INTERRUPTIONS and NONVERBAL GENDER DIFFERENCES

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ABSTRACT: The purpose of this study was to examine gender differences in selected nonverbal behaviors associated with interruptions. Six graduate student groups involving 18 female and 17 male subjects were videotaped. The data for the study were 140 cross-sex interruption sequences and a matched, randomly selected sample of noninterruption sequences. A category system using self-related activity, gestures, body lean, facial expression and eye gaze was developed and used to code the data. There were no significant findings related to interruptions in the categories of self-related activity or gestures. Women leaned away from the group significantly more often than did men and when leaning away, women were more likely to be interrupted. Women were also more likely to be interrupted when smiling than were men, and women smiled significantly more when taking the speaking turn. Finally, women were interrupted significantly more often than men when they did not look at the turn-taker. The high educational status of the subjects was examined in the discussion of the findings.

Gender differences in communication have been of interest to researchers because these differences are assumed to explain, in part, the nature of relationships between men and women. The primary explanation for these differences is the use of dominant and submissive roles by males and females. However, recent studies (e.g., Kennedy & Camden, 1981, 1983; Martin & Craig, 1983) reject dominance/submission explanations as the sole or even primary reason for these differences.

The studies by Kennedy and Camden yielded two critical results. First, they found that there were no significant differences

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between the sexes in the type of verbalizations produced during interruption sequences, (i.e., women did not ask to be interrupted, and in fact, women did more interrrupting in this study than did the men). Secondly, their research found that there were significantly more cross-sex interruptions than would have been expected by chance. (See Note 2)

In order to understand the interactive processes occurring between men and women during interruption (and hopefully other) behavior, this study reexamines the corpus of interruptions used by Kennedy and Camden (1981) for the influence of selected relevant nonverbal behaviors. This re-analysis was recommended by Kennedy and Camden because their analysis of verbal behavior during interruption sequences failed to reveal the reason for greater than expected amounts of cross-gender interruptions.

For this investigation, five nonverbal behaviors, which have been characteristically linked to gender differences in communication behavior, were chosen for analysis. The behaviors of interest were 1) self-related activity, 2) gestures, 3) body lean, 4) facial expression and 5) eye gaze.

Previous research (e.g., Peterson, 1976) has revelaed that females generally engage in more self-related activities (e.g., handling objects, touching body, etc.) than do males. These self-related activities have been identified by Harper, Wiens, and Matarrazzo (1978) as 'adaptors' or acts that are parts of efforts to manage body needs. Self-consciousness and concern for appearance have long been thought of as female characteristics. Additionally, these activities can be regarded as defensive or protective in nature (Eakins & Eakins, 1978). If an attitude of defensiveness is being communicated, it could serve as an invitation for communication dominance behavior by other interactants.

Secondly, gestures have been previously defined (e.g., Duncan, 1972) as an important part of turn transition activity. The presence of gesturing seems to inhibit others from interrupting the speaker. Studies examining gender differences in this area have yielded mixed results. Some research results indicate that women gesture more than men (e.g., Ickes & Barnes, 1977; Rosenfeld, 1966) while others (e.g., Duncan & Fiske, 1977) report no significant gender differences.

Additionally, the type of gesture employed may be as important as the rate of gesturing. For example, hands held with the palms facing upwards or toward the other person may suggest

receptivity, whereas hands held with palms down or fingers pointed upward with palms facing outward may suggest authoritativeness or defensiveness (Smith & Bass, 1979). Prior research also reveals gender differences in the type of gestures employed by men and women. For example, Peterson (1976) reports that women tend to use the palms up gesture while men tend to use a pointing gesture. Overall, it appears likely that gestures could be an important component of interruption behavior.

The third nonverbal behavior, body lean, has been shown to be both related to turn transition behavior and perceived attitudes of interactants. Backward torso lean has been found to be more pronounced in men, more common when communicating with someone the speaker dislikes (Mehrabian & Friar, 1969) and associated with the speaker's attempt to maintain the talk turn. Forward leans have been associated with attentive behavior (Norton & Pettegrew, 1979), and when associated with interruptions indicate an individual's desire to assume the speaker's turn (Rosenfeld, 1977). Overall, it appears likely that body lean may be an important nonverbal component of turn transition behavior.

The fourth nonverbal behavior of interest was facial expression. The sexes reportedly differ in the amount and kind of demonstrated facial expressions. Women tend to reveal more of their emotions in their facial expressions than do men (Eakins & Eakins, 1978). The majority of research in this area has focused on the smiling behavior of women. Women are reported to do more smiling than do men (Henley, 1977; Mackey, 1976), whether or not a smile is appropriate to the situation (Eakins & Eakins, 1978; Rosenfeld, 1966). It has been proposed that women's smiles may reflect their social status and could be interpreted as a sign of submission or appeasement (Eakins & Eakins, 1978; Henley, 1977). Therefore, women's smiles may serve as an invitation for communication dominance on the part of other interactants, especially males.

The final behavior of interest in this investigation was eye gaze. Eye gaze has been viewed as highly important in turn transition behavior. For example, Harper, Wiens, and Matarrazzo (1978) report that when people interact, they primarily look at one another while listening, look away while speaking, but turn the look to the other to signal the end of an utterance. From their research on eye gaze with female subjects, Cegala, Alexander, and Sokuvitz (1979) found that involved subjects demonstrated more

eye gaze while listening and speaking. Norton and Pettegrew (1979) suggest that one's attentiveness to the other speaker is communicated via eye gaze behavior.

As with the other behaviors, gender differences in eye gaze behavior have been reported. Research indicates that women look more at the other person than do men (Exline, 1963; Exline, Gray & Schuette, 1965). This may be due more to the fact that women are typically socialized to be more sensitive and responsive to nonverbal cues (Eakins & Eakins, 1978). Women may also have greater eye contact because the listener in an interaction tends to look at the speaker (Exline, 1963) and men have been reported to talk more than women (Argyle, Lalljec & Cook, 1968). Thus eye gaze behavior seems to be a potentially useful variable to explain gender differences in turn transition behavior.

In their previous study on verbal behaviors, Kennedy and Camden (1981) failed to find significant verbal precursors to interruption behavior. However, the fact that Chi Square analysis revealed that cross-sex interruptions occurred significantly more than would be expected by chance indicates that there are meaningful sex-differentiated characteristics in the interaction which have the effect of heightening the incidence of interruptions in cross-sex interaction. Although analysis of verbal bahavior yielded little insight into this cross-gender interruption phenomenon, the preceding review of the literature indicates that differences in the speaker's nonverbal actions may invite and/or ward off interruptions. This study examines that possibility as a way to explain the greater than expected amounts of cross-sex interruptions.

METHOD

Subjects

Subjects were 35 graduate students, 17 males and 18 females, in six different seminar or work groups at a large midwestern university. The participants were students in a variety of academic disciplines and almost all of the subjects were either teaching assistants or administrative assistants. These highly educated subjects were selected for study because it was believed that rapidly changing socialization practices in the last decade would most likely be reflected in the communication patterns of educated men and women. The subjects ranged in age from 23 to 46 with the median age being 29.

Groups

The six groups ranged in size from four to nine members with approximately equal number of females and males in each group. All groups met the following criteria: 1) they were naturally occurring groups; 2) members within groups had the same title or work assignment and thus, it was expected that all members had equal opportunity to participate in the work of the group; 3) formal leaders did not have to be present in order for the group to progress; and 4) all of the groups had an established history.

Group size varied from four to nine members as follows: Group A = 5 males and 4 females; Group B = 3 males and 3 females; Group C = 3 males and 4 females; Group D = 3 males and 2 females; Group E = 2 males and 2 females; Group F = 1 male and 3 females. Groups A and C were seminar classes from an educational counseling department and had met together for seven weeks. Members of Group A discussed an alcohol practicum experience in which they examined their own attitudes about alcohol use and abuse. The discussion was an emotional one with members primarily discussing personal opinion. Group C had a less personal discussion with most of the content being abstract in nature.

The remaining four groups had met together for nine months. Group B was composed of communication teaching assistants who were responsible for evaluating the course they had taught. Members verbalized strong opinions about how the course they had taught could be improved. Ideas were suggested and immediately evaluated. Groups D, E, and F were comprised of academic advisors with diverse backgrounds. These groups focused the discussion on an evaluation of the campus advising program. These discussions were slower paced, more polite, and did not generate much controversy.

In all cases, it was appropriate that the identified formal leader of the group was not present for the data collection session. This was arranged in order to avoid the dominant-submissive communication patterns that reasonably could have been expected to occur between group leader and group member. It was assumed that a leader or leaders would evolve during the 'leaderless' meeting; however, this was not viewed as problematic in that all members would have equal opportunity to do so.

Data

All groups agreed to have an hour of their meeting videotaped. Groups met in a room designed for videotaping, and subjects self-selected seats arranged on three sides of an oblong table. Subjects were aware that the investigator was interested in knowing about the general communication patterns of the group. The data for this study consisted

of the original 118 cross-sex interruption sequences reported in Kennedy and Camden (1981) of which 65 were female interruptions of males and 53 were male interruptions of females. While numerically females interrupted males more often, the Chi Square analysis revealed an 18% greater number of male interruptions of females than should have occurred if interaction participation occurred randomly according to talk time proportions. Therefore, although there were more female interruptions of males than male interruption of females, we were most interested in accounting for the statistically greater than chance expectation number of male interruptions of females. In addition, another 22 cross-sex interruptions were added to the corpus (See Note 2) for a total of 140 cross-sex interruption sequences.

These interruption sequences were matched with identical speaking transitions. In other words, if female A interrupted male B, then an instance of male B followed without interruption by female A was selected from the videotape and matched with the interruption sequence. Selection of noninterruption transitions was accomplished by playing the videotape until the desired combination of interactants was identified. The example was coded and this process repeated until matches for all interruption sequences was obtained. This comparison allowed the researchers to discern nonverbal precursors unique to interruption behavior, that is the noninterruption sequences served as control data for the interruption sequences. It is important to note that interruptions represented an involuntary turn loss, while all of the noninterruption sequences represented a voluntary turn transition. These noninterruption sequences are not turn losses but rather represent the usual turn transition mechanism used in conversation.

Coding

All sequences were coded for the five nonverbal cues previously discussed. For both data sets, the nonverbal behaviors of both the current speaker and the previous speaker were coded. Two coders, a male and female, coded each sequence for all behaviors. One behavior at a time was coded and each sequence was replayed until all five behaviors were coded. Reliability (percentage of agreement) of the categories was as follows: self-related activity, .90; gestures, .95; body lean, .95; facial expression, .90; and eye gaze, .90. The nonverbal behaviors are defined as follows: (See Note 3).

Self-related Activity. Hand movement in which the hands are used to touch or manipulate hair, foreign objects, accessories, or other parts of the body. Data were coded into the following four categories: 1) Body-touching; 2) Object-touching; 3) None Present; 4) Other. The operational definitions of these four categories are as follows:

1) *Body Touching:* any hand movement which involves manipulation of any portion of the subject's body. Examples include: stroking, touching or twisting hair; stroking or touching the face; scratching the scalp; leaning the head on one's hand; crossing arms, etc.
2) *Object Touching:* any hand movement which involves inanimate objects such as twisting a pen; picking up paper; twisting one's rings; playing with one's glasses; tapping the table; etc. Resting hands on table or holding a pen without movement would not qualify.
3) *None Present:* no self-related activity is present. Holding a pen or pencil with no movement or resting one's arms or hands on the table would be coded into this category.
4. *Other:* any self-related activity which does not fall into the above categories.

Gestures: any arm or hand movement which does not involve touching self or manipulating objects. The operational definitions of the sub-categories are as follows:

1) *Pointing:* a hand movement characterized by extending the index finger while keeping the other fingers curled inside the palm. The index finger can be curled or straight, but it must be extended.
2) *Palms Up:* any movement of the hand in a palms up position.
3) *Palms Down:* any movement of the hand in a palms down position.
4) *Illustrating:* any movement of the hands which pictures or describes the verbal talk.
5) *Other:* any arm or hand movements which do not fit into the above categories.
6) *None Present:* no gestures were made during the period observed.

Body Lean: the position of the upper torso. The operational definitions of the sub-categories are presented below:

1) *Forward:* position of the body torso in at least an 80 degree vertical angle
2) *Backward:* position of the body torso in at least a 100 degree slight reclining position.
3) *Neutral:* the torso is positioned straight up at approximately a 90 degree angle.

Facial Expression: The emotional expression of the mouth. Data were coded into the following two categories: 1) Positive Expression and 2) Nonpositive Expression. The operational definitions of these two categories are as follows:

1) *Positive Expression:* smiling (any upturned mouth position) or

laughing (a vocal chuckle or laugh while a person is speaking or listening) activity.

2) *Nonpositive Expression:* a neutral or negative expression. The lips could be at rest, conveying no particular emotion; or could convey frowns or grimaces.

Eye Gaze: The general eye/head orientation of the speaker and listener(s). The operational definitions of the sub-categories are as follows:

1) *Toward:* the eye/head position of the speaker is oriented toward the person obtaining the next turn (when coding the first speaker's behavior); or the eye/head position of the next speaker is oriented toward the current speaker (when coding the behavior of the person obtaining the next turn).
2) *Away:* the eye/head position of the speaker is away from the person obtaining the next turn; or the eye/head position of the next speaker is oriented away from the current speaker.
3) *None:* the speaker or listener is not looking at other people, e.g., he or she may be looking down at the table, up in the air, or around the room.

Analysis

The nonverbal behavior of both the first and the second speaker in interruption and noninterruption sequences was coded via the above category system. Statistical tests were employed to identify gender differences in these nonverbal behaviors, the role of nonverbal behavior in the type of speaker transition employed, and the interaction between gender and nonverbal behavior function.

RESULTS

Self-related Activity

Previous research indicated that women engaged in more self-related activity and that this behavior could serve as an invitation to be interrupted. However, in this study women did not engage in more self-related activity than did men. No sex differences were revealed (Chi Square = 4.12, $df = 2$, $p > 10$).

Consistent with the previous research findings however, this study did find sex differences in the self-related activity of the

soon-to-be next speakers (Chi Square = 20.11, df = 2, $p < .001$). The major difference occurred in the type of self-related activity demonstrated, not the quantity. Men tended to handle objects, while women tended to body touch.

The major difference in the behaviors of the first and second speakers was that both men and women who were about to conclude their turn decreased their amount of self-related activity. In essence, prior to turn transition there is a marked trend for individuals to stop moving, indicating that turn-taking behavior is now appropriate.

Finally, in terms of self-related activity, there were no significant differences in type of self-related activity according to the type of turn transition for either the first (Chi Square = 3.75, df = 2, $p > .10$) or second speakers (Chi Square = 3.42, df = 2, $p > .10$). In other words, the particular type of self-related activity that occurred prior to the turn transition did not influence the type of transition (i.e., interruption vs. noninterruption) employed by the interactants.

Gestures

Previous research indicated that women gestured more than did men, and that certain types of gestures typically employed by women (e.g., palms up behavior) may indicate submission and subsequently serve as an invitation for interruptions. However, in this study, the nonverbal category of gesture behavior did not yield significant differences in analysis for either gender or functional dimension (i.e., type of turn-transition). The behavior of the first (Chi Square = 3.44, df = 5, $p > .10$) and second speakers (Chi Square = 5.50, df = 3, $p > .10$) did not differ by the gender of the interactant. Additionally, the type of turn transition was not sensitive to the gestural behavior of either the first (Chi Square = 3.67, df = 5, $p > .10$) or the second speaker (Chi Square = 3.03, df = 3, $p > .10$) prior to the turn transition. The only difference of note was that the quantity of gestures was higher for the talkers (48.2%) than for the upcoming speakers (2.1%). As expected people rarely gesture except when they are speaking.

Body Lean

Previous research indicates that leaning away from the group

is more common of men. This study did not support these previous findings. For both first (Chi Square = 14.59, df = 2, $p < .001$) and second speakers (Chi Square = 18.60, df = 2, $p < .001$) significant gender differences were revealed in the opposite direction. In both situations, men tended to lean toward the center of the group and thus appeared more involved with the group's communication process than did the women. Additionally, women unexpectedly tended to lean away from the center of group interaction. (See Table I for relevant data.)

This gender difference becomes conceptually important when considering its functional impact. The more involved an invididual was in terms of body lean, the less likely one was to lose the speaking turn via an interruption. For current speakers, body lean prior to turn transition (Chi Square = 5.93, df = 2, $p = .05$). Leaning away from the center of group interaction increased the likelihood of being interrupted. The body lean of the second speaker was not related to the type of turn transition employed (Chi Square = 2.95, df = 2, $p > .10$). In other words, gender differences in body lean behavior played a significant role in in-

Table I
Body Lean Information

Transition Type/Sex	Type of Body Lean	
	Involved	Not Involved
Interrupted-Male	43	28
Interrupted-Female	28	41
Noninterrupted-Male	53	19
Noninterrupted-Female	34	36

terruption behavior. Women were less likely to be 'involved' (in terms of body lean) with the group's interaction, and this lack of 'involvement' resulted in an increase in turn loss via interruptions.

Facial Expression

Previous research indicated that women tended to smile more than did men, and that this display could serve as an invitation to be interrupted, because it may function to convey submissiveness or appeasement. This study identifies a more complex interaction. No significant differences in type or quantity of facial expression were detected for the first speakers (Chi Square = .18, df=1, $p > .10$). Interestingly, there were significant gender differences in the types of nonverbal facial expression displayed by second speakers (Chi Square = 5.61, df=1, p=.01). Overall, women tended to display more positive expression (laughing and /or smiling) than did men. More importantly, an important gender function difference was detected. Generally a speaker is more likely to lose his or her turn via an interruption if not displaying positive affect (Chi Square = 4.59, df= 1, $p < .05$). However, for women this trend is not as pronounced. There is a greater chance that a woman will be interrupted if she is displaying positive affect than if a man is. Positive expression seems to serve as an invitation for men to interrupt women but inhibits women from interrupting men. (See Table II for relevant data.)

Eye Gaze

Previous research indicated that women look more at other people than do men. This study revealed gender differences in the analysis of the eye gaze behavior exhibited by the first speakers (Chi Square = 16.94, df=2, $p < .001$), but not for the second speakers (Chi Square = .70, df=2, $p < .10$). While the types of eye gaze behavior demonstrated by the second speakers were fairly similar regardless of the gender of the speaker, female first speakers were significantly more likely to be looking at a person other than the one obtaining the speaking turn. Women were interrupted when not looking at the 'soon-to-be' next speaker. Additionally, the type of turn transition employed by the second speaker was sensitive to the type of eye gaze bahavior of the first speaker (Chi Square = 6.06, df=2, $p < .05$). The previously iden-

tified gender difference was significant only for turn transitions involving interruptions (Chi Square = 14.38, df = 2, p = .001) but was not significant for noninterruption transitions (Chi Square = 4.55, df = 2, p ≥ .10). The women in this study were much more likely to lose their speaking turn via an interruption than were the men when the women were not looking at the turn-taker. (See Table III for relevant data.)

DISCUSSION

Kennedy and Camden (1981) initiated their study of verbal interruption behavior in an attempt to account for the reported finding that male interruption of females account for 96% of cross-sex interruptions (Zimmerman & West, 1975). Typically this imbalance was explained by the fact that men use interruptions to express communication and social dominance over their female counterparts (Henley & Freemen, 1975). In their original analysis of interruptions, Kennedy and Camden found that none of the typical verbal behaviors associated with communicative dominance ac-

Table II
Facial Expression Information

Transition Type/Sex	Type of Facial Expression	
	Positive	Nonpositive
Interrupted-Male	3	53
Interrupted-Female	11	54
Noninterrupted-Male	16	48
Noninterrupted-Female	14	55

counted for the variance in interruption behavior. While cross-gender interruptions still occurred in greater than expected numbers, the verbal precursors did not predict interruption behavior. Nonverbal factors were suggested as possible mitigating factors.

The results of this study would support the suggestion that aspects of nonverbal behavior, in some way, were operating in the increased number of cross-gender interruption sequences. Both quantity and types of nonverbal behavior differed in some aspects between the sexes. More importantly, these findings differentiate between interruption and noninterruption transition behavior.

The outcomes of this study were clearly what would be expected from some of the previous research on gender differences in nonverbal behaviors, but in other cases were similar to the previous findings. With regard to self-related activity, no sex differences were noted in quantity of activity, but there was a difference in the type of activity engaged in by males and females. In keeping with the literature, females touched their hair, hands and face more than did males, but males, in findings previously not reported, handled inanimate objects more frequently than did females. These findings would suggest a certain amount of self-

Table III
Eye Gaze Information

Transition Type/Sex	Type of Eye Gaze		
	Direct	At Another	At No One
Interrupted-Male	39	22	7
Interrupted-Female	20	27	22
Noninterrupted-Male	42	15	15
Noninterrupted-Female	29	17	24

consciousness on the part of both males and females, but different modes of expressing this are employed by males and females. Although identifiable differences exist in this area of nonverbal behavior, the difference did not function to stimulate or inhibit interruptions for either sex.

Second, the findings of this study did not reveal sex differences with regard to type or amount of gesturing behavior, and consequently, the findings of this research differed from previous reports. Additionally, there was no relationship between the type of gesture being displayed and the probability of being interrupted. The significance of our findings in this nonverbal area of gestures is that the line between clearly feminine and clearly masculine behaviors may be fading. For example, females may possibly feel more comfortable pointing, and at least, these males may be more willing than previously reported samples to demonstrate receptivity via such gestures as holding the palms up.

Third, the category of body lean produced interesting results clearly divergent from previously reported research. Specifically, the literature would lead one to expect that males would lean away from the center of the group activity and that females, particularly because of their sensitivity to, and awareness of nonverbal behaviors of others, would lean into the group, if for no other reason than to be able to receive more nonverbal behaviors. Also, if females are the socio-emotional caretakers of interactions (as traditional belief maintains), then leaning toward others would appropriately demonstrate the proper concern thought to be associated with this role. This study revealed that males tended to lean toward the center of group activity, whereas females leaned away, and that leaning away was associated with females being interrupted. One possible interpretation is that when a female leans away from the center of group activity (thus possibly communicating a lack of involvement and/or interest), males perceive the behavior to violate their expectations to such a degree that women are consequently interrupted for their behavior. This deviance from socially expected sex-role behavior may not be as well tolerated as other deviations in behavior (e.g., deviations in gesturing). Perceived lack of interest may well be less tolerated in groups than a change in female behavior from submissiveness to assertivness.

Why the women in this study were found to lean away from the center of group activity is unknown, but it may be related to

leg position. Recall that subjects were seated around a table which, for the most part, obstructed the view of the subjects' legs. Women will typically sit with legs crossed at the knees, whereas men typically sit with feet flat on the floor or with the ankle of one leg across the knee of the other leg. Leaning forward may not be easily accomplished with the legs crossed at the knees. Future investigators may find this to be a valuable area to explore. Table height may also have influenced a comfortable leaning forward posture for the women in this study.

Fourth, this study's findings that women smiled more than men was expected. It is especially interesting to note that this occurred when women obtained the turn. It could be that women smiled when getting the turn because they were pleased, or because they were uneasy with the conversational focus placed on them. It is more likely, however, that women smile when taking the turn as a way to soften the blow of turn-taking—as an expression of apology, or as an act of submission.

In order to understand why women tended to be interrupted when smiling, one could reason that a woman's smile has lost its effectiveness in task situations and does not have the positive effect associated with the male smile. If women smile constantly, whether or not there is something to smile about, then women's smiles have lost some of their meaningfulness. On the other hand, several writers have suggested that women may communicate submissiveness by their smiling behavior and this may stimulate male dominance (i.e., interruptions).

Finally, the findings on eye gaze are not consistent with previous research findings regarding amount of looking by males and females. The results suggest (as with body lean) that when women do not act as expected, (i.e., looking at others), this out-of-role behavior is not well tolerated and may result in an interruption. This line of thought suggests that men expect women's attention and that this attention must be conveyed via looking behavior. Unlike her male counterpart, it is not sufficient for a female to talk in order to have the speaking turn, but she must also look at all of the audience. Obviously, this can not always be easily accomplished in a group setting.

Clearly, then, the preceding discussion demonstrates that there are significant gender differences in nonverbal behavior. It is also clear that these differences are related to the probability that women will be interrupted. What is not clear is why the occurrence

of these nonverbal behaviors by females results in their being interrupted. In no instance did male nonverbal behavior increase the probability of being interrupted more than when these same behaviors were emitted by a female. We offer the following possible explanations. First, it is possible that these male interruptions of females may support the dominance hypothesis advanced by some sociolinguists (e.g., Zimmerman & West, 1975; Henley, 1977). The dominance hypothesis claims that male interruptions of females are evidence of the male dominance and female submissiveness which parallel the stereotypic male-female roles in society. Another explanation of why these behaviors stimulate interruptions is an out-of-role hypothesis. In the case of body lean and eye gaze behavior, women were interrupted when deviating from socially expected feminine behavior. Thus interruptions could be viewed as the sanctions applied to deviant behaviors. A third explanation of this interruption phenomenon centers around the congruence hypothesis, i.e., the verbal and nonverbal messages are inconsistent with each other. A possible example from the data occurred when a woman assertively took a speaking turn, but discounted that assertion with an apologetic smile. Finally, it is possible that all of the above, and perhaps more, are operating to explain this complex communication event. Future directions in research should consider the above hypotheses and the following limitations.

The data were originally collected for a study of verbal behavior. When the data were later analyzed for nonverbal behaviors, it was discovered that the camera angle and quality of videotape did not permit the researchers to have access to some of the subtleties in behavior, e.g., the angle of head tilt, precise angle of body lean, and exact eye gaze position. Technical adjustments to obtain more precise data collection are needed in future studies on nonverbal behavior. Clearly, studies in this area need to combine both verbal and nonverbal analysis. The interruptions available in this study were not sufficient to allow the statistical analysis needed for that comparison. Such a comparison would have provided a more complete picture of turn transition behavior and possible gender differences. More importantly, this combined analysis could have clarified the dominance and verbal/nonverbal congruence explanations proposed for these results.

Where the findings of this study do not support previous research, the nature of the study's sample must be considered. As

was mentioned earlier, highly educated subjects were specifically selected for study in order to capture possible recent changes in female-male communication interaction behavior. In the original research, no verbal indicators of sex stereotyped language were found; however, this study reveals that even with highly educated subjects, vestiges of stereotypic behavior are seen in some of the nonverbal behaviors that were studied, and further that these bahaviors may stimulate interruptions. It is not surprising that the nonverbal behaviors of these subjects would still show evidence of traditional sex role behavior, because nonverbal behavior are thought to be less under the conscious control (Goss, 1982) and therefore, would be slower to change than would the more conscious utterances.

REFERENCE NOTES

1. This study was supported in part by a grant from the Ohio State Office of Women's Studies.
2. The following Chi Square table was reported in Kennedy and Camden (1981) and identifies the greater than expected number of male interruptions of females:

Sex of Interruptee	Sex of Intrerrupter Male	Female	Total
Male	26	65	91
Female	53	70	123
	79	135	214

Note: Yates' correction for continuity was performed to correct 1 df.

Group F was excluded from this Chi Square analysis because there was only 1 male and thus not all outcomes were possible in Group F. However, the 22 cross-gender interruptions that occurred in Group F were included in the nonverbal analysis and increased the sample of cross-sex interruptions from 118 to 140.

3. The authors acknowledge the work of Putnam and McCallister (1980) as being seminal in development of this category system.

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