A study was conducted to examine speech interruption patterns as an index of communication dominance and gender differences in language behavior. Six graduate student groups involving a total of 35 subjects were videotaped. The data extracted for study were 255 transcribed interruption sequences. A category system was developed and used to code preinterruption, interruption, and postinterruption speech behavior. Interruptions were found to be an inadequate communication dominance index. Additionally, graduate student women were found to be interrupted, to interrupt, and to speak following an interruption significantly more often than the graduate student men. No significant differences between the sexes were detected in type of preinterruption or postinterruption speech behavior; however, more cross-sex interruptions occurred than could be accounted for by chance alone. (Author/FL)
INTERRUPTIONS AS AN INDEX OF COMMUNICATION DOMINANCE

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Interruptions as an Indice of Communication Dominance

Watzlawick, Beavin and Jackson (1967) propose that when people communicate, they exchange information and define the nature of the relationship between them. This exchange of information occurs on two operational levels: the content (i.e., the information aspect of the message), and the relationship (i.e., the command for how the message is to be taken) (Ruesch & Bateson, 1951; Watzlawick, et al, 1967). The command gives meaning to the relationship by asserting one or several of the following: "This is how I see myself ... this is how I see you ... this is how I see you seeing me ..." (Watzlawick, et al, 1967, p. 52).

While the content aspects of a message are fairly explicit, the command aspects are more elusive and often overlooked.

One command function that has received considerable attention is the construct of dominance (Brandt, 1980). Farace, Monge and Russell (1977) define this construct of dominance as 'the degree to which communication in a group is centered around only one (or a few) of the persons in the group' (p. 239). Brandt (1980) notes that the measurement of this dominance command function has utilized both noncontent (e.g., speech duration) and verbal content (e.g., control orientation of the utterance) indices. While these communication dominance indices measure dominance in all communication acts, another perspective (e.g., West, 1979) maintains that communication dominance is best considered as particularly manifested in certain types of communicative acts.

One such communicative act is the phenomenon of interruption. Interruptions are commonly viewed as evidence of communication dominance because interruptions lessen the communicative role of another (Markel, Long & Saine, 1976). In other words, the interrupter uses interruptions (consciously or not) to assert relational dominance over the speaker.
Another interpretation concerning interruption behavior is that it serves the function of exercising control in face-to-face interactions (West & Zimmerman, 1977). The interrupter can maintain control over subject area and direction of conversation via his/her interruptions. Thus, for example, frequency of interruptions is highly correlated with an individual's control over direction of topic of conversation (Brandt, 1980). These two related positions provide the basis for the underlying assumptions for most of the research on interruption behavior. It is one purpose of this research to further examine the validity of these assumptions.

These assumptions about the relationship of dominance and interruptions can best be examined in the context of gender differences in communicative behavior. In major reviews of relevant literature, males were found to interrupt females more than females interrupted males (Baird, 1976; Kramer, 1974b). For example, Zimmerman and West (1975) tape-recorded male-male, female-female, and male-female conversations in places such as coffee shops and drug stores. They found that in same sex conversations, the interruptions were evenly distributed among the speakers. However, in male-female conversations, the males were responsible for 96 percent of all interruptions. Eakins and Eakins (1978) found that in a university faculty meeting, men averaged a greater number of interruptions per meeting than did the women.

A possible function of the above differences in interruption behavior pattern may be afforded by the concept of dominance role relationships between males and females. Ellis and McCallister (1980) note many commonly identified stereotypic gender differences 'refer to control in interaction' (p. 37). Bernard (1973) contends that one way women assume
a subordinate position in relation to men is by asking questions (of men). In addition to asking more questions, Kramer (1974a) believes that women further communicate their subordinance by using an interrogative intonation even when uttering declarative statements. (It is assumed that these authors are not referring to authoritative questions, e.g., those asked by police officers, physicians, lawyers, etc.). Additionally, the speech style of the subordinate is typically filled with hesitancy and self doubt, qualifying phrases and self-disparagement (Henley, 1977). Kramer (1974b) believes that all of these communication characteristics are reflective of women's speech. If women's speech style is typical of one in a subordinance role, then the predominance of male interruptions of female speech may be explained by a natural expression of dominance roles during the communication interaction.

People allow themselves to be interrupted by those they consider their superiors, but they will not permit themselves to be interrupted by their inferiors (Henley & Freeman, 1975). This dominance role hypothesis is supported in a study by Courtright, Millar and Rogers-Millar (1979). They found that the more domineering a spouse was, the more he or she interrupted the other.

Further support for the dominance hypothesis is derived from examination of post-interruption behavior. In conversations between acquainted cross sex dyads, Zimmerman and West (1975) found that when women were interrupted, they exhibited noticeable silences and did not make efforts to regain the speaking turn, thereby, perpetuating the pattern of being interrupted. In a laboratory setting involving five cross-sex conversations between previously unacquainted partners, West (1979) found that when males were interrupted by other males, they
typically dropped out of talk, allowing the male interrupter to take
the turn. However, when "interruptions were initiated by females in
the cross-sex exchanges, male recipients were as likely to finish
their utterances within a state of simultaneity ... as they were to
drop out" of the conversation (p. 14). Thus, it would appear that
there is a tendency for females to accept interruptions whereas males
accept interruptions only if the interrupter is another male. This
gender difference would be predicted by the hypothesis that males main-
tain a stereotypic superior-subordinate relationship to females.

In order to further analyze the hypothesis that interruptions
serve a transactional function by manifesting dominance, the researchers
returned to the work of Watzlawick, et al, (1967). These theorists
maintain that in response to A's definition of self, B can respond in
one of three ways (i.e., with confirmation, rejection or disconfirmation).
Confirmations are responses which express approval, understanding or
acceptance of A's position. Rejections are responses from B which
somewhere indicate disagreement or disapproval of A. No matter how pain-
ful, rejection at least recognizes what is being rejected and, therefore,
does not necessarily negate the reality of A's view of self (Watzlawick,
et al, 1967). Disconfirmations, on the other hand, are the most dysfunctional
types of communication because they negate the reality of A as a source of
self-definition (Watzlawick, et al, 1967). Disconfirmations say, in effect,
"You do not exist." This type of message can be communicated through a
variety of mechanisms such as a change of subject or a tangential reply.
Using this confirmation, rejection, disconfirmation paradigm would allow a
more accurate examination of how interruptions function in the communication
between interactants.
Finally, several researchers only noted the number of simultaneous speeches, but did not differentiate agreeing and reinforcing comments from true interruptions. The present study differentiates among the types of simultaneous speech and includes as interruptions only those utterances which occur prior to a possible transition place in the original speaker's turn. The interruptions are also differentiated from overlaps which are errors in transition that occur on or about the final word of the speaker. Overlaps are not actual interruptions of the speaker's turn (Zimmerman & West, 1975). An example illustrates the difference:

**INTERRUPTION**

A. How was your...
B. Did you remember the tickets?

**OVERLAP**

A. They said they would come over Tuesday.
B. Yes, but something came up.

Other items interspersed through a speaker's speech, such as 'um humm', 'uh huh' and 'yeah' are viewed as serving a facilitating function in topic development (Schegloff, 1972), and thus, like overlaps are not defined as interruptions in this study.

This study seeks to examine the following five hypotheses derived from a dominance role perspective:

H1: There are no significant differences in the quantity of rejecting, disconfirming and confirming interruptions.
H2: There are no significant differences in the quantity of interruptions of males and females.

H3: There are no significant differences in the quantity of male/female and female/male interruptions.

H4: Males and females demonstrate no significant differences in speech behavior prior to being interrupted.

H5: There are no significant differences in loss of speaking turn by males or females after being interrupted.

PROCEDURE

Subjects. Subjects were 35 graduate students, 17 males and 18 females, in six different seminars or work programs at a large midwestern university.

Groups. The six groups met the following criteria: 1) They were naturally occurring groups. 2) All group members were expected to participate equally in the work of the group. 3) They were composed of approximately equal numbers of men and women. 4) Formal leaders did not have to be present in order for the work of the group to progress.

Data. All groups agreed to have one-hour of their regular group interaction videotaped. Groups met in a room designed for videotaping and subjects were aware that the investigator was interested in knowing about the general communication patterns in their group. The six one-hour videotapes yielded 255 transcribed interruption sequences. The transcription of the group interaction and identification of interruptions were performed jointly by a male and a female.
Coding. Each interruption sequence was coded for the following characteristics: 1) The sex of the person interrupted; 2) The type of speech that was interrupted; 3) The gender of the interrupter; 4) The type of interruption; 5) The gender of the person who gained the speaking turn after the interruption; and 6) The type of post-interruption speech behavior.

The following category system was used to categorize the pre-interruption speech:

1) ASSERTION: Any speech in a declarative or imperative form.
2) QUESTION: A speech with an interrogative form.
3) LENGTHY SPEECH: A speech which is prolonged or speech with three or more major ideas expressed.
4) OTHER: Any speech not falling into the above categories.

The following categories were used to code the interruption speeches:

1 - Clarification - a speech which attempts to understand the interrupted persons message, e.g., "What do you mean?" Clarifications do not substantively add to the original speaker's speech.
2 - Agreement - a speech which demonstrates agreement, support, concurrent, compliance, or understanding, and can be demonstrated through further development or elaboration of the first speaker's idea, e.g., "You're right, our meetings are very business like," in response to "Our meetings are too formal."
3 - Disagreement - a speech which demonstrates rejection, disagreement, challenge, or contradiction of the first speaker's communication, e.g., "I don't like that idea," or "Yes, but that's not all there is to the problem."
4 - **Tangentialization** - a speech which 1) reflects awareness of the first speaker's statement, and 2) in some way minimizes or makes light of the first speaker's message, e.g., "Fine, except the typing is terrible," in response to "What do you think of the rough draft I presented to the committee?"

5 - **Subject Change** - a speech which 1) reflects no awareness of the first speaker's statement, and 2) has no theme in common with the first message, and/or is a substantial change of topic, e.g., "Where are the reports to be filed?" in response to "Someone forgot to start the coffee."

6 - **Other** - any speech not appropriate to the above categories.

The categories of Clarification and Agreement represent types of confirmations. Disagreement speeches represent rejections, and the categories of Tangentializations and Subject Change represent disconfirmations.

The following categories were used to code the post-interruption speeches:

1 - **Continues:** The interrupted person keeps talking while being interrupted and maintains initial idea or theme of interrupted speech.

2 - **Reintroduces:** The interrupted person pauses, allowing for the interruption, then continues with initial idea or theme of interrupted speech.

3 - **Re-Interrupts:** The interrupted speaker regains the turn by interrupting the speech of the person who initially interrupted him/her.
4 - **Cooperates**: The interrupted person further develops, acknowledges, agrees with or responds to the interrupter's idea. The interrupted person may pause to allow the interruption or may continue talking simultaneously, but changes the theme after the interruption.

5 - **Loses Turn**: A different speaker than the one interrupted speaks after the turn of the interrupter. This speaker may gain the turn from the interrupter through post-interruption processes 2, 3, or 4 above.

6 - **Other**: Any speech after the interruption not appropriate to the above categories.

Categories one through three represent efforts by the person interrupted to resist the interruption behavior of the interrupter. Category four, on the other hand, represents acceptance of the interruption. Category five does not clearly lend itself to either position. It is possible that losing one's turn represents a passive resistance to the interruption because the person may be too intimidated, embarrassed or unorganized by the interruption to respond. It is also reasonable to infer that the lost turn represents acceptance of the interruption as in a situation where the interrupter has agreed with the person interrupted and has possibly completed the thought to the satisfaction of the interrupted person. In other words, there may be no more to be said.

**RESULTS**

Inter-rater reliability was determined by having a panel of five judges code a random sample of the 255 interruption sequences. The
reliability for the pre-interruption and interruption speech behavior was .86, and the reliability for the post-interruption speech behavior was .93.

Examination of Table I reveals that Agreements comprised 97 of the interruptions, followed by 60 Subject Changes, 49 Disagreements, 28 Clarifications, and 21 Tangentializations. By combining the Clarification and Agreement categories, a confirmation ratio of 49 percent of the total interruptions is obtained. When the categories of Tangentialization and Subject Change are combined, a disconfirmation ratio of 31.8 percent of the total interruptions is obtained. The rejection ratio is derived from the Disagreement category and represents 19.2 percent of the total interruptions. A chi-square was performed using the combined categories revealing that there were significantly more confirmation interruptions than rejection or disconfirmation interruptions, $X^2 = 34.26; 2 \text{ d.f.}, p < .001$. Thus, $H_1$ is rejected indicating that the prevailing assumptions concerning interruptions warrant reconsideration. Apparently, interruptions can function to encourage and support the interrupted person's speech. This seems to be an especially important insight, particularly in group situations where members are frequently present for the expressed purpose of pooling their collected ideas to obtain the best solutions to problems.

The second hypothesis predicted that there would be no significant differences in the quantity of interruptions by males and females. Of the 255 interruptions, males were interrupted 98 times and females were
interrupted 157 times. This difference proved to be significant \( (X^2 = 10.21; df = 1; p < 0.01) \). Thus, the null hypothesis was rejected: Women were interrupted significantly more often than were men.

The third hypothesis predicted that there would be no significant differences in the quantity of male/female and female/male interruptions. Of the 255 interruptions, females did the interrupting 157 times, whereas males interrupted others 98 times. This difference was also significant \( (X^2 = 10.21; df = 1; p < 0.01) \). Additionally, there was a significant relationship between the sex of the interrupter and the person interrupted. There were fewer same sex interruptions and more cross-sex interruptions than would be expected by change \( (X^2 = 4.14; df = 1; p < 0.05) \). In a more direct test of the hypothesis, 118 cross gender interruptions were analyzed. Males were interrupted by females 65 times, while females were interrupted by males 53 times. This difference was not significant and thus, the null hypothesis was not rejected.

The fourth hypothesis predicted that males and females demonstrate no significant differences in pre-interruption speech behavior. The predominant speech behavior prior to being interrupted was an assertion which occurred 217 times. Out of the 255 interruptions, only 17 were preceded by questioning behavior and lengthy speeches preceded interruptions 19 times. (Two behaviors prior to being interrupted were classified as other.) Additionally, no difference was found in pre-interruption behavior according to the sex of the person interrupted \( (X^2 = 1.83; df = 3; p < 0.01) \). Hypothesis 4 was not rejected, with males and females demonstrating essentially the same behavior prior to being interrupted.
The fifth hypothesis predicted that there are no significant differences in loss of speaking turn by males or females after being interrupted. Of the 240 relevant interruptions (during some interruption interacts, no single individual emerged with the floor after an interruption), the interruption was resisted 70 times (29%), the person interrupted cooperated 67 times (28%), and the speaker's turn was completely lost 103 times (43%). Thus, the interruption was successful in 71% of the time in denying the speaker the right to complete a speaking turn or changing the speaker's topic. There was no significant difference in the post-interruption behavior of males and females ($X^2 = .66; df = 2; p > .70$). Thus, hypothesis 5 was not rejected. In a final examination of hypothesis 5, post-interruption behavior was examined for differences according to cross gender interruption patterns. No significant differences existed in post-interruption behavior between male-female or female-male interruptions.

DISCUSSION

The research findings reported in this study are clearly divergent with much of the previous research and theories concerning interruption behavior. In the analysis of this study, interruptions did not seem to manifest dominance behavior. If anything, interruptions appeared to be a healthy functional communication act. There are two possible reasons for these divergent findings: 1) special qualities of group vs. dyadic behavior; and 2) previous failure to consider the effects of this specific communication act.
First, group communication constraints may increase the social acceptability of interruption behavior. In a dyad, unless one speaker is exceptionally talkative, there is ample speech time or floor access available to both members. However, in a group of six members, the amount of speech time and access is severely reduced in a per person analysis. To this end, Bostrom (1970) notes that there are only two possible interactions in a dyad, but 186 possible interactions in a group of six. This leads to increased demands for speeches of shorter duration and a relaxation of turn-taking protocol. In such an atmosphere, interruptions may become a more legitimate means of gaining access to the floor than it would be in a dyad.

Secondly, as noted before, previous research has focused almost exclusively upon the interruption and not the effect. Typically, interruptions have been defined from a negative perspective, i.e., as a violation of a speaker's turn (Zimmerman & West, 1975). This type of definition leads to an assumption that interruptions are intrinsically dysfunctional. Yet, among even nominally acquainted people, there may be a tacit agreement that interruptions are an acceptable interaction style. It is the effect of a communication act that determines its functionality, rather than its definitional characteristics.

Additionally, the dominance role perspective does not appear to account for the gender interruption behavior identified in this report. Commonly reported sex role speech behaviors were not exhibited by this sample. The type of pre- and post-interruption speech behavior did not differ according to the sex of the communicator; however, females exhibited a significantly higher overall number of speeches and interruptions produced.
These unexpected findings may be due to the composition of the sample. The individuals who participated in the six groups were atypical in the following two characteristics: a) Education - All participants were graduate students in a variety of academic disciplines. b) Status - Almost all of the subjects were either graduate teaching assistants or administrative assistants. These atypical characteristics may have potentially strong interaction effects with dominance role behavior.

Years ago, Terman and Miles (1936) found that in the general population, scores on the masculinity-femininity index were significantly positively associated with education and occupation. Further, they found that highly intelligent and well educated women tended to have more masculine scores than their sex norms, and that men who had artistic or cultural interests tended to have more feminine scores. Thus, the subjects in this study could easily be expected to exhibit behavior contrary to the norm; thereby, accounting for the predominance of interruptions by females.

Other explanations regarding interactions between the sexes under conditions of high levels of education have been offered. First, studies of successful women (Hennig & Jardim, 1978) reveal that these women generally adopt male attitudes because they believe that the way to succeed in a male's world is to act like men. In order to overcome skepticism about their participation in leadership positions, highly educated women may overcompensate and do more of what they perceive men to have done, i.e., interrupt and talk. In support of this suggestion, Benet (1972) has written that women must work harder than men in order to
receive the same recognition. Secondly, there has been some evidence presented that a male response to female domination is withdrawal (Bormann, Pratt & Putman, 1978). It is therefore difficult to determine whether the women in this study talked more (and thereby interrupted more), or the men talked less.

Additionally, Johnson and Hooper (1979) indicate that task characteristics affect language usage style. Two such characteristics are evident in this experimental study. First, the subjects were engaged in work. The world of work may be considered a setting in which sex roles are minimized and where a more androgynous posture is adopted by both sexes. It is possible that under different circumstances, i.e., a more social setting, the subjects might have produced different language patterns. Secondly, the subjects were aware they were participating in a research project, and this may have caused them to produce sex neutral language (Tyler, 1976). This suggestion, although possible, does not seem highly probable given the fact that the group members had worked together prior to participation in the study, and the subject of conversation was the naturally occurring work of the group. It should be mentioned, however, that group members did occasionally make references to and about the camera indicating some conscious awareness of the videotaping process.

The fact that subordinate speech behavior was not associated with interruptions provides evidence that the interrupted person is not verbally "asking" to be interrupted. It is quite possible, however, that subordinance may be communicated through nonverbal modes. Zimmerman and West (1975) suggest that eye contact, laughter, into-
nation, gesture and posture are variables that could be profitably investigated to yield a more complete understanding of interactions involving interruption.

The following conclusions thus seem to be warranted: (1) Interruptions are not always an effective indice of dominance behavior. In many cases, the interruption seems to serve a healthy, functional and confirming communication role. (2) Common stereotypic beliefs about the communication behavior of men and women are not valid at least for highly educated men and women working together in groups. Men did not dominate women via interruptions, if anything, women seemed much more predisposed to use interruptions as a turn-taking behavior. (3) At least verbally, people do not ask to be interrupted. Subordinance type communication behavior rarely preceded an interruption. (4) Contrary to previous research, the women in this study were not more subordinate in their communication behavior than were women. (5) Finally, for the highly educated men and women of this study, there were no significant differences in post-interruption behavior. Women did not demurely concede to the attempted 'dominance' any more often than did men. Thus, there seems to be a need for a reconceptualization of interruptions as an indice of either dominance behavior or gender differences.
### Table I

** Interruption Categories  

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<th>Category</th>
<th>Number</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Clarification</td>
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<tr>
<td>Agreement</td>
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REFERENCES


