saliency to the different sexes, these divergences should be explored. However, the external validity of a study's results must be considered, and the variables used should have an ordinary occurrence in a natural setting. Therefore, this study investigates the influence of receiving differently encoded evaluative cues about a person on the subject's attraction. The cues are both verbal and nonverbal and have differing degrees of positivity. Competency, which strongly affects attraction, is manipulated as the verbal cue, for a person's level of competency is often encountered in a written form (e.g., in vitae or biographies). The nonverbal cue is operationalized by varying observed friendliness. Since nonverbal cues cannot be varied without showing the sex of the person observed, the sex of the person observed is also considered. Competency and friendliness cues are confounded with the channel through which each cue is encoded in the present study; however, since each cue is likely to actually occur through a different channel, this

study should have greater external validity than most attraction research. The systematic presentation of these verbal and nonverbal cues to men and women allows for the study of sex differences with regard to the influence of various cues.

Different Channels of Evaluation

The preceding section indicates that cues should be operationalized in the manner that they are usually encountered; this means that some of the cues are verbal, the others nonverbal (or implicit). However, the characteristics of these two channels, verbal and nonverbal, are different. This section explores the implications for the use of these channels in the attraction process.

The role of nonverbal communication is extremely important in affecting the relationships between people. Research from areas not immediately associated with interpersonal attraction has shown a need to consider its importance. Positive rapport, displayed by implicit behavior, has been found to mediate the effect of simple verbal reinforcement of attitudes (Insko & Butzine, 1967; Insko & Cialdini, 1971). Nonverbal cues act as social reinforcers because of their demonstration of liking and trust to another (Krasner, 1962; Matarazzo, Wiens, & Saslow, 1965; Truax, 1966; Truax & Mitchel, 1972). Weisbrod (cited in Argyle & Kendon, 1967) found that a person was rated as more valuable and important by a subject if the person looked at the subject rather than looked away. In a study dealing with a hospitalized population, subjects were rated as uneasy and insecure because of their negative and submissive nonverbal behaviors (Mehrabian, 1972). Chaiken, Sigler, and Derlega (1974) found that teachers displayed

different types of affective cues toward students who were labeled either bright or dull. If the boy had been labeled as bright, the teachers showed more positive nonverbal cues, (e.g., more smiling, eye contact) than if the same boy had been labeled as dull. Clearly, implicit behavior is very salient to people's relationships.

Research by Bostrom (1970) and Ekman (1965) has confirmed that implicit behavior can convey information about a person's feeling toward another. But since behavior is dynamic, it must be perceived through the senses. Birdwhistle (1970) has shown that affect is communicated primarily through the visual and auditory channels. Dittmann and Llewellyn (1969) found that movement was added to verbalization if the message was to convey importance, difficulty, or excitement. Zaidel and Mehrabian (1969) demonstrated that negative affect was more accurately decoded when facial or vocal channels were used to encode the affect, than when other channels were used. It would appear that "any behavior that is observable can serve as an outlet for feeling and is thus, in principle, communication" (Mehrabian, 1972, p. 179).

The saliency of nonverbal behavior for human relationships reflects the importance of humans' being able to make evaluations. Previously, the dimension of evaluation has been found to account for much of the meaning structure of language (Osgood, Suci, & Tannenbaum, 1957; Triandis & Osgood, 1958), and others (Mehrabian, 1970, 1972; Osgood, 1966; Schlosberg, 1954; Williams & Sundene, 1965) have found that evaluation is also the principal component of nonverbal behavior. Osgood (1969) has described the ability to evaluate as an innate emotional response in humans which manifests itself in both behaviors, such as approaching or avoiding, and

sentiments, such as liking or hating. When a person approaches a novel stimulus it is important for that person to determine whether the stimulus is good or bad; this ability to evaluate has clear survival benefits.

Clore and Byrne (1974) posit that evaluation has both informational and affective components. Informational stimuli refer to qualities, characteristics, and factors which a person possesses, such as competency information. This is often the type of stimuli manipulated in investigations of impression formation (e.g., Anderson, 1971). Affective stimuli relate to feelings, comfort, and mood; experiments which have mainly manipulated liking for another and personal evaluation both fall into this domain. Clore and Byrne point out that most evaluative stimuli are a combination of these two sources, informational and affective stimuli. But what they did not recognize is that these two components might be primarily encoded through different channels: informational cues through verbal channels and affective cues through nonverbal channels. Both are different types of stimuli and involve distinct differences in processing (Bateson, 1972; Gazzaniga, 1967; Ornstein, 1972, 1973; Sperry, 1964; Watzlawick et al., 1967; Wilden, 1972). Informational stimuli are mainly content oriented and are relayed to others by words. Affective stimuli are displayed mainly through implicit behavior (Mehrabian, 1972). Clearly, most things that humans do can be both talked about and performed or displayed, so neither component is restricted to a particular encoded channel. But the type of component, informational or affective, is generally limited to a particular channel. For example, a person can both display and talk about his or her competency, but generally, the person's account of the competency is restricted to words.

Seldom will you see the person perform the competency. Likewise, a person can both exhibit and talk about his or her feelings, but how the person acts indicates the level of the feelings much better than the words used. Thus informational stimuli are mostly channeled through verbal modes and affective stimuli through nonverbal behavior.

Recognizing that informational and affective components are generally processed through different channels is very pertinent to interpersonal attraction. Evaluative cues from both verbal and nonverbal channels are the basis for liking for another; yet, since the channels differ, evaluative cues encoded through the respective channels might differentially affect a person's attraction. Although some research has investigated the effect of receiving two different types of evaluative cues (Hagiwara, 1975; Lampel & Anderson, 1968), one of which is verbal and the other nonverbal, this research has not systematically considered the importance of subject differences, such as the sex of the perceiver. If competency, which is commonly verbal, and friendliness, which is nonverbal, are manipulated so that a subject receives both cues, one cue might carry more weight in the evaluation of a person because the subject is more sensitive to that channel than another. If, as the preceding section has shown, nonverbal cues are pertinent to the evaluation process, then subjects who are more sensitive to the implicit channels might weigh the evaluative cues more heavily than subjects who are not as sensitive to the channel. To those subjects who are not as sensitive to the nonverbal channels, the verbal cues might be more important in affecting attraction. In the next section, specific sex differences are explored in connection with

differential decoding abilities, and specific hypotheses are made with regard to men and women's attraction to another.

Sex Differences

It would be expected that if a person were more sensitive to nonverbal cues, then nonverbal cues would have more effect on the impression one forms. A consistent finding is that women are more sensitive than men to implicit cues (Argyle et al., 1970; Cratty, 1970; Exline & Winters, 1965; Kleck & Nuessle, 1968; Kozel & Gitter, 1968; Mehrabian, 1972; Thayer & Schiff, 1974; Zahn, 1973, 1975). Women as a group are more visually oriented to others than are men (Exline, 1963; Exline, Gray, & Schuette, 1965; Gibson & Pick, 1963; Thayer & Schiff, 1974), and this increased visual orientation occurs at an early age (Beller, 1959). Women appear to gain much information from implicit cues, for they respond to and with more implicit affective behavior than men (Anastasi, 1958; Drag & Shaw, 1967; Long, Ziller, & Henderson, 1968; Mehrabian, 1971; Norum, Russo, & Sommer, 1967; Sommer, 1959). All of this evidence appears consistent with Parsons and Bales' (1955) conclusion that women are more social-emotionally oriented than men, who are more task oriented, for a person who is concerned with social-emotional factors must be able to decode cues that are affective. Decoding refers only to the ability of a person to make judgments regarding the affective level of information. This research does not imply that men are not good decoders of nonverbal behavior, but rather that women are better decoders. Maccoby and Jacklin (1974) reported that there was no clear tendency for girls to be more sensitive than boys to social cues, but this does not contradict the findings that

women are better decoders of implicit behavior than men, and, therefore, that they are potentially better decoders of the affective component of evaluation. Social cues, as discussed by Maccoby and Jacklin, included many different types of cues (e.g., self-disclosure, intimacy, social interaction, positive social behavior) which may or may not be related directly to implicit behavior.

If women as a group do attend to implicit cues more than men, it would be expected that cues which are encoded through implicit channels would be more salient for women than men. Since those cues basically concern liking (Mehrabian, 1972), women's attraction to another person should be highly influenced by the implicit cues which encode liking for another. But since men as a group are less sensitive to implicit behavior, and subsequently affective cues, they should not weigh the nonverbal affective component as highly. Men would attend to the visual modes less than women, but still would attend the other nonvisual cues, such as competency. Parsons and Bales (1955) found that men were more task specialists; the cues which are pertinent to tasks, such as competency information, are most often communicated verbally. Men's attraction to another should be highly influenced by the level of the verbal information. In an experiment combining both verbal and nonverbal cues, Zahn (1975) found that men did give more weight to the verbal cues than the nonverbal cues.

Given a situation where men and women receive verbal and nonverbal cues about another person, but do not actually interact with that person, it is expected that the two sexes should weigh the two cues differently. When asked to evaluate people, men and women's attraction should be

based on the cues which are weighed the most heavily for each sex. Therefore, if men and women were to receive both verbal competency information, which would be either positive or negative, and nonverbal friendliness cues, which would be either positive or negative, it is expected that women's attraction to the person would be affected more than men's attraction by the level of the friendliness cues. With women being better decoders of implicit cues than men, the level of the friendliness cues should affect women's attraction more than men's. On the other hand, men should be more highly affected than women by the level of the person's competency. Since men do not decode implicit cues as well as women, and verbal cues are given more weight, the verbal cues should be more salient to men than women, and thus affect men's attraction more.

Summary of the Hypotheses

The major hypotheses to be tested are: (1) given both verbal and nonverbal cues, women's attraction toward another person will be more affected than men's by the other person's level of implicit cues; and (2) given both verbal and nonverbal cues, men's attraction toward another person will be more affected than women's by the other person's level of verbal cues.

METHOD

A 2⁴ factorial design was used with: (1) the confederate's sex, (2) the confederate's level of competency which was either competent or incompetent, (3) the confederate's level of friendliness which was either friendly or nonfriendly, and (4) the subject's sex as the independent variables. Also tested were control groups in which subjects received only the competency or the friendliness information about the confederates. These were included as a check on the information given to the subjects.

The main dependent variables were the evaluation of the confederate by adjective pairs chosen from the Evaluation factor of the Semantic Differential, (Osgood et al., 1957), and the interpersonal judgment scale (Byrne, 1971).

The procedure for the experiment was: (1) an introduction of the experimental rationale and instructions, which included that the subjects would be rating another person, (2) the manipulation of the independent variables, operationalized by having the subjects receive biographic information (competency) of and watch a videotape interview (friendliness) of the confederate, and (3) the completion of the dependent variables and manipulation checks.

Subjects

Subjects were a total of 407 male and female Iowa State University students enrolled in various introductory psychology classes during the Winter and Spring Quarters, 1975.

Out of the total of 407 subjects, 207 participated in the 16 cells of the experimental sessions. Eliminated from this pool because of subject's

indications on the manipulation checks that they disbelieved the competency or friendliness manipulations were 11 subjects. Also, because 11 subjects were the least number obtained for 7 of the experimental cells, it was decided to use 11 subjects per cell for ease of computation; 20 subjects were randomly eliminated from the other 9 groups to create equal numbers per cell. Thus 176 subjects were used for the experimental groups (88 men and 88 women).

There were 8 cells each for both the competency control and the friendliness control conditions. Because the data were to be compared between the control and experimental conditions, it was decided to use 11 subjects per cell, for a total of 88 subjects (44 men and 44 women) for the particular control condition. For the competency control conditions, 15 of 103 subjects were randomly eliminated; 9 of 97 subjects were randomly eliminated from the friendliness control conditions. This left a total of 88 subjects in the 8 cells of the competency control and of the friendliness control conditions.

Procedure

A group of 8 to 12 subjects (with sex varied randomly) were run at one time. Due to subject's volunteering for a group, the number and composition of sex for each group varied.

Preceding the admission of subjects to the experimental room, the experimenter randomly chose the variations of independent variables the subjects would receive. Subjects assembled in the experimental room, which consisted of individual writing desks arranged in semicircular

aisles around a table on which the videotape player and monitor were set.

All desks were within six to ten feet of the television monitor.

When the subjects were seated, the experimenter read the instructions:

This is an experiment concerning the interview process. We, in psychology and sociology, are interested in what kind of information can be learned from the interview. Interviewing is very important: we are often hired for jobs on the basis of interviews; many government decisions are based on information learned from interviews; and most polls and surveys use the interview method to gain information.

Yet we really don't know much about the interview method. Obviously, one person meets another face-to-face to ask him or her questions, which the person answers. Yet how is the information learned in the interview different from the information learned from different sources, such as test batteries?

The Psychology and Sociology Departments are cooperating together in investigating the interview process. With the help from the students from an advanced methodology course in sociology, we are going to let you participate as "mock interviewers." You will be both shown and given some information about a particular sociology student, and then you will be asked to make some ratings and judgments about this student. The students come from an advanced methodology course in the Sociology Department, and participation in this rating was part of their course requirements. The students were each asked to be interviewed on videotape, and also asked to provide background information about themselves. Each of you will read information about one particular student, see this student interviewed, and rate the student.

The ratings you make of the student will be your own opinion; therefore, there can be no wrong or right judgments. We are only concerned with your opinions, not how accurate your judgments are.

We present the interview on videotape so that each of you would see the same interview; something we couldn't do if the interviews were live. Also because each of your interviewing the same person would take a tremendous amount of time, recording the interview on videotape seemed the best solution.

After you have made your impressions we will ask you to make some anonymous ratings of this student. You will also be asked to complete several questionnaires and surveys.

Do you have any questions? If not, then let's proceed.

Experimental Conditions

The four independent variables were: (1) the confederate's sex, (2) the confederate's competency, (3) the confederate's friendliness, and (4) the subject's sex. Since the subjects randomly participated in each

group, the subject's sex was not directly controlled by the experimenter. Each group was presented information about either a male or female; this was the operationalization of the confederate's sex. The information about the confederate, the competency and the friendliness conditions, was presented in a counterbalanced order throughout the experiment. The confederate's competency was manipulated by presenting written biographic information about each confederate, which showed him or her to be competent or incompetent. The confederate's friendliness conditions, was presented in a counterbalanced order throughout the experiment. The confederate's competency was manipulated by presenting written biographic information about each confederate, which showed him or her to be competent or incompetent. The confederate's friendliness was varied by showing a videotaped interview with a confederate of the appropriate sex. While speaking the same dialogue in each interview, the confederate was either friendly or nonfriendly. These four factors, at two levels each, were varied to create 16 experimental conditions.

The competency of the confederate

In this condition, written (verbal) biographic information about the male or female confederate was manipulated. As stated previously, these conditions were presented in a counterbalanced order with the friendliness manipulation throughout the experiment.

The instructions were read to the subjects:

You are now receiving some biographic material provided to us from the student (the same one you saw in the videotaped interview). Please follow along as I read aloud from the sheet. Remember you will be asked to rate this student.

The experimenter distributed the material to the subjects. After the biographies were read, they were collected by the experimenter.

The biographic material In the written material, the male or female confederate was described as being either competent (evaluatively positive) or incompetent (evaluatively negative).

The competent biography read:

John (Joan) S. comes from a small town in Iowa. He (she) is the middle child in a family of three children; he (she) has one other brother and sister.

John (Joan) is a senior sociology major. His (her) grade point average is 3.8. Following graduation he (she) has received support to begin work on his (her) Ph.D. at Harvard University. He (she) is a member of Phi Kappa Phi, the National College Honor Society. During his (her) junior year, he (she) ran and was elected to the Government of the Student Body (GSB), for which he (she) served on several committees. During his (her) freshman year he (she) applied and was selected to be a Cyclone Aid.

During high school, John (Joan) was editor of the yearbook. He (she) also was elected President of the Student Council. During his (her) senior year he (she) served as Vice-President of the National Honor Society. He (she) was also a member of the high school boys (girls) basketball team. Being in the top 10% of the graduating class, John (Joan) graduated from high school with honors.

The incompetent biography read:

John (Joan) S. comes from a small town in Iowa. He (she) is the middle child in a family of three children; he (she) has one other brother and sister.

John (Joan) is a senior sociology major. His (her) grade point average is 1.9. Following graduation he (she) is unsure of his (her) plans, but hopes to find some type of employment, possibly as a clerk or salesperson. During his (her) junior year, he (she) thought about running for the Government of the Student Body (GSB), but he (she) never completed the eligibility form in order to run. During his (her) freshman year he (she) applied, but was not selected to be a Cyclone Aid.

During high school, John (Joan) was a typist for the yearbook. He (she) was a member of the high school boys (girls) basketball team for one month, but voluntarily dropped from the team. John (Joan) graduated from high school in the lower 30% of the graduating class.

The capability of the competency manipulation to appropriately affect attraction was tested by presenting male and female subjects only the

biographic material about either the male or female confederate. These control subjects than rated the confederate on the evaluation measure.

The friendliness of the confederate

In this condition, the nonverbal behavior of the confederate was controlled. These conditions were presented in counterbalanced order with the competency ones.

The instructions were read to the subjects:

You will now be seeing a videotape of an interview with the sociology student (the same one you have already received biographic material about). The interview consists of the student's impression of an art object. We present the interview on videotape so that each of you would see the same interview; something we couldn't do if the interviews were live. The camera was stationed so that you could see the student in the same manner as the interviewer actually saw the student. Remember you are a "mock interviewer," so watch the student carefully.

Do you have any questions?

The experimenter turned on the videotape.

The videotaped material The videotaped interview was recorded and played on a General Electric portable videotape recorder (Model 4TD1B2). The monitor for the videotape recorder was a 12 inch diagonal black-and-white television.

This manipulation was devised in order to vary only the confederate's nonverbal behavior; a standardized dialogue was given by all the confederates (see Appendix B for the dialogue used). In order to minimize the effect of the confederate's verbal responses on the subject's ratings, it was decided to use an ambiguous reference: a painting, unseen by the subject. This allowed the subject to hear the confederate speak, but not to know what the confederate was speaking about; the subject would have few standards by which to judge the confederate's responses. This

situation was analogous to one in which an answer is given for a question which is unknown; there is no frame of reference in which to evaluate the adequacy of the response.

The subjects saw either a friendly (evaluatively positive) or non-friendly (evaluatively negative) confederate of the appropriate sex. The confederates were two male and two female psychology graduate students, who were Caucasian and between the ages of 22 to 25 years. Each confederate was trained to give the same interview script in two different implicit manners, friendly and nonfriendly. These implicit cues, immediacy behavior, have been demonstrated to show attraction to others (Mehrabian, 1972).

In the friendly interview, the confederate demonstrated much eye contact with the camera, a forward lean, a direct orientation (with the lateral plane of the shoulders directly facing the camera), an open and relaxed arm position (with the arms resting on the desk, so that the confederate's chest could be seen), and some gesturing. The vocal intonation was active and enthusiastic.

In the nonfriendly interview, the confederate demonstrated little or no eye contact with the camera, a backward lean, an indirect orientation, a closed and tense arm position, and no gesturing. The vocal intonation was low and flat.

The capability of the friendliness manipulation to appropriately affect attraction was tested by presenting male and female subjects only and the videotape of the confederate (either male or female). These controlled subjects then rated the confederate on the evaluation measure.

Administration of the Rating Material

After the subjects received both videotaped and biographic materials, the experimenter read:

You have now received different materials concerning this student. We would like to have your impressions about him (her). We are passing out a booklet in which you will be asked to give your opinions concerning the student. There are a number of questions; please answer them all. We are not interested in the correctness of your judgments; since we are only asking your opinions, there can't be any wrong or right answers. Please respond as you feel. In no way will the identity of your remarks be revealed. However, since we want your opinion only, please don't look at anyone else's ratings while you do this. Do you have any questions?

The experimenter passed out the rating booklets. (See Appendix B for the exact format of the measures.)

The dependent variables

Among numerous bogus questions were the dependent measures. One was the evaluation measure, composed of five bipolar adjective-pairs rated on 7-point scales. Taken from the Evaluation factor (Osgood et al., 1957), the adjective-pairs were: good-bad; kind-cruel; approaching-receding; beautiful-ugly; and wise-foolish. These five scales were summed to yield a measure of evaluation. The more positive the rating, the higher the evaluation score.

The other measure was the interpersonal judgment scale (Byrne, 1971). It consisted of two 7-point questions, summed, regarding personal feelings and sentiments towards working together with the confederate. Other factors that were measured on 7-point scales were potency and activity ratings (Osgood et al., 1957). The potency measure was the sum of the ratings on the adjective-pairs: hard-soft; deep-shallow; and strong-weak. The activity measure was the sum of the ratings on the adjective-pairs:

excitable-calm; fast-slow; hot-cold; and active-passive. Also included were independent estimates of the confederate's degree of friendliness and competency.

The manipulation checks

Within this booklet were questions which allowed the subject to give his or her views of the experiment. The open-ended questions were: What do you feel the experiment was about? Do you have any suggestions to improve it? What do you feel the experiment was trying to demonstrate? If subjects indicated a disbelief in the experiment, their responses were eliminated from the data pool.

Statistical Analysis

The scores on each of the measures from the experimental conditions were independently analyzed in a 2^4 ANOVA. The ratings for each of the control conditions were analyzed in a 2^3 ANOVA. Regression analyses were also computed in order to assess the effect of using different males and females for the confederate's sex conditions.

RESULTS

The Control Groups

Analysis of the competency control condition

This analysis is of subjects who received only the biographic (competent or incompetent) information about a male or female confederate; these were the same competency stimuli which were used in the experimental conditions. Subjects were asked to rate the confederate on the evaluation measure. These ratings were analyzed in a 2^3 factorial design, which included confederate's sex by competency by subject's sex conditions; the results of the ANOVA can be seen in Table 1.

Clearly the competency manipulation affected the attraction for the confederate, $F(1, 80) = 689.89$, $p < .001$. The competent confederate was better liked ($M = 26.00$) than the incompetent confederate ($M = 17.50$). This main effect accounted for 31.52% of the total variance on the evaluation measure.

Other aspects of the biography affected the confederate's attraction. There was a main effect for the confederate's sex, $F(1, 80) = 17.75$, $p < .01$; the female confederate was liked better ($M = 22.43$) than the male confederate ($M = 21.07$). Also women had a tendency to rate the confederate as more attractive ($M = 22.14$) than men did ($M = 21.36$), $F(1, 80) = 5.70$, $p < .05$. There was also a significant interaction between the confederate's competency and the subject's sex, $F(1, 80) = 7.12$, $p < .01$. This showed that women did not differ from men in their attraction for the incompetent confederate ($M_s = 17.45$ and 17.54 , respectively), but women did like the competent confederate ($M = 26.82$) significantly more

Table 1

Summary of the Analysis of Variance
for Subjects Receiving Only the Competency Information
(Competency Control Group)

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	40.908	17.75**	2.07%
Subject's Sex (<u>Ss</u>)	1	13.136	5.70*	.58%
Competency (C)	1	1589.500	689.89***	31.52%
<u>Cs</u> X <u>Ss</u>	1	6.545	2.84	--
<u>Cs</u> X C	1	8.910	3.87	--
<u>Ss</u> X C	1	16.408	7.12**	.76%
<u>Cs</u> X <u>Ss</u> X C	1	.729	< 1	--
Error	80	2.304		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .01$

*** $p < .001$

($p < .01$) than men did ($M = 25.18$). Since these last three significant effects accounted for only a total of 3.41% of the total variance, their effects on the attraction ratings were considered minimal. The competency manipulation was judged as successfully affecting the subjects' attraction.

Analysis of the friendliness control condition

In this control condition subjects viewed only the videotape interview of the male or female confederate, who was either friendly or non-

friendly. These were the same friendliness stimuli used in the experimental settings. After the videotape, the subjects rated the confederate on the evaluation measure; the results were analyzed in a 2^3 factorial, with confederate's sex by friendliness by subject's sex conditions.

However, before the friendliness of the confederate could be analyzed, it was important to establish any differences in the use of individual male and female confederates. The evaluation ratings for each individual confederate are in Table 2; the length of time for each videotape is also included. The results (in Table 2) show that neither female confederate was seen as causing more attraction when being friendly, $t_{2-t}(20) = .038$, $p > .50$, or nonfriendly, $t_{2-t}(20) = .103$, $p > .50$. The two male confederates were rated similarly when they were both friendly, $t_{2-t}(20) = .038$, $p > .50$, or nonfriendly, $t_{2-t}(20) = .020$, $p > .50$.

The results in Table 2 reflect the major finding of the ANOVA for the evaluation ratings of the confederate's friendliness manipulation (in Table 3). The only significant result is the main effect for friendliness, $F(1, 80) = 123.05$, $p < .001$. The friendly confederate was better liked ($M = 26.07$) than the nonfriendly confederate ($M = 18.30$), and this main effect accounted for 58.89% of the variance on the evaluation measure. The friendliness manipulation was judged as successfully affecting the subjects' attraction.

In summary, both the competent and the friendly confederate were significantly better liked than the incompetent and the nonfriendly ones respectively. Both manipulations were potent in affecting the subjects' attraction.

Table 2
 Summary of the Means and Time for the
 Videotape of Each Confederate

Condition	Male I	Male II	Female I	Female II
Friendly				
Mean ^{a,b}	26.00 (12)	25.50 (10)	27.16 (9)	26.62 (13)
Time ^c	117 sec.	118 sec.	120 sec.	120 sec.
Nonfriendly				
Mean ^{a,b}	18.63 (11)	18.80 (11)	18.88 (10)	18.09 (12)
Time ^c	129 sec.	135 sec.	125 sec.	127 sec.

^a Ratings on evaluation measure; the higher score indicates more positivity.

^b Numbers in parentheses indicate the number of subjects rating the videotape.

^c Length of the videotape in seconds.

Manipulation Checks on the Experimental Data

The confederate's sex

After the experiment was completed, regression analyses were computed to assess the effect of using different confederates in the friendliness condition. The analyses compared each individual confederate with each other, but did not also compare the effect for the confederates nested within their sex. This means that the regression analyses are conservative; however, since t tests and an ANOVA were computed for the friendliness control condition, the evidence points toward minimum effect of using two different males and females. There were no differences between

Table 3

Summary of the Analysis of Variance for Subjects
Receiving Only the Friendliness Cues
(Friendliness Control Group)

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	.409	< 1	--
Subject's Sex (<u>Ss</u>)	1	4.044	< 1	--
Friendliness (F)	1	1329.135	128.05*	58.89%
<u>Cs</u> X <u>Ss</u>	1	31.637	3.05	--
<u>Cs</u> X F	1	8.909	< 1	--
<u>Ss</u> X F	1	0	--	--
<u>Cs</u> X <u>Ss</u> X F	1	28.319	2.73	--
Error	80	10.380		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .001$

any of the individual confederates on the regression analysis of the evaluation measure, $F < 1$, or on the interpersonal judgment scale, $F < 1$. Since there were no significant differences, the ratings for both individual female confederates composed the data of the confederate's sex (female) condition; the ratings for the two individual male confederates were combined for the data of the confederate's sex (male) condition. Any significant effects for the confederate's sex or its interaction with other conditions should not be due to any one individual confederate.

Competency and friendliness of the confederate

In order to assess the perceived competency and friendliness of the confederate under the experimental conditions, a direct assessment of these traits was included. The subject was asked to indicate the confederate's degree of being competent-incompetent and friendly-unfriendly on 7-point scales which were included among the adjective pairs which composed the evaluation measure and the other Semantic Differential scales.

Table 4 shows the 2^4 ANOVA analyzing the confederate's competency. There was a strong main effect for competency, $F(1, 80) = 165.00$, $p < .001$. Clearly the competent confederate was seen as being more competent ($M = 5.41$) than the incompetent confederate ($M = 2.79$). Regardless of manipulated competency the confederate's friendliness also affected perceived competency, $F(1, 160) = 16.17$, $p < .001$; the friendly confederate was rated as being more competent ($M = 4.51$) than the nonfriendly one ($M = 3.69$). There was also a significant competency by friendliness interaction, $F(1, 160) = 4.04$, $p < .05$, as well as a significant four-way interaction, $F(1, 160) = 4.04$, $p < .05$. However, the point of concern was the success of the confederate's perceived competency; it accounted for 46.25% of the variance, whereas the other three effects accounted for only a total of 6.00% of the variance. Thus, regardless of other significant effects, the subjects were able to correctly perceive the competency of the confederate.

The 2^4 ANOVA for the perceived friendliness of the confederate is shown in Table 5. The main effect for the confederate's friendliness was significant, $F(1, 160) = 236.43$, $p < .001$. The friendly confederate was

Table 4
 Summary of the Analysis of Variance
 for the Confederate's Perceived Competency

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	.091	< 1	--
Competency (C)	1	300.568	165.00**	46.25%
Friendliness (F)	1	29.455	16.17**	4.28%
Subject's Sex (<u>Ss</u>)	1	1.454	< 1	--
<u>Cs</u> X C	1	0	--	--
<u>Cs</u> X F	1	.568	< 1	--
<u>Cs</u> x <u>Ss</u>	1	1.114	< 1	--
C X F	1	7.364	4.04*	.86%
C X <u>Ss</u>	1	2.273	1.25	--
F X <u>Ss</u>	1	.205	< 1	--
<u>Cs</u> X C X F	1	.204	< 1	--
<u>Cs</u> X C X <u>Ss</u>	1	.568	< 1	--
<u>Cs</u> X F X <u>Ss</u>	1	1.455	< 1	--
C X F X <u>Ss</u>	1	.023	< 1	--
<u>Cs</u> X C X F X <u>Ss</u>	1	7.364	4.04*	.86%
Error	160	1.821		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .001$

Table 5
 Summary of Analysis of Variance
 for Confederate's Perceived Friendliness

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	.051	< 1	--
Competency (C)	1	7.778	6.17*	1.22%
Friendliness (F)	1	297.960	236.43***	55.39%
Subject's Sex (<u>Ss</u>)	1	8.642	6.86**	1.38%
<u>Cs</u> X C	1	.006	< 1	--
<u>Cs</u> X F	1	6.960	5.52*	1.06%
<u>Cs</u> X <u>Ss</u>	1	.142	< 1	--
C X F	1	.142	< 1	--
C X <u>Ss</u>	1	2.506	1.98	--
F X <u>Ss</u>	1	2.506	1.98	--
<u>Cs</u> X C X F	1	.687	< 1	--
<u>Cs</u> X C X <u>Ss</u>	1	.278	< 1	--
<u>Cs</u> X F X <u>Ss</u>	1	2.506	1.98	--
C X F X <u>Ss</u>	1	.051	< 1	--
<u>Cs</u> X C X F X <u>Ss</u>	1	2.506	1.98	--
Error	160	1.260		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .01$

*** $p < .001$

rated as being friendlier ($\underline{M} = 6.08$) than the nonfriendly one ($\underline{M} = 3.48$). There was a significant two-way interaction for the confederate's friendliness by the sex of the confederate, $\underline{F} (1, 160) = 5.52, \underline{p} < .05$. Also found was that the competent confederate was rated as being friendlier ($\underline{M} = 4.99$) than the incompetent confederate ($\underline{M} = 4.57$), $\underline{F} (1, 160) = 6.17, \underline{p} < .05$. Men also rated all confederates as being more friendly ($\underline{M} = 5.00$) than women did ($\underline{M} = 4.56$), $\underline{F} (1, 160) = 6.86, \underline{p} < .01$. Again the main concern was the subjects' correct perception of the confederate's level of friendliness. Since the main effect for friendliness accounted for 55.39% of the variance, and the other three effects together accounted for only 3.66% of the variance, the manipulation of friendliness was judged successful.

In summary, subjects rated the competent confederate as being more competent than the incompetent confederate, and the friendly confederate as being friendlier than the nonfriendly confederate. Although other factors affected the ratings, the variance accounted for by the appropriate competency and friendliness manipulations was much greater than by any other factors. Subjects correctly identified the competency and friendliness manipulations regardless of their attraction to the confederate.

The Analysis of the Experimental Data

The ANOVA for the evaluation measure is presented in Table 6, and the ANOVA for the interpersonal judgment scale is in Table 7. Cochran's Test (Kirk, 1968) was performed to test the assumption of homogeneity of the population variances. The analyses revealed that this assumption was met for the evaluation measure, $\underline{C} (10, 16) = .1169, \underline{p} > .10$, and for the

interpersonal judgment scale, $C(10, 16) = .1200, p > .10$. The ratings on each measure appeared to be distributed for all cells, for graphic inspection of the scores indicated no floor or ceiling effects.

In an attempt to broaden the basis of the results from this experiment (Campbell, 1957), two dependent measures of attraction were used: the evaluation measure and the interpersonal judgment scale. However, since the average correlation between these two measures was $.615 (p < .01)$, and the two scales gave basically the same results, it was decided to report the results from both measures, but only to discuss the results from the evaluation measure. Also when both scales gave similar findings, only the results from the evaluation measure are reported since comparisons between the experimental and control groups could only be done directly on the evaluation measure (due to the control groups being given only the evaluation measure), more weight was given to it than the interpersonal judgment scale. There is also evidence that the evaluation measure might be a better indication of the subject's positivity than the interpersonal judgment scale. Others who have used both scales have commented on the difficulty of interpreting the results from the interpersonal judgment scale and found the evaluation ratings more indicative of subjects' attraction (Sadler & Tesser, 1973; McCaughey & Hagen, Note 1). This is supported by the finding that the evaluation measure accounted for more total variance (61.34%) than the interpersonal judgment scale (46.46%). Thus only the results from the evaluation measure are discussed.

As it can be seen in Tables 6 and 7, the results show major support for previous studies which found that competency affects attraction (Aronson, Willerman, & Floyd, 1966; Spence & Helmreich, 1972). Competency

Table 6
 Analysis of Variance for Subject's
 Attraction (Experimental Data)

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	12.023	1.10	--
Competency (C)	1	1191.841	109.21***	23.75%
Friendliness (F)	1	1584.000	145.14***	31.64%
Subject's Sex (<u>Ss</u>)	1	11.000	1.01	--
<u>Cs</u> X C	1	5.114	< 1	--
<u>Cs</u> X F	1	4.455	< 1	--
<u>Cs</u> X <u>Ss</u>	1	.091	< 1	--
C X F	1	25.364	1.41	--
C X <u>Ss</u>	1	184.091	16.87***	3.48%
F X <u>Ss</u>	1	54.568	5.00*	.88%
<u>Cs</u> X C X F	1	40.091	3.67	--
<u>Cs</u> X C X <u>Ss</u>	1	1.455	< 1	--
<u>Cs</u> X F X <u>Ss</u>	1	3.841	< 1	--
C X F X <u>Ss</u>	1	16.568	1.52	--
<u>Cs</u> X C X F X <u>Ss</u>	1	90.205	8.27**	1.59%
Error	160	10.914		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .01$

*** $p < .001$

Table 7
 The Summary of the Analysis
 of Variance of the Interpersonal Judgment Scale
 (Experimental Group)

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	4.454	1.13	--
Competency (C)	1	213.841	54.31**	15.45%
Friendliness (F)	1	372.364	94.57**	27.33%
Subject's Sex (<u>Ss</u>)	1	7.364	1.87	--
<u>Cs</u> X C	1	16.568	4.21*	.67%
<u>Cs</u> X F	1	9.091	2.31	--
<u>Cs</u> X <u>Ss</u>	1	.818	< 1	--
C X F	1	19.114	4.85*	.86%
C X <u>Ss</u>	1	19.114	4.85*	.86%
F X <u>Ss</u>	1	.091	< 1	--
<u>Cs</u> X C X F	1	1.114	< 1	--
<u>Cs</u> X C X <u>Ss</u>	1	1.114	< 1	--
<u>Cs</u> X F X <u>Ss</u>	1	7.364	1.87	--
C X F X <u>Ss</u>	1	.023	< 1	--
<u>Cs</u> X C X F X <u>Ss</u>	1	24.750	6.29*	1.29%
Error	160	3.937		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .001$

was significant on the evaluation measure, $F(1, 160) = 109.21, p < .001$, and on the interpersonal judgment scale, $F(1, 160) = 54.31, p < .001$. The competent confederate was significantly better liked ($M = 24.52$) than the incompetent one ($M = 19.32$). Although the confederate's sex and level of competency were nonsignificant on the evaluation measure, $F < 1$, this interaction was significant on the interpersonal judgment scale, $F(1, 160) = 4.21, p < .05$. A Newman-Keuls test revealed that the liking for the incompetent male and female confederates ($M_s = 7.18$ and 7.48 , respectively) did not differ significantly ($p > .05$), although both means were significantly ($p < .01$) lower than the means for the liking of either competent confederates. However, the competent male confederate was significantly liked more ($M = 10.00$) ($p < .01$) than the competent female ($M = 9.07$).

The results in Tables 6 and 7 also show support for the effect of the confederate's friendliness. Friendliness has been found to be a powerful determinant of attraction (Mehrabian, 1972). The friendliness main effect was significant on the evaluation measure, $F(1, 160) = 145.14, p < .001$, and on the interpersonal judgment scale, $F(1, 160) = 94.57, p < .001$. Clearly, the friendly confederate was more attractive ($M = 24.92$) than the nonfriendly confederate ($M = 18.92$).

The first-order interaction of competency by friendliness was significant on the interpersonal judgment scale, $F(1, 160) = 4.85, p < .05$, but not on the evaluation measure, $F(1, 160) = 1.41, p > .20$. A Newman-Keuls test of the means of the interpersonal judgment scale revealed that the competent, friendly confederate ($M = 11.31$) was significantly more attractive ($p < .01$) than either the competent,

nonfriendly or incompetent, friendly confederates ($M_s = 7.75$ and 8.45 , respectively); these latter means did not significantly differ ($p > .05$). However, the mean for the incompetent, nonfriendly confederate ($M = 6.20$) did not differ significantly ($p > .05$) from the mean for the competent, nonfriendly confederate, although it did differ from the mean for the incompetent, friendly confederate ($p < .01$). Apparently, if the confederate were nonfriendly, being competent did not significantly affect the subject's attraction.

In summary, both competency and friendliness were independently important determinants of attraction. Friendliness accounted for a larger portion of the variance on both the evaluation measure (31.64%) and the interpersonal judgment scale (27.33%) than competency did on each of the same measures (23.75% and 15.47%, respectively). On the evaluation measure alone, these two factors accounted for most of the variance (over 55%).

Test of the hypotheses

Hypothesis One Given both verbal and nonverbal cues, women's attraction toward another person will be more affected than men's by the other person's level of implicit cues.

This hypothesis suggested that women would find the friendly confederate more attractive and, conversely, find the nonfriendly confederate less attractive than men would. This result is found in the two-way interaction of confederate's friendliness by subject's sex. As can be seen in Table 6, this interaction was significant on the evaluation measure, $F(1, 160) = 5.00$, $p < .05$, but not in Table 7 on the

interpersonal judgment scale, $F > 1$. The results of the evaluation scale for this interaction are graphed in Figure 1. A Newman-Keuls analysis revealed that men and women differentially rated the confederates. When friendly, the confederate was better liked by both men ($\underline{M} = 24.61$) and women ($\underline{M} = 25.23$), but these ratings were nonsignificantly different ($p > .05$). Therefore, women were not affected more than men by the positive, friendly cues of the confederate. But women did differ from men in their attraction to the nonfriendly confederate; women significantly ($p < .05$) disliked the nonfriendly confederate ($\underline{M} = 18.11$) more than men did ($\underline{M} = 19.73$). Thus in regard to the nonfriendly confederate, Hypothesis One received partial support.

Hypothesis Two Given both verbal and nonverbal cues, men's attraction toward another person will be more affected than women's by the other person's level of verbal cues.

This hypothesis suggested that the attraction ratings of men would be more affected than women's by the verbal input about the confederate. Men would be expected to rate the competent confederate as more attractive than women did and the incompetent confederate as less attractive than women did. The result is found in the two-way interaction competency by subject's sex, which can be found in Tables 6 and 7. This interaction was significant on the evaluation measure, $F(1, 160) = 16.87, p < .001$ and on the interpersonal judgment scale, $F(1, 160) = 6.29, p < .05$. The means for the evaluation measure are graphed in Figure 2. This shows that the results were exactly converse to the predicted ones. A Newman-Keuls test of the evaluation measure showed that all the means were significantly different from one another. Although men were significantly more

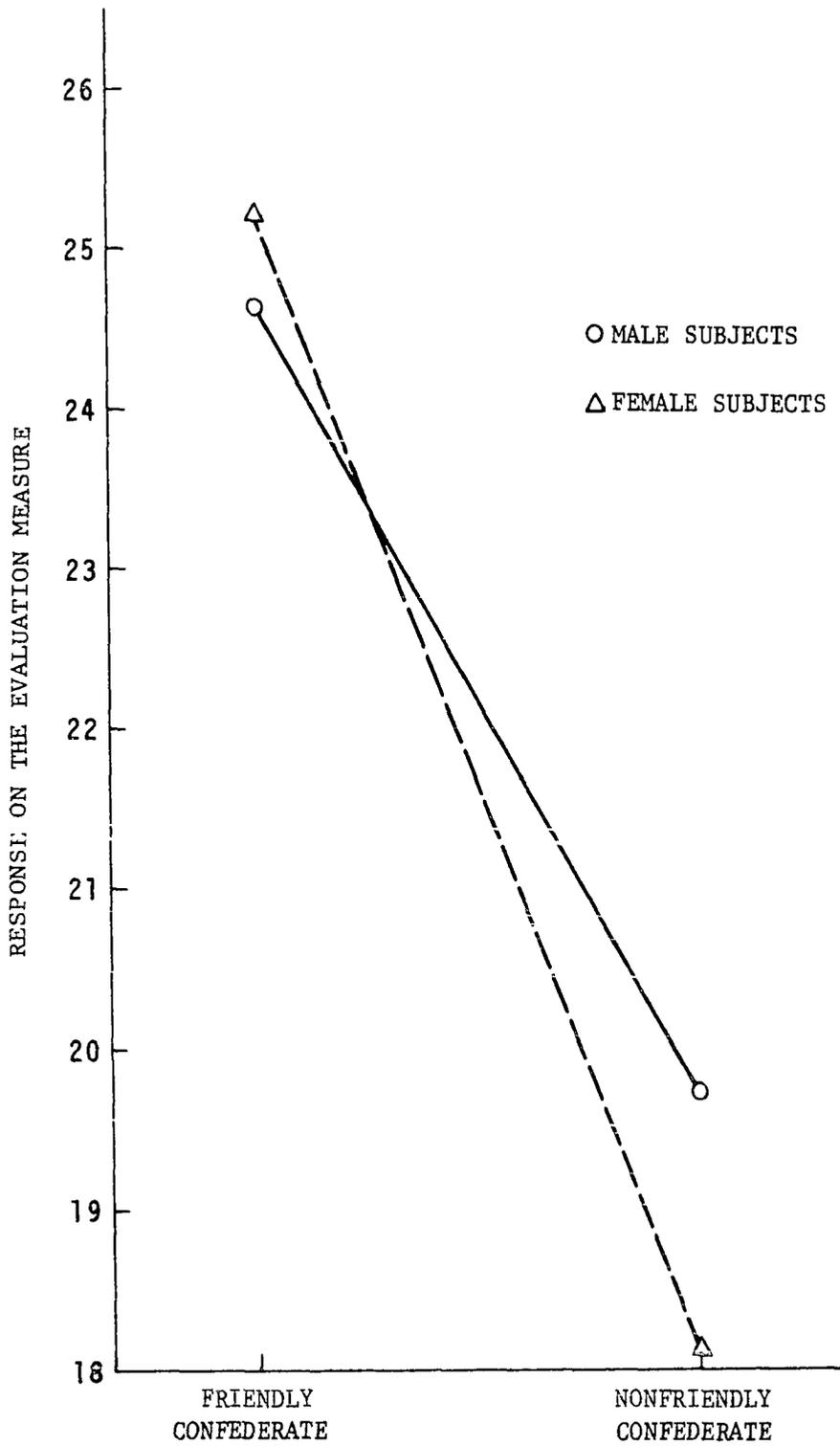


Figure 1: The Two-Way Interaction of Friendliness by Subject's Sex

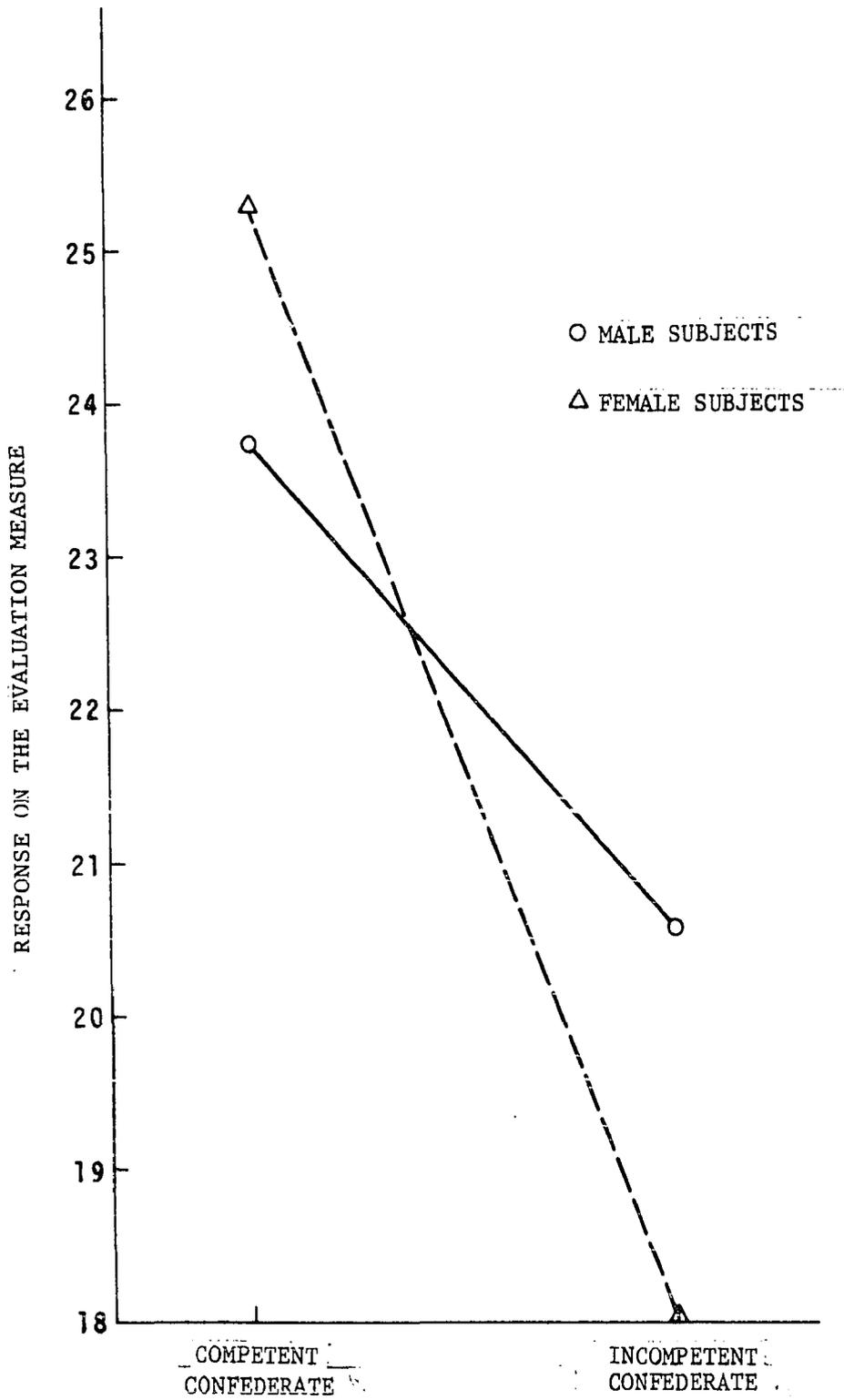


Figure 2: The Two-Way Interaction of Competency by Subject's Sex

attracted to the competent confederate ($\underline{M} = 23.75$) than the incompetent one ($\underline{M} = 20.59$) ($\underline{p} < .01$), women were even more attracted to the competent confederate ($\underline{M} = 25.30$) than men were ($\underline{p} < .05$) and less attracted to the incompetent confederate ($\underline{M} = 18.05$) than men were ($\underline{p} < .01$). Contrary to predictions, women were more affected than men by the verbal cues of competency.

In general, women's attraction appeared to be more affected than men's by both the verbal and nonverbal cues of the confederate. This was contrary to the differential attraction ratings expected.

Other findings

Of strong interest is the significant four-way interaction of the confederate's sex by competency by friendliness by the subject's sex. This was significant on both the evaluation measure, $\underline{F} (1, 160) = 8.28$, $\underline{p} < .01$, and the interpersonal judgment scale, $\underline{F} (1, 160) = 6.29$, $\underline{p} < .05$. Since a Newman-Keuls test had been used for all of the other post hoc tests, it was computed for the 16 means of the four-way interaction. But because of the large array of means, the Newman-Keuls test became too complicated to interpret. For ease of explication to report the results of separate analyses for the combinations of subject variables, viz., sex of the confederate and of the subject are reported for the evaluation measure. Thus four separate analyses were done: male subject-male confederate; male subject-female confederate; female subject-male confederate; and female subject-female confederate. The advantage of these analyses is the computation of simple main effects tests for the effect of the

Table 8

Summary of Analysis of Variance with Simple
Main Effects for Male Subjects Evaluating
Male Confederate

Source ^a	df	MS	F	% ^b
Competency (C)	1	121.113	11.20**	13.33%
C at F+	1	43.682	4.04	
C at F-	1	80.182	7.42*	
Friendliness (F)	1	260.204	24.07***	30.14%
F at C+	1	104.727	9.69**	
F at C-	1	158.227	14.64**	
C X F	1	2.749	< 1	--
Error	40	10.809		

^a Positive level of cue indicated by plus (+); negative level indicated by minus (-).

^b Percentage of variance factor accounts for (Strength of Association)

* $p < .05$
** $p < .01$
*** $p < .001$

confederate's competency and friendliness. These simple main effects tests generally corresponded to the results from the Newman-Keuls test.

Male subject-male confederate This ANOVA is shown in Table 8. The simple main effects test show that men liked the competent, friendly male confederate ($M = 25.72$) better than the competent, nonfriendly one ($M = 21.36$), Simple Main Effects $F(1, 40) = 9.69$, $p < .01$. Likewise, the friendly, incompetent confederate ($M = 22.91$) was better liked than

the nonfriendly, incompetent one ($\underline{M} = 17.55$), Simple Main Effects \underline{F} (1, 40) = 14.64, $p < .001$. The level of the male confederate's friendliness certainly affected the men's ratings. However the confederate's level of competency did not significantly affect the men's liking for the confederate when he was friendly, Simple Main Effects \underline{F} (1, 40) = 4.04, $p > .05$. But when the confederate was nonfriendly, his competency did affect the men's attraction toward him, Simple Main Effects \underline{F} (1, 40) = 7.42, $p < .05$. The results from the Newman-Keuls test did not find this last reported difference significant. Nevertheless, the confederate's level of friendliness was important in determining attraction. The power of the male confederate's friendliness to affect the men's ratings is reflected by the amount of variance friendliness accounts for (30.15%). Competency accounted only for 13.33% of the variance.

Male subject-female confederate The men's ratings of the female confederate is shown in Table 9. As in the ratings of the male confederate, the female confederate was more attractive if she were competent and friendly than if she were competent and nonfriendly, Simple Main Effects \underline{F} (1, 40) = 18.37, $p < .001$, or if she were incompetent and friendly rather than incompetent and nonfriendly, Simple Main Effects \underline{F} (1, 40) = 12.67, $p < .001$. Again, regardless of confederate's sex, the confederate's level of friendliness was an important determinant of men's liking. When the female confederate was competent and friendly ($\underline{M} = 26.64$), she was significantly better liked than if she were incompetent and friendly ($\underline{M} = 23.18$), Simple Main Effects \underline{F} (1, 40) = 7.62, $p < .05$. But if the female confederate was nonfriendly, there were no differences in the liking for her whether she was competent ($\underline{M} = 21.27$) or incompetent

Table 9

Summary of Analysis of Variance with Simple
Main Effects for Male Subjects Evaluating
Female Confederate

Source ^a	<u>df</u>	<u>MS</u>	<u>F</u>	% ^b
Competency (C)	1	99.000	11.49**	12.56%
C at F+	1	65.637	7.62*	
C at F-	1	35.636	4.14	
Friendliness (F)	1	265.091	30.77***	35.65%
F at C+	1	158.227	18.37**	
F at C-	1	109.136	12.67**	
F X C	1	2.272	< 1	--
Error	40	8.614		

^a Positive level of cue indicated by plus (+); negative level indicated by minus (-).

^b Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .01$

*** $p < .001$

($M = 18.73$), Simple Main Effects $F(1, 40) = 4.14$, $p < .05$. For men, the female confederate's nonfriendliness was important in determining attraction. As with the male confederate, friendliness accounted for a larger portion of the variance (35.65%) than competency (12.56%).

Female subject-male confederate In Table 10 are the women's ratings of the male confederate. The results show that if the confederate was friendly, then the competent male was better liked than the incompetent

Table 10

Summary of Analysis of Variance with Simple
Main Effects for Female Subjects Evaluating
Male Confederate

Source ^a	<u>df</u>	<u>MS</u>	<u>F</u>	% ^b
Competency (C)	1	664.568	44.48***	34.49%
C at F+	1	710.227	47.53***	
C at F-	1	96.182	6.37*	
Friendliness (F)	1	464.750	31.11***	23.88%
F at C+	1	560.045	37.48***	
F at C-	1	46.545	3.11	
C X F	1	141.842	9.49**	6.74%
Error	40	14.941		

^a Positive level of cue indicated by plus (+); negative level indicated by minus (-).

^b Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .01$

*** $p < .001$

one, Simple Main Effects $F(1, 40) = 47.53, p < .001$. And if he were non-friendly, the level of his competency significantly affected women's ratings, Simple Main Effects $F(1, 40) = 6.37, p < .05$. Also, when women rated the male confederate who was competent, their liking for him was significantly greater when he was friendly ($M = 30.36$) than nonfriendly ($M = 20.27$), Simple Main Effects $F(1, 40) = 37.48, p < .001$. But when the male confederate was incompetent and friendly ($M = 19.00$), there was

no significant difference in women's liking for him and the incompetent and nonfriendly confederate ($\underline{M} = 16.09$), Simple Main Effects $\underline{F} (1, 40) = 3.11$, $\underline{p} > .05$. Apparently, the male's level of competency was more important in affecting women's attraction than indications of his level of friendliness, for the confederate's competency accounted for 34.49% of the variance. His friendliness accounted for a lesser 23.88%, while the interaction of the confederate's competency and friendliness accounted for 6.74%.

Female subject-female confederate The ANOVA of the women's ratings of the female confederate is in Table 11. Women's ratings of the female confederate were affected by both the confederate's level of competency and friendliness. If the female confederate was competent and friendly ($\underline{M} = 28.55$), she was better liked than if she were competent and nonfriendly ($\underline{M} = 22.00$), Simple Main Effects $\underline{F} (1, 40) = 244.75$, $\underline{p} < .001$. Liking was also greater for the incompetent, friendly female confederate ($\underline{M} = 23.00$) than the incompetent, nonfriendly one ($\underline{M} = 14.09$), Simple Main Effects $\underline{F} (1, 40) = 539.61$, $\underline{p} < .001$. Furthermore, if the confederate was competent, she was better liked if she were friendly than nonfriendly, Simple Main Effects $\underline{F} (1, 40) = 209.07$, $\underline{p} < .001$. The same relationship held if the female confederate was incompetent, Simple Main Effects $\underline{F} (1, 40) = 485.95$, $\underline{p} < .001$. Surprisingly, over 97% of the variance was accounted for; both the confederate's competency and friendliness were important to women's attraction for they accounted for 44.61% and 50.59% of the variance, respectively. The significant interaction of the confederate's friendliness and competency accounted for 1.88% of the variance.

Table 11

Summary of Analysis of Variance with Simple
Main Effects for Female Subjects Evaluating
Female Confederate

Source ^a	<u>df</u>	<u>MS</u>	<u>F</u>	% ^b
Competency (C)	1	539.000	666.25*	44.61%
C at F+	1	198.000	209.07*	
C at F-	1	436.545	485.95*	
Friendliness (F)	1	611.273	755.59*	50.59%
F at C+	1	169.136	244.75*	
F at C-	1	393.136	539.61*	
C X F	1	23.372	28.89*	1.88%
Error	40	.809		

^a Positive level of cue indicated by plus (+); negative level indicated by minus (-).

^b Percentage of variance factor accounts for (Strength of Association)

* $p < .001$

In summary, the effect of the confederate's competency and friendliness are determined by the sex of both the confederate and the subject. These results are descriptively summarized in Table 12.

Comparisons of Control Groups with Experimental Groups

To further explicate how men and women used the cues presented to them about the confederates, the experimental groups were directly compared with the control groups. The control groups received the same cues as the experimental groups; however, each control group received

Table 12

Descriptive Summary of Results for Each
Subject (S) and Confederate (Cs) Sex Combination

Level of Cue Held Constant	Male <u>S</u> - Male <u>Cs</u>	Male <u>S</u> - Female <u>Cs</u>	Female <u>S</u> - Male <u>Cs</u>	Female <u>S</u> - Female <u>Cs</u>
Friendly (F+)	C+ = C-	C+ > C-	C+ > C-	C+ > C-
Nonfriendly (F-)	C+ > C-	C+ = C-	C+ > C-	C+ > C-
Competent (C+)	F+ > F-	F+ > F-	F+ > F-	F+ > F-
Incompetent (C-)	F+ > F-	F+ > F-	F+ = F-	F+ > F-

only one kind of cue, concerning the confederate's level of either competency or friendliness. The experimental groups received the combination of both cues.

It was decided that since the main hypotheses involved differences between male and female subjects, these post hoc analyses would compare same-sex subjects receiving: (1) only competency information, (2) only friendliness cues, or (3) both competency and friendliness cues at the same level as those received in (1) and (2); these cues would be about both the male and the female confederate. These analyses, however, offered several problems. Since these were post hoc analyses and were not complete factorial designs with matched cells, there could not be complete ANOVA's for all the data from the same-sex subjects. Therefore, four factorial analyses for each subject sex were computed: confederate's sex by the type of cues. For instance, one analysis was done for same-sex

subjects: (1) reading the competent biography only, (2) seeing the friendly videotape only, or (3) seeing the friendly videotape and reading the competent biography, about either a male or female confederate. The data for (1) and (2) came from the control groups, and the data for (3) came from the experimental groups. There were a total of eight ANOVA's. The results of these analyses showed that if subjects received a combination of inconsistent cues about the confederates, i.e., competency-nonfriendliness cues or incompetency-friendliness cues, their ratings were intermediate between the higher ratings for the single positive cue and the lower rating for the negative cue. This occurred regardless of subject sex or confederate's sex, and in all cases was significant ($p < .01$). These results are reported in Appendix A. Therefore, the explication of the remaining results centers on the subjects receiving only positive or only negative levels of cues about the confederates.

Since this approach necessitated using the data from each control group in two different ANOVA's, plus the fact that all the data had been previously used in different analyses, there was an increased opportunity of spurious significant results to occur because of the increased alpha level. To guard against this, it was decided that only an alpha level of .01 should be accepted as significant and discussed.

An interesting finding occurred when women received the combination of two positive or negative cues about the confederate, regardless of sex. As shown in Tables 13 and 14, there is a significant effect for the type of cue. The results (in Table 13) indicate that when either cue was positive, women liked the competent confederate ($\bar{M} = 26.14$) or the friendly confederate ($\bar{M} = 26.82$) at the same level; a Newman-Keuls test

Table 13

Summary of Analysis of Variance for Female Subjects
Receiving Positive Cue(s) about Confederate

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	6.682	1.10	--
Type of Cue(s) (T)	2	67.561	11.22*	22.56%
<u>Cs</u> X T	2	18.136	3.01	--
Error	60	6.023		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .01$

Table 14

Summary of Analysis of Variance for Female Subjects
Receiving Negative Cue(s) about Confederate

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	.242	< 1	--
Type of Cue(s) (T)	2	60.061	7.09**	14.91%
<u>Cs</u> X T	2	27.697	3.27*	5.56%
Error	60	8.467		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .01$

shows that these means did not differ ($p > .05$). But if women were shown both the competency and friendliness cues during the experimental setting, their attraction toward the confederate ($\underline{M} = 29.45$) was significantly increased ($p < .01$) over the ratings for the single cue. Likewise, a parallel, but reverse pattern occurred when the information was negative (in Table 14). When women received both incompetency and non-friendliness cues about the confederate, they significantly ($p < .01$) disliked the confederate ($\underline{M} = 15.09$) more than when they received only incompetency cues ($\underline{M} = 17.45$) or nonfriendliness cues ($\underline{M} = 18.27$). The Newman-Keuls test showed that these two single cue means did not differ. Apparently receiving two consistent cues significantly enhanced women's ratings in either direction.

As shown in Tables 15 and 16, this enhancement effect is not found for men. Liking did not differ because of the amount, either when both cues were positive, $F < 1$ (in Table 15), or when both were negative, $F < 1$ (in Table 16). When men received both positive cues ($\underline{M} = 26.18$), their liking did not differ from their liking for the confederate for whom only competency information ($\underline{M} = 25.18$) or only friendliness ($\underline{M} = 26.00$) cues were shown. Similarly, men's dislike did not differ whether they saw only incompetency cues ($\underline{M} = 17.59$), only nonfriendliness cues ($\underline{M} = 18.62$), or both incompetency and nonfriendliness cues ($\underline{M} = 18.13$).

The difference between men and women's ratings can most clearly be seen in Figure 3. There was a sex difference in the pattern of subject's ratings, for women showed a strong enhancement in their ratings

Table 15

Summary of Analysis of Variance for Male Subjects
Receiving Positive Cue(s) about Confederate

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	29.331	4.53*	4.92
Type of Cue(s) (T)	2	6.242	< 1	--
<u>Cs</u> X T	2	13.880	2.14	--
Error	60	6.474		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

Table 16

Summary of Analysis of Variance for Male Subjects
Receiving Negative Cue(s) about Confederate

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	11.879	1.49	--
Type of Cue(s) (T)	2	3.614	< 1	--
<u>Cs</u> X T	2	5.477	< 1	--
Error	60	8.033		

^a Percentage of variance factor accounts for (Strength of Association)

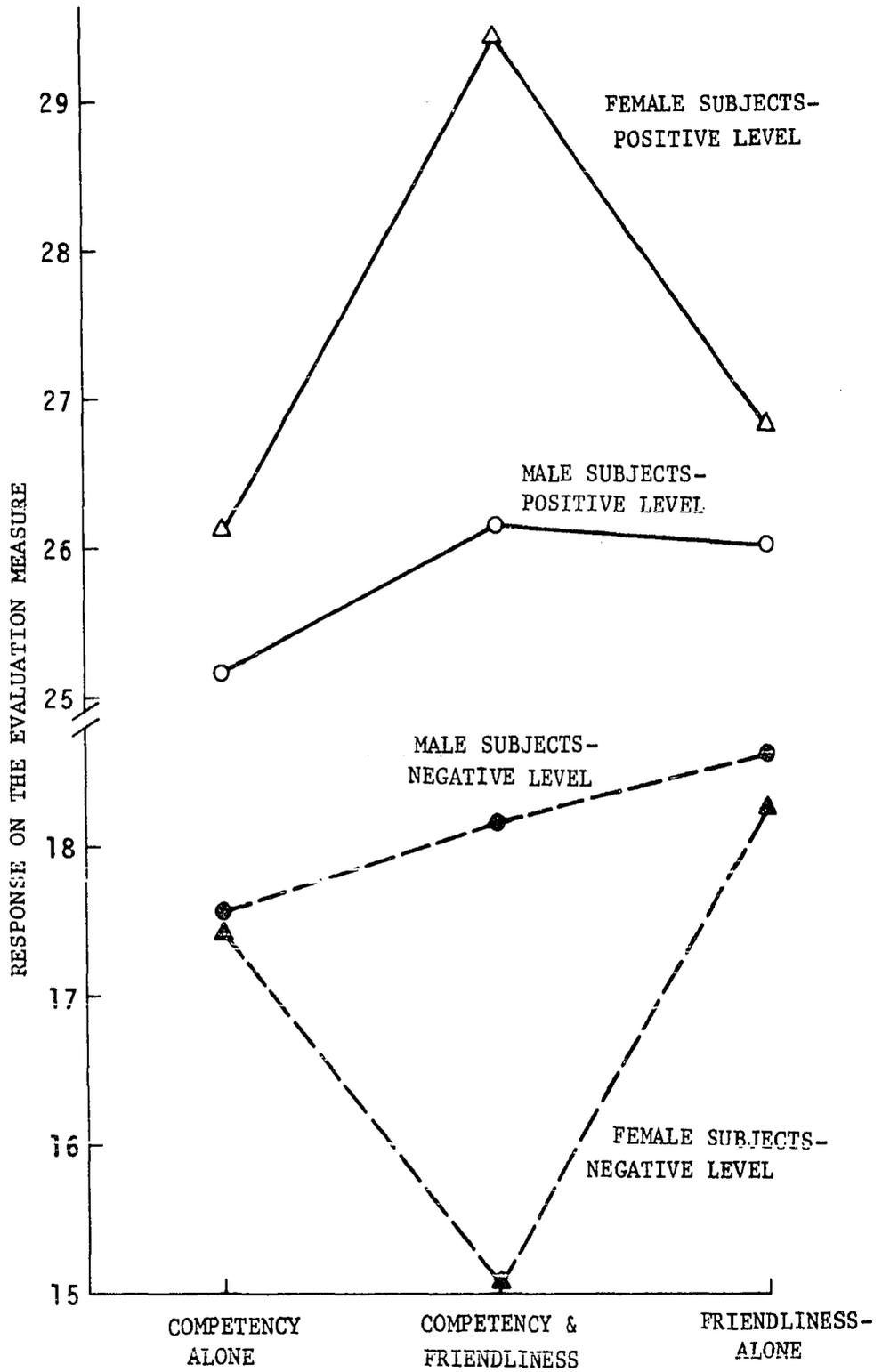


Figure 3: The Interaction of Subject's Sex and the Amount and Level of Cues

when two consistent cues were received, but men did not. Apparently the combination of cues was a determinant of attraction for women, but was not for men.

Other Dependent Measures

The potency measure

Potency refers to perceived social control or social power, which is extremely salient in the social life of animals and humans (Eibl-Eibesfeldt, 1974; Mehrabian, 1972). Power has been discussed as the ability to affect the quality of outcomes of another (Thibaut & Kelley, 1959) or the ability to control resources which can be given to or taken from another (Foa & Foa, 1972). Thus the confederate who is rated as being more potent could be seen by subjects as having greater resources and ability to use them than the less potent confederate. However, potency in our culture is highly involved with sex stereotypes, and men are viewed as being more powerful than women (Bernard, 1974; Henley, 1973). Both concepts of potency should affect the subject's ratings of the confederate.

The potency measure was submitted to a 2^4 ANOVA; the results of this analysis can be seen in Table 17. Competency was a significant determinant of the confederate's perceived potency, $F(1, 160) = 107.97, p < .001$. The competent confederate was much more potent ($M = 13.07$) than the incompetent confederate ($M = 9.35$). As French and Raven (1959) have discussed, competency or expertise is an important source of power. Apparently the competent confederate was seen as being able to control more resources than the incompetent one. Although the male confederate was seen as more potent ($M = 11.59$) than the female confederate ($M = 10.83$),

Table 17
 Summary of Analysis of Variance
 for Potency Measure

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	25.505	4.53*	1.15%
Competency (C)	1	607.551	107.97***	34.78%
Friendliness (F)	1	12.551	2.23	--
Subject's Sex (<u>Ss</u>)	1	2.051	< 1	--
<u>Cs</u> X C	1	14.779	2.63	--
<u>Cs</u> X F	1	57.279	10.18**	2.98%
<u>Cs</u> X <u>Ss</u>	1	15.961	2.84	--
C X F	1	4.779	< 1	--
C X <u>Ss</u>	1	75.142	13.35**	4.02%
F X <u>Ss</u>	1	.142	< 1	--
<u>Cs</u> X C X F	1	0	--	--
<u>Cs</u> X C X <u>Ss</u>	1	317.960	56.51***	18.04%
<u>Cs</u> X F X <u>Ss</u>	1	0	--	--
C X F X <u>Ss</u>	1	.687	< 1	--
<u>Cs</u> X C X F X <u>Ss</u>	1	0	--	--
Error	160	5.627		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .01$

*** $p < .001$

$F(1, 160) = 4.53, p < .05$, sex did not account for as much variance (1.15%) as the confederate's competency did (34.78%). Thus the perceived power of confederate appeared to be more a function of the confederate's abilities than sex.

Sex of the confederate did have some influence on perceived potency, especially when it interacted with other variables. The three-way interaction of confederate's sex by competency by subject's sex was very significant, $F(1, 160) = 56.51, p < .001$; it accounted for almost 20% of the variance. The results of the Newman-Keuls test, which is reported in Appendix A, show that when the confederate was competent, ratings of potency did not differ with regard to the sex of the confederate or the subject. And as expected from the competency main effect, the incompetent confederate was generally seen as being less potent than the competent confederate. However, when men rated the competent female confederate ($M = 12.09$) and the incompetent male confederate ($M = 11.04$), their ratings of potency did not statistically differ. Furthermore, the men's ratings for the incompetent male confederate were significantly higher ($p < .01$) than men or women's ratings of any other incompetent confederate. Thus men's ratings of potency were affected by the sex of the confederate.

Other significant effects were two-way interaction of confederate's sex by friendliness, $F(1, 160) = 10.18, p < .001$. This showed that the friendly male confederate was viewed as being significantly ($p < .05$) more potent ($M = 12.32$) than either the friendly female ($M = 10.64$), the nonfriendly female ($M = 11.02$), or the nonfriendly male ($M = 10.86$). These last three means did not statistically differ. The significant two-way

interaction of competency by subject's sex, $F(1, 160) = 13.35, p < .001$, showed that although the confederate's level of competency affected both men and women's ratings of potency, women were significantly more affected ($p < .05$) by competency ($M = 13.61$) and incompetency ($M = 8.59$) than men were ($M_s = 12.52$ and 10.11 , respectively). These two factors together accounted for only 7.00% of the variance.

In summary, the confederate's competency was the single most important determinant of the confederate's perceived potency. Apparently knowledge and expertise, as determined by academic and social success in school, makes a person a more potential source of rewards. However, consistent with a number of observations (e.g., Henley, 1973), potency was also seen as being affected by the sex of the person, so that the male is seen as having more power.

The activity measure

Activity refers to the saliency that a person or thing has for a rater (Mehrabian, 1972). This does not imply that saliency is good or bad, but rather that the person or thing is highly noticeable. A person jumping for joy or throwing a tantrum should both be rated as highly active, although the former should be more positive than the latter.

The results of the 2^4 ANOVA for the activity measure are shown in Table 18. In general, the confederate's positive evaluative cues were more salient for the subjects than the negative ones. The friendly confederate was rated as being more active ($M = 18.01$) than the nonfriendly one ($M = 11.66$), $F(1, 160) = 163.27, p < .001$. Likewise, the competent

Table 18
 Summary of the Analysis of
 Variance for Activity Measure

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	88.778	8.16**	1.69%
Competency (C)	1	824.778	75.85***	17.68%
Friendliness (F)	1	1175.460	163.28***	38.34%
Subject's Sex (<u>Ss</u>)	1	31.960	2.94	--
<u>Cs</u> X C	1	.460	< 1	--
<u>Cs</u> X F	1	1.642	< 1	--
<u>Cs</u> X <u>Ss</u>	1	17.187	1.58	--
C X F	1	6.187	< 1	--
C X <u>Ss</u>	1	51.278	4.71*	.88%
F X <u>Ss</u>	1	.460	< 1	--
<u>Cs</u> X C X F	1	4.778	< 1	--
<u>Cs</u> X C X <u>Ss</u>	1	37.278	3.43	--
<u>Cs</u> X F X <u>Ss</u>	1	.687	< 1	--
C X F X <u>Ss</u>	1	.960	< 1	--
<u>Cs</u> X C X F X <u>Ss</u>	1	10.874	< 1	--
Error	160	10.874		

^a Percentage of variance factor accounts for (Strength of Association)

* $p < .05$

** $p < .01$

*** $p < .001$

confederate was rated more active ($\underline{M} = 17.00$) than the incompetent confederate ($\underline{M} = 12.67$), $\underline{F} (1, 160) = 75.85$, $\underline{p} < .001$.

The significant two-way interaction of competency by subject's sex, $\underline{F} (1, 160) = 4.71$, $\underline{p} < .05$, showed that although men and women did not differ in their activity ratings of the competent confederate ($\underline{M}s = 16.87$ and 17.11 , respectively), the incompetent confederate was less salient for women ($\underline{M} = 11.70$) than for men ($\underline{M} = 13.64$). Also the analysis showed that the female confederate was significantly more salient to subject's ($\underline{M} = 15.55$) than the male confederate ($\underline{M} = 14.13$), $\underline{F} (1, 160) = 8.16$, $\underline{p} < .01$.

In general, the confederate's friendliness was the most significant factor; it accounted for a larger portion of the total variance (38.33%) than any other factor. Competency accounted for only 17.68% of the variance; the other two significant factors only accounted for 2.57%. If the activity measure tapped the saliency of the cues, then the positive level of the stimuli attracted more attention. Since activity can be considered as a measure of the orientation a person has toward stimuli in the environment (Mehrabian, 1972), it is interesting that nonverbal cues were important determinants of the rating of activity. The finding suggests that a person's nonverbal cues are a highly salient and attention-focusing behavior for people.

DISCUSSION

The results showed that men and women were affected by both the verbal and nonverbal cues. Contrary to the predictions that men would be primarily affected by verbal cues and women by nonverbal ones when both were presented, the results showed that both sexes were highly affected by both types of cue. Although the results were generally consistent with the effect of friendliness on women's attraction, the results also showed that women's attraction was more affected by the level of the confederate's competency than men's. Thus not only were both sexes sensitive to either type of cue, but women's attraction was more affected by either cue than men's. Moreover, the four-way interaction revealed that the valence of friendliness and competency depended on the sex of both the confederate and the subject. Although the predictions did not hold, there are patterns in the results; these consistencies are: (1) differences in the sex of the subjects; and (2) differences between same- and cross-sex groups of confederates and subjects.

However, before these patterns can be discussed, it is important to consider the reasons why the predicted results did not occur. It appears that this experiment differs strategically in procedure from previous research. The next section explores these differences.

Procedural Differences

This research was designed to explore the effects of giving men and women verbal and nonverbal cues about another person. The purpose was to discern the effect that each cue would have on a subject's attraction when the two cues were presented together. Since people in

ordinary situations receive multiple input, both in terms of content and channel, it was decided to attempt an analogous situation by giving the subjects multiple input of verbal and nonverbal stimuli. The verbal cues were manipulated as a biography which the subject read; it revealed that the confederate was competent or incompetent. The nonverbal cues were varied as the level of friendliness the confederate displayed in the short videotaped interview. Clearly the content and the channel for each cue were confounded. However, that confounding is somewhat endemic to the very nature of the cues, especially when considering friendliness (Mehrabian & Ferris, 1967; Mehrabian & Wiener, 1967). The demonstration of friendliness "speaks" much louder than words. On the other hand, competency information is commonly seen in verbal form; pick up any news or personality magazine off the stands, and you can see a person's abilities extolled or disparaged. Since the purpose was to explore the effect of receiving cues encoded through different types of content, the cues were purposely confounded.

But this does not mean that the results are unmeaningful, for the intention was to produce two orthogonal cues which were both evaluative. And these two manipulations were successful in this, for the positive level of each cue produced significantly greater liking than its negative level. Furthermore, the comparison of the control and the experimental data showed that the positive level of each cue separately produced similar amounts of liking for same-sex subjects; this also occurred for the negative level for the cues. Since the cues produce like amounts of attraction in the subjects, the competency and friendliness manipulations were evaluatively equivalent. Of course, any study, using a

confederate to impart an independent variable, has the possible problem in confounding the individual performance of a variable with its generic operationalization. Thus, subjects might see confederates A and B both display friendliness, but they might react to A differently on the dependent variable than B, because A has more or less skills at encoding friendliness. This problem is offset by training of the confederates, and getting independent estimates of the confederates' skills, but it must be recognized that the use of a confederate offers a possible limitation to the generality of the results. Nevertheless, given the findings, it is reasonable to argue that this study has a good amount of internal validity and also has relatively more external validity than many studies of interpersonal attraction.

Yet, in comparison to results from studies using both verbal and nonverbal stimuli, the results of this research are confusing. To clarify the distinction between this study and others, it is helpful to examine the assumptions on which this study was based. To clarify the assumptions, it is helpful to discuss a distinction in the way that cues from different channels can be given differing weights (Bugental, 1974). One manner is through channel discounting which refers to the dominance of one channel over another in the weighing process. Thus, cues from the preferred channel would be given more weight in the attraction formation than cues from a less preferred channel. Creek and Watkins (1972) found that people do have preferred channels. Based on previous research (e.g., Mehrabian & Ferris, 1967), it was expected that women would be more influenced by friendliness cues because they were better decoders of nonverbal channels and gave them more weight (Zahn, 1973, 1975). It was assumed that men

would give more weight to the verbal channels (Zahn, 1975). Thus, in fact, it is seen that the hypotheses predicted differences in women and men's discounting. However, those differences did not occur, for the findings of the strong main effects for the confederate's competency and friendliness can only argue that either set of cues strongly determined the subjects' attraction. There is little evidence for sex differences in channel discounting, since the level of positivity for each cue determined the attraction ratings.

Although the expected sex differences were not found, these findings do not contradict the results of other studies. The procedures used in this experiment and the procedures used by other experiments manipulating both verbal and nonverbal cues have important differences. Previous studies which used both cues as independent variables (Bugental, 1974; Bugental, Kaswan, & Love, 1970; Creek & Watkins, 1972; Mehrabian & Ferris, 1967; Mehrabian & Wiener, 1967; Solomon & Ali, 1972; Solomon & Yeager, 1969; Zahn, 1973, 1975) presented the two types simultaneously in the same stimulus presentation. Results from these studies have consistently found that women weigh nonverbal cues more than men do; this consistency formed the basis for the assumptions of this research. However, this experiment presented the verbal and nonverbal channels independently of each other in a counterbalanced order. This separate display of cues from either channel maximized the differences in the two channels, as well as offered the most control in presenting the variables. Since the intention was to focus the subjects' attention on both cues in order to

determine their effects, the procedure worked, for both competency and friendliness individually accounted for large portions of the variance of the evaluation measures.

While channel discounting did not happen, other types of discounting did. Bugental (1974) also discussed valence discounting, which is the giving of differential weights to cues on the basis of the sign of their evaluative connotations. In other words, some cues would be given more weight because they are evaluatively positive or negative. This model appears to describe the results of the study. With regard to sex differences, women's ratings were generally more affected than men's by the confederate's level of friendliness or competency. The results of the two-way interactions, as well as the four-way interaction, would indicate that women weighed both the positive and the negative evaluative cues more heavily than the men did. The four-way interaction also reveals consistent differences in valence discounting for same- and cross-sex groups. However, valence discounting is only a model; it does not explain why these differences should occur.

The following sections will examine possible explanations for the reasons for these differences in valence discounting. First, sex differences are explored; this is followed by a discussion of same- and cross-sex differences.

Sex Differences

Why should women give more weight than men to any of the confederate's cues? It is proposed, that since the cues applied to information about people, women gave them more weight in the rating process because of their

increased orientation toward people. There is a great amount of research which indicates that women are more affiliation oriented than men (Anastasi, 1958; Mehrabian & Ksionzky, 1972; Oetzel, 1966; Parsons & Bales, 1955; Walberg, 1969). However, this affiliation orientation need only imply that women have greater skills and interest in dealing with people than men do (Maccoby, 1966). There is a body of research (Hoffman, 1972; Stein & Bailey, 1973) which indicates that women are not more sensitive to social approval, but rather that women have greater interest than men in social skills because this represents a major area of achievement orientation for them. Since skill at dealing with people implies proficiency at decoding personal information, it is not unexpected that women's scores show enhancement over men's on the evaluation measure, a rating form which taps a major source of cognitive involvement with people (Mehrabian, 1972; Osgood, 1969).

In view of this reasoning the assumptions which predicted that women would only be affected by the nonverbal cues were simplistic and naive. If women are concerned with people, then any cues which are presented concerning a person (especially in a situation where the amount of the cues is delimited) should have strong effects on them, particularly when asked to rate the person's qualities. Being highly oriented to people, women should find the nonverbal cues a person displays pertinent in their judgments of the person; the predicted relation concerning women's increased ratings for the confederate's level of friendliness received partial support. However, verbal cues, especially competency, are also

pertinent for they relay important information about the confederate. Since these were the only cues presented in the experiment, their effects became particularly salient.

This reasoning that the confederate's cues had more meaning for women because of their increased affiliation orientation receives clearest support when considering the effect that the confederate's competency had on men and women. When only competency cues were revealed about the confederate in the control condition, the competent confederate was rated as being more attractive by women than men. In the experimental situation, it is clear that women liked the competent confederate and disliked the incompetent confederate significantly more than the men did. In the four-way interaction, when women rated the female confederate, her competency accounted for almost as much variance as her friendliness (44.61% and 50.59%, respectively); furthermore, when women rated the male confederate, competency accounted for more variance than friendliness (34.49% and 23.88%, respectively). The affect of competency on men's ratings was much less than women's; the analyses of the four-way interaction showed that the confederate's competency never accounted for more than 14% of the variance. Certainly, the confederate's competency was important for women's ratings.

This is not to say that competency was unimportant in determining the men's attraction. The main effect for competency showed that it was a major determinant of attraction for both subject sexes. However, competency was not as consistently an important determinant of men's liking as it was for women's. For example, if the female confederate were nonfriendly, her being competent did not increase men's liking for

her. And if the male confederate were friendly, his incompetency did not decrease their liking for him. Thus, although competency was important in determining men's attraction, it was not as consistently powerful in affecting men's attraction as it was for women's.

The finding that men were highly affected by the confederate's level of friendliness appears to cloud the conclusion that women are more affected by information about people. If women were more affected than men by personal information, then when only friendliness cues were revealed about the confederate, women should have liked the friendly confederate and disliked the nonfriendly one more than men did. Although women's ratings were slightly more extreme than men's, the differences were nonsignificantly different, although women's attraction was higher. Does this evidence mean that the argument presented previously that women are more affiliatively skillful is erroneous?

It may only indicate that men's social judgment skills have been seriously underrated (Maccoby & Jacklin, 1974). Clearly, friendliness played an important role in the determination of men's attraction toward the confederate. Finding that men and women's ratings of the friendly confederate did not differ only implies that both sexes were equally sensitive to the positive evaluative cues of friendliness. The results from the four-way interaction showed that men's liking was highly determined by the confederate's level of friendliness; it accounted for over twice as much variance (over 30%) as competency did (less than 14%). The importance of friendliness for men is consistent with earlier research by Bales and his associates (Bales, 1958, 1966; Bales & Slater, 1955). Using all male groups they found that attraction toward another

was based primarily on social-emotional factors, such as friendliness. Task relevant factors, such as a person's competency, were important in influencing decisions in the groups, but were not highly correlated with men's liking for people. Since the dependent measures in this study referred to liking, the confederate's friendliness was an important determinant of their liking.

However, men and women only rated the friendly confederate at the same level; the nonfriendly confederate was disliked significantly more by women than men. From this evidence it would be argued that while men were as sensitive as women to the positive evaluative cues of friendliness, they were not as sensitive to the negative cues of nonfriendliness. Zaidel and Mehrabian (1969) found that the range of nonverbal cues was more differentiated when expressing negative feelings than positive ones. If negative cues are more varied, then women who decode implicit cues better than men do (e.g., Argyle et al., 1970; Mehrabian, 1972; Zaidel & Mehrabian, 1969) should react more strongly to them. Women did dislike the nonfriendly confederate significantly more. Furthermore, Zaidel and Mehrabian found that men were slightly better decoders than women of positive implicit cues, while women were better decoders of negative cues. Since the variability for positive cues is not as great as for negative ones, men and women should not greatly differ in their reactions to a show of positive friendliness; their ratings should fall within a similar range. Although women did rate the friendly confederate as more attractive than men did, their ratings did not differ. These results, as well as Zaidel and Mehrabian's and others (McGaughey & Kahn, Note 2), only suggest that men are as sensitive as women to the

narrower range of positive implicit cues, but women are affected by the larger range of both positive and negative cues. Returning to the question of whether women are more affected by cues about another, the answer appears affirmative. With the slight modification that men were as affected as women by the positive nonverbal cues, it appears that women's attraction to the confederate was more of a function of the valence (and type) of the cues than it was for men's.

While women did respond to the confederate's competency and friendliness more than men did, it appears that the saliency of these cues was due in part to the presentation of both cues in the same stimulus conditions. When each cue was presented singly in the control conditions, there was no consistent interaction effect for subject sex by the level of the particular cue in question. Men and women showed no differences in their liking for the friendly and nonfriendly confederate when friendliness was presented alone; yet when the level of friendliness was presented with competency information in the experimental setting, there was a significant interaction effect. There was an interaction effect when competency cues were presented alone in the control group, but there was no difference in men and women's liking for the incompetent confederate. However, when the competency levels were combined with friendliness cues, women not only liked the competent confederate more than men did, but they also disliked the incompetent confederate significantly more than men did. These differences between men and women's ratings is highlighted when the data from the experimental and control groups are compared. When men received consistent positive or negative cues, their attraction to the confederate was at the same level

as when they received the friendliness or competency information alone. The men's ratings did not differ because of the combination of cues. Men appeared to use a simple averaging process for rating the two cues in the experimental setting; their ratings were simply the averaged combination of the ratings for each separate cue in the control groups. Zahn (1975) found similar results for men in an experiment examining vocal and verbal integration.

Women's reactions differed importantly. When women received two consistent cues about the confederate, their ratings were significantly enhanced over their ratings of the confederates when each cue was given alone. When positive levels of both friendliness and competency were revealed, the women liked the confederate significantly more than when each positive cue was given alone; likewise, women disliked the incompetent, nonfriendly confederate significantly more than either the incompetent (only) or the nonfriendly (only) confederate. Women appear to combine the two cues in a summative or multiplicative manner. These results are similar to ones found by others (Hagiwara, 1975; Lampel & Anderson, 1968; Zahn, 1973, 1975).

However, this enhancement effect is not due to women's simply receiving more information about people. Hagiwara (1975) and Lampel and Anderson (1968) found that women would only give intensified ratings when cues came from a combination of verbal and nonverbal channels. Giving women information about a man, which included several personality traits and either a photograph or a verbal description of the man's facial appearance, Hagiwara found that liking was enhanced only in the photograph-trait combination, but not in the verbal description-traits

combination. Furthermore, the man's appearance accounted for a greater portion of the variance when presented by photographs than when verbally described. Lampel and Anderson, in a similar experiment where the combination of photographs and personality-trait adjectives were judged by women, found similar enhancement in the photograph-traits interaction, but not in the traits-traits interaction. Zahn (1973, 1975) who examined verbal-vocal integration found a summative effect for women. From these results it is suggested that the enhancement effect in the interaction of the friendliness and the competency cues occurred for women only because of the combination of verbal and nonverbal channels. This implies that if friendliness had been presented through a verbal channel, the enhancement effect would not have occurred.

But why should women's liking be intensified when consistent evaluative cues are combined from the verbal and nonverbal channels? It has been suggested that nonverbal channels have greater power to accurately transmit affective stimuli (Mehrabian, 1972; Watzlawick et al., 1967). As long as there are no contradictory cues, women should put increased weight on cues from nonverbal channels when asked about matters concerning affiliation. This is consistent with the findings that women are better decoders of the full range of nonverbal cues (Zaidel & Mehrabian, 1969) as well as the findings that they give more weight to nonverbal cues in matters concerning evaluation (Zahn, 1973, 1975), especially when credible (Bugental, 1974). However since men and women can decode both types of channels, cues from both can be the basis for liking of another. When these channels are transmitted separately, they arbitrarily focus the subject's attention on the cues presented;

therefore, regardless of the type of cue, the evaluative level becomes the basis for the subject's rating of liking. When women received only competency or only friendliness cues, each of which had the same level of positivity, there were no differences in their liking for the confederate. But when cues from both channels indicated similar levels of positivity, the consistency of the cues indicated that they corroborated each other. And that corroboration came from the special pertinence the nonverbal channels have for relating relationship information. Since the dependent measure concerned liking, the increased power of the valence from the nonverbal cues plus the valence of the verbal cues caused women to give enhanced ratings for consistently positive or negative cues. Simply giving more verbal information, as Hagiwara (1975) or Lampel and Anderson (1968) did, would not increase the ratings, since the accuracy and/or validity of the channel had not been increased. As proposed, the enhancement effect for consistent cues was found for women because of their increased skill in determining evaluative information. Since nonverbal channels are especially pertinent for determining affiliative information, these channels have increased weight in the attraction process. As long as other cues are consistent with the evaluative level of nonverbal cues, women should be more affected than men by the combination of cues about people which are encoded through different channels.

In this study, women have been found to differ from men in the following ways: (1) women gave greater weight to competency information; (2) women gave greater weight to negative nonverbal cues; and (3) with verbal and nonverbal cues given at a consistent evaluative level, women gave more enhanced ratings of the confederate. It has been proposed that

these results are due to women's increased affiliation skills. An alternative hypothesis is that women are simply better decoders than men of implicit behaviors. If women have increased affiliation skills it is because they are sensitive to the channels through which affective stimuli are primarily communicated. Although this accounts for the second and third results, it does not explain why women should be better decoders than men of competency material. Another alternative hypothesis which is consistent with some of the findings but not all of them, is that women, who have less power than men, must be more attentive to all types of information which might affect their relationship to people. Since women have less control or power in a situation than men, they must be more vigilant of information, and thus, responsive in order to possibly protect themselves in a situation (cf., Thibaut & Kelley, 1959). However, this hypothesis would indicate that women should be more responsive to men than women, since men are assumed more powerful (Henley, 1973). This did not happen, for women were more affected than men by information about any confederate, regardless of sex.

Although it is reasonable to conclude that the results are best explained by the increased affiliation skills of women, this could only be an indirect cause of the extremity of women's ratings. Stein and Bailey (1973) have suggested that social skills are a primary source of achievement motivation for women. This would suggest that a situation which requires subjects to make judgments about a person might be considered more important or more serious by women than men. Thus, because of trying to be more accurate, or possibly to impress the experimenter with their skills, women gave enhanced responses on the dependent measures.

Perhaps, under ordinary circumstances, when judgments are not going to be examined in a psychological experiment, women's ratings would not differ from men's. Although women's increased affiliation skills would be a cause of the enhancement, the pattern of findings would be an artifact of asking the subjects to give their judgments about the confederates. Until subsequent testing of this alternative hypothesis can be made, the possibility remains that the results of this study are an artifact of its method. Although this alternative hypothesis will not be further pursued in this discussion, its suggested limitation of the results must be considered.

One other alternative hypothesis should be discussed; it is possible that the sex differences are simply due to women's using the evaluation measure differently than men's. In other words, the sex differences could be due to a rating bias on the part of women, which would make them rate the positive cues more positively and the negative cues more negatively than men did; Tagiuri (1969) has called this the leniency effect. The differences would not reflect actual stimulus differences, but rather sex differences in the usage of the scales. For this argument to have validity, other researchers should have found consistent sex differences when using the Semantic Differential; moreover, data from this experiment should show that women's ratings were consistently more extreme than men's.

Osgood et al. (1957) reported in their analysis of the Semantic Differential technique that they did not find significant differences between men and women's use of scale positions. They did report an unpublished study by Lyons and Solomon which found that under

anxiety-provoking conditions, males tended to use the more intermediary positions of the scales, while females piled up heavily in the polar and the neutral positions. In order for Lyons and Solomon's results to be relevant to this study, it would have to be demonstrated that this experiment was anxiety-provoking. The instructions stressed that there were no correct or incorrect judgments. The demeanor of the subjects, as well as their replies on the manipulation checks, gave no indication that the subjects were anxious. Furthermore, research using similar stimulus material and procedures to the ones in the research (McGaughey & Hagen, Note 1) found no sex differences in scale usage. With regard to data in this experiment, no consistent pattern of sex differences was found in the control groups. Since subjects who participated in the control groups were randomly chosen from the same population from which the experimental subjects were taken, there is little consistent support of sex bias in the scale use. With the evidence from the present and previous research showing no consistent sex differences on the Semantic Differential scales, it is reasonable to conclude that the results reflect actual differences in the sexes' reaction to the stimuli.

Therefore women did differ from men. Women were found to be more responsive than men to a larger range of stimuli and, also, to be more affected than men by combinations of cues from different channels. These sex differences are seen as reflecting women's increased affiliation skills.

Same- versus Cross-Sex Differences

While men and women differed in their pattern of valence discounting, the results also indicated that there were important differences in the

subject's attraction to same- and cross-sex confederates. Again valence discounting refers to the process whereby differential weights are assigned to cues on the basis of the sign of their evaluative connotations. Zahn (1973) found evidence of negative (pessimistic) discounting which accounts for an integration of separate cues weighted toward the negative or unfavorable components; he also found examples of positive (optimistic) discounting, which is an emphasis on the positive or favorable components. While there was a sex difference in valence discounting, another specific pattern is also suggested when subjects rated same- and cross-sex confederates. This pattern is seen when the results from the significant four-way interaction are examined. For the convenience of the reader, Table 11, which summarized the results of the four-way interaction, is reprinted here as Table 18. This shows the separate analyses for each combination of subject and confederate sex; thus, the relative weight of competency and friendliness can be assessed for each sex group.

Table 19

Descriptive Summary of Results for Each
Subject (S) and Confederate (Cs) Sex Combination

Level of Cue Held Constant	Male <u>S</u> - Male <u>Cs</u>	Male <u>S</u> - Female <u>Cs</u>	Female <u>S</u> - Male <u>Cs</u>	Female <u>S</u> - Female <u>Cs</u>
Friendly (F+)	C+ = C-	C+ > C-	C+ > C-	C+ > C-
Nonfriendly (F-)	C+ > C-	C+ = C-	C+ > C-	C+ > C-
Competent (C+)	F+ > F-	F+ > F-	F+ > F-	F+ > F-
Incompetent (C-)	F+ > F-	F+ > F-	F+ = F-	F+ > F-

This table indicates that the valence of competency and friendliness were differentially weighed, depending on both the sex of the subject and the confederate. This is most apparent for the cross-sex groups. For men, as long as the female confederate was friendly, her competency produced a significant increase in liking. But if she were nonfriendly, the difference between her being competent and incompetent was non-significant. It cannot be argued that men were unaware of the female confederate's competency, for when she was friendly, the level of competency produced significant differences in liking. It appears that the negativity of her nonfriendliness masked the positivity of her competency; men negatively discounted this combination of incongruent cues. For women, a similar pattern appeared. If the male confederate were competent, his friendliness produced significantly more attraction. Yet if the male were incompetent, women showed no significant difference in liking between the friendly or the nonfriendly male. Again it is unlikely that women were unaware of the male confederate's level of friendliness, for when he was competent, his friendliness affected the ratings. His incompetency masked the positivity of his friendliness; women negatively discounted this presentation of incongruent cues. Why, when incongruent cues are presented, should men give more weight to the female's nonfriendliness, while women give more weight to the male's incompetency?

Much research (Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1970; McKee & Sherriffs, 1959; O'Leary & Depner, 1975; Rosenkrantz, Vogel, Bee, Broverman, & Broverman, 1968; Elman, Press, & Rosenkrantz, Note 3) has found that stereotypes of sex differences show that women are considered highly affiliation-oriented and that men are task-centered.

As Elman et al. (Note 3) found, concepts of the ideal cross-sex individual closely parallel the male and female sex-role stereotype. Therefore, friendliness cues, relevant to affiliation, are especially pertinent for men's judgment of women, while competency, related to task proficiency, are relevant for women's judgments of men. As Levinger and Snoek (1972) have pointed out, in a situation where there is no direct interaction, attraction is determined by the perceived person's reward value or "image." Thus the level of competency should determine the male's reward value and friendliness the female's for cross-sex ratings. If the cross-sex confederate demonstrates the appropriate value, then evidence of other cues should have some influence, but if the cross-sex confederate deviates from that stereotype, then any positive information which is less appropriate to that stereotype will have less influence on the attraction ratings. The results show that when the cross-sex confederate "fit" the stereotype (competent males and friendly females), the level of the other evaluative cues did affect the subject's attraction. But when the cross-sex confederate deviated from the stereotype (incompetent males and nonfriendly females), the evidence of the positive, but less appropriate, evaluative cues was masked. Since the cross-sex confederate did not fit the appropriate "image," his or her reward potential was lowered, and hence, his or her attraction for the subject. The effect of the presentation of other positive evaluative cues was masked, and cross-sex subjects negatively weighed the incongruent cues.

This pattern of valence discounting contrasts with the pattern of attraction for the same-sex groups. The previously discussed subject sex differences become pertinent. Women were significantly influenced

by both the female confederate's level of competency and friendliness. Apparently a model of simple valence discounting fits women's ratings of the female. These results regarding women's liking are similar to the findings of McGaughey and Hagen (Note 1) who had women actually interact with other women. Men's ratings, on the other hand, show patterns similar to that for women, although the male confederate's level of friendliness was more important for men than his level of competency. If the male confederate were friendly, his level of competency did not significantly affect the men's liking for him. These results are consistent with earlier research (Bales, 1966, 1958; Bales & Slater, 1955) which shows that friendliness is much more important for men's attraction than competency. Apparently when the male confederate was friendly and incompetent, men positively discounted the cues; in other cases, a simple valence discounting model accounts for men's attraction to the male confederate.

Although competency was not pertinent when men rated the friendly confederate who was male, it was when the confederate was female. Elman et al. (Note 3) found that in a selection of Midwestern college students, men's ideal female was significantly more competent than either males' self-ratings, females' self-ratings, or females ratings of the ideal female. O'Leary and Depner (1975) found similar results. Apparently competency is pertinent to men's stereotype of women, but not as much as friendliness.

Considering the pattern of results, the basis of attraction for the cross-sex confederate appears to be more stringent than that for the same-sex confederate. Since minimal information was available to the

subjects, the cues presented may have been exaggerated in their effect on subject's ratings. Familiar with their own sex characteristics, subjects based their ratings of the same-sex confederate on the saliency of the cue for them; the level of the evaluative cue generally determined their ratings. However, since subjects presumably have less familiarity with cross-sex characteristics (the subjects were generally freshmen and sophomores), the stereotyped image of that sex became important in affecting the attraction. When the cross-sex confederates deviated from the appropriate stereotype, but showed other positive cues, the confederates were rated as though no positive information had been revealed. Yet when incongruent levels were shown for the same-sex confederate, the subjects' liking for them was not adversely affected. For cross-sex confederates, the sex stereotype restricted the valence of the cues presented.

While there were subject sex differences in valence discounting, both sexes showed some consistencies in their ratings of the confederates. Depending on the confederate's sex, subjects would differentially weigh the cues presented to them. Given same-sex groups, the effect of the cues depended on their evaluative valence, although this was attenuated by the value of the cue for the subject. Ratings in the cross-sex groups were affected by the sex stereotypes appropriate for the confederate. When the confederate deviated from that stereotype, liking for the confederate was low, regardless of any contrasting positive information. It was posited that the value of the cross-sex confederate to reward the subject was "image" bound and restricted to stereotypic concepts of that sex.

Other considerations

The results have been interpreted specifically in terms of sex differences in the subjects and/or confederates; however, concerns raised earlier should now be considered. It was questioned whether results from many studies probing the attraction process could be generalized to nonlaboratory settings. These studies have found significant results; certain variables are potent determinants of attraction. With regard to the two variables, competency and friendliness, tested in this study, the findings add more support to the results from other research (e.g. Byrne et al., 1974; Helmreich et al., 1970), which has shown that if positive competency or nonverbal cues are displayed by a person, he or she will be better liked than if he or she displays negative ones. These results have been found in laboratory studies and in nonprocess experiments; they are not surprising. In this experiment the confederate's competency and friendliness accounted for over 55% of the total variance. Although this study is not that different from other classic impression formation studies (cf., Tagiuri, 1969), it did attempt to use variables which were pertinent to the process (nonverbal cues) in ways which were analogous to realistic settings (multiple input). Is the concern for the influence of the process justified?

It is interesting that the friendliness manipulation accounted for more variance (31.64%) than the competency manipulation (23.75%). When the groups are broken into each subject and confederate sex combination, the influence of friendliness appears to generally gain importance in the rating process in comparison to competency. The potency of the friendliness manipulation is interesting, even though the subject

did not interact with the confederate, and the friendliness was only a general trait of the confederate's. Even though Argyle (1969) has pointed out that the specific effect for nonverbal cues can vary with the saliency placed on them by the experiment, the effect of friendliness and, presumably other process variables, must be considered as an important influence in interpersonal attraction. Many, from theoretical viewpoints (e.g., Levinger & Snoek, 1972) and practical ones (e.g., Chaiken et al., 1974; Rosenthal, 1966), would argue for their consideration in any discussion of human social behavior..

Germane to this discussion is the presidential address Paul Secord made to the Division of Personality and Social Psychology; he stated:

. . . person parameters must be included in the system. Differences among individuals that interact with the treatment conditions or with dependent variables must be taken into account. We cannot be satisfied with the random assignment of individuals to treatments, without regard to individual differences. Such a procedure averages out person parameters, and, as a result, most empirical generalizations about social behavior that would apply to people in general are apt to be trivial or banal. (Note 4, p. 2)

In terms of the general effects found in this experiment, it can be said that a person who showed the more positive level of either cue was better liked. This can be said without regard to the sex of the observer or the observed, or even without consideration of the type of cue. However, when the specific interactions are examined, these general considerations would not have predicted that women's ratings would differ from men's, either in the influence of the cues or the enhancement effect. Furthermore, the same- versus cross-sex group differences could not have been expected. Thus, in general, the effect of increased positivity

would predict the effect for the major variables, but could not predict the effects of the variables in the context of the whole experimental situation.

The person parameters which mediated the effects of receiving the evaluative cues in this experiment were the assumed differences in the decoding abilities of the two sexes. These decoding abilities are assumed to be mediated by the affiliative social skills of the subjects. Since social skills imply not only encoding abilities (untested in this experiment), but also decoding abilities, people with greater affiliative skills or with greater affiliation needs should be more receptive to input about people. It is important to differentiate between these two causes; however, it is argued that both imply greater decoding abilities. While people with high affiliative skills or with high affiliative needs should be receptive to social stimuli, those with high affiliative needs should be more interested in social approval. This experiment only dealt with decoding abilities, and it is impossible to clearly differentiate the causes for increased abilities; however, since the experiment systematically varied the sex of the subject, it is likely that social skills in general were being tested (Hoffman, 1972; Stein & Bailey, 1973). However, it is important to consider that the assumptions of this experiment indicate that anybody, regardless of sex, who has increased affiliation skills, for whatever reason, would be more likely to be highly affected by the confederate's input, and thus rate the confederate more extremely. A person's decoding abilities are an important person parameter which attenuates the effects of social cues.

While the individual difference in affiliation skills has been recognized for some time (e.g., Mehrabian & Ksionzky, 1972), another important person parameter may not have even been recognized by many psychologists. This difference refers to the differential sensitivity people have to the processing of verbal and nonverbal channels. The results showed that women, who are better decoders of nonverbal channels than men are, gave enhanced ratings when they received the combination of two consistently positive or negative verbal and nonverbal cues; men did not. Other research (Hagiwara, 1975; Lampel & Anderson, 1968) suggests that the enhancement only occurred because of the use of nonverbal cues. The implication is that women, or people who have greater affiliative skills, may be more process-oriented than men or low affiliators. Several have argued that the ongoing process of nonverbal channels gives more information concerning relationships between people than verbal channels (Bateson, 1972; Watzlawick et al., 1967; Wilden, 1972). The cliché of a picture being worth a thousand words may have great validity when dealing with matters of affiliation; if a nonverbal picture gives more information about relationships than the verbal word, then the process becomes very important in determining relationships, and hence, interpersonal attraction. The differences between verbal and nonverbal processes have been largely overlooked; some have tried to incorporate this difference into accounts which are pertinent to the attraction process (e.g., Spiegel & Machotka, 1974), but most have written as though verbal and nonverbal processes did not differ (e.g., Clore & Byrne, 1974).

This lack of recognition of differences in processing appears to be encouraged by the methods used by most researchers. Polanyi (1958) has demonstrated that experimenters are often unaware of the fundamental assumptions they have made when they adopt a particular approach in studying a phenomenon. The unquestioned assumption of much attraction research is that variables relevant to interactions are processed in the same way regardless of their presentation. Personal evaluations are the same whether they are written on a sheet of paper or demonstrated nonverbally. Clore and Byrne (1974) posited that the evaluation process was composed of informational and affective stimuli; both components were regarded as content. But the suggestion is made that how these components are processed may actually mediate or, in some cases, dominate the content. It is suggested that in regard to questions of evaluation, people who have greater social skills would be affected more by cues processed nonverbally, regardless of their content. And the cues would not necessarily have to pertain to people. This is an area that needs further exploration to systematically explicate its influence. Nevertheless, this finding of an enhancement effect gives added weight to the argument that social psychologists in particular have too long ignored the actual, ongoing process; especially in the context of person parameters.

Apparently, process must be considered if theories are going to account for human behavior outside of the laboratory. This means that variables which are important to actual ongoing behavior must be assessed. Admittedly, conceptualizing the process is difficult to do, for there has often been an absence of a framework within which to organize research. Some theoretical frameworks are being offered, both within social

psychology (e.g., Argyle, 1972; Argyle & Kendon, 1967; Altman & Taylor, 1973; Huesman & Levinger, 1976) and psychology in general (e.g., Powers, 1973). But there still needs to be more acknowledgment of the process. This study, which is basically like others in the area of person perception (cf., Tagiuri, 1969), did not have subjects interact with the confederates, but it did allow the subjects to sample the confederate's behavior. The results are similar to the ones found by McGaughey and Hagen (Note 1) who had subjects actually interact with confederates. While it is difficult to manipulate the process, it is not impossible. Process variables can be controlled; with their use, ongoing behavior can be systematically examined and understood. The effect of people interacting can be assessed. Thus as Secord (Note 4) indicated, social psychological theory can do more than just make trivial generalizations about social behavior, it can add to our understanding of human behavior in its most usual circumstance: people being together. Is that not what social psychology implies?

Speculations from the results

This experiment attempted to manipulate variables in such a way that the results would be optimally generalizable to nonlaboratory settings. Since much attention was placed on the external validity of the material, it is important to speculate how these results would have meaning for ordinary settings outside of the laboratory. Since the research was framed within the context of both subject and cue effects, the results can be examined from two different perspectives: (1) how

different types of cues about people can affect liking for them; and (2) how people, who have different decoding abilities, can use the information revealed to them.

With regard to the effect different types of cues have on people's liking, the results are mostly generalizable to situations where people have minimal contact with each other. Levinger and Snoek (1972) indicated that the basis for liking differs with the amount of contact people have with each other; therefore, speculation about how different cues affect intimates is very tenuous. However, there are many situations where a person does not interact with other people, but does come into contact with them. Such a common situation is the teaching of large lecture classes. Here the teacher must perform in front of students, but has minimal opportunity to actually interact with them. Since large lecture classes are a seemingly permanent fixture of the modern educational system, it is important to make this situation as advantageous to learning as possible; both for the student and the teacher. With regard to the teacher, being liked by the students can be important, in terms of their cooperation and their responses to teacher evaluation forms. The results from this study indicate that although both competency and friendliness were important in the evaluation of the confederate, the confederate's friendliness was more important in determining liking. This indicates that a person's demeanor, their nonverbal behavior, would have a greater effect on the liking people have for them, than other, less observable, characteristics. This basically implies that if two teachers were equally competent in their respective areas, but differed in the level of friendliness they showed in the lecture class, the friend-

lier teacher would be given the better evaluation. Who has not had the experience of sitting in a large lecture class where you are indifferent to the material presented, but because of the teacher, who was active, positive, and perhaps humorous, you actually learned something?

With regard to the student, the teacher's nonverbal behavior has many implications. The analysis of the activity measure showed that the confederate's friendliness was twice as salient to subjects as were the other cues; this indicates that the confederate's implicit behavior was important and attention-orienting for the subjects. With regard to teaching in large classrooms, this suggests that a teacher's nonverbal cues would be important in keeping the attention of the students; if students are to learn from a lecture, they must pay attention. Zimbardo and Ruch (1975) indicated that teachers who gesture regularly would get better grades from their students than those who are very stiff and proper. Gesturing is an indication of greater immediacy and nonverbal positivity (Mehrabian, 1972). Therefore, the friendly teacher might not only be better liked, but also make a greater contribution to students' learning. The effects of a teacher's positivity are only beginning to be understood (Chaiken et al., 1974). Perhaps, teachers should be given more training in interpersonal skills to promote their effectiveness. This is an area that should be investigated more thoroughly.

The second perspective with which to interpret the results is the difference between people's reaction to incoming information about others. If, as assumed, people differ in their decoding abilities, then various types of input about others will have different weights in the evaluation process. This suggests neither channel nor valence discounting, but

only that certain cues might be more attended by certain people. It was assumed that women have greater skills at decoding personal information, and that men have less. Contrary to the original predictions, men and women were both greatly affected by the confederate's nonverbal cues; friendliness accounted for about the same amount of average variance for both sexes (32.90% and 37.23%, respectively). The real difference lay in the influence that competency had on the sexes; for women, competency accounted for over three times as much average variance (39.55%) as it did for men (12.95%). The difference between subjects with high and low affiliation skills was not their reactions to nonverbal cues, but their reactions to verbal ones; high affiliators were much more influenced by verbal cues. Thus, while low affiliators were affected mainly by nonverbal cues, high affiliators rated the confederate on the basis of both nonverbal and verbal information.

It is important to emphasize that while sex was used to operationalize affiliation differences, the preceding reasoning would apply to anyone, regardless of sex. People with greater skills appear to use more kinds of information in forming their evaluations of others. This suggests that persons who have greater social skills might be more efficient and successful in situations where assessment of people must be made on a number of qualities, such as in job interviewing or personnel work. Although many aspects of interviewing have been examined (cf., Siegman & Pope, 1972), the understanding of decoding abilities might offer new insights into the skill. The research suggests that low affiliators might base their judgments of people primarily on their face-to-face behavior, while high affiliators would use a number of attributes

including face-to-face behavior on which to base their evaluations. The inference is that high affiliators would make better interviewers, especially for jobs which included a number of different qualifications, most of which could not be assessed in a face-to-face setting. For example, if a very competent, but anxious interviewee were to apply for a job and do poorly during the actual interview, a low affliator might make an unfavorable estimate of the interviewee's prospects for fulfilling the job requirements. This would not be because of the man or woman's lack of skill, but because of the low positivity of their face-to-face behavior. On the other hand, the high affliator might give a more favorable rating to the candidate in the same situation, not because the nonverbal behavior had less meaning, but because other information (the competency of the interviewees for the job) had more. Thus the high affliator might be more effective in selecting a good candidate. These decoding abilities should be examined for their effect on the interviewing process.

These are but several of many practical implications which can be suggested from this research. Social perception is a complex phenomenon. For it to be understood, the processes affecting it and social behavior must be investigated, both within theoretical and practical contexts. As more is understood, the area of interpersonal attraction will more certainly gain clarity.

SUMMARY AND CONCLUSIONS

Results from this research are relevant to interpersonal attraction. Person parameters do mediate the attraction value of evaluative cues; furthermore, the channel through which a cue is encoded appears to influence liking. When men and women received differing levels of verbal competency and nonverbal friendliness information about a male or female confederate, the results showed that the level of the evaluative cue was a significant determinant of attraction. Although this was not unexpected, specific interactions showed that women were more influenced than men by the cue's level. Women were more affected than men by the level of the confederate's competency. They also significantly disliked the nonfriendly confederate more than men did, although their liking for the friendly confederate did not statistically differ from men's. These sex differences in ratings are seen as being caused by women's increased affiliation skills, which would make them more receptive and, hence, influenced by any social information. The results suggest that men's social skills have been underrated, for they were sensitive to the positivity of the confederate's friendliness. However, women were affected by the positivity, too, and were more affected by the confederate's negative nonverbal cues than men were. The weight of each factor, as determined by the amount of variance each factor accounted for, showed that men's judgments were primarily influenced by the friendliness cues, whereas women's were determined by both the friendliness and competency of the confederate. Thus increased affiliation is differentiated, not by its

receptivity to positive friendliness cues, but by its receptivity to the larger range of total social information.

It was also revealed that women gave enhanced ratings when they received two different positive or negative cues, but not when they received only one; men did not show this enhancement effect. Other research (Hagiwara, 1975; Lampel & Anderson, 1968) suggests that it was the specific combination of different channels, not merely more information, that was responsible for the effect. The enhancement is seen as being due to women's increased affiliation skills. Since information about relationships between people is primarily transmitted through nonverbal channels (Mehrabian, 1972; Watzlawick et al., 1967), the cues encoded through the nonverbal channels are seen as having more validity concerning matters of evaluation. Since women have increased social skills which make them responsive to relationship information, it is expected that their decoding should be especially influenced by the evaluative level encoded through the nonverbal channels. With the corroboration of the evaluative information from the verbal cue, liking is significantly increased or decreased. This finding of an enhancement effect also suggests that women or persons with greater social skills may be more process-oriented in their decoding.

Other findings showed that in spite of these sex differences in rating, cross-sex ratings were influenced by the confederate's adherence to the appropriate sex stereotype (being a competent man or a friendly woman). If the cross-sex confederate deviated from this stereotypic view, subjects disliked him or her, regardless of other contrasting positive information. This masking effect is explained as due to the

lowered reward value of the deviating cross-sex confederate. With same-sex confederates, the reward value of the cue depended mainly on its saliency to determine liking for the subject.

The results suggest that manipulating the variables in ways in which they are ordinarily encountered is important. The confederate's friendliness was a prominent determinant of liking, more potent than competency; yet the confederate's friendliness was not even specifically directed toward the subject. Therefore, its saliency must be considered. These results suggest that nonverbal cues, as well as other process variables, should be more often included in the study of interpersonal attraction. The results also imply that the power of nonverbal cues to affect liking and attention have important implications for areas like teaching. Furthermore, the difference in the decoding abilities of people with greater and less degrees of social skill may be of importance. If, as the results imply, people with greater social skills are attentive to greater ranges of social information, verbal as well as nonverbal, then they may be better assessors of people's abilities. This means that they could do well at interviewing and other jobs which entailed making decisions about people.

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APPENDIX A

Table 20

Summary of the Newman-Keuls Test for Two-Way
Interaction of Competency (C^{\pm}) by Subject's Sex (S)
(The Competency Control Group)

<u>Sources</u>		<u>Sources</u>		
		<u>C- : Male S</u> 17.54	<u>C+ : Male S</u> 25.18	<u>C+ : Female S</u> 26.82
<u>C- : Female S</u>	17.45	.09	7.73*	9.37*
<u>C- : Male S</u>	17.54	--	7.64*	9.28*
<u>C+ : Male S</u>	25.18		--	1.64*

* $p < .01$

Table 21

Summary of the Analysis of Variance
(Regression) of Evaluation Ratings of
Individual Confederates

<u>Source</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Confederates	3	7.887	< 1
Error	172	28.705	

Table 22

Summary of the Analysis of Variance
(Regression) of Interpersonal Judgment Scale
Ratings of Individual Confederates

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Confederates	3	3.726	< 1
Error	172	7.651	

Table 23

Summary of the Newman-Keuls Test
for the Two-Way Interaction of Competency (C[±]) by
Friendliness (F[±]) (Confederate's Perceived Competency)

<u>Sources</u>	<u>Sources</u>		
	C- : F+	C+ : F-	C+ : F+
	3.00	4.79	6.02
C- : F-	2.59	.41	2.20*
C- : F+	3.00	--	1.79*
C+ : F-	4.79	--	1.23*

* $p < .01$

Table 24

Summary of the Newman-Keuls Test for Four-Way
Interaction of Confederate's Sex (M/FCs) by Competency (C±)
by Friendliness (F±) by Subject's Sex (M/FSs)
(Confederate's Perceived Competency)

Sources	Sources								
	MCs:C-: F-:MSs	FCs:C-: F+:MSs	MCs:C-: F+:FSs	MCs:C-: F-:FSs	FCs:C-: F-:MSs	FCs:C-: F+:FSs	MCs:C-: F+:MSs	FCs:C+: F-:MSs	
	2.36	2.64	2.73	2.81	2.90	3.27	3.36	4.45	
FCs:C-:F-:FSs	2.27	.09	.37	.46	.54	.63	1.00	1.09	2.18*
MCs:C-:F-:MSs	2.36	--	.28	.37	.45	.54	.91	1.00	2.09*
FCs:C-:F+:MSs	2.64	--	--	.09	.17	.26	.63	.72	1.81
MCs:C-:F+:FSs	2.73			--	.08	.17	.54	.63	1.72
MCs:C-:F-:FSs	2.81				--	.09	.46	.55	1.64
FCs:C-:F-:MSs	2.90					--	.37	.46	1.55
FCs:C-:F+:FSs	3.27						--	.37	1.18
MCs:C-:F+:MSs	3.36							--	1.09
FCs:C+:F-:MSs	4.45								--
MCs:C+:F-:FSs	4.64								
MCs:C+:F-:MSs	4.82								
FCs:C+:F-:FSs	5.27								
FCs:C+:F+:MSs	5.64								
MSs:C+:F+:MSs	5.91								
FCs:C+:F+:FSs	6.18								

* $p < .01$

Table 24 (continued)

<u>Sources</u>	<u>Sources</u>							
	<u>MCs:C+:</u> <u>F-:FSs</u>	<u>MCs:C+:</u> <u>F-:MSs</u>	<u>FCs:C+:</u> <u>F-:FSs</u>	<u>FCs:C+:</u> <u>F+:MSs</u>	<u>MSs:C+:</u> <u>F+:FSs</u>	<u>FCs:C-:</u> <u>F+:FSs</u>	<u>MCs:C+:</u> <u>F+:FSs</u>	
	4.64	4.82	5.27	5.64	5.91	6.18	6.36	
<u>FCs:C-:F-:FSs</u>	2.27	2.37*	2.55*	3.00*	3.37*	3.64*	3.91*	4.09*
<u>MCs:C-:F-:MSs</u>	2.36	2.28*	2.46*	2.91*	3.28*	3.55*	3.82*	4.00*
<u>FCs:C-:F+:MSs</u>	2.64	2.00	2.18*	2.63*	3.00*	3.27*	3.54*	3.72*
<u>MCs:C-:F+:FSs</u>	2.73	1.91	2.09*	2.54*	2.91*	3.18*	3.45*	3.63*
<u>MCs:C-:F-:FSs</u>	2.81	1.83	2.01*	2.46*	2.83*	3.10*	3.37*	3.55*
<u>FCs:C-:F-:MSs</u>	2.90	1.73	1.92	2.37*	2.74*	3.01*	3.28*	3.46*
<u>FCs:C-:F+:FSs</u>	3.27	1.37	1.55	2.00*	2.37*	2.64*	2.91*	3.09*
<u>MCs:C-:F+:MSs</u>	3.36	1.28	1.46	1.91*	2.28*	2.55*	2.82*	3.00*
<u>FCs:C+:F-:MSs</u>	4.45	.19	.37	.82	1.19	1.46	1.73	1.91
<u>MCs:C+:F-:FSs</u>	4.64	--	.18	.63	1.00	1.27	1.54	1.72
<u>MCs:C+:F-:MSs</u>	4.82		--	.45	.82	1.09	1.36	1.54
<u>FCs:C+:F-:FSs</u>	5.27			--	.37	.64	.91	1.09
<u>FCs:C+:F+:MSs</u>	5.64				--	.27	.54	.72
<u>MSs:C+:F+:MSs</u>	5.91					--	.27	.45
<u>FCs:C+:F+:FSs</u>	6.18						--	.18

Table 25

Summary of the Newman-Keuls Test
 for Two-Way Interaction of Confederate's Sex (C)
 by Friendliness (F[±]) (Confederate's Perceived Friendliness)

		Sources		
<u>Sources</u>		F- : Male <u>C</u> 3.66	F+ : Male <u>C</u> 5.86	F+ : Female <u>C</u> 6.29
F- : Female <u>C</u>	3.29	.37	2.57*	3.00*
F- : Male <u>C</u>	3.65	--	2.20*	2.63*
F+ : Male <u>C</u>	5.86		--	.43

* $\underline{p} < .01$

Table 26

Summary of the Newman-Keuls Test
for Two-Way Interaction of Competency (C^{\pm}) by
Subject's Sex (S) (Evaluation Measure)

		Sources		
<u>Sources</u>		F- : Male <u>S</u> 19.73	F+ : Male <u>S</u> 24.61	F+ : Female <u>S</u> 25.23
F- : Female <u>S</u>	18.11	1.62*	6.50**	7.12**
F- : Male <u>S</u>	19.73	--	4.88**	5.50**
F+ : Male <u>S</u>	24.61		--	.62

* $p < .05$ ** $p < .01$

Table 27

Summary of the Newman-Keuls Test
for the Two-Way Interaction of Competency (C^{\pm})
by Subject's Sex (S) (Evaluation Measure)

		Sources		
<u>Sources</u>		C- : Male <u>S</u> 20.59	C+ : Male <u>S</u> 23.75	C+ : Female <u>S</u> 25.29
C- : Female <u>S</u>	18.05	2.54**	5.70**	7.25**
C- : Male <u>S</u>	20.59	--	3.16**	4.70**
C+ : Male <u>S</u>	23.75		--	1.54*

* $p < .05$ ** $p < .01$

Table 28

Summary of the Newman-Keuls Test for Four-Way
Interaction of Confederate's Sex (M/FCs) by Competency (C±)
by Friendliness (F±) by Subject's Sex (M/FSS)
(Evaluation Measure)

Sources		Sources							
		MCs:C-: F-:FSS	MCs:C-: F-:MSs	FCs:C-: F-:MSs	MCs:C-: F+:FSS	MCs:C+: F-:FSS	FCs:C+: F-:MSs	MCs:C+: F-:MSs	FCs:C+: F-:FSS
		16.09	17.54	18.72	19.00	20.27	21.27	21.36	22.00
FCs:C-:F-:FSS	14.09	2.00	3.45*	4.63**	4.91**	6.18**	7.18**	7.27**	7.91**
MCs:C-:F-:FSS	16.09	--	.45	2.63	2.91	4.18**	5.18**	5.27**	5.91**
MCs:C-:F-:MSs	17.54	--	--	1.18	1.46	2.73	3.73	3.82	4.46*
FCs:C-:F-:MSs	18.72			--	.28	1.55	2.55	2.69	3.28
MCs:C-:F+:FSS	19.00				--	1.27	2.27	2.36	3.00
MCs:C+:F-:FSS	20.27					--	1.00	1.09	1.73
FCs:C+:F-:MSs	21.27						--	.09	.73
MCs:C+:F-:MSs	21.36							--	.64
FCs:C+:F-:FSS	22.00								--
MCs:C-:F+:MSs	22.90								
FCs:C-:F+:FSS	23.00								
FCs:C-:F+:MSs	23.18								
MCs:C+:F+:MSs	25.72								
FCs:C+:F+:MSs	26.63								
FCs:C+:F+:FSS	28.54								

* $p < .05$

** $p < .01$

Table 28 (continued)

Sources	Sources							
	<u>MCs:C-:</u> <u>F+:MSs</u>	<u>FCs:C-:</u> <u>F+:FSs</u>	<u>FCs:C-:</u> <u>F+:MSs</u>	<u>MCs:C+:</u> <u>F+:MSs</u>	<u>FCs:C+:</u> <u>F+:MSs</u>	<u>MCs:C+:</u> <u>F+:FSs</u>	<u>MCs:C+:</u> <u>F+:FSs</u>	
	22.90	23.00	23.18	25.72	26.63	28.54	30.36	
<u>FCs:C-:F-:FSs</u>	14.09	8.81**	8.91**	9.09**	11.63**	12.54**	14.45**	16.27**
<u>MCs:C-:F-:FSs</u>	16.09	6.81**	6.91**	7.09**	9.63**	10.54**	12.45**	14.27**
<u>MCs:C-:F-:MSs</u>	17.54	5.36**	5.46**	5.64**	8.18**	9.09**	11.00**	12.82**
<u>FCs:C-:F-:MSs</u>	18.72	4.18*	4.28*	4.46*	7.00**	7.91**	9.82**	11.64**
<u>MCs:C-:F+:FSs</u>	19.00	3.90	4.00	4.18	6.72**	7.63**	9.54**	11.36**
<u>MCs:C+:F-:fSs</u>	20.27	2.63	2.73	2.91	5.45**	6.36**	8.27**	10.09**
<u>FCs:C+:F-:MSs</u>	21.27	1.63	1.73	1.91	4.45*	5.36**	7.27**	9.09**
<u>MCs:C+:F-:MSs</u>	21.36	1.54	1.64	1.82	4.36*	5.27**	7.18**	9.00**
<u>FCs:C+:F-:FSs</u>	22.00	.90	1.00	1.18	3.72	4.63*	6.54**	8.36**
<u>MCs:C-:F+:MSs</u>	22.90	--	.10	.28	2.82	3.73	5.64**	7.46**
<u>FCs:C-:F+:FSs</u>	23.00	--	--	.18	2.72	3.45	5.54**	7.36**
<u>FCs:C-:F+:MSs</u>	23.18	--	--	--	2.54	.91	5.36**	7.18**
<u>MCs:C+:F+:MSs</u>	25.72	--	--	--	--	--	2.72	4.64**
<u>FCs:C+:F+:MSs</u>	26.63	--	--	--	--	--	1.91	3.73*
<u>FCs:C+:F+:FSs</u>	28.54	--	--	--	--	--	--	1.82

Table 29

The Summary of Newman-Keuls Test for the Two-Way Interaction of Confederate's Sex (C) by Competency (C[±]) on the Interpersonal Judgment Scale (Experimental Group)

		Sources		
		C- : Female <u>C</u> 7.48	C+ : Female <u>C</u> 9.07	C+ : Male C 10.00
<u>Sources</u>				
C+ : Male <u>C</u>	7.18	.30	1.89**	2.82**
C- : Female <u>C</u>	7.48	--	1.59**	2.52**
C+ : Female <u>C</u>	9.07		--	.93**

* $p < .05$

** $p < .01$

Table 30

Summary of the Newman-Keuls Test for the Two-Way Interaction of Competency (C[±]) by Friendliness (F[±]) on the Interpersonal Judgment Scale (Experimental Group)

		Sources		
		C+ : F- 7.75	C- : F+ 8.45	C+ : F+ 11.32
<u>Sources</u>				
C- : F-	6.20	1.55	2.25*	5.12*
C+ : F-	7.75	--	.70	3.57*
C- : F+	8.45		--	2.87*

* $p < .01$

Table 31

Summary of the Newman-Keuls Test for the Two-Way
Interaction of Competency by Subject's Sex (S)
on the Interpersonal Judgment Scale
(Experimental Group)

		Sources		
		C- : Male <u>S</u> 7.86	C+ : Male <u>S</u> 9.41	C+ : Female <u>S</u> 9.66
<u>Sources</u>				
C- : Female <u>S</u>	6.79	1.07*	2.62**	2.87**
C- : Male <u>S</u>	7.86	--	1.55**	1.80**
C+ : Male <u>S</u>	9.41		--	.25

* $p < .05$

** $p < .01$

Table 32

Summary of the Newman-Keuls Test for Four-Way
Interaction of Confederate's Sex (M/FCs) by Competency (C±)
by Friendliness (F±) by Subject's Sex (M/FSS)
on the Interpersonal Judgment Scale (Experimental Group)

Sources		Sources							
		MCs:C-: F-:FSS	MCs:C-: F-:MSs	MCs:C-: F+:FSS	FCs:C+: F-:MSs	FCs:C-: F-:MSs	FCs:C+: F-:FSS	MCs:C+: F-:MSs	MCs:C+: F-:FSS
		6.36	6.36	6.91	7.00	7.18	7.27	8.27	8.45
FCs:C-:F-:FSS	4.91	1.45	1.45	2.00	2.09	2.27*	2.36*	3.36**	3.54**
MCs:C-:F-:FSS	6.36	--	0	.55	.64	.82	.91	1.91	2.09
MCs:C-:F-:MSs	6.36		--	.55	.64	.82	.91	1.91	2.09
MCs:C-:F+:FSS	6.91			--	.09	.27	.36	1.36	1.54
FCs:C+:F-:MSs	7.00				--	.18	.27	1.27	1.45
FCs:C-:F-:MSs	7.18					--	.09	1.09	1.27
FCs:C+:F-:FSS	7.27						--	1.00	1.18
MCs:C+:F-:MSs	8.27							--	.18
MCs:C+:F-:FSS	8.45								--
FCs:C-:F+:MSs	8.82								
FCs:C-:F+:FSS	9.00								
MCs:C-:F+:MSs	9.09								
FCs:C+:F+:FSS	10.82								
FCs:C+:F+:MSs	11.18								
MCs:C+:F+:MSs	11.18								

* $p < .05$

** $p < .01$

Table 32 (continued)

Sources		Sources						
		<u>FCs:C-:</u> <u>F+:MSs</u> 8.82	<u>FCs:C-:</u> <u>F+:FSs</u> 9.00	<u>MCs:C-:</u> <u>F+:MSs</u> 9.09	<u>FCs:C+:</u> <u>F+:FSs</u> 10.82	<u>FCs:C+:</u> <u>F+:MSs</u> 11.18	<u>MCs:C+:</u> <u>F+:MSs</u> 11.18	<u>MCs:C+:</u> <u>F+:FSs</u> 12.09
<u>FCs:C-:F-:FSs</u>	4.91	3.91**	4.09**	4.18**	5.91**	6.29**	6.29**	7.18**
<u>MCs:C-:F-:FSs</u>	6.36	2.46	2.64*	2.73*	4.46**	4.82**	4.82**	5.73**
<u>MCs:C-:F-:MSs</u>	6.36	2.46	2.64*	2.73*	4.46**	4.82**	4.82**	5.73**
<u>MCs:C-:F+:FSs</u>	6.91	1.91	2.09	2.18	3.91**	4.27**	4.27**	5.18**
<u>FCs:C+:F-:MSs</u>	7.00	1.82	2.00	2.09	3.82**	4.18**	4.18**	5.09**
<u>FCs:C-:F-:MSs</u>	7.18	1.64	1.82	1.91	3.64**	4.00**	4.00**	4.91**
<u>FCs:C+:F-:FSs</u>	7.27	1.55	1.73	1.82	3.55**	3.91**	3.91**	4.82**
<u>MCs:C+:F-:MSs</u>	8.27	.55	.77	.82	2.55*	2.91**	2.91**	3.82**
<u>MCs:C+:F-:FSs</u>	8.45	.37	.55	.64	2.37*	2.73*	2.73*	3.64*
<u>FCs:C-:F+:MSs</u>	8.82	--	.18	.27	2.00	2.36*	2.36*	3.27*
<u>FCs:C-:F+:FSs</u>	9.00		--	.09	1.82	2.18*	2.18*	3.09*
<u>MCs:C-:F+:MSs</u>	9.09			--	1.73	2.09*	2.09*	3.00*
<u>FCs:C+:F+:FSs</u>	10.82				--	.36	.36	1.27
<u>FCs:C+:F+:MSs</u>	11.18					--	0	.91
<u>MCs:C+:F+:MSs</u>	11.18						--	.91

Table 33

Summary of the Analysis of Variance
for Male Subjects Receiving Competency and/or
Nonfriendliness Cue(s)

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	.243	< 1	--
Types of Cue(s) (<u>T</u>)	2	260.470	40.45*	55.57%
<u>Cs</u> X <u>T</u>	2	.106	< 1	--
Error	60	6.439		

^a Percentage of variance factor accounts for

* $p < .001$

Table 34

Summary of the Newman-Keuls Test for Types
of Cue(s) for Male Subjects Receiving Competency
and/or Nonfriendliness Cue(s)

<u>Sources</u>		<u>Sources</u>	
		Competent & Nonfriendly 21.32	Competent Only 25.18
Nonfriendly Only	18.32	3.00*	6.86*
Competent & Nonfriendly	21.32	--	3.86*

* $p < .01$

Table 35

Summary of the Analysis of Variance
for Male Subjects Receiving Incompetency
and/or Friendliness Cue(s)

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	45.833	5.08*	2.58%
Types of Cue(s) (T)	2	405.015	44.86**	55.44%
<u>Cs</u> X T	2	10.924	1.21	--
Error	60	9.029		

^a Percentage of variance factor accounts for

* $p < .05$

** $p < .001$

Table 36

Summary of the Newman-Keuls Test for Types
of Cue(s) for Male Subjects Receiving Incompetency
and/or Friendliness Cue(s)

<u>Sources</u>		<u>Sources</u>	
		Incompetent & Friendly 23.05	Friendly Only 26.00
Incompetent Only	17.55	5.50*	8.45*
Incompetent & Friendly	23.05	--	2.95*

* $p < .01$

Table 37

Summary of the Analysis of Variance
for Female Subjects Receiving Competency
and/or Nonfriendliness Cue(s)

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	16.500	4.90*	1.23%
Types of Cue(s)	2	411.106	122.11**	76.17%
<u>Cs</u> X T	2	13.227	3.93	--
Error	60	3.367		

^a Percentage of variance factor accounts for

* $p < .05$

** $p < .001$

Table 38

Summary of the Newman-Keuls Test for Types
of Cue(s) for Female Subjects Receiving Competency
and/or Nonfriendliness Cue(s)

<u>Sources</u>		Sources	
		Competent & Nonfriendly 21.41	Competent Only 26.82
Nonfriendly Only	18.27	3.14*	8.55*
Competent & Nonfriendly	21.41	--	5.41*

* $p < .01$

Table 39

Summary of the Analysis of Variance
for Female Subjects Receiving Incompetency
and/or Friendliness Cue(s)

Source	<u>df</u>	<u>MS</u>	<u>F</u>	% ^a
Confederate's Sex (<u>Cs</u>)	1	42.561	5.16*	2.33%
Types of Cue(s)	2	428.697	51.94**	57.62%
<u>Cs</u> X T	2	35.152	4.26*	4.21%
Error	60	8.253		

^a Percentage of variance factor accounts for

* $p < .05$

** $p < .001$

Table 40

Summary of the Newman-Keuls Test for Types
of Cue(s) for Female Subjects Receiving Incompetency
and/or Friendliness Cue(s)

<u>Sources</u>		<u>Sources</u>	
		Incompetent & Friendly 21.00	Friendly Only 26.14
Incompetent Only	17.45	3.55*	8.69*
Incompetent & Friendly	21.00	--	5.14*

* $p < .01$

Table 41

Summary of Newman-Keuls Test for Female Subjects
Receiving Positive Cue(s) about Confederates

<u>Sources</u>	<u>Sources</u>		
	Competent Only 26.82	Competent & Friendly 29.45	
Friendly Only	26.14	.68	3.31*
Competent Only	26.82	--	2.63*

* $p < .01$

Table 42

Summary of Newman-Keuls Test for Female Subjects
Receiving Negative Cue(s) about Confederates

<u>Sources</u>	<u>Sources</u>		
	Incompetent Only 17.45	Nonfriendly Only 18.27	
Incompetent & Nonfriendly	15.09	2.36*	3.18*
Incompetent Only	17.45	--	.82

* $p < .01$

Table 43

Summary of the Newman-Keuls Test for Two-Way
Interaction of Confederate's Sex (C)
by Friendliness (F[±]) (Potency Measure)

		Sources		
Sources		F- : Male <u>C</u> 10.86	F- : Female <u>C</u> 11.02	F+ : Male <u>C</u> 12.32
F+ : Female <u>C</u>	10.64	.22	.68	1.68**
F- : Male <u>C</u>	10.86	--	.16	1.46*
F- : Female <u>C</u>	11.02		--	1.30*

* $p < .05$ ** $p < .01$

Table 44

Summary of Newman-Keuls Test for Two-Way
Interaction of Competency (C[±])
by Subject's Sex (S) (Potency Measure)

		Sources		
Sources		C- : Male <u>S</u> 10.11	C+ : Male <u>S</u> 12.52	C+ : Female <u>S</u> 13.61
C- : Female <u>S</u>	8.59	1.52*	3.93**	5.02**
C- : Male <u>S</u>	10.11	--	2.41**	3.50**
C+ : Male <u>S</u>	12.52		--	1.09*

* $p < .05$ ** $p < .01$

Table 45

Summary of the Newman-Keuls Test for Three-Way
Interaction of Confederate's Sex (M/FCs) by Competency (C \pm)
Subject's Sex (M/FSs) (Potency Measure)

		Sources						
		<u>MCs:C-:</u> <u>FSs</u> 9.00	<u>FCs:C-:</u> <u>MSs</u> 9.18	<u>MCs:C-:</u> <u>MSs</u> 11.04	<u>FCs:C+:</u> <u>MSs</u> 12.09	<u>MCs:C+:</u> <u>MSs</u> 12.95	<u>MCs:C+:</u> <u>FSs</u> 13.36	<u>FCs:C+:</u> <u>FSs</u> 13.86
<u>Sources</u>								
<u>FCs:C-:FSs</u>	8.18	.82	1.00	2.86**	3.91**	4.77**	5.18**	5.68**
<u>MCs:C-:MSs</u>	9.00	--	.18	2.04**	3.09**	3.95**	4.36**	4.86**
<u>FCs:C-:MSs</u>	9.18		--	1.86**	2.91**	3.77**	4.18**	4.68**
<u>MCs:C-:MSs</u>	11.04			--	1.05	1.91*	2.32**	2.82**
<u>FCs:C+:MSs</u>	12.09				--	.86	1.27	1.77
<u>MCs:C+:MSs</u>	12.95					--	.41	.91
<u>MCs:C+:FSs</u>	13.36						--	.50

* $p < .05$
** $p < .01$

Table 46

Summary of the Newman-Keuls Test for
Two-Way Interaction of Competency (C^{\pm}) by
Subject's Sex (S) (Activity Measure)

		Sources		
		C- : Male S 13.64	C+ : Male S 16.89	C+ : Female S 17.11
Sources				
C- : Female S	11.70	1.94*	5.19*	5.41*
C- : Male S	13.64	--	3.25*	3.47*
C+ : Male S	16.89		--	.22

* $p < .01$

Table 47

Intercorrelation of Adjective-Pairs
that Compose Evaluation Measure

Adjective-Pairs ^a	Kind	App	Wise	Good	Beau
E	.738*	.779*	.777*	.797*	.681*
Kind	--	.427*	.391*	.689*	.437*
App		--	.507*	.449*	.455*
Wise			--	.556*	.482*
Good				--	.454*

Note. All adjective-pairs rated on 7-point scales; adjectives listed = 7.

^a E = Evaluation measure; Kind = Kind-Cruel; App= Approaching-Receding;
Wise = Wise-Foolish; Good = Good-Bad; Beau = Beautiful-Ugly.

* $p < .001$

Table 48
 Intercorrelations of Adjective-Pairs
 that Compose Activity Measure

Adjective-Pairs ^a	Exc	Fast	Hot	Act
A	.705*	.813*	.709*	.847*
Exc	--	.355*	.401*	.398*
Fast		--	.432*	.626*
Hot			--	.491*

Note. All adjective-pairs rated on 7-point scales; adjectives listed = 7.

^a A = Activity measure; Exc = Excitable-Calm; Fast = Fast-Slow; Hot = Hot-Cold; Act = Active-Passive.

* $p < .001$

Table 49

Intercorrelation of Adjective-Pairs
that Compose Potency Measure

Adjective-Pairs ^a	Hard	Deep	Str
P	.356*	.560*	.661*
Hard	--	-.175	.073
Deep		--	.651*

Note. All adjective-pairs rated on 7-point scales; adjectives listed = 7.

^a P = Potency measure; Hard = Hard-Soft; Deep = Deep-Shallow; Str = strong-weak.

* $p < .001$

Table 50

Intercorrelations of Scales that Compose
the Interpersonal Judgment Scale

Reference ^a	Like	Work
IJS	.910*	.935*
Like	--	.703*

Note. All scales rated on 7-points; most positive response = 7.

^a IJS = Interpersonal Judgment Scale; Like = Personal Feelings; Work = Working Together in an Experiment.

* $p < .001$

Table 51

Summary of the Individual Cell Means and
Standard Deviations (SD) on Evaluation Measure
for Experimental Data: Confederate's Sex (Cs) by
Competency (C \pm) by Friendliness (F \pm) by Subject's Sex (Ss)

Cells	Male <u>Ss-</u> Male <u>Cs</u>	Male <u>Ss-</u> Female <u>Cs</u>	Female <u>Ss-</u> Male <u>Cs</u>	Female <u>Ss-</u> Female <u>Cs</u>
C+ - F+				
Mean	25.73	26.64	30.36	28.55
<u>SD</u>	2.61	2.92	2.69	1.57
C+ - F-				
Mean	21.36	21.27	20.27	22.00
<u>SD</u>	3.72	2.80	4.59	3.13
C- - F+				
Mean	22.91	23.18	19.00	23.00
<u>SD</u>	2.34	3.82	4.51	1.61
C- - F-				
Mean	17.55	18.73	16.09	14.09
<u>SD</u>	4.13	3.74	3.42	3.88

Note. For each cell, N = 11.

Table 52

Summary of the Individual Cell Means and
Standard Deviation (SD) on Competency Control Data
(Evaluative Measure): Confederate's Sex (Cs)
by Competency by Subject's Sex (Ss)

Cells	Male <u>Ss</u> - Male <u>Cs</u>	Male <u>Ss</u> - Female <u>Cs</u>	Female <u>Ss</u> - Male <u>Cs</u>	Female <u>Ss</u> - Female <u>Cs</u>
Competent				
Mean	25.18	25.18	26.09	27.54
<u>SD</u>	1.78	2.04	1.58	2.16
Incompetent				
Mean	16.73	18.36	16.27	18.64
<u>SD</u>	1.85	1.50	2.37	1.29

Note. For each cell, N = 11.

Table 53

Summary of the Individual Cell Means
and Standard Deviations (SD) of Friendliness Control
Group (Evaluation Measure): Confederate's
Sex (Cs) by Friendliness by Subject's Sex (Ss)

Cells	Male <u>Ss</u> - Male <u>Cs</u>	Male <u>Ss</u> - Female <u>Cs</u>	Female <u>Ss</u> - Male <u>Cs</u>	Female <u>Ss</u> - Female <u>Cs</u>
Friendly				
Mean	24.45	27.55	26.91	25.36
<u>SD</u>	3.47	4.05	2.81	3.37
Nonfriendly				
Mean	18.45	18.18	18.64	17.91
<u>SD</u>	3.05	3.06	2.42	3.30

Note. For each cell, N = 11.

Table 54

Summary of the Individual Cell Means and
Standard Deviations (SD) of the Experimental Data
(Interpersonal Judgment Scale): Confederate's Sex (Cs)
by Competency (C[±]) by Friendliness (F[±]) by Subject's Sex (Ss)

Cells	Male <u>Ss-</u> Male <u>Cs</u>	Male <u>Ss-</u> Female <u>Cs</u>	Female <u>Ss-</u> Male <u>Cs</u>	Female <u>Ss-</u> Female <u>Cs</u>
C+ - F+				
Mean	11.18	11.18	12.09	10.82
<u>SD</u>	1.66	2.23	1.22	1.72
C+ - F-				
Mean	8.27	7.00	8.45	7.27
<u>SD</u>	2.10	1.61	1.75	2.24
C- - F+				
Mean	9.09	8.82	6.91	9.00
<u>SD</u>	2.02	2.75	2.66	2.64
C- - F-				
Mean	6.36	7.18	6.36	4.91
<u>SD</u>	1.69	2.14	1.43	.70

Note. For each cell, N = 11.

APPENDIX B

The Interview Script (Videotape Material)

Interviewer: Please have a seat, John (Joan). You just saw an object in the other room, could you tell me what you saw?

Confederate: You mean the oil painting? I'm not sure what it was since it was an abstract. I'm not an art expert; it was one of those things where everyone could have their own opinion.

I: Could you describe the physical properties of the painting, such as its size, shape, colors? Do you know who painted it?

C: I didn't notice who painted it. It was a pretty large painting, though, maybe 3 x 5 feet. I think it had a wooden frame, like the ones you see on a lot of modern art paintings--very narrow and hardly noticeable. It's hard to remember exact things about the painting, since nothing had real shapes. It was mainly just areas of colors--blue, white and green. Although they did fade into each other, blue was the main color toward the bottom, and some at the top. The green and white were mixed. There might've been more--I'm not sure.

I: Did the painting represent anything to you?

C: No. When I first saw the picture, I thought it might've been a landscape. The green represented trees and grass; blue--the sky and water, white--clouds? But I don't guess it was supposed to be anything definite. It was a pretty painting, though.

I: Would you put a painting like this in your home?

C: Yes, I would.

I: Do you prefer this type of painting over one that is more realistic?

C: No, not generally. It depends more on the particular painting, than the type. Usually I like paintings where I can recognize what's been painted, but not all the time.

I: I don't have any more questions. Would you like to add anything?

C: No.

I: Thank you, John (Joan).

Note. The author was the interviewer in all conditions.

For the following, please write a 3 sentence character sketch of the student. Include any information or descriptions that you feel were important in helping you come to some decision about the student.

(1)

(2)

(3)

Below are a list of jobs that a person might choose as an occupation. Please put a check mark by the jobs you feel that the student might like, regardless of ability.

- | | |
|--|---|
| <input type="checkbox"/> Occupational Therapist | <input type="checkbox"/> Registered Nurse |
| <input type="checkbox"/> Beautician | <input type="checkbox"/> Secretary |
| <input type="checkbox"/> Chiropractor | <input type="checkbox"/> Realtor |
| <input type="checkbox"/> Social Science Teacher | <input type="checkbox"/> Guidance Counselor |
| <input type="checkbox"/> Architect | <input type="checkbox"/> Artist |
| <input type="checkbox"/> Engineer | <input type="checkbox"/> Dentist |
| <input type="checkbox"/> X-ray Technician | <input type="checkbox"/> Navy Officer |
| <input type="checkbox"/> Accountant | <input type="checkbox"/> Business Education Teacher |
| <input type="checkbox"/> Funeral Director | <input type="checkbox"/> Pharmacist |
| <input type="checkbox"/> Elementary School Teacher | <input type="checkbox"/> Minister |
| <input type="checkbox"/> Musician | <input type="checkbox"/> Interior Decorator |
| <input type="checkbox"/> Computer Programmer | <input type="checkbox"/> Veterinarian |
| <input type="checkbox"/> Forester | <input type="checkbox"/> Police Officer |
| <input type="checkbox"/> Credit Manager | <input type="checkbox"/> Banker |
| <input type="checkbox"/> Lawyer | <input type="checkbox"/> Life Insurance Agent |
| <input type="checkbox"/> Public Administrator | <input type="checkbox"/> Social Worker |
| <input type="checkbox"/> English Teacher | <input type="checkbox"/> Librarian |
| <input type="checkbox"/> Speech Pathologist | <input type="checkbox"/> Psychologist |

You now have an opportunity to give your views of the experiment.

What do you feel the experiment was about?

Do you have any suggestions to improve it?

What do you feel the experiment was trying to demonstrate?