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Sex Differences in Nonverbal Communication[1]

Shirley Weitz[2]
New School For Social Research

An experiment was conducted to determine the relationship between sex-role attitudes, affiliation, and dominance and nonverbal communication styles in men and women in same- and opposite-sex dyads. Women were found to elicit more warmth and men more anxiety from their partners. Evidence was found for a possible monitoring mechanism through which women adjust their nonverbal communications to fit the male in the interaction. Liberalism in sex-role attitudes was found to correlate with nonverbal warmth in men. The nonverbal presentations of men and women in the microprocesses of dyadic interaction were found to relate significantly to the macrostructure of societal sex roles.

Many perspectives can be taken on sex differences in communication. One can look at sex differences in content (Aries, 1974; Warshay, 1972), language style (Lakoff, 1973), paralanguage (Sachs, Lieberman & Erickson, 1973), etc. (see Thorne and Henley, 1974, for a complete review), but taken alone this is an incomplete view. The interactant is never confronted with a disembodied voice, but rather with a gesturing, expressive, positioned individual, whose voice and language are only part of the message being conveyed.

One major question behind most research on sex differences in language and speech is: how do such differences interact with the social roles of men and women? Thus, exclusive emphasis on the verbal aspect of interaction denies us access to the nonverbal part, which may be contributing as much, if not more, to the total interactive presence of the speaker and to his/her sex-role performance.

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[2] Requests for reprints should be sent to Shirley Weitz, Department of Psychology, The Graduate Faculty, New School for Social Research, 66 West 12 Street, New York, New York 10011.

Work in the area of sex differences in nonverbal communication (see Thorne & Henley, 1974, for a complete review) has proceeded in two directions, parallelling the structuralist and external variable traditions (Duncan, 1969) in nonverbal research. The structuralist approach emphasizes holistic sequences of behavior and tries to analyze them within a linguistic model (Birdwhistell, 1970). It does not isolate behavior, e.g., smiling, out of the behavioral stream nor try to correlate such behaviors to emotional states as is true within the external variable tradition. Birdwhistell (1970) discusses what he calls "tertiary sex characteristics" in a short piece which suggests that certain body postures (e.g., pelvic orientation) may act as part of a human gender display system, but he does not detail what this system is, nor what part is plays in interaction. Another structuralist, Scheflen (1965) has isolated what he calls a "quasi-courting reciprocal" as a sequence of behaviors deriving originally from sexual courting but now serving a more general affiliative function in both cross- and same-sex interactions.

A more common approach, falling within the external variable tradition, has been to select certain nonverbal behaviors that are generally thought to be part of stereotypical sex-role behavior or that mediate power relationships between the sexes and then to study the differential appearance of such behaviors in the two sexes. Examples in this tradition are: touching (Henley, 1973), eye contact (Argyle & Ingham, 1972; Exline, 1972) and smiling (Rosenfeld, 1966; Beekman, 1974). Most findings tend to support the idea of more affiliative and less dominant behaviors by females in interaction. Mehrabian (1971) found that males "posturally convey a more potent and dominant attitude than females," and were generally less affiliative and intimate in interaction than females along a number of nonverbal dimensions, especially with same-sex partners. Eye contact, which has been linked to affiliative motivation (Argyle & Dean, 1965) seems to be higher among women than men (Exline, Gray & Schuette, 1965) and in same-sex rather than opposite-sex interactions (Argyle & Dean, 1965). Even when instructed to withhold approval, women smile and nod more than men (Rosenfeld, 1966) and everyday observation tends to confirm the view that women smile more than men even in seemingly neutral social contexts (see Beekman, 1974; Bugental, Love & Gianetto, 1971; Firestone, 1970).

Most research in sex differences in nonverbal communication has analyzed the differential frequency of various behaviors thought to covary with sex-role performance, e.g., smiling. But one cannot ignore the question of whether the same behavior in men and women is *perceived* in the same way by interactants. It is these social perceptions which shape impressions of others, expectancies about them, etc., and not the raw behavioral event per se. Thus it would seem instructive to examine the nonverbal impression that is being conveyed and then try to discover what it is about the nonverbal behaviors emitted in the context

of the actor's sex which is leading to the impression and the individual's interactive identity. One could also relate such impressions to personality variables in the actor as well as to the sex of the partner in interaction. The nonverbal behaviors, then, would acquire their social significance only insofar as they influenced impressions of the actor derived from them.

An example of this approach can serve for illustration. The nonverbal behavior most frequently observed to differ between the sexes is smiling. For example, Beekman (1974) found that females smiled more than males in dyadic interactions, but also found that the smiling might have a different motivational base in the two sexes. That is, in women, smiling tended to correlate with feelings of social anxiety, discomfort, deference, and abasement, while for men smiling correlated with measures of affiliation and sociability. This is a much more interesting finding than merely a frequency count of the number of smiles. An even more promising perspective on smiling, from the point of view of its place in interaction, is to discover how smiling is evaluated in the context of the sex of the smiler. We already have some suggestive results in Bugental, Love and Gianetto's (1971) finding that children tend to discount female smiling when it is accompanied by a conflicting verbal report, but to respond to male smiling in the same context, because female smiling is often dissociated from the emotional tone of the message, whereas male smiling is not. Thus we might generalize by saying that smiling is evaluated against the "resting position" of the face of the smiler, or the breadth of the general expressive repertoire, and not in isolation as "a smile." Experience with broad categories of interactants, such as men and women, young and old, members of various ethnic groups, etc., gives the perceiver some background against which to evaluate expressive behaviors, even of strangers on first encounter. The attitudes of the observer, e.g., sex-role attitudes, probably also interact with the stimulus to produce an impression of the interactant based on expressive material.

The present study, therefore, was designed with two goals in mind: (1) to work with the impressions generated by the nonverbal expressions and gestures, rather than only the raw expressive and gestural material itself; (2) to study the relationship between nonverbal impressions projected by the individual and personality and attitudinal variables in same- and cross-sex interactions. Within this context, one can also look at the effect of a partner of the same or opposite sex on these impressions and relationships. Within an interactive communications model rather than a static one, the sex of the partner of the interactant can be seen as an important determinant of the nonverbal repertoire displayed; thus it is likely that nonverbal communication in interaction is a function of the target person's responses as well as the sender's dispositions. Females have been found to be more accurate judges of affect (Rosenthal, 1973), thus it is likely that they monitor partners' affective cues and perhaps adjust their own nonverbal com-

munications in accordance with them more so than males do. One might also predict that sex-role attitudes are an important determinant of nonverbal communications in both same- and cross-sex interactions.

The present study, then, endeavors to study the effect of partner's dispositions on nonverbal communication, as well as the impact of sex-role attitudes, background factors, and personality characteristics in same- and cross-sex interactions.

METHOD

The *S*s were 48 men and women, mostly graduate students, recruited through posted advertisements. The 24 males and 24 females in the sample were randomly assigned to same- and opposite-sex pairs, yielding a 2 X 2 design of sex of *S* and sex of partner. Each pair was brought into the experimental setting, consisting of two chairs and a coffee table, and left for several minutes of unstructured interaction. The first minute of that interaction was videotaped behind a one-way screen, and was used for the first nonverbal analysis. Two cameras and videotape recorders were used; thus each person in the interaction was taped separately, with focus on the full body of the interactant. Following the first taping, the *E* returned and several structured and unstructured dyadic tasks were presented and taped for analysis, using the same two-camera system. The second analysis reported here is of a discussion on Watergate (this was done in summer 1973), using tapes of both faces only and complete bodies of the interactants. Following the tasks, *S*s were asked to fill out the sex-role attitude measure (Weitz, 1973), and situational scales of dominance and affiliation, as well as background information about early sex role socialization.

The videotapes were edited and a composite tape of all interactions of one type was made, with the order of interactants randomized. Ten raters (five male and five female) rated each tape for each interactant's conveyed nonverbal expressions (e.g., warmth and dominance on the first tape, additional variables on the second tape, discussed below). Reliabilities between raters were good, yielding .84 and .64 for the first two qualities (Rosenthal, 1970). No sex differences for raters' sex were found, so that results for the two sexes of raters were pooled. Raters only saw the person being taped, and did not know the sex of the person addressed nor the purpose of the experiment. Sound was turned off on the tapes so that raters could attend only to facial expression and body movements and positions. Tape ratings were entered into an analysis of variance for sex of subject filmed and sex of partner addressed, and into a correlation matrix with sex role attitudes, background information, dominance and affiliation scores of both the tapes *S* and his/her partner.

RESULTS AND DISCUSSION

First Interaction

Liberalism in sex-role attitudes was significantly correlated with rated nonverbal warmth for men in both same sex ($r = .57, p < .05$) and opposite sex ($r = .56, p < .05$) interactions. Thus, men with liberal sex-role attitudes were perceived as being nonverbally warmer in interacting with both men and women, while those men with conservative sex-role attitudes came across in a colder nonverbal way. This finding supports the idea that men with more rigid sex-typed attitudes would be more inhibited in expressing positive affect than men with less traditional views of sex-role separation. Thus, attitudes are carried through in interpersonal behavior with partners of both sexes; there appears to be a general inhibition or freedom of expression which is not limited to response to one sex. Women, however, present a somewhat different picture. Their nonverbal warmth was not significantly related to sex-role attitudes in cross-sex interaction ($r = .28$, n.s.), but was marginally *negatively* related in same-sex interaction ($r = -.47, p < .10$). Thus, women with liberal sex-role attitudes were perceived as colder in interaction with other women than were women with more traditional sex-role attitudes. One might speculate that at least for some women, having liberal sex-role attitudes is associated with less positive feelings for women in general as embodiments of a denigrated role, and that this is transmitted in the microprocesses of same-sex interaction. Nonverbal ratings of dominance were not significantly related to sex-role attitudes in any condition. The situation taped (that of the first few minutes of an interaction) was perhaps more apt to elicit nonverbal overtures of warmth (or coldness) rather than of dominance (or submission).

Nonverbal behaviors of women in opposite-sex interactions were significantly related to the male partner's scores of dominance and affiliation, suggesting a monitoring mechanism by which women adjust their nonverbal responses to the personality of the male in the interaction. Thus, female nonverbal dominance was significantly negatively related to male-dominance scale scores ($r = -.57, p < .05$), and female nonverbal warmth was significantly negatively related to male-affiliation scale scores ($r = -.72, p < .01$). Women, then, are nonverbally more submissive with more dominant male partners, and nonverbally more dominant with more submissive male partners. Such adjustment would create an equilibrium in the interaction which would result in maximum interpersonal comfort (especially for the male) in the interaction. The same reasoning would follow for the negative relationship with affiliation. Male nonverbal scores were *not* significantly related to female scale scores, nor were there any other significant relationships between scale scores and nonverbal behavior in any other

condition. Thus, in the first moments of interaction, female nonverbal styles seem to be closely attuned to male personality traits, presumably as transmitted in the very early stages of the interaction and picked up by the female respondents. Women are not as attuned to female traits, since there was no significant relationship between such traits of the partner and nonverbal behavior in the same-sex condition ($r = -.06$ for both dominance and affiliation, n.s.).

Finally, there was an overall tendency for women to elicit a warmer nonverbal response from a partner of either sex in a dyadic interaction ($F = 4.16$, $p < .05$, df 1,44). Thus, both men and women responded in a warmer way to a female partner (and in a colder way to a male partner), replicating earlier work (Rosenthal, 1967). This finding is especially noteworthy as the effect was found in the first minute of a dyadic interaction. Women were not perceived as warmer than men, however, disputing earlier findings. It is possible that raters expect a higher degree of warmth from women and thus their threshold level for high ratings of warmth is higher than for men. Previous work (e.g., Rosenthal, 1966) has usually embodied some "objective" measure of warmth (such as smiling frequency) rather than interpersonal ratings.

In summary, then, we see that nonverbal communication in first encounter dyadic interaction is partially determined by sex-role attitudes of male interactants, with warmer nonverbal impressions conveyed by the more liberal sex-role respondents in interaction with both men and women. There is a trend for women with liberal sex-role attitudes to be colder in same-sex interaction than those with more conservative sex-role attitudes. In female–male interaction, women seem to be nonverbally attuned to male dominance and affiliation tendencies and to adjust their nonverbal responses to maintain equilibrium in the interaction. Finally, females in both same-sex and cross-sex interactions elicit warmer nonverbal responses from partners than males. All of the nonverbal material came from the first minute of interaction between previously unacquainted persons. These findings present a considerably more complex picture of sex differences in nonverbal communication than previous work which relied on the dominance = male, affiliation = female equation. It is clear that attitudinal and interactional variables play a large role in the nonverbal outcomes of same- and opposite-sex interactions.

Later Interaction

An unstructured discussion about the Watergate affair (study was done in summer 1973) was taped in two forms: faces only and complete bodies. Five male and female raters assessed each tape on warmth, dominance, anxiety, focus on partner, and sexual interest shown in partner. Each of these ratings was made for the face and body types separately by different raters. In all cases, only one person was shown on the tape at one time, so raters were unaware of whom the

person was interacting with, nor of what they were saying (since the sound had been turned off).

Two significant findings emerged for the sex of the *S* being observed. Females were rated higher in focus on partner (face tapes, $F = 4.72$, $p < .05$, *df* 1,44) and higher in sex interest shown in partner (body tapes, $F = 11.60$, $p < .01$, *df* 1,44). Interestingly enough, both significant results were partner-directed; there were no significant sex differences in ratings of warmth per se ($F = 0.90$ for body, $F = 0.21$ for face, both n.s.). Thus, women are not perceived as showing more warmth than men, but *are* seen as being more focused on their partners and as evidencing more sexual interest in them (a measure correlated with focus) in both same- and cross-sex interactions.

When we look at sex of the partner, an interesting effect emerges. Interactants of both sexes are perceived as more anxious if they are interacting with men than women (body tapes, $F = 8.69$, $p < .001$, *df* 1,44). Recall that raters did not know the identity of the partners when rating the tapes; they saw the one interactant alone. Also recall the earlier finding that in the first interaction, female partners elicited a warmer nonverbal reaction from both female and male interactants ($F = 4.16$, $p < .05$, *df* 1,44). At this later stage in the interaction we find the warmth effect washes out for women ($F = 0.74$ for body, $F = 0.004$ for face, both n.s.), but the anxiety effect emerges for male partners. We might hazard to guess, then, that women elicit more warmth in first encounters but men elicit more anxiety in later ones (recall that this effect is elicited equally from male and female interactants, as determined by inspection of the means). However, an alternative explanation is also possible. Since the topic of Watergate and political issues in general might be perceived as "masculine" topics, it is possible that participants of both sexes might have expected more competence from male partners, and this expectation might have led to higher anxiety levels.

Finally, in looking at the interaction of *S* sex and partner sex in the later interaction we find that cross-sex interactions elicit more nonverbal warmth and sexual interest than same-sex interactions ($F = 6.26$, $p < .05$, *df* 1,44 for warmth in face tapes; $F = 5.84$, $p < .05$, *df* 1,44 for sexual interest in face tapes).

Since it is impossible to report here on all the correlational data for the last interaction, we will limit ourselves to comparing female–female interactions with female–male interactions, to see if the relationships change for women as a result of the sex of the partner in the interaction. Recall the findings reported in the first interaction on the relationship between female nonverbal behavior and male personality traits, which suggested an "adjustive" mechanism in which women shape their nonverbal behavior to fit male needs. A similar effect is found in the Watergate interaction tapes. In female–male interactions, the female's facial focus on the male was significantly related to the male's dominance ($r = .59$, $p < .05$). This means that women focus more on high-dominance men, less on low-dominance men. With female partners, women show a nonsignificant trend in the same direction ($r = .29$, n.s.).

Another interesting result in contrasting the female–male pairs to the female–female pairs is the relationship between background socialization variables and nonverbal interactive performance. We asked all *S*s to assess on a seven-point scale the degree to which their parents emphasized (1) careers and (2) marriage, for them while they were growing up. In the female–male pairs, we find that the greater the emphasis on career, the greater was the woman's nonverbal warmth as measured in interaction with a male during the Watergate discussion ($r = .69$, $p < .01$ for the body tapes). Conversely, of course, those women whose parents had not emphasized careers were perceived as colder. Career-oriented women were also perceived as more intelligent by the males they interacted with ($r = .55$, $p < .05$), and as less similar to those same males ($r = -.72$, $p < .05$, as rated by the male partners themselves). In the female–female pairs, we did not find significant correlations among these variables, nor were there any significant correlations found for the variable of emphasis on marriage. Interestingly enough, the findings for the career-emphasis variable and the lack of findings for the marriage variable contradicts the stereotype that socialization for achievement is done at the expense of socialization for interpersonal warmth (the old instrumental–expressive dichotomy revisited and rejected). Unfortunately, the liberalism of the females' sex-role attitudes did not correlate significantly with perceptions of nonverbal warmth, but did correlate significantly with the male partners' nonverbal warmth ($r = .54$, $p < .05$ for body tapes; n.s. for female–female pairs). Thus, in cross-sex interaction, men react in a nonverbally warmer way to women with more liberal sex-role attitudes than to those with more conservative attitudes.

SUMMARY AND CONCLUSIONS

How should one interpret the pattern of results obtained? As a first step, the most meaningful approach is to try to relate the results to sex-role expectations and behavior. We can conclude that the type of nonverbal behavior elicited is at least partially based on the sex of the target interactant. Thus, in first encounters, women elicit more nonverbal warmth than men; in a later encounter men elicit more nonverbal anxiety than women. These findings clearly relate to the social roles of the two sexes. In first encounters, women may be approached more readily and more immediately (they pose less of a threat) than men; in a later encounter (in a discussion on a political topic) men put others more "on their guard" than women (or, conversely, women may be taken "less seriously" and therefore be reacted to less anxiously).

One is also not surprised to note that in a presumably largely heterosexual sample that more nonverbal warmth and sexual interest is perceived in interactants in cross-sex than in same-sex encounters. (Recall that raters never saw the

other interactant.) What part this fact plays in affecting the content of such interactions is unclear. For example, if sexual dynamics normally underlie cross-sex interactions (even when the subject of discussion is unrelated to sex, e.g., Watergate), does this interfere with or enhance the "official business" of the interaction (e.g., in business transactions)? This cross-sex interaction effect of greater nonverbal warmth and sexual interest was shown for both men and women (as demonstrated by the means table), not just by men alone as is sometimes charged by activists in the Women's Movement.

The only consistent findings of sex differences in perceived nonverbal behavior itself came in the greater female focus and sex interest in partner. One major distinction, then, between male and female interaction styles might have to do with a greater female responsiveness and attention to the other interactant, which is even perceived by an outside observer seeing only half of the interaction. Other work has shown a sex difference in person vs. thing emphasis in social perception, with women being more attuned to the interpersonal environment and men to things and thus to events outside of the interaction context itself (Little, 1968). This split, of course, reflects the old instrumental–expressive division between male and female sex roles. Whatever the origin, there does seem to be evidence for more female focus on the interaction; is this done at the expense of the woman's own contribution to the interaction? The finding of a possible female monitoring mechanism shown by the complementary relationship between female nonverbal style and male personality traits reinforces this idea of greater female responsiveness to the other person in the interaction. Of course, one can see this as a positive quality as well, except if this responsiveness is done at the expense of the assertion of the woman's own point of view, which it perhaps might be.

Lastly, we might reiterate the findings of a relationship between male nonverbal warmth and liberalism of sex-role attitudes, and between female nonverbal warmth and career socialization. The first finding fits our expectations, the last shatters them, both reveal trends in a welcome direction for those committed to sex role change.

Overall, then, we see that the microprocesses of interaction cannot help but reveal the macrostructure of sex roles. And, in fact, it is the nonverbal aspects of interaction which reveal these structures most clearly, since the verbal content of interaction is often constrained, but the nonverbal aspect is left to vary more or less freely. A valuable perspective on the impact of sex roles on the communication process, then, is the study of nonverbal variables. Such variables will be receiving more attention in future work and will provide an essential complement to the analysis of verbal interaction. Only when both verbal and nonverbal materials are combined to create a complete model of social interaction will a full understanding of the microprocesses of social structure and social roles emerge.

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