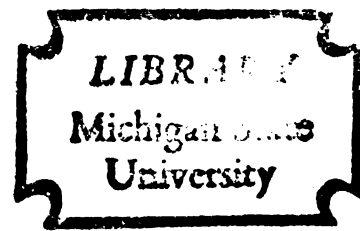


SEX DIFFERENTIAL IN NON-RECIPROCAL TOUCHING
AS RELATED TO DOMINANCE AND LIKING

Thesis for the Degree of M. A.
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ABSTRACT

SEX DIFFERENTIAL IN NON-RECIPROCAL TOUCHING AS RELATED TO DOMINANCE AND LIKING

By

Jane Hennessy

The present study attempted to determine the relationship between touching, dominance and a liking relationship. To test this, subjects were shown a 5-minute videotape of a conversation between a male and a female college student. It was hypothesized that a male toucher and liker as well as a female toucher and liker would be perceived as more affectionate individuals and their touch initiation would be attributed to their affectionate disposition. A male toucher with a female liker was expected to be perceived as a more dominant and assertive individual while his touching would be attributed to a dominant disposition. A female toucher with a male liker was hypothesized to be perceived as a flirtatious individual and the touching to be attributed to sexual attraction. Also, it was expected that female touch initiators would be given more dispositional attributions due to their out-of-role behavior. It was also predicted that the liker, regardless of sex, would be perceived as more affectionate and less dominant and the

one who was liked more would be perceived as more dominant and less affectionate. Results indicated that these predicted hypotheses held true on some of the scales but were not consistent across all the dependent measures. The results were discussed in terms of attribution theory, vicarious reinforcement and the theory of least interest.

SEX DIFFERENTIAL IN NON-RECIPROCAL TOUCHING AS
RELATED TO DOMINANCE AND LIKING

By

Jane Hennessy

A THESIS

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TO MICHAEL
for what you are to me

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INTRODUCTION

Communication with others involves not only verbalization but also various types of nonverbal cues. Nonverbal communication is a form of communication, like verbal communication, used by others to determine and express feelings, intentions, and relationships between people.

Social psychological research has primarily concentrated on nonverbal communication as a dependent variable, trying to show a relationship between a particular form of nonverbal communication and a particular relationship between people. After considering two problems associated with establishing these relationships between a particular behavior and relationship between people, I will give a brief overview of the previous research done in the area.

First, most of the nonverbal behaviors have been measured unobtrusively. While this form of measurement may give one unbiased scores because it avoids the response bias of acquiescence, interviewer effects or making a socially desirable response, it can, however, create difficulty determining validity. One does not really know that one is measuring. For example, pupil dilation has been used as an indicator of liking in a relationship, but it also has been studied in a variety of methods. The use of a multiple measures approach may help alleviate the

validity problem. According to Webb, Campbell, Schwartz, and Sechrest [1966] when multiple operations provide consistent results, the possibility of slippage between the conceptual definition and the operational specification is diminished greatly. An example to illustrate the multiple measures approach is provided by Shadegg [1964]. He describes how one campaign manager used every available means to learn the plans of his opponent who was unwilling to grant an interview. One method arranged for procuring the contents of his opponent's wastebasket. There he obtained carbon copies of letters and memos in the handwriting of his opponent's manager. Another method involved making inferences drawn from observations of the opponent's public acts. Each method aided the other by providing a validity check.

The second limitation of unobtrusive measurement is that much of the research has been observational and correlational which seems to allow for increased diversity of meaning of nonverbal cues and to be less specific in nature. The present study was conducted using the experimental method in an attempt to be more scientific and systematic. (The study was to establish the relationship between the nonverbal behavior of touching and liking and dominance.) I will give a brief overview of the research linking nonverbal behaviors to liking and dominance.

Eye Contact

There are studies which indicate that eye contact is associated with greater liking [Berscheid and Walster, 1969; Ellsworth and Carlsmith, 1968; Rubin, 1973; Exline and Winters, 1965] as well as with dominance [Ellsworth, Carlsmith and Henson, 1972; Hutt and Ounsted, 1966].

Berscheid and Walster [1969] used the frequency of glances as a measurement procedure and found it correlated positively with an individual's reported liking for another, and with the extent to which he reported a desire to initiate or maintain his interaction with the other.

Rubin [1973] tested the prediction that love and eye contact would be positively related. Results indicated that "strong love" couples (determined by his liking and love scales) made significantly more eye contact than did "weak love" couples.

Exline and Winters [1965] indicated that, after male and female subjects chose one person over another after a period in which he/she had interacted with two persons together, the difference between the frequency of eye engagement with the preferred same-sexed interviewer and the nonpreferred interviewer increased significantly.

Researchers have also looked at the other side of the question, that is, will individuals like someone who looks into their eyes more than someone who does not? Ellsworth and Carlsmith [1968] supported the hypothesis that the

amount of eye contact in a dyadic interaction can positively change a subject's reaction to the other person by showing that female subjects liked the female interviewer significantly more when she looked them in the eyes.

Looking at eye contact from a different perspective, i.e., relating it to a dominance rather than liking relationship between people, Ellsworth et al. [1972] substantiated that in field studies with pedestrians crossing the street, the stare can be perceived as an aggressive gesture while Hutt and Ounsted [1966], in a study involving autistic children looking at various model faces, indicated that the averted glance may be a gesture of submission.

One may wonder why eye contact communicated liking in one instance and dominance or submission in another or perhaps both in some instances. One possible explanation [Henley, 1973a, 1973b, 1973c] may be the power or status differential between the parties. If one is of higher status or power and no attraction element is involved, perhaps submission and dominance may be evident. If, on the other hand, similar status is perceived and attraction is plausible, then liking may be communicated.

Pupil Dilation

Similarly, studies [Hess and Polt, 1960; Hess, 1965; and Stass and Willis, 1969] indicate that pupil dilation may be related to feelings toward people or objects.

However, it may be difficult to determine exactly what feeling is conveyed by the pupil dilation. Hess and Polt [1960] and Hess [1965] found that the pupils dilated more when male and female subjects were looking at pleasurable or interesting stimuli. In addition, Stass and Willis [1969] found that both male and female subjects chose, as either someone they could trust or they found pleasant and easy to talk to, an eye-contact partner significantly more often than a non-eye-contact partner, and that they also chose a pupil dilated partner of the other gender over the nondilated partner.

Physical Proximity and Seating Position

Various researchers [Byrne, Ervin and Lamberth, 1970; Kiesler and Goldberg, 1968; Cook, 1970; Little, 1965; Byrne, 1961] have found that physical proximity and closeness of seating positions may be sensitive measures of attraction and liking while others [Henderson and Lyons, 1972; Sommer, 1969; and Willis, 1966] have indicated these to be measures of dominance or personal space violation.

Byrne et al. [1970] reported that the more mixed-sex couples liked each other the closer they stood. Also Little [1965] reported male and female subjects placed figures described as same-sexed friends closer together than figures described as strangers. Kiesler and Goldberg [1968] also found that male subjects indicated they would sit

closer to an individual to whom they were more attracted. Cook [1970] obtained similar findings in field observations.

By manipulating seating patterns in college classes of both males and females, Byrne [1961] was able to separate the important question of "does physical proximity create attraction" from the correlational question of "do people who like each other interact at a closer physical proximity than those who do not?" Byrne [1961] found that a significantly higher proportion of same-sex seat neighbors than nonneighbors indicated attraction to one another.

Thus, it is hypothesized by many, and confirmed by some that the less physical distance there is between two individuals the more likely they will become attracted to each other [Berscheid and Walster, 1969] and that people who like each other will interact at a closer physical proximity than those who do not.

Personal space, defined by Sommer [1969] as the emotionally charged zone around each person which helps to regulate the spacing of individuals, has primarily been used as a measure influenced by power relationships. In this light, Henderson and Lyons [1972] found easier violation of female space in a study of pedestrians crossing a street in at a crosswalk. The motion of the female was more disturbed by people in general than that of the males.

In addition, Sommer [1969] observed that dominant animals and human beings have a larger envelope of

inviolability surrounding them than do subordinate ones. That is, dominants may not be approached as closely.

Willis [1969] found differences in personal space violation in terms of the initial speaking distance set by an approaching person. His study indicated that women were approached more closely than were men, by both men and women. This finding, that women approach other women more closely, indicates that the power structure in the relationship may not be the only relevant one, but that the perceived status of the person may influence such social norms as initial speaking distance.

Tone of Voice

Obviously we all react to another's tone of voice as a cue to interpret what is said. For example, a mother may tell her child to go to bed and indicate anger by yelling the command or may make it more of a suggestion with a quieter, less vehement tone of voice.

Mehrabian [1968] concluded that a speaker's tone of voice is more important than the content of his message in determining whether the listener feels liked or disliked.

Weitz [1972] suggested that tone of voice may be a better indicator of liking or disliking of another person than self-report on a questionnaire. In this experiment each of the white male subjects was given a written description of a black man who was to be his partner in the experiment and who was waiting in an adjoining room. The subject

then expressed his reaction to the unseen partner on the basis of written information. He filled out a paper-and-pencil measure of liking for the partner and read task instructions to the partner over an intercom system. Tape recordings of these statements were later scored by a panel of raters for their warmth of tone. Additionally, the subject was asked to indicate how many hours he would be willing to return to the lab during the following week to take part in further experiments with the same partner. After collecting the data, Weitz computed correlations between the measures. She found that though warmth of tone and commitment to future interaction correlated positively with one another, each of the measures correlated negatively with the questionnaire measure of liking. Those subjects who expressed the most positive attitudes toward their black partner on the questionnaire had the least friendly tone and were least willing to interact with him further. Weitz suggests that this inconsistency may stem from a tendency of whites within a liberal college environment to repress their negative or conflicting feelings toward blacks by overreacting in a positive direction on the questionnaire. This may also indicate that actual observations of nonverbal communication are more accurate in predicting behavior than are other measures, such as self-reports.

However, one could reasonably question the validity

of much of the research in the field and postulate other reasons for the findings. Often there is a lack of clarity about what the conceptual variables mean, such as what, exactly, constitutes interpersonal attraction? Also, due to the unobtrusive nature of nonverbal communication one could question whether the "true" meaning or intent of that communication were being established or whether nonverbal behavior is, in fact, intended behavior. Also one must consider those cases, such as Weitz [1972] in which the nonverbal behavior was incongruent with the other responses to the object. How can one deal with and interpret these incongruities between different forms of behavior?

Thus, for these reasons, the relationship between nonverbal communication and other factors such as interpersonal attraction, curiosity, aggressiveness and dominance has not been entirely systematically nor validly researched.

In line with previous research which has attempted to establish clearer relationships between various nonverbal cues and relationships between people, I will attempt to show a relationship between the nonverbal cue of touching and a particular relationship between people, namely that of dominance.

First, one must recognize the context from which feelings regarding touch originate. Touching behavior is a commonly shared nonverbal "language" in which certain behaviors acquire specific meanings within a group [Faltico, 1969]. There are norms guiding this behavior

which vary across class, ethnic groups, sexes and situations. Examples of these norms are evidenced in the ability of a master to touch a slave while that touch may not be reciprocated without a blatant violation of an unspoken rule. Further, the president of a company is freer to touch the elevator operator or his secretary than vice versa. Additionally, a doctor may more often touch his patients, nurses, or technicians. There is some observational evidence to substantiate this. Goffman [1956] found that doctors touched other ranks but other ranks tended to feel it would be presumptuous for them to reciprocate a doctor's touch, let alone initiate such a contact with a doctor. In an explanation of this touching norm, Goffman [1956] states that the higher the class, the more extensive and elaborate are the taboos against initiation of contact by subordinates, and that between superordinate and subordinate one may expect to find asymmetrical relations, the superordinate having the right to exercise certain familiarities which the subordinate is not allowed to reciprocate. Violation of these norms may result in diverse reactions, ranging from mere surprise to severe reprimand or ostracism.

In order to study this normative behavior, Henley [1973a, 1973b, 1973c] conducted noncontrived observational studies which indicated that males touch females more than females touch males. This sex difference in touching has

further been substantiated by Jourard [1966] and Jourard and Rubin [1968] employing pictures of the body and asking subjects to indicate specific body areas and how often they were touched by particular others. The results indicated that women showed greater accessibility to physical contact than men, and that the hand, arms, shoulders and the top of the head received the most contact while areas most obviously linked with sexuality were touched less.

Henley [1973a, 1973b, 1973c] contends that a power or status difference offers a more complete explanation as to why males touch females more often. One may begin to substantiate this by delineating three areas of power differences. First, there are external indicators of power such as income and education figures. Stevenson [1975] and Astin [1969] have shown that women are under-represented in fields, such as scientific and professional, which pay more and that women who work full time have lower average wages than men at every educational level. In addition, James [1975], Astin [1969] and Knudsen [1969] have substantiated that the educational attainment of females remains considerably lower than that of males and men are becoming better educated than women especially beyond the baccalaureate. Second, there are observational indices such as interpersonal gestures of deference like females averting their eyes more often than men or smiling

more. As Goffman [1956] stated, in face-to-face behavior one may expect to find asymmetrical relations between superordinate and subordinate, with the superordinate having the right to exercise certain familiarities.

Various studies [Moore, 1966; Broverman, Vogel, Broverman, Clarkson and Rosencrantz, 1971; Johnson, 1972] have substantiated that observers conclude that males occupy a higher position on a dominance or power hierarchy. By dominance we mean more assertive, active and independent behavior rather than more dependent, passive and nonassertive behavior.

Using binocular rivalry situations in which a "violent" picture was tachistoscopically presented to one eye simultaneously with a "nonviolent" picture shown to the other, Moore [1966] concluded that, in Western culture, males learn to be more active and socially assertive than females since he considers this binocular rivalry situation to be a direct measure of aggressiveness. Additionally, Broverman et al. [1972] developed a sex role questionnaire based on their previous studies and found that included in the male-valued items were the attributes of independent, active, and assertive while women are perceived to be dependent, passive, and nonassertive. Further, a similar questionnaire was given to mental health professionals and they tended to view mature healthy women as more submissive and less independent than either mature healthy men, or adults,

sex unspecified. Also, Johnson [1972] found that both males and females tended to regard the direct exercise of power as masculine and used by males.

In addition to the research on perceived male dominance, Stephens [1963] stated that the power is actually, as well as formally, in the hands of the husband. In a sample of 96 cultures, only four or five constitute possible matriarchies (societies in which women customarily rule within the home) and these are the Berbers, Tchambuli, Modjokuto, Jivaro, and perhaps Nama. However, none of these could be considered full-fledged matriarchies since the female is not dominant in the public realm.

Zellman [1974], Duverger [1955] and Tiger [1969] documented the particular societal structure in which male dominance is obvious, namely the political and economic structures. Male dominance in recreational areas (particularly more aggressive sports) and the religious (including European Christian churches) structures of Western culture has been discussed by Tiger [1969].

Most importantly for this study, Frieze [1974] asserts that nonverbal expressions serve to establish and maintain more dominant positions in these societal structures for men who display them. Thus, one could interpret this sex differential in touching as being related to dominance as Henley [1973a, 1973b, 1973c] has done. She maintained that more powerful individuals can touch others

more and specifically, that is why men touch women more.

Frieze [1974] reasoned that since men do more touching of women than vice versa, and this touching is unrelated to the intimacy of the relationship but in accord with the relations of power, female personal space is consistently violated. (By touching someone who does not reciprocate, one violates the personal space of that individual [Frieze, 1974].) Further, according to Henley [1973b], women are expected to accept as normal behavior the daily violations of their persons. However, according to Henley [1973b], when they reciprocate or initiate touching with males, they are likely to be interpreted as conveying specific sexual intent.

Additional research has indicated a complex relationship between nonverbal cues and dominance. In a study of sex role attitudes and nonverbal communication, Weitz [1974] videotaped unstructured interactions and dyadic tasks between same and mixed-sex pairs. Following the tasks, subjects completed a sex role attitude measure developed by Weitz as well as scales of dominance and affiliation. The videotapes were rated by blind raters for conveyed interpersonal warmth and dominance. Weitz [1974] found that nonverbal behaviors of women in mixed-sex interactions were significantly related to the male partner's score of dominance. Women were nonverbally more submissive with more dominant male partners and nonverbally more

dominant with more submissive male partners. Male nonverbal behaviors were not significantly related to female scale scores and Weitz [1974] offers no explanation for this. As a partial explanation of the significant findings, Weitz [1974] suggests that females are more likely to monitor their partner's affective cues and adjust their own nonverbal communications in accordance with them more so than males do. Some support for this conclusion comes from Rosenthal [1974] and Argyle [1967] who found that women are more accurate judges of affect, including nonverbal cues. Additionally, Montagu [1971] has found that females of all ages appear to be much more responsive to tactile stimuli than males.

Much groundwork research on establishing what nonverbal behaviors are consciously or unconsciously perceived as dominant is needed before one can address the question of women's sensitivity to these cues. One question which is addressed in this study is the extent to which subjects link nonreciprocal touch to relationships of dominance. Attribution theorists attempt to determine the processes an observer goes through in making these links. The task in this case is to determine how and what an individual will conclude when given the information that one of the people in a relationship touches the other more.

First one must recognize that attribution theory is closely linked with person perception. The observer, first,

must perceive the situation presented, and in this research one must ask whether the observers perceived the touching scenario as it was intended. Given then, that observers have perceived the stimulus situation, it will mean, according to Heider's attribution theory, different things to perceivers who differ. When subjects are asked to make causal attributions about the stimulus situation, the various attributions may mean different things since the observers may have perceived the relationship between the two individuals in different ways. That is what attribution theory is concerned with since Heider's [1958] theory stresses the importance of looking at the perceiver's subjective experience rather than the objective description of the stimulus input. The perceiver not only perceives people as having certain spatial and physical properties, but also can grasp even such intangibles as their wishes, needs and emotions by some form of immediate apprehension [Heider, 1958].

In this study, one must consider what cognitive process the participants would go through to arrive at a sufficient underlying cause for the touching behavior and then hypotheses about the characterizations of the toucher and the touched person can be generated. The Jones and Davis [1965] version of attribution theory seems most applicable to the present study. The basic premises of their theory are that every action is presumed to carry with it certain

specifiable effects and each unit of intentional behavior can be seen as one of several possible actions available to the actor at the time. The common effects produced by two or more potential choices can not serve as a basis for a decision between those possibilities. Only the noncommon effects can be used to infer the reasons for the choice that was actually made. One considers the number of noncommon effects involved and attempts to assess the assumed desirability of these effects using a reference point. The more the actor's choice deviates from what would be expected in the observer's reference group used for comparison, the more the choice will be attributed to a personal disposition, which is defined as a relatively unchanging structure or process that characterizes or underlies a phenomenon [Heider, 1958].

The theory then considers what Jones and Davis call the perceivers correspondence of inference--i.e., the perceiver's certainty that the actor's behavior reflects an underlying personal disposition. Correspondence refers to the extent that the act and the underlying characteristic or attribute are similarly described by the personality inference. For example, the most correspondent inference is that which assumes with high confidence that domineering behavior is a direct reflection of the person's intention to dominate, which in turn reflects a disposition to be dominant [Jones and Davis, 1965]. In terms of effects, this

is stated that high correspondence occurs when there are few noncommon effects and when the assumed desirability of those effects is low. For example, in this study one would consider the noncommon effects between touching and not touching the other individual. That is, compare what one can gain or lose by either touching or not touching and then assess the assumed desirability of those effects in relation to a particular reference group.

A simplified example of this process undertaken by a subject would be as follows: If a subject were given the information that one individual was touching another more, he/she would conclude that there are some effects produced by both touching and not touching another. The effects produced when a male touches a female more might include getting the female to like him or asserting his dominance. The effects produced by not touching the female might also include getting the female to like him (by not appearing too aggressive) and maintaining a certain distance between the two parties. Therefore if a subject sees a male touching the female he/she compares the noncommon effects of the touching and not touching. Since only the noncommon effects can serve as a basis for a decision between the two courses of action, he/she would most likely infer that the male touched the female more because he was asserting his dominance or power.

Jones and Davis [1965] then suggest how a perceiver

searches for the dispositional cause of an intention. The perceiver can obtain more information about the actor (1) when the number of effects produced by the action is small rather than large, and (2) when those effects are of low rather than high social desirability. In other words, unexpected or out-of-role action is more attributionally informative to an observer than role-prescribed behavior. When a person behaves in a manner opposite that dictated by the role requirements, one can be fairly certain that his/her behavior reflects his/her underlying personality. In this study an out-of-role behavior would occur with the female touch initiator. Thus, this action should reflect a personal disposition and subjects should indicate this in their responses.

The present study is a test of the significance of a dominance and a liking relationship in nonreciprocal touching and its relation to the sexes. In the study subjects are given two pieces of information to integrate. One is the liking information they are given and the other is the fact that there is an interpersonal encounter where the person who is touching the other more is liked either more or less than the recipient of the touch. Given this information, a subject must then decide what the touching indicates. This is, when will nonreciprocal touching communicate affection and when will it communicate dominance?

If a subject is told that "Renee likes Dave more" and

Renee is touching Dave more, it is hypothesized that her touch initiation will more frequently be attributed to affection or sexual attraction and that subjects will characterize her as flirtatious or affectionate on the adjective checklist and as less dominant, less assertive and weaker on the semantic differential scales. The reason this is hypothesized is that since nonverbal communication has been shown to be related to affection it seems intuitively logical that if someone likes another more, his/her touching would be related to his/her liking and thus, would be done out of affection. For the same reasoning, it is hypothesized that if "Dave likes Renee more" and Dave is the touch initiator, his touch initiation will be more frequently attributed to affection or sexual attraction and he will be characterized by subjects as flirtatious or affectionate on the adjective checklist and as less dominant, less assertive and weaker on the semantic differential scales.

When a subject is told that "Renee likes Dave more" and Dave is touching Renee more, it is hypothesized that his touch initiation will be more frequently attributed to dominance and subjects will characterize him as more dominant, assertive, active and stronger on the semantic differentials and as commanding, manipulative or independent on the adjective checklist. The reasoning behind this is found in the theory of least interest [Waller and Hill, 1951]. This states that in any sentimental relationship the one who

cares less can exploit the one who cares more. Thus, in this condition Dave likes Renee less and can therefore be perceived as being more exploitative, thereby leading to more characterizations to Dave of dominance and assertiveness.

Subjects told that "Dave likes Renee more" will more frequently attribute her touch initiation to sexual attraction and will characterize her as flirtatious or sex-starved on the adjective checklist and as less affectionate (since Dave likes her more) and more active on the semantic differential scales. The reasoning for this is that Henley [1973b] stated that women touch initiators are likely to be interpreted as conveying specific sexual intent. The reason this was not hypothesized for the female touch initiator with the female liker was that since the female also liked him more it was more congruous to assume that her touch and liking were related and thus, the touch was done out of affection. In this condition, however, the male likes her more and therefore affection is not a logical reason for her touch. Also Henley [1973b] states that it is difficult to ascribe dominance to a female since it is out-of-role for her so the sexual attraction explanation seems most logical.

Overall, regardless of the liking relationship, subjects will give more frequent dispositional attributions (such as, is an insecure person) rather than situational one (e.g., was trying to loosen up) to a female initiating

touch. This hypothesis assumes that in our culture it is seen as more appropriate for men to touch women; thus, a female's initiation of touch is an out-of-role action.

There seems no reason to believe males would receive either more situational or dispositional attributions. Also, it is hypothesized that on the question relating to the most apparent dimension, the dominance-submission dimension will be the most apparent to the subjects in the condition of Dave as the touch initiator and Renee liking Dave more since this is in line with the other hypotheses for that condition.

Some main effects for the asymmetrical liking relationship are also hypothesized. It is predicted that the person who likes the other more will be perceived as more affectionate and less dominant while the individual who does not like the other more will be perceived as more dominant and less affectionate. This is in accordance with the theory of least interest and the assumption that in our society power comes from liking less.

Differences between male and female subjects will also be analyzed but no specific hypotheses are predicted since there is no background material upon which to base any predictions.

METHOD

Subjects

Subjects were 80 students, 40 males and 40 females, enrolled in introductory psychology course at Michigan State University who received extra credit for participation. Subjects participated in groups of eight.

Procedure

Two college students, a male and a female, were trained to carry on a conversation regarding movies. (They were instructed to equalize all nonverbal cues except touching.) Two five-minute conversations were videotaped, using standard equipment. In one tape the male initiated approximately 80 percent of the touching behavior while there was approximately 20 percent reciprocation by the female. In the other tape, the female was the initiator of the touch with approximately 20 percent reciprocation by the male. The touching was primarily confined to the head, shoulders, arms and hands. It consisted chiefly of a touch to the others arm, an arm around the other's shoulder, or taking the other's hand.

Subjects were met in a classroom by either a male or female undergraduate experimenter. They were allowed to choose any classroom seat relatively close to the television set.

Subjects were randomly assigned to one of the four experimental conditions, male toucher and liker, female toucher and liker, female toucher and male liker or male toucher and female liker. Before viewing the videotape, subjects were told that this was an experiment in person perception and that they were to watch a five-minute tape of a conversation between a male and female and then would be given a questionnaire regarding the encounter.

Also, before viewing one of the videotapes, subjects were given information concerning the liking relationship between the individuals. In one condition subjects were told that "Renee likes Dave more" and the other, that "Dave likes Renee more." This resulted in a $2 \times 2 \times 2$ factorial design.

Dependent Measures

After watching the videotapes subjects answered a questionnaire (see Appendix) regarding both the verbal and nonverbal aspects of the scenerio, though only the nonverbal data was of primary interest. On the questionnaire subjects were initially provided the following information: There are various aspects of the conversation which one can focus on, and one of these is the verbal communication. Then questions were asked about whether it appeared to be a free flowing conversation, each of them seemed to be able to express, in words, just what she/he wanted to say, the topics of the conversation seemed interesting to the

individuals and to the subject. Following that, subjects were told that in addition to the verbal communication one can also focus on the nonverbal cues given by the individuals involved. The subjects were then instructed to answer questions relating to the impressions or opinions they had about the two individuals in the videotape. (These questions concerned how long the subject thought the couple had been going together, if theirs appeared to be a close relationship and then to check three adjectives from a list which the subject felt best characterized the female in the videotape. The adjectives were compassionate, flirtatious, friendly, independent, cold, sex-starved, cautious, affectionate, commanding, insecure, dependable, irresponsible, manipulative, hard-working, spoiled, deserving, well-adjusted, trustworthy, confident, tender, yielding and uncertain.) Subjects were also asked to rate the female on the following semantic differential scales: strong-weak, passive-active, assertive-nonassertive, wise-foolish, submissive-dominant, independent-dependent, dishonest-honest, pleasant-unpleasant, low status-high status. The same adjective checklist and semantic differential scales were given for the male. Subjects were then given the additional information that it was obvious from the tape that one individual was touching the other more. There may be a variety of reasons for this as well as different meanings associated with the touching behavior. Subjects then answered

questions relating to the meanings conveyed by the nonverbal behavior in the videotape. They were to rank order the following reasons why the individual touched the other more: is an insecure person, is sexually attracted, is a dominant individual, was trying to make the other person loosen up, is an affectionate person, needs someone at that moment. The reason these six items were chosen was that they were the most frequent reason for touching given in a pilot study conducted by the author. Subjects were then asked to indicate any of the dimensions of interpersonal relations evidenced in the tape. The dimensions were dominance-submission, emotionality-nonemotionality, familiarity-nonfamiliarity, warmth-coldness, trust-mistrust. Then each subject was to indicate which one of the dimensions was the most apparent. Then, using all of the dimensions checked, a subject was to describe, in his/her own words, the relationship between the two individuals that indicated that dimension.

RESULTS

Semantic Differential and Adjective Checklist Characterizations

(The data regarding the female toucher and liker contradict the hypothesis that she would be perceived as more affectionate, less dominant, less assertive and weaker on the semantic differential scales. In fact, the female toucher and liker was seen as more dominant ($F = 7.983$, $p < .006$) and none of the other scales exhibited significant effects (see Table 1).)

On the adjective checklist, all the data were analyzed with the Cochran Q test. For the female toucher and liker, the results supported the hypothesis that she would be perceived as more affectionate or flirtatious ($\chi^2 = 59.202$, $p < .01$) (See Table 2).

There were no significant interaction effects on the semantic differential scales for the male liker and toucher.

However, for the male liker and toucher, the adjective checklist indicated a significant effect. As was predicted, he was perceived as more flirtatious or affectionate ($\chi^2 = 45.185$, $p < .01$) (See Table 2).

For the male toucher and female liker, the hypothesis that he would be perceived as more dominant was supported by the data ($F = 4.110$, $p < .044$). However, he was

perceived as more assertive ($F = 4.044$, $p < .05$) when he was the toucher but also the liker (see Table 1). There were no other significant effects for this condition on the semantic differential scales.

On the adjective checklist, the data supported the hypothesis that the male toucher with a female liker would be perceived as more commanding, manipulative and independent ($\chi^2 = 25.39$, $p < .01$) (see Table 2). Also, the female in this condition was perceived as significantly more insecure or yielding ($\chi^2 = 37.755$, $p < .01$).

There were no significant interaction effects on the semantic differential scales for the male liker and female toucher.

The adjective checklist did indicate a significant effect for the female toucher with a male liker. She was perceived as more flirtatious or sex-starved ($\chi^2 = 59.202$, $p < .01$), which supported the original hypothesis (see Table 2).

Attributions on the Basis of Liking Sex of Stimulus Person

The results from the ordinal classification of the attributions to the toucher indicated only one significant effect. As was hypothesized the condition of male toucher and female liker resulted in more dominance ($\chi^2 = 3.09$, $p < .10$) being attributed to the male toucher. The data did not support any of the other hypotheses.

Dispositional/Situational Attributions

The findings involving the ordinal classification of attributions to the toucher disconfirmed the attribution literature. According to Jones and Davis [1965] more dispositional attributions should be given to a person performing an out-of-role behavior. In this study it was hypothesized that since a female toucher would be performing an out-of-role behavior she would be ascribed more dispositional attributions for that behavior. However, the data indicated no significant differences.

Dominance Dimension

It was hypothesized that the dominance dimension would be the most apparent with a male toucher and female liker. (However, the data indicated that the dominance dimension was most apparent when the male was the touch initiator, regardless of the liker.) Thus this lends some support to Henley's [1973a, 1973b, 1973c] conjecture that males touch females more because of a power dimension.

Main Effects for Asymmetrical Liking

The data on the adjective checklist and semantic differential scales gave little support to the hypotheses that a liker will be seen as more affectionate and less dominant and the one who likes the other less will be perceived as less affectionate and more dominant. A female liker was cited as more insecure ($\chi^2 = 27.21$, $p < .01$) while she was

perceived as more active ($F = 5.281$, $p < .023$) but also friendlier ($\chi^2 = 24.337$, $p < .01$) when the male was the liker. The male liker was seen as more commanding ($\chi^2 = 19.567$, $p < .01$), assertive ($F = 5.504$, $p < .02$) and independent ($F = 11.979$, $p < .001$) while he was perceived as more confident ($\chi^2 = 20.014$, $p < .01$), stronger ($F = 4.416$, $p < .04$) and more dominant ($F = 8.055$, $p < .006$) if the female were the liker (see Table 3). The results are too ambiguous to draw any definitive support for the original hypotheses or to lend any support to the theory of least interest [Waller and Hill, 1951].

TABLE 1

Interaction Effects For Toucher and
Liker on Semantic Differential Scales

	df	MS	F
Female Toucher and Female Liker			
Dominance			
* $p < .006$	1	15.312	7.983*
Male Toucher and Female Liker			
Dominance			
* $p < .044$	1	5.000	4.110*
Male Toucher and Male Liker			
Assertive			
* $p < .045$	1	7.200	4.044*

TABLE 2

Chi Square Values for Significant Toucher/Liker
Interaction Effects on Adjective Checklist

Female Toucher and
Female Liker

		Toucher	
		Male	Female
Flirtatious or Affectionate Liker	Male	2	19
	Female	1	25

$$x^2 = 59.202, p < .01$$

Male Toucher and
Male Liker

		Toucher	
		Male	Female
Flirtatious or Affectionate Liker	Male	18	1
	Female	15	1

$$x^2 = 45.185, p < .01$$

Male Toucher and
Female Liker

		Toucher	
		Male	Female
Commanding, Manipulative or Independent Liker	Male	8	1
	Female	14	6

$$x^2 = 25.39, p < .01$$

Female Toucher and
Male Liker

		Toucher	
		Male	Female
Flirtatious or Sex-Starved Liker	Male	2	19
	Female	1	25

$$x^2 = 59.202, p < .01$$

TABLE 3

Main Effects for Asymmetrical Liking on
Semantic Differential Scales

	df	MS	F
Characterization of Female if she is the Liker			
Active	1	8.450	5.281*
* $p < .023$			
Characterization of Male if he is the Liker			
Assertive	1	9.800	5.504*
Independent	1	21.012	11.979**
* $p < .020$			
** $p < .001$			
Characterization of Male if the Female is the Liker			
Stronger	1	7.200	4.416*
Dominant	1	9.800	8.055**
* $p < .037$			
** $p < .006$			

DISCUSSION

The results contradicted Jones and Davis' [1965] theory that more dispositional attributions would be given to the female toucher. The data showed no significant differences in terms of situational/dispositional attributions. Since this was a very short, as well as contrived, conversation, perhaps subjects did not feel justified in giving too many dispositional attributions since they were quite unfamiliar with the individuals and saw only a small portion of their behavior. Perhaps they did not want to make too hasty a causal judgment of another individual's personality.

Another possible explanation as to why the female's out-of-role behavior did not lead to more dispositional attributions is that many subjects perceived the female toucher as affectionate and sex-starved on the other scales, and thus, her touching was then not perceived as out-of-role because they created this new role for her.

The results also did not support the hypothesis that the dominance dimension would be the most apparent with a male toucher and female liker. The findings indicated that dominance was most apparent with a male toucher regardless of the sex of the liker. Thus, this is supportive of Henley's [1973a, 1973b, 1973c] idea that males touch females more than females touch males because of a power differential.)

The results of the adjective checklist and semantic differential scales lend both support and contradiction to the original hypotheses.

The female toucher was not perceived as more affectionate, less dominant, less assertive and weaker on the semantic differentials but was perceived as more affectionate and flirtatious on the adjective checklist. Perhaps this may be a function of the particular scales employed. On an adjective checklist one is confronted with a forced-choice situation and perhaps, affectionate and flirtatious were two of the least offensive choices but perhaps did not fully and specifically classify the individuals. The semantic differential scale allows for more discrimination on each item, rather than a yes/no response and perhaps subjects responded with more middle-of-the-road classifications here rather than making blatant character attributions.

The data on the male toucher and liker showed similar results. There were no significant effects on the semantic differentials but he, too, was perceived as flirtatious and affectionate, perhaps due to the same reasons mentioned for the female toucher and liker.

The results for the female toucher with a male liker, again, showed no significance on the semantic differential scales while the adjective checklist indicated she was perceived as flirtatious or sex-starved, lending support to Henley's [1973b] research on female touch characterizations.

Again, the same argument can be used to explain the lack of significance on the semantic differential scales.

The experimental condition which most supports the original hypothesis was that of the male toucher and female liker. He was perceived as dominant on the semantic differential scales, but was characterized as more assertive when he was also the liker. Also, he was characterized as more commanding, manipulative and independent on the adjective checklist while the female was characterized as more insecure and yielding. Weitz [1974] found that females are more submissive with more dominant male partners and perhaps they not only act that way but are perceived by others as more submissive with a more dominant male partner even though the actions were standardized for all conditions in the experiment. It seems, then, that the touch initiation of a male is perceived as a dominant gesture when given the female liker. This may mean that the male is perceived to be dominant and commanding in this condition since he has already gained a female's affections, whereas if he is the toucher and liker he will not be perceived as more dominant since he has more to lose if he acts in that manner. In the former condition he may be perceived as having more command of the situation and thus may have more freedom of action.

Looking at the results, one can conclude that a relationship between dominance, liking and touching does exist, but the explanations and interpretations are tenuous, at

best, since the results are rather inconsistent and at times, contradictory. That an individual can be perceived as both dominant and affectionate or as dominant, but not less affectionate may be due to one's upbringing. In childhood one typically looks to the parents as a model for his/her own subsequent behavior.

According to Bandura [1971] and Mischel [1968] vicarious reinforcement may occur. The child may watch the types of consequences produced by different actions in various settings and the observer can then learn the response considered appropriate in given situations. In childhood a child often receives affection, through touch, from a parent and sees the parents touch others. This affectionate touch generally produces good consequences. After a certain age, this touching of the child may decrease and then the child must look to his model to determine the appropriate behavior. However, when a child does look to the parent to learn touching he/she sees someone who may be an affectionate person but one who also has more status or power and is more dominant. (Thus, this association between affection and dominance learned from the parents may remain with an individual and appear again when he/she is asked to explain another's touching.) Thus, this ambivalence and ambiguity may be due to the situation in which touching was generally originally learned.

Another explanation of the dual description of touching

may be due to the fact that both subjects and confederates were male and female college students. In that setting, touching between a male and female typically indicates a dating or sexual relationship or one of some degree of affection. However, the dominance characteristic may also be perceived because of the nonreciprocation and this may indicate that one individual has more command of the situation.

This study seems to confirm the ambivalence in the existing nonverbal communication literature, i.e., that these cues may be interpreted in a variety of ways. Further research is necessary in order to establish the link between dominance, liking, and touching. Also, other scales should be used since the replies in this study appeared to be partly a function of the dependent measure. The attribution theory connection in the present study does appear to be a valuable tool for measuring responses but the research on it, as well as the techniques for employing it, needs extensive work.

In conclusion, the present study appeared to be a step forward in terms of adding the liking dimension and attribution theory to the existing paradigms of studying touching. However, the results are not consistent enough to make any definitive statements about the relationships between dominance, liking and touching. More research is needed in order to more fully clarify and explain how

observers interpret touching behavior, and perhaps this study will contribute some ideas as to how future research should be conducted.

APPENDIX

Please circle one to indicate your own sex: Male Female

There are various aspects of the conversation which one can focus on, and one of these is the verbal communication. Please answer the following questions concerning what you heard on the tape.

1. Did it appear to be a "free flowing," easy conversation?
2. Did each of them seem to be able to express, in words, just what he/she wanted to say?
3. Did the topics of conversation seem interesting to you?
4. Did the individuals generally seem interested in the topic(s) of conversation?

In addition to the verbal communication, one can also focus on the nonverbal cues given by the individuals. From these cues one can extract judgments about the individuals involved. Please answer the following questions relating to the impressions or opinions you have about the two individuals in the videotape.

1. How long do you think the couple has been going together?
2. Does theirs appear to be a close relationship?
3. Please check three (3) of the following adjectives which you feel best characterize the female in the videotape.

<input type="checkbox"/> compassionate	<input type="checkbox"/> irresponsible
<input type="checkbox"/> flirtatious	<input type="checkbox"/> manipulative
<input type="checkbox"/> friendly	<input type="checkbox"/> hard working
<input type="checkbox"/> independent	<input type="checkbox"/> spoiled
<input type="checkbox"/> cold	<input type="checkbox"/> well-adjusted
<input type="checkbox"/> sex-starved	<input type="checkbox"/> trustworthy
<input type="checkbox"/> cautious	<input type="checkbox"/> confident
<input type="checkbox"/> affectionate	<input type="checkbox"/> tender
<input type="checkbox"/> commanding	<input type="checkbox"/> yielding
<input type="checkbox"/> insecure	<input type="checkbox"/> uncertain
<input type="checkbox"/> dependable	

4. Please rate the female on the following scales:

: _____ :	: _____ :
Strong	Weak
: _____ :	: _____ :
Passive	Active
: _____ :	: _____ :
Assertive	Nonassertive
: _____ :	: _____ :
Wise	Foolish
: _____ :	: _____ :
Submissive	Dominant
: _____ :	: _____ :
Nonaffectionate	Affectionate

:	_____:	_____:	_____:	_____:	:	_____:
	Independent					Dependent
:	_____:	_____:	_____:	_____:	:	_____:
	Dishonest					Honest
:	_____:	_____:	_____:	_____:	:	_____:
	Pleasant					Unpleasant
:	_____:	_____:	_____:	_____:	:	_____:
	Low Status					High Status

5. Please check three (3) of the following adjectives which you feel best characterize the male in the videotape.

☐ compassionate
☐ flirtatious
☐ friendly
☐ independent
☐ cold
☐ sex-starved
☐ cautious
☐ affectionate
☐ commanding
☐ insecure
☐ dependable

☐ irresponsible
☐ manipulative
☐ hard working
☐ spoiled
☐ deserving
☐ well-adjusted
☐ trustworthy
☐ confident
☐ tender
☐ yielding
☐ uncertain

6. Please rate the male on the following scales.

: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Strong					Weak
: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Passive					Active
: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Assertive					Nonassertive
: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Wise					Foolish
: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Submissive					Dominant
: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Nonaffectionate					Affectionate
: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Independent					Dependent
: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Dishonest					Honest
: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Pleasant					Unpleasant
: _____ :	: _____ :	: _____ :	: _____ :	: _____ :	: _____ :
Low Status					High Status

It is obvious, from the tape, that one individual was touching the other more. There may be a variety of reasons for this as well as different meanings associated with the touching behavior. Please answer the following questions relating to the meanings conveyed by the nonverbal behavior shown in the videotape.

1. Please rank order (from 1 to 6) the following reasons why the individual touched the other more. One (1) means that is the most likely reason and 6 indicates the least likely reason for that behavior.

☐ is an insecure person
☐ is sexually attracted
☐ is a dominant individual
☐ was trying to make the other person loosen up
☐ is an affectionate person
☐ needs someone at that moment

2. This encounter may have shown several dimensions of interpersonal relations. Please put a check mark by any dimension you felt was evidenced in the tape.

☐ Dominance-Submission
☐ Emotionality-Nonemotionality
☐ Familiarity-Nonfamiliarity
☐ Warmth-Coldness
☐ Trust-Mistrust

3. Out of all the dimensions you checked above, which one was the most apparent? _____

4. Using all the dimensions you checked, please describe the relationship between the two individuals that indicated that dimension. For example, if you thought that eye contact was related to liking-disliking and you were given a scene showing eye contact, you might respond by saying "Betty likes Jack" or "Betty is disliked by Jack," and similarly for any other dimensions which may have been tapped by this encounter.

Thank you for your participation.

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