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University of Alberta

Women and Men in Conversation: Persuasiveness and Supportiveness

by

Heather Dawn MacDonald 

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Science

Department of Psychology

Edmonton, Alberta

Fall 1997

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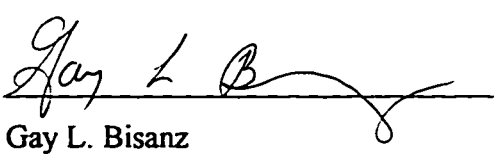

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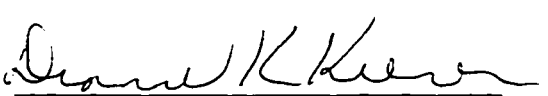

Dianne K. Kieren

15 September 1997

To Mark and to my parents, for your love, support, and faith in me

Abstract

The effects of sex and conversational goals on both perceptual and behavioral measures of supportiveness and persuasiveness were examined. Mixed-sex dyads (50 females and 50 males) discussed a controversial topic on which they represented opposing perspectives (pro and con), having been assigned a supportive goal, persuasive goal, or no specified goal. Consistent with predictions, males with no assigned goal reported greater persuasiveness effort and success than males assigned a supportive goal, but did not differ from males assigned a persuasive goal. Contrary to predictions, females did not differ from each other across the three goal conditions on any persuasiveness measures. The predicted sex differences in persuasiveness in the no-assigned goal condition also were not obtained. In general, males spoke more and presented more ideas for their perspective than females. No main effects or interactions for any of the supportiveness measures were obtained.

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Introduction

Although a large literature has accumulated on sex differences in conversation and speech, the answers to many theoretical and practical questions about male-female interaction patterns remain unanswered.[1] Over the past two decades, most studies in this area have focused either on the behavioral aspects of mixed-sex interactions, such as frequencies of speech behaviors, or on stereotypic aspects, such as ratings of politeness or assertiveness on actual or constructed speech of women and men. Much less emphasis has been placed on interactants' self-perceptions of their own conversations.

More recently, researchers have sought to identify the situations in which sex differences in conversation are more or less likely to emerge. Studies of this nature have established the importance of role power (Molm, 1985; Siderits, Johannsen, & Fadden, 1985), personality dominance or power (Kollock, Blumstein, & Schwartz, 1985; Roger & Nesshoever, 1987), and task-related competence (Brown, Dovidio, & Ellyson, 1990; Dovidio, Brown, Heltman, Ellyson, & Keating, 1988; Lockheed, 1985) in offsetting or overcoming sex differences in conversation and perceptions of conversation. Although these findings are informative, the study of additional variables is needed to achieve a more complete understanding of how sex differences in conversation are affected by situational factors.

The present study was designed to respond to some of the unanswered questions about sex differences in conversation. The following issues were addressed: (a) the need for empirical studies examining participants' perceptions of their own conversational

behavior; and (b) the need to define the boundaries of those circumstances conducive to moderating the effects of sex on conversation.

Theoretical Perspectives

The study of sex differences in conversation in Western cultures did not come to the forefront until the 1970s, when Lakoff (1973, 1975) introduced her notion of "women's language."[2] On the basis of her own introspection and observations, Lakoff proposed that women use tentative forms of speech, such as hedges (kind of), tag questions (It's cold out, isn't it?), and intensifiers (awfully) more frequently than men, and that these sex differences in language use are due to women's low status in society relative to men. Furthermore, Lakoff claimed that women's use of tentative speech causes others to evaluate women as ineffective and incompetent, thereby reinforcing the status inequality between men and women.

Lakoff's (1973, 1975) claims stimulated a flood of research on sex differences in language. Her ideas were appealing to researchers for several reasons. Not only did Lakoff open up a virtually untapped area of research, but her claims were easily converted into empirically testable hypotheses. These hypotheses could take on a wide variety of forms, given that Lakoff's claims applied to both the behavioral and the perceptual realms of sex differences in language. Furthermore, Lakoff provided a plausible alternative to sex role socialization processes (e.g., Parsons, 1955) for explaining sex differences in behavior, one which instead focused on the status differentials between women and men. This contribution was particularly important given the mounting evidence countering sex role socialization explanations for sex differences in behavior (e.g., Brown, 1979; Eskilson &

Wiley, 1976; Maccoby & Jacklin, 1974).Where her explanations fell short, however, was in terms of describing (a) the specific processes whereby the lower status of women relative to men translates into women's use of tentative language, as well as lower evaluations of women, and (b) the specific situations in which such sex differences (if they indeed exist) are most likely or least likely to occur.

One theory that could provide answers to these questions was expectation states theory (e.g., Berger, Cohen, & Zelditch, 1972; Berger, Wagner, & Zelditch, 1985). According to the theory, external characteristics such as sex, race, and age can act as diffuse status characteristics. A diffuse status characteristic is one which has two or more states (e.g., male and female are the two states of sex), each associated with a different value and different performance expectations. Both specific expectation states (e.g., men are more mathematical than women) and general expectation states (e.g., men are more intelligent than women) are associated with the diffuse status characteristic. Diffuse status characteristics are culturally and situationally determined, meaning that a particular external characteristic may act as a diffuse status characteristic in certain cultures, situations, or time periods but not in others. These characteristics are used, particularly when little specific information is available, to form evaluations and expectations of people that are consistent with the value attached to each state of the characteristic. The result is that people of higher status are expected to be more competent, more able, and more valuable than people of lower status. These differing evaluations of high and low status individuals, in turn, result in status-based differences in behavior, which collectively are referred to as the observable power and prestige order (Berger, Wagner, & Zelditch,

1985). High status individuals will have and be given more opportunities to interact or perform, will receive more positive evaluations of their contributions as communicated by other group members, and will be more influential than low status individuals. Furthermore, Berger and his colleagues noted that the diffuse status characteristic will be assumed to be relevant to any task unless the characteristic is specifically dissociated from it. Thus, the burden of proof lies on the shoulders of the lower status interactant: He or she must prove competence, whereas a high status person need not. Meeker and Weitzel-O'Neill (1977) have also pointed out that it is legitimate for high-status members of a group, but not for low-status members, to raise their own status; low-status members must first demonstrate that their intentions are not self-serving but are for the benefit of the group before their actions will be deemed acceptable. Finally, expectation states theory is a theory of relative status, meaning that people use diffuse status characteristics to assess relative competence only when more than one state of the characteristic is represented by the interactants in the given situation.

Sex does appear to meet the requirements of a diffuse status characteristic, given that research consistently has demonstrated that men and women are evaluated differently overall (McKee & Sherriffs, 1957) as well as on a large number of specific attributes (Bem, 1974; Spence, Helmreich, & Stapp, 1975). Furthermore, men are, in general, evaluated more positively than women (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Rosenkrantz, Vogel, Bee, Broverman, & Broverman, 1968). Thus, men represent the high status state of the characteristic, whereas women represent the low status state. According to expectation states theory, people will use sex to form

performance expectations and evaluations of others in mixed-sex settings (as opposed to same-sex settings, where only one state of the characteristic is present) when they have little other information upon which to base their judgments. The consequences of these status-based expectations are that men should behave more assertively, should be more influential, and should have and be given more opportunities to interact than women in mixed-sex interactions. In addition, men should be evaluated more positively than women, both by themselves and others, even when males' and females' performances are equal. Because women must prove that their contributions are not self-motivated, women should exhibit more supportive or social-emotional behaviors, such as agreements and acknowledgments of the contributions of others, than men (Meeker & Weitzel-O'Neill, 1977).

Several studies have obtained results consistent with these predictions. In two studies conducted by Lockheed and Hall (1976), ratings by trained observers revealed that males in mixed-sex groups were more likely to emerge as leaders than females. In their study of student teacher groups, who were given a decision-making task, males emerged as leaders four times as often as females; and in their study of groups of high school students, who were instructed to play a group decision-making game, males were seven times as likely as females to emerge as leaders. Unfortunately, no statistical tests were performed, but their results clearly provide support for the predictions of expectation states theory.

In a study by Andrews (1987), male and female participants were assigned a task in which they had to make a difficult decision and then justify their decision to a male or

female graduate student. Andrews found that males and females did not differ in self-confidence when they anticipated presenting their arguments to a female confederate, but they did differ when the confederate was male: Females were significantly less confident than males when they anticipated presenting their arguments to a male confederate. This sex difference obtained even though males and females were rated by trained raters as having performed equally well in their task.

Carli (1990, Study 1) conducted a study of gender differences in language among mixed- and same-sex dyads. She found that women used significantly more disclaimers (I'm not sure, but), hedges, and tag questions (all of which she defined as tentative speech behaviors) than men in mixed-sex dyads; however, no sex differences in these speech behaviors were found in same-sex dyads. These results are in line with expectation states theory in that sex differences in assertiveness would only be expected when men and women are interacting with each other. Carli's prediction that interruptions, defined as an assertive speech behavior, would be used more by men than by women in mixed-sex dyads did not obtain. However, several researchers (e.g., Smith-Lovin & Brody, 1989; Tannen, 1993) have noted that interruptions can serve several functions other than assertion, including cooperation, interest, clarification, and support. In fact, Kennedy and Camden (1983) found that in their analysis of the total interruptions used in mixed-sex groups, significantly more confirmation interruptions (agreements or clarifications) were used than disconfirmation interruptions (subject changes or tangentializations) or rejection interruptions (disagreements). Carli, however, did not distinguish between these different types when coding interruptions.

There are situations in which expectation states theory would predict that the tendency for men to make more task contributions, to be more influential, to behave more assertively, and to be evaluated more positively than women would diminish or disappear. Meeker and Weitzel-O'Neill (1977) discuss three ways. First, as mentioned earlier, if the women present are perceived by other group members to be motivated by enhancement of the group rather than by self-enhancement, their contributions may be accepted by the group and they may be evaluated positively. Another way of eliminating these sex differences is by presenting evidence to the group that the women present are highly competent. A third way is by legitimating high status or assertiveness of women in some way. Meeker and Weitzel-O'Neill suggest several ways in which women's higher status can be legitimated, including being appointed to a leadership position by an outside authority or working on a task that is considered appropriate for women.

Research does, in general, support the claims made by Meeker and Weitzel-O'Neill (1977). In support of the notion that women must prove that their contributions are not motivated by self-enhancement, Carli (1990, Study 2) found that female speakers were more influential with males when they spoke tentatively than when they spoke assertively. Presumably, as long as female speakers spoke in a style appropriate to their lower status, they were not penalized for their attempts to influence others. Male speakers, however, were equally influential regardless of whether they spoke tentatively or assertively.

Ridgeway (1982) also tested whether self- versus group-oriented motivation affects the influence that is attained by men and women in mixed-sex groups. Four-person groups were given a task which required a series of decisions to be made. To activate sex

as a diffuse status characteristic, three of the four members of each group were of the same sex, whereas the fourth member was a confederate of the opposite sex. (For comparative purposes, same-sex groups were also formed in which the confederate was the same sex as the other group members.) In the group-oriented condition, confederates acted in a friendly, cooperative manner and were supportive of other group members. In the self-oriented condition, confederates acted emotionally distant from the group, were somewhat critical of others, and promoted their own ideas over those of the other group members. Ridgeway found that male confederates interacting with females were equally influential whether group- or self-oriented. Female confederates, however, were significantly more influential among males when they were group-oriented than when they were self-oriented.

Johnson (1994) compared the effects of legitimate authority versus sex on assertive and supportive speech behaviors. Three-person groups were formed in which one member was appointed manager (ostensibly on the basis of participants' past employment histories) and the other two members were appointed to employee (subordinate) positions. Four types of groups were formed: all female-groups, all-male groups, mixed-sex groups consisting of a female manager and two male employees, and mixed-sex groups consisting of a male manager and two female employees. Johnson found that regardless of the manager's sex, employees were more supportive (as indicated by higher rates of positive interruptions and verbal reinforcers such as mm-hmm) and less directive (as indicated by higher rates of qualifiers and less amount of talk) than managers. Thus, as would be predicted by expectation states theory, occupying a leadership position

overrode the impact of sex in predicting the pattern of supportive and assertive verbal behaviors.

To examine the effect of sex-differentiated task competence on mixed-sex interactions, Lockheed (1985) conducted a meta-analysis of 29 studies examining sex differences in influence. She found that when the task was male-typed or sex-neutral, men were more influential than women: For the former type of task, men were more influential than women in 100% of the studies, and in the latter, men were more influential than women in 63% of the studies. However, for studies in which the task was female-typed, 50% of these studies found no sex difference in influence and 34% found that women were more influential than men. Overall, these findings do support the conclusion that when the group task is one in which women are deemed to be competent, men's status advantage is no longer apparent.

Conversational Behaviors, Perceptions, and Goals

Although the studies reviewed in the foregoing section provide strong support for expectation states theory, the majority of them have examined only the behavioral aspects of mixed-sex interaction. Berger and his colleagues (e.g., Berger, Wagner, & Zelditch, 1985) have noted that their avoidance of predictions about the perceptual aspects of interaction is quite deliberate. In their view, the processes whereby diffuse status characteristics and other information are used to form a power and prestige order in groups are not necessarily conscious to the interactants; therefore, self-report measures may not be reliable indicators of the relative influence, value, or task contributions of high and low status interactants. Indeed, research by Langer (1978) and Nisbett and Wilson

(1977) underscores the limitations in our awareness of our cognitive processes. However, Berger and colleagues have also pointed out that interactants' perceptions are valuable sources of information in the development of theoretical concepts. After all, the determination that sex, race, physical attractiveness, and other attributes can act as diffuse status characteristics in North American culture has largely been based on subjective evaluations.

More importantly, the validity of so-called objective measures of status differentials in groups is also suspect. The decision of what conversational behaviors are to be included in the operational definition of a construct and the actual coding of those behaviors each require subjective assessments on the part of the researcher. Tag questions, for example, were once thought to be a form of tentative speech. Eakins and Eakins (1978), however, have noted that although tag questions can serve to weaken or qualify statements in some cases, in other cases they actually serve to strengthen or reinforce the statements. A similar shift in thinking has occurred in the interpretation of interruptions. Interruptions were, for a long time, considered to be a measure of conversational assertiveness or dominance, yet, as previously mentioned, they are now considered to serve many other functions, such as agreement, involvement, and need for clarification (Edelsky, 1981; Tannen, 1993). Of note is a study by Roger and Nesshoever (1987), in which participants (as well as the experimenters) coded their own interruptions after viewing their videotaped conversations. Classifications by the experimenters were discrepant from participants' in 18 cases. This finding, as well as the existence of differing, even contradictory operational definitions of constructs among researchers, calls into

question the assumption that conversational behaviors as measured by experimenters are necessarily more accurate than participants' assessments.

In response to the lack of studies examining interactants' subjective assessments of their own conversations, the main focus of the present study was on these perceptual aspects of interaction. Participants were asked to rate themselves and their partners on supportiveness and persuasiveness, as well as several other dimensions. However, behavioral measures were also examined for about one-third of the sample to avoid the danger of an overreliance on subjective measures. Three behavioral measures were examined: (a) speech productivity, measured as the number of words spoken by each individual; (b) number of points or arguments each participant made; and (c) number of verbal reinforcers. The measure of speech productivity follows directly from predictions of expectation states theory, that high status members are afforded and take more opportunities to contribute. Thus, whenever the effect of sex as a status characteristic is not moderated by other factors, men should talk more than women. Number of spoken ideas was seen as a measure of persuasiveness, with high frequencies indicative of high persuasiveness. Verbal reinforcers were a measure of supportiveness, with high frequencies indicative of high supportiveness. Given the small sample upon which the speech measures are based, however, results of these measures should be interpreted with caution.

In addition to shifting the focus from the behavioral to the perceptual aspects of interaction, the present study tested Meeker and Weitzel-O'Neill's (1977) predictions about what types of situations are likely to reduce sex differences in interaction. The

approach used, however, differed from the methods used in previous studies. The current study sought to examine whether another method, one in which the interaction goals of the participants are manipulated, is sufficient to overcome the tendency for women to behave less assertively and to be evaluated less favorably than men in mixed-sex interactions. Meeker and Weitzel-O'Neill's claims would suggest that one way of legitimating assertive behavior of women is for an authority figure (such as the experimenter in a research study) to publicly impose an assertion-based goal (such as a persuasive goal) on women in the presence of men. This act would free women to behave assertively without suffering any negative social consequences, both because an authority figure has legitimated such behavior and because they would be perceived to be motivated not by self-enhancement but by their commitment to fulfilling their communication task. Thus, when dyads are assigned no specific conversational goal, women would be expected to be less persuasive and to be perceived as less persuasive than men because they are of low status relative to their male partners. They would also be expected to be more supportive and to be perceived as more supportive than men. When dyads are assigned a persuasive goal, however, women are justified (in fact, instructed) to behave persuasively; therefore, they should behave as persuasively as men.

Whether or not women would be more supportive than men when assigned a persuasive goal is less clear-cut. Socialization theories would predict that a supportive or social-emotional orientation is a fundamental aspect of girls' and women's socialization and should be apparent regardless of the behavioral situation (Maccoby & Jacklin, 1974); therefore, even in this situation, women would be expected to be more supportive than

men. Expectation states theory, on the other hand, would predict that, in mixed-sex interactions in which the interactants lack specific information about each other, women will behave more supportively than men as a means of being accepted by the group and as a means of proving that their contributions are not self-motivated. However, if the interactants in a group are provided with the information that they are expected to pursue a persuasive goal, these reasons for behaving supportively would no longer apply. Thus, when dyads are assigned a persuasive goal, women and men should not differ in supportive behaviors or in perceived supportiveness.

When assigned a supportive goal, women are no more justified in behaving persuasively than if they had been given no goal instructions at all. However, men's usual tendency to pursue an persuasive goal becomes less salient and less appropriate when instructed to pursue a supportive goal. The influence of their higher status relative to women has been removed because an authority figure (the experimenter) has defined the goal of the interaction. Thus, men and women who are assigned a supportive goal should not differ from each other in persuasive behavior or in perceived persuasiveness, or in supportive behavior or perceived supportiveness.

A debate-like task was chosen as the communication task in the present study. Participants were asked to generate ideas for the pro or con perspective of their assigned discussion topic and then were instructed to discuss these opposing ideas with each other. Debate was selected because of its presence in many forms of human interaction. In particular, due to the reduced sex differentiation in occupational roles that has been occurring in recent years, men and women are increasingly finding themselves in situations

where they must negotiate, compromise, and debate with each other. Although the debate-like setup may have favored a persuasive communication style more so than a supportive one, the context was nonetheless seen as one in which both persuasion (e.g., trying to get one's partner to agree with one's ideas) and supportiveness (e.g., acknowledging the merit of the other person's ideas) would be appropriate and expected.

My specific predictions are described as follows. These predictions are also summarized in Table 1.

Hypothesis 1. Males assigned a supportive goal were predicted to be more supportive and to perceive themselves as more supportive than both males assigned a persuasive goal and males assigned no specified goal, who were not expected to differ from each other. Males assigned a supportive goal were also predicted to be less persuasive and to perceive themselves as less persuasive than both males assigned a persuasive goal and males assigned no specified goal, who were not expected to differ from each other. Partners of males assigned a supportive goal were predicted to perceive these males as more supportive and less persuasive than partners of males in the other two conditions.

Hypothesis 2. Females assigned a persuasive goal were predicted to be higher on the persuasiveness measures and lower on the supportiveness measures than both females assigned a supportive goal and females assigned no specified goal, who were not expected to differ from each other. Partners of females assigned a persuasive goal were also predicted to perceive these females as more persuasive and less supportive than partners of females in the other two conditions.

Hypothesis 3. Males and females with no assigned goal were predicted to differ from each other on the persuasiveness and supportiveness measures, with males higher on the persuasiveness measures and females higher on the supportiveness measures. No sex differences were expected in the other two conditions. Males and females with no assigned goal were also expected to differ in the persuasiveness and supportiveness they ascribed to each other, with males predicted to attribute greater supportiveness to their female partners and females predicted to attribute greater persuasiveness to their male partners. No such sex differences were expected in the other two conditions.

Table 1
Predictions by Sex and Goal Condition

	Condition		
	No assigned goal	Persuasive goal	Supportive goal
Males	a	a	b
Females	b	a	b

Note. For measures of persuasiveness, a > b; for measures of supportiveness, b > a.

Method

Pretest

A pretest questionnaire (Appendix A), modeled after that used by Carli (1989, 1990), was administered to 144 introductory psychology students (88 females and 56 males) during a regular class period for research credit. The questionnaire consisted of 40 controversial issues, for which participants were to provide three ratings: (a) the degree to which they agreed or disagreed with each item; (b) the degree to which they were knowledgeable of each item; and (c) the degree to which they were interested in each item. Participants indicated their agreement with each item on a scale ranging from 0 (completely disagree) to 9 (completely agree), their knowledge of each item on a scale ranging from 0 (no knowledge) to 9 (extremely high knowledge), and their interest in each item on a scale ranging from 0 (no interest) to 9 (extremely high interest).

The purpose of the pretest was to identify topics for which there were no meaningful sex differences in agreement, knowledge, or interest. Other researchers (e.g., Dovidio et al., 1988; Kelly, Wildman, & Urey, 1982) have found that the use of topics for which there are differences in knowledge or interest results in members of the favored sex exhibiting greater verbal assertiveness and power. The pretest was also intended to identify topics for which the mean scores for interest and knowledge were 4.5 (the scale midpoint) or higher, because high interest in or knowledge of a topic would likely stimulate conversation. On the basis of these criteria, the following two topics were chosen: "Should capital punishment for serious offenders be reinstated in Canada?" and "Should HIV testing of all professional athletes in contact sports be mandatory?" (For

opinion ratings of the capital punishment topic, the male mean was 5.57 and the female mean was 4.78; for the HIV topic, the male mean was 5.45 and the female mean was 5.43. For knowledge ratings of the capital punishment topic, the male mean was 4.78 and the female mean was 5.49; for the HIV topic, the male mean was 4.72 and the female mean was 4.78. For interest ratings of the capital punishment topic, the male mean was 5.84 and the female mean was 6.47; for the HIV topic, the male mean was 5.20 and the female mean was 5.27.)

Participants and Design

Fifty-eight unacquainted pairs of participants (116 participants in total), each pair consisting of one male and one female, participated in this experiment. The pairs of participants were randomly assigned to goal conditions. The overall design of the study, then, was a 2 (sex of participant) x 3 (goal) factorial, with sex treated as a repeated measures factor (since each pair contained both a male and a female participant). Eight pairs were excluded from the final analysis: five because English was not the first language of one member of the pair, one because one member of the pair guessed the nature of the study, one because the members of the pair knew each other, and one because one member of the pair requested that her data not be used. The final analysis consisted of 50 pairs (100 participants). Of these, 40 pairs were composed of introductory psychology students who received research credit for participating; 10 pairs were composed of volunteers from non-psychology university classes. The no-assigned goal and supportive goal groups each contained 17 pairs, whereas the persuasive goal group contained 16 pairs.

Procedure

Half of the experimental sessions were conducted by a female experimenter, the other half by a male experimenter. Male and female participants began their experimental sessions in separate rooms, with no knowledge of the other participant with whom they would later be interacting. Participants were asked to complete the Attitudes Questionnaire (Appendix B) which consisted of a subset of six of the pretest items, including the capital punishment question and the HIV question. After they completed the questionnaire, the experimenter collected their questionnaires and, on the basis of random assignment, asked each participant to spend the next 10 min generating ideas for either the "yes" (pro) or "no" (con) perspective on either the HIV topic or the capital punishment topic.

At the end of the 10 min, the two participants were brought into a common room, seated at a table, and introduced to each other. Two small clip-on microphones, connected to a tape-recording device, were situated on the table. At this point, the experimenter informed participants that they had been randomly assigned to one or the other perspective on the topic and that they would be asked to discuss with each other their ideas on their assigned perspective for 10 min. The experimenter then requested permission from participants to tape-record their conversation. While participants completed a consent form regarding permission to tape-record their conversation, the experimenter inconspicuously turned over a card that indicated the instructional condition to which the pair of participants was randomly assigned. Once participants completed their consent form, the experimenter asked the participants to clip on the microphones, began recording,

and gave the participants one of three sets of verbal instructions. Participants in the persuasive goal condition received the following instructions:

> Here's your goal: You must each try to be as persuasive as possible in discussing your perspective of the issue with the other person (the "yes" or "no" perspective, whichever perspective you have been assigned). These ideas can be those you wrote down in your Idea Lists, or any other points, reasons, or ideas for your perspective that occur to you during the discussion. Try to promote your ideas and convince each other that your ideas are the most important. Your goal, then, is to present your ideas in a way that will be most effective at persuading the other person. Feel free to comment on each other's ideas.

Participants in the supportive goal condition received the following instructions:

> Here's your goal: You must both try to be as supportive of each other as possible in discussing your perspective of the issue with one another (the "yes" or "no" perspective, whichever perspective you have been assigned). These ideas can be those you wrote down in your Idea Lists, or any other points, reasons, or ideas for your perspective that occur to you during your discussion. Try to listen carefully to each other's ideas and encourage one another to express, clarify, and elaborate on one another's ideas. Your goal, then, is for the two of you, as a team, to achieve as complete an understanding of each other's ideas as possible. Feel free to comment on each other's ideas.

Participants in the no-assigned goal condition received the following instructions:

> I would like you to discuss with each other the points and ideas you have generated for the "yes" or "no" perspective of the issue, whichever perspective you have been assigned. These ideas can be those you wrote down in your Idea Lists, or any other points, reasons, or ideas for your perspective that occur to you during the discussion. Feel free to comment on each other's ideas.

To increase their motivation to take their task seriously, participants were told that after their 10-min discussion, they would be asked to provide a report of the ideas they discussed. The experimenter left the room for the 10-min period while the participants discussed the topic.

At the end of the 10 min, the experimenter returned and gave each participant a questionnaire booklet (Appendix C). The participants completed the booklets in their

separate cubicles. As a manipulation check, the first question in the booklet asked participants to rate the extent to which they took seriously the goal instructions given by the experimenter prior to their 10-min discussion. The next question was an open-ended item asking them to list and describe the goals they tried to achieve during the discussion. The remainder of the questions were 22 Likert-type questions rated on 7-point scales (described in the next section).

After completing the questionnaire, participants were asked what they thought the true nature of the study was and whether they agreed or disagreed with the perspective on the issue to which they were assigned. Participants were then debriefed and excused.

Measures

Supportiveness and persuasiveness: Questionnaire measures.

The questionnaire measures of supportiveness and persuasiveness consisted of eight questionnaire items (four of supportiveness and four of persuasiveness). The four items for each construct differed on two important dimensions: (a) self/partner attribution and (b) perceived effort/perceived success. The items, and their respective categorizations, are listed in Table 2.

Exploratory questionnaire items.

The other 14 questionnaire items were not intended to directly measure supportiveness or persuasiveness but were included for exploratory purposes. Half of the items were ratings of self and the other half were ratings of partner. The self items included: how much participants enjoyed their discussion, how much they liked their partner, how comfortable they felt during the discussion, how self-confident they felt, how competent they felt, how well they thought they had presented themselves, and how successful they thought they were in achieving their goals. The

Table 2
Questionnaire Items Measuring Supportiveness and Persuasiveness

Measure	Attribution	Effort	Success
Supportiveness	Self	"How concerned were you with supporting and encouraging your partner?"	"How supportive do you think you were?"
	Partner	"How concerned do you think your partner was with supporting and encouraging you?"	"How supportive do you think your partner was?"
Persuasiveness	Self	"How concerned were you with convincing your partner that your ideas were most important?"	"How persuasive do you think you were?"
	Partner	"How concerned do you think your partner was with convincing you that his/her ideas were most important?"	"How persuasive do you think your partner was?"

partner items were the same as the self items, except that participants were asked to rate their partners on the items (e.g., how much they thought their partner enjoyed the discussion, etc.).

Supportiveness and persuasiveness: Speech measures. A random sample of 18 dyads (six from each goal condition) was selected to be coded for speech measures. The 18 tape-recorded conversations were transcribed orthographically using a transcribing scheme similar to that developed by Sacks, Schegloff, and Jefferson (1974). One rater (the author) coded the tapes for all of the measures. Speech productivity was a measure of the total number of words spoken by each participant. A coding manual (Appendix D) was developed for the other two speech measures, verbal reinforcers and spoken ideas. Verbal reinforcers were defined as minimal responses spoken by the listener while or immediately after the speaker's turn. Verbal reinforcers are not attempts to claim the "floor" but merely serve to signal acknowledgment, agreement, attention, or need for clarification (Duncan, 1972, 1974; Marche & Peterson, 1993). Common forms of verbal reinforcers include "mm-hmm," "uh-huh," "right," "really?" and "okay." However, verbal reinforcers can also take on the form of sentence completions (finishing the speaker's sentence for him or her after a short pause, or saying the same thing at the same time as the speaker) and brief restatements (repetitions) of the speaker's words. Spoken ideas were defined as points, ideas, or arguments made by speakers in favor of their assigned perspective or in contradiction of their partner's assigned perspective.

Results

All measures were tested using 2 (sex) x 3 (goal) repeated measures ANOVAs. The dyad was treated as the unit of analysis and sex of participant was treated as the repeated measures factor, since each dyad contained both a female and a male participant. The repeated measures ANOVA was chosen as a means of accounting for dependence between individuals within dyads. An alpha level of .05 was used for all statistical tests.

Manipulation Check

One-sample *t* tests, using the scale midpoint of 4 as a test value, were performed to test whether male and female participants took the goal manipulation seriously. Ratings of self for both males ($M = 5.62$; $t(49) = 10.93$, $p < .01$) and females ($M = 5.80$; $t(49) = 12.36$, $p < .01$) were significantly higher than the midpoint of this measure, indicating that overall, participants complied with the goal manipulation. Separate one-sample *t* tests for each of the three experimental conditions were also conducted, revealing the same results for each of the three conditions as for the overall test (all $ps < .01$). Regardless of sex of participant and goal condition, participants reported that they treated the goal manipulation seriously. In addition, repeated measures ANOVAs revealed no differences by sex ($p > .25$), goal ($p > .05$), or their interaction ($p > .25$).

Status Characteristics Other than Sex

According to expectation states theory, external characteristics other than sex, such as age and race, can also act as diffuse status characteristics when they are a source of differentiation among members of a group. Although age and race were not systematically varied in this study (with the assumption that random assignment would

prevent unequal representation by sex or goal condition), the age and race of participants were nonetheless recorded to test whether such differences occurred by chance. Difference scores for age and race were computed for each dyad. For age, this score was computed merely by subtracting the male age (in years) from the female age (in years). For race, this score was computed by first coding participants as either 1 (white) or 2 (other). (Although several races were represented in the study sample, a binary coding scheme was selected due to the small numbers of non-Caucasian participants in the sample.) Then the male "score" was subtracted from the female "score." A difference score of 0 indicated that both members of the dyad were of the same race (or race "group"), whereas a difference score of 1 or -1 indicated that the members of the dyad differed in race.

A one-sample t test for age difference revealed that dyad members did not differ significantly in age ($p > .25$). A one-way ANOVA for age difference by goal condition was then conducted, revealing a main effect for goal that approached statistical significance, $F(2, 46) = 3.13$, $p < .06$). The no-assigned goal group appeared to have greater age differences between its dyad members than the other two groups, with males being an average of 4.12 years older than females. A closer examination of the data, however, revealed that this effect may have been due to an outlier in the no-assigned goal group, in which the age difference between the members of one dyad was 26 years (male 44 years, female 18 years). Removing this outlier from the analysis caused the marginally significant effect to become nonsignificant ($p > .10$), with males in the no-assigned goal condition now an average of only 2.67 years older than females. Therefore, the age

differences among interactants in the three goal conditions were not sufficient to warrant including age as a covariate in subsequent analyses of dependent measures.

Of the 50 dyads, members of 21 of the dyads differed in race. However, a chi-square analysis by goal condition revealed that the mixed-race dyads were not differentially distributed among the three goal conditions, χ^2 (2, $\underline{N}$ = 50) < 1. Furthermore, in those dyads which differed in race, the sex of the non-Caucasian dyad member was equally likely to be male or female, χ^2 (1, $\underline{N}$ = 21) < 1. As with age, race was not included as a covariate in subsequent analyses.

Supportiveness and Persuasiveness: Questionnaire Measures

Assigned perspective, experimenter, and discussion topic. For assigned perspective ("yes" or "no" perspective of the discussion topic), no main effects or interactions with participant sex or goal were obtained for any of the questionnaire measures of supportiveness or persuasiveness. Therefore, assigned perspective was not included as a factor in subsequent analyses.

No main effects for experimenter were obtained for any of the supportiveness and persuasiveness measures, but significant Sex of Participant x Experimenter interactions were obtained for the two self-attributed persuasiveness measures. In addition, a significant Goal x Experimenter interaction was obtained for the two measures of supportiveness effort (self and partner). However, given that the experimenters were not present during the tape-recorded discussions (which formed the basis for all of the dependent measures), and given the uncertainty about what distinguishing features of the

experimenters (sex, personality characteristics, research experience, etc.) may have explained such effects, experimenter is not included as a factor in subsequent analyses.

For discussion topic, analyses of the supportiveness measures revealed no main effects or interactions with goal or participant sex. For the persuasiveness measures, no main effects for topic or interactions with sex of participant were obtained, but significant Topic x Goal interactions were found for the two partner-attributed persuasiveness measures. However, because I had no a priori reason to expect discussion topic to influence my results (and only the results for partner-attributed persuasiveness), topic was not included as a factor in subsequent analyses.[3]

Effects of sex and goal. No main effects or interactions involving sex or goal were obtained for any of the supportiveness measures, or for any of the partner measures of persuasiveness (all $ps > .05$). For the self-perceived persuasiveness measures, analyses of persuasiveness effort revealed that the predicted Sex x Goal interaction approached statistical significance, $F(2, 47) = 3.11$, $p < .06$ (see Table 3). Duncan's multiple range test revealed that, consistent with predictions, males in the no-assigned goal condition ($M = 4.65$) were more concerned with convincing their partners than were males in the supportive goal condition ($M = 3.47$), but did not differ from males in the persuasive goal condition ($M = 4.38$). Contrary to predictions, however, females did not differ across the three goal conditions in their self-perceived persuasiveness effort. Also contrary to predictions, males and females in the no-assigned goal condition ($Ms = 4.65$ and 4.35, respectively) did not differ from each other in self-perceived persuasiveness effort.

Table 3
Persuasiveness Effort (Self) by Participant Sex and Goal Condition

	Condition			
Participant sex	No assigned goal[a]	Persuasive goal[b]	Supportive goal[a]	M
Males	4.65_a	4.38_{ab}	3.47_b	4.16
Females	4.35_{ab}	4.19_{ab}	4.59_a	4.38
M	4.50	4.28	4.03	4.27

Note. Means that do not share any common subscripts differ at $p < .05$ in the Duncan multiple comparison.
[a]$n = 17$. [b]$n = 16$.

For persuasiveness success (self), the predicted Sex x Goal interaction was nonsignificant ($p > .10$), but an unpredicted main effect for goal was obtained, $F(2, 47) = 3.44$, $p < .05$ (see Table 4). Duncan multiple range tests revealed that participants with no assigned goal ($M = 4.82$) reported being more persuasive than participants assigned either a persuasive goal ($M = 4.22$) or a supportive goal ($M = 4.15$).

Disagreement with assigned perspective. Because assignment of perspective was random rather than based on participants' a priori opinions on the topic, there was a concern regarding participants' ability to represent their assigned perspective.[4] In selecting the topics for use in the study, I attempted to choose topics for which I felt most participants could easily and comfortably present ideas for either perspective, regardless of their true beliefs. However, in the event that some participants disagreed with their

Table 4
Persuasiveness Success (Self) by Participant Sex and Goal Condition

	Condition			
Participant sex	No assigned goal[a]	Persuasive goal[b]	Supportive goal[a]	M
Males	5.18	4.56	3.82	4.52
Females	4.47	3.88	4.47	4.27
M	4.82_a	4.22_b	4.15_b	4.40

Note. Duncan multiple comparison tests were conducted only for the goal main effect. For these means, those that do not share common subscripts differ at the $p < .05$ level.
[a]$n = 17$. [b]$n = 16$.

assigned perspective, one plausible outcome was that such participants would have more difficulty being persuasive and would be more supportive than participants who did not disagree with their perspective. For this reason, a record was kept of those participants who disagreed with their assigned perspective. Three sources were used to gather this information: (a) comments made during the tape-recorded conversations; (b) written comments in the questionnaires; and (c) responses to a direct inquiry by the experimenters during the debriefing phase. Because these sources of information were based on responses provided during or after participants' discussions, the responses did not necessarily reflect participants' opinions prior to the discussions. Therefore, the responses should be interpreted with caution. Binary variables (1 = disagreed with perspective, 0 = did not disagree with perspective) were formed after coding the data for each of these three sources. When all sources of information were combined, 24 of the 50 dyads had

one or more participants who indicated some level of disagreement with their assigned perspective. In light of this important finding, I decided to conduct all of the analyses of the measures of perceived persuasiveness and perceived supportiveness with "disagreement with perspective" included as a covariate.

When the covariate was included in the model, the Sex x Goal interaction for persuasiveness effort (self) was significant, $\underline{F}(2, 46) = 3.56$, $\underline{p} < .05$. As discussed earlier, this interaction only approached significance when the effects of the covariate were not partialed out. (Results of Duncan multiple range tests were the same, with or without the covariate.) For persuasiveness success (self), controlling for disagreement with perspective resulted in effects that were more consistent with predictions than when the covariate was ignored. The unpredicted main effect for goal that was obtained when the covariate was ignored only approached significance after the covariate's effects were partialed out, $\underline{F}(2, 46) = 3.09$, $\underline{p} < .06$. (However, Duncan multiple range tests revealed that the differences obtained for the unadjusted means were also obtained for the adjusted means.) Conversely, the Sex x Goal interaction for self-perceived persuasiveness success approached statistical significance, $\underline{F}(2, 46) = 3.05$, $\underline{p} < .06$, when the effects of the covariate were partialed out (see Table 5). As noted in the previous section, this interaction was clearly nonsignificant ($\underline{p} > .10$) when the effects due to the covariate were ignored. Duncan multiple range tests on the adjusted means revealed that, consistent with predictions, males with no assigned goal ($\underline{M} = 5.18$) reported greater persuasiveness than males assigned a supportive goal ($\underline{M} = 3.82$), but did not differ from males assigned a persuasive goal ($\underline{M} = 4.56$). Contrary to predictions, however, females did not differ

Table 5
Persuasiveness Success (Self) by Participant Sex and Goal Condition, Adjusted for Disagreement With Perspective

	Condition			
Participant sex	No assigned goal[a]	Persuasive goal[b]	Supportive goal[a]	M
Males	5.18_{a}	4.56_{ab}	3.82_{b}	4.52
Females	4.40_{ab}	3.83_{b}	4.58_{ab}	4.27
M	4.79	4.20	4.20	4.40

Note. Duncan multiple comparison test results reported here are for the Sex x Goal interaction only. For these means, those that do not share any common subscripts differ at the $p < .05$ level.
[a]$n = 17$. [b]$n = 16$.

across the three goal conditions in their perceived persuasiveness success. Also contrary to predictions, males and females in the no-assigned goal condition (Ms = 5.18 and 4.40, respectively) did not differ from each other, although the nonsignificant sex difference was in the predicted direction.

Supportiveness and Persuasiveness: Speech Measures

Speech productivity, number of spoken ideas, and number of verbal reinforcers were analyzed for the effects of sex and goal and the interaction of these terms. (Due to small N, no other factors were included in the model.) No main effects for goal or Sex x Goal interactions were obtained (all ps > .25). Sex main effects were obtained for speech productivity, $F(1, 15) = 9.99$, $p < .01$, and for number of spoken ideas, $F(1, 15) = 5.24$,

$p < .05$). As shown in Tables 6 and 7, respectively, males spoke more than females (Ms = 960 vs. 673) and also made more points in support of their perspective or against their partner's perspective (Ms = 19.39 vs. 16.28). Although it appeared, from the means, that females (M = 16.39) used more verbal reinforcers than males (M = 12.94), the difference was nonsignificant ($F < 1$; see Table 8).[5]

Exploratory Questionnaire Items

A main effect of goal was obtained for self-perceived presentation, $F(2, 47) = 6.36$, $p < .01$. The means for the no-assigned goal, persuasive, and supportive goal conditions were 5.41, 4.35, and 4.59, respectively. Sex main effects were obtained for perceived confidence of partner, $F(1, 47) = 5.51$, $p < .05$, and perceived competence of partner, $F(1, 47) = 4.77$, $p < .05$. Females rated their partners as more confident (Ms = 5.08 vs. 4.58) and more competent (Ms = 5.14 vs. 4.58) than did males. A Sex x Goal

Table 6
Speech Productivity by Participant Sex and Goal Condition[a]

	Condition			
Participant sex	No assigned goal	Persuasive goal	Supportive goal	M
Males	1041.00	875.67	963.33	960.00
Females	662.67	795.83	560.50	673.00
M	851.83	835.75	761.92	816.50

Note. The values represent mean number of words spoken.
[a] $n = 6$ for each cell of the 2 x 3 design.

Table 7
Number of Spoken Ideas by Participant Sex and Goal Condition

	Condition			
Participant sex	No assigned goal	Persuasive goal	Supportive goal	M
Males	21.17	21.00	16.00	19.39
Females	16.00	18.17	14.67	16.28
M	18.58	19.58	15.33	17.83

Note. n = 6 for each cell of the 2 x 3 design.

Table 8
Number of Verbal Reinforcers by Participant Sex and Goal Condition

	Condition			
Participant sex	No assigned goal	Persuasive goal	Supportive goal	M
Males	16.17	10.50	12.17	12.94
Females	19.00	19.33	10.83	16.39
M	17.58	14.92	11.50	14.67

Note. n = 6 for each cell of the 2 x 3 design.

interaction was obtained for perceived comfort of partner, $F(2, 47) = 3.33$, $p < .05$. For females, the means for the no-assigned goal, persuasive, and supportive goal conditions were 5.24, 4.13, and 4.94, respectively; for males, the means were 4.41, 4.63, and 4.00, respectively.

Discussion

The results show that, consistent with predictions, males with no assigned goal perceived themselves to be more persuasive and more concerned with convincing their partners than males instructed to pursue a supportive goal, but did not differ on these measures from males instructed to pursue a persuasive goal. These results strongly suggest that in mixed-sex interactions, at least in the type of communication context examined in this study, (a) persuasiveness is a salient goal for men and (b) the tendency for men to pursue persuasive goals can be attenuated by making a supportive orientation more salient or more appropriate to them. Curiously, however, these perceptions of males' persuasiveness across the three goal conditions were not shared by their female partners: Females' perceptions of persuasiveness effort or success in their male partners did not differ among the three conditions. Carli (1990, Study 2) has found that men are perceived to be equally influential whether they speak tentatively or assertively. Possessing the high status state of sex appeared to override the potential moderating effects of tentativeness. In the present study, perhaps females perceived their male partners to be persuasive, regardless of their conversational goal, because sex was more salient than conversational goal.

Contrary to predictions, females did not differ in perceived persuasiveness effort or success across the three goal conditions. (In fact, an examination of the respective means for the two measures reveals a trend for lower levels of perceived persuasiveness in the persuasive goal condition, in which the highest levels were predicted, than in the other two goal conditions.) The reason for these similarities across goal conditions may stem from a

fundamental difference between the manipulation used in the present study and those used in similar studies. Many of the studies that have yielded support for Meeker and Weitzel-O'Neill's (1977) hypotheses about factors that can attenuate the influence of sex as a diffuse status characteristic have used manipulations that prove or suggest women's competence in some way. For example, in such studies, the group task may be one in which women are known or thought to be competent, or the women present may be appointed to a leadership or other powerful position on the basis of legitimate (or ostensibly legitimate) reasons, such as relevant experience, demonstrated ability, etc. These types of manipulations assure all group members, including the women themselves, that the women are capable of performing well at the task at hand. In the present study, however, persuasiveness was legitimated in women (or, at least, an attempt was made to do so), but no evidence or assurance was provided of women's persuasive ability. There is evidence that women have less self-confidence in their persuasive ability than men, even when their persuasive performance is equivalent to men's (Andrews, 1987). Thus, the mere act of assigning a persuasive goal to women may not have been sufficient to alter women's perceptions of their persuasiveness.

Whether the absence of a difference in women's perceived persuasiveness among the three goal conditions is due to a true lack of difference in persuasiveness is difficult to determine. Assuming the validity of the behavioral measures of persuasiveness used in the present study, the corresponding lack of differences in behavioral persuasiveness among goal conditions suggests that women's perceptions are, at least in part, driven by actual behavior. This conclusion is highly speculative, however, given the uncertainty about

validity of the measures (i.e., whether the perceptual and behavioral measures are measuring the same constructs and are measuring what they were intended to measure) and given that the behavioral measures are based on only a subset of the sample.

The results for the supportiveness measures were surprising: No interactions or main effects for sex or goal were obtained for any of the supportiveness measures. One possible explanation for the lack of a sex difference is that, although expectation states theory would predict that women in mixed-sex interactions would behave supportively, there is no reason why men would not also behave supportively. Both supportiveness and assertiveness are valued attributes in North American society (Spence, Helmreich, & Stapp, 1975). Carli's (1990, Study 2) finding suggests that if men can be influential despite exhibiting an attribute that is not, in general, viewed positively (tentativeness), then the influence and evaluations of men are likely not harmed by exhibiting the positive attribute of supportiveness. Stated in another way, women stand more to lose by being persuasive than men do by being supportive, since persuasiveness is considered to be an attempt to raise one's status (Meeker & Weitzel-O'Neill, 1977). Such an act is unacceptable for women in mixed-sex interactions unless it is legitimated for them in some way.

The lack of differences in supportiveness by goal condition may be explained by the fact that, although supportiveness is perceived to be a positive attribute, it may not carry with it the same level of prestige or rewards as persuasiveness does. Therefore, simply increasing its salience may not result in a corresponding increase in reported or actual supportiveness.

A comparison of the behavioral and perceptual measures reveals both consistencies and inconsistencies. For both the behavioral measure and the perceptual measures of supportiveness, no main effects or interactions involving sex or goal were obtained. However, the trend observed in the means for verbal reinforcers differs from that for the perceptual measures. For verbal reinforcers, the unexpected trend was that females who were assigned a persuasive goal or no specified goal used more verbal reinforcers than females assigned a supportive goal. Also unexpected, males who were assigned no specified goal used more verbal reinforcers than males in the other two conditions. Whether these trends observed in the means represent meaningful differences can only be determined by testing the effects on a larger sample. For the perceptual measures of supportiveness, males and females expressed similar levels of supportiveness effort and success across the three goal conditions.

For the behavioral measures of persuasiveness, the only effects observed were sex main effects, with men behaving more persuasively than women. The perceptual measures tell a different story. Sex and goal interacted such that the pattern of findings for males was consistent with predictions, with males in the no-assigned goal condition perceiving themselves as more persuasive than males in the supportive goal condition; no differences among conditions, however, were observed for females. Although these findings suggest that the behavioral and perceptual measures of persuasiveness may not be tapping the same construct, the caveat that the behavioral measures must be tested on a larger sample before any firm conclusions can be drawn again applies. I know of only one other study that has examined both behavior and evaluations of behavior in a mixed-sex

communication context (Molm, 1985). In this study, regression analyses revealed that participants' evaluations of their own conversational behaviors were largely based on actual behavior, suggesting that there are communication contexts in which our perceptions of our own behavior are reasonably accurate. As research examining both the behavioral and perceptual aspects of conversation grows, so will our understanding of the contexts in which people can and cannot form accurate evaluations of their interactions with others.

Footnotes

[1] In research on gender differences in communication, differences in verbal as well as nonverbal communication are studied in groups that vary in size and gender composition. To narrow the focus, my emphasis will be on research of verbal communication in mixed-sex groups. In addition, the majority of the studies cited in this paper examined conversations in dyads. These studies have been selected since they are most similar to the design employed in the present study.

[2] Similar claims about sex differences in language were made by Key (1972, 1975).

[3] Analyses of participants' knowledge and interest ratings of the discussion topics revealed that participants reported equivalent knowledge of the two topics ($F < 1$). However, participants expressed greater interest in the capital punishment topic ($M = 6.68$) than in the HIV topic ($M = 5.44$), $F(1, 98) = 8.39$, $p < .01$. This difference in interest may have contributed to the Topic x Goal interactions for partner-attributed persuasiveness, but, if so, why the difference would influence perceptions of partner but not perceptions of self is unclear. Equally likely is the possibility that some other unknown dimension on which the two topics differ caused the interactions. Another reason why the difference in interest is unlikely to have contributed to the interaction effects is the fact that participants' ratings of interest were significantly higher than the scale midpoint of 4.5 for both the capital punishment topic and the HIV topic, $ts(49) = 8.02$ and 2.84, respectively, both $ps < .01$.

[4] No measure was obtained of participants' a priori opinions on the discussion topics. Sensitizing participants to their true opinions on the topics may have made it more

difficult for some participants to represent their assigned perspective (particularly those who disagreed with their assigned perspective).

[5] Because the variances for verbal reinforcers were quite high, I transformed the data using the formula $X' = \sqrt{X} + \sqrt{(X + 1)}$ (Winer, 1971). (This particular square root transformation was recommended by Winer for data in which some cases were numerically small, as was the case with the data for verbal reinforcers.) Although the transformation did result in smaller variances, the sex main effect remained nonsignificant ($F < 1$).

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Appendix A

OPINION QUESTIONNAIRE

This questionnaire contains 40 controversial issues for your consideration. The questionnaire is in three sections: The first section asks you to indicate the degree to which you agree or disagree with each item; the second section asks you to indicate how knowledgeable you are of each item; and the third section asks you to indicate how interested you are in each item. Thus you will be rating the same list of 40 items three times, once in terms of **agreement**, once in terms of **knowledge**, and once in terms of **interest**. The rating scale for each section of the questionnaire is provided at the top of the pages in the appropriate section. Please record your responses to each item on the computer scan sheet provided, using a pencil to fill in the appropriate circles. Note that there are items on both sides of the pages in this questionnaire.

Before you turn the page and begin to complete the questionnaire, please indicate your sex by filling in the appropriate circle on your computer scan sheet. Do not fill in your name, ID number, or any other identifying information.

Section I: AGREEMENT

Indicate the degree to which you agree or disagree with each of the items in this section, using the following scale:

0 1 2 3 4 5 6 7 8 9
completely disagree ... completely agree

1. There is a strong possibility that a nuclear war will occur in my lifetime.

2. The federal government should pass strict environmental laws to deal with the ecological crisis.

3. U of A professors should cut down on the use of multiple choice exams and base course grades more on essay exams and term papers.

4. Undergraduate programs should focus more heavily on practical skills and less on basic learning to prepare graduates for the work force.

5. The driving age in Alberta should be lowered to 15 years.

6. Parents should pay for students' postsecondary education.

7. The research participation component of PSYCO 104/105 should be eliminated.

8. U of A students should have more say in what courses are requirements for their degrees.

9. Universities place too much emphasis on grade point averages as admission criteria.

10. HIV testing of all professional athletes in contact sports should be mandatory.

11. Keillor Road should stay closed to vehicle traffic.

12. Homosexual couples should not be allowed to marry or to receive spousal benefits.

13. The U of A should eliminate "marking on the curve" and just give students marks based on a percentage system.

14. Nuclear testing should be discontinued.

15. Gun laws in Canada should be stricter.

16. All Albertans who were sterilized during the eugenics movement should receive compensation from the Alberta Government.

0 1 2 3 4 5 6 7 8 9
completely disagree completely agree

17. The provincial speed limit should be abolished.

18. The jury for the O.J. Simpson trial were correct in deciding that Simpson could not be declared guilty beyond a reasonable doubt.

19. The health and education cuts imposed by the Klein government are an undesirable yet necessary strategy for eliminating the province's deficit and debt.

20. Most people in our society have a negative, distorted view of the "X-Generation."

21. Capital punishment (i.e., for serious offenders) should be reinstated in Canada.

22. The quality of education at the U of A isvery high.

23. All research conducted in university settings should have real-world applications.

24. HIV-positive athletes in contact sports (such as basketball star Magic Johnson) should be banned from professional sports.

25. Edmonton Transit should cut down on the number of bus routes to make fares cheaper.

26. The future for my generation is not as promising as the one my parents had when they were young.

27. Sex education classes for adolescents should make condoms available to students.

28. There is nothing wrong with awarding honorary degrees to active politicians such as Ralph Klein.

29. Canada's penal code for juveniles who commit serious crimes is too lenient.

30. The U of A has a lot of school spirit and pride.

31. Québec should separate from Canada because Québecois are never going to be satisfied as long as they are part of this country.

32. The University of Alberta should have smaller classes to allow for more one-to-one contacts between professors and students.

33. The quality of teaching among professors would be improved if universities put less emphasis on research.

0 1 2 3 4 5 6 7 8 9
completely disagree completely agree

34. The federal government should provide free day care for working parents.

35. Life satisfaction is not determined by how much money you make.

36. The 9-point grading system used at the U of A is fair.

37. Canada devotes too much funding to nuclear weapons.

38. A "Yes" vote for sovereignty in Québec would have been good because it would make Québecois realize and appreciate the benefits of being part of Canada.

39. O.J. Simpson's celebrity status and convoy of clever lawyers are what led to a "not guilty" verdict.

40. The drinking age in Alberta should be lowered to 17 years.

Section II: KNOWLEDGE

Indicate the degree of knowledge you have of each of the items in this section, using the following scale:

0 1 2 3 4 5 6 7 8 9
no knowledge extremely high knowledge

41. There is a strong possibility that a nuclear war will occur in my lifetime.

42. The federal government should pass strict environmental laws to deal with the ecological crisis.

43. U of A professors should cut down on the use of multiple choice exams and base course grades more on essay exams and term papers.

44. Undergraduate programs should focus more heavily on practical skills and less on basic learning to prepare graduates for the work force.

45. The driving age in Alberta should be lowered to 15 years.

46. Parents should pay for students' postsecondary education.

47. The research participation component of PSYCO 104/105 should be eliminated.

48. U of A students should have more say in what courses are requirements for their degrees.

49. Universities place too much emphasis on grade point averages as admission criteria.

50. HIV testing of all professional athletes in contact sports should be mandatory.

51. Keillor Road should stay closed to vehicle traffic.

52. Homosexual couples should not be allowed to marry or to receive spousal benefits.

53. The U of A should eliminate "marking on the curve" and just give students marks based on a percentage system.

54. Nuclear testing should be discontinued.

55. Gun laws in Canada should be stricter.

56. All Albertans who were sterilized during the eugenics movement should receive compensation from the Alberta Government.

0 1 2 3 4 5 6 7 8 9
no knowledge extremely high knowledge

57. The provincial speed limit should be abolished.

58. The jury for the O.J. Simpson trial were correct in deciding that Simpson could not be declared guilty beyond a reasonable doubt.

59. The health and education cuts imposed by the Klein government are an undesirable yet necessary strategy for eliminating the province's deficit and debt.

60. Most people in our society have a negative, distorted view of the "X-Generation."

61. Capital punishment (i.e., for serious offenders) should be reinstated in Canada.

62. The quality of education at the U of A isvery high.

63. All research conducted in university settings should have real-world applications.

64. HIV-positive athletes in contact sports (such as basketball star Magic Johnson) should be banned from professional sports.

65. Edmonton Transit should cut down on the number of bus routes to make fares cheaper.

66. The future for my generation is not as promising as the one my parents had when they were young.

67. Sex education classes for adolescents should make condoms available to students.

68. There is nothing wrong with awarding honorary degrees to active politicians such as Ralph Klein.

69. Canada's penal code for juveniles who commit serious crimes is too lenient.

70. The U of A has a lot of school spirit and pride.

71. Québec should separate from Canada because Québecois are never going to be satisfied as long as they are part of this country.

0 1 2 3 4 5 6 7 8 9
no knowledge extremely high knowledge

72. The University of Alberta should have smaller classes to allow for more one-to-one contacts between professors and students.

73. The quality of teaching among professors would be improved if universities put less emphasis on research.

74. The federal government should provide free day care for working parents.

75. Life satisfaction is not determined by how much money you make.

76. The 9-point grading system used at the U of A is fair.

77. Canada devotes too much funding to nuclear weapons.

78. A "Yes" vote for sovereignty in Québec would have been good because it would make Québecois realize and appreciate the benefits of being part of Canada.

79. O.J. Simpson's celebrity status and convoy of clever lawyers are what led to a "not guilty" verdict.

80. The drinking age in Alberta should be lowered to 17 years.

Section III: INTEREST

Indicate the degree of interest you have in each of the items in this section, using the following scale:

0 1 2 3 4 5 6 7 8 9
no interest extremely high interest

81. There is a strong possibility that a nuclear war will occur in my lifetime.

82. The federal government should pass strict environmental laws to deal with the ecological crisis.

83. U of A professors should cut down on the use of multiple choice exams and base course grades more on essay exams and term papers.

84. Undergraduate programs should focus more heavily on practical skills and less on basic learning to prepare graduates for the work force.

85. The driving age in Alberta should be lowered to 15 years.

86. Parents should pay for students' postsecondary education.

87. The research participation component of PSYCO 104/105 should be eliminated.

88. U of A students should have more say in what courses are requirements for their degrees.

89. Universities place too much emphasis on grade point averages as admission criteria.

90. HIV testing of all professional athletes in contact sports should be mandatory.

91. Keillor Road should stay closed to vehicle traffic.

92. Homosexual couples should not be allowed to marry or to receive spousal benefits.

93. The U of A should eliminate "marking on the curve" and just give students marks based on a percentage system.

94. Nuclear testing should be discontinued.

95. Gun laws in Canada should be stricter.

96. All Albertans who were sterilized during the eugenics movement should receive compensation from the Alberta Government.

0 1 2 3 4 5 6 7 8 9
no interest extremely high interest

97. The provincial speed limit should be abolished.

98. The jury for the O.J. Simpson trial were correct in deciding that Simpson could not be declared guilty beyond a reasonable doubt.

99. The health and education cuts imposed by the Klein government are an undesirable yet necessary strategy for eliminating the province's deficit and debt.

100. Most people in our society have a negative, distorted view of the "X-Generation."

101. Capital punishment (i.e., for serious offenders) should be reinstated in Canada.

102. The quality of education at the U of A isvery high.

103. All research conducted in university settings should have real-world applications.

104. HIV-positive athletes in contact sports (such as basketball star Magic Johnson) should be banned from professional sports.

105. Edmonton Transit should cut down on the number of bus routes to make fares cheaper.

106. The future for my generation is not as promising as the one my parents had when they were young.

107. Sex education classes for adolescents should make condoms available to students.

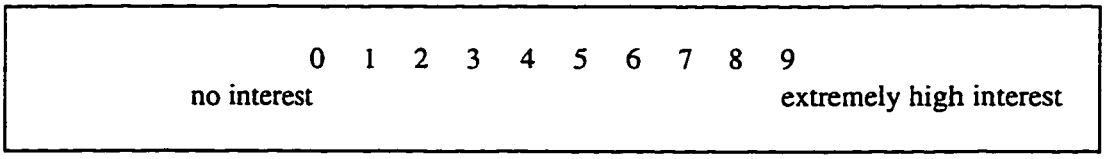
108. There is nothing wrong with awarding honorary degrees to active politicians such as Ralph Klein.

109. Canada's penal code for juveniles who commit serious crimes is too lenient.

110. The U of A has a lot of school spirit and pride.

111. Québec should separate from Canada because Québecois are never going to be satisfied as long as they are part of this country.

112. The University of Alberta should have smaller classes to allow for more one-to-one contacts between professors and students.



113. The quality of teaching among professors would be improved if universities put less emphasis on research.

114. The federal government should provide free day care for working parents.

115. Life satisfaction is not determined by how much money you make.

116. The 9-point grading system used at the U of A is fair.

117. Canada devotes too much funding to nuclear weapons.

118. A "Yes" vote for sovereignty in Québec would have been good because it would make Québecois realize and appreciate the benefits of being part of Canada.

119. O.J. Simpson's celebrity status and convoy of clever lawyers are what led to a "not guilty" verdict.

120. The drinking age in Alberta should be lowered to 17 years.

Appendix B

ATTITUDES QUESTIONNAIRE

Your responses to this questionnaire, as well as all other information you provide in this study, are strictly confidential and anonymous. The experimenter will not release this information to anyone except the other researchers of this project. Please do not write your name or any other identifying information on this questionnaire. Thank you.

Please turn the page and begin.

Code No. _____

Please indicate the degree of **KNOWLEDGE** you have of each of the issues on this page, using the following scale:

0 1 2 3 4 5 6 7 8 9
no knowledge ... extremely high knowledge

Express your knowledge of each issue by filling in a number from the scale in the line beside each issue. You may use any scale number more than once.

SCALE NUMBER	ISSUES
_____	1. Should the University of Alberta eliminate "marking on the curve" and just give students marks based on a percentage system?
_____	2. Should HIV testing of all professional athletes in contact sports be mandatory?
_____	3. Are the education cuts and tuition hikes imposed by the Klein government a necessary strategy for eliminating the province's debt?
_____	4. Should all Albertans who were sterilized during the eugenics movement (for example, because they were classified as mentally retarded) receive compensation from the Alberta Government?
_____	5. Should capital punishment (i.e., for serious offenders) be reinstated in Canada?
_____	6. Should people have the right to die when they choose (i.e., because of a debilitating disease)?

Please go on to the next page.

Now we would like you to rate the 6 issues again, this time by indicating the degree of **INTEREST** you have in each of the issues. Please use the following scale for your ratings:

0 1 2 3 4 5 6 7 8 9
no interest — extremely high interest

Express your interest in each issue by filling in a number from the scale in the line beside each issue. You may use any scale number more than once.

SCALE NUMBER	ISSUES
_____	1. Should the University of Alberta eliminate "marking on the curve" and just give students marks based on a percentage system?
_____	2. Should HIV testing of all professional athletes in contact sports be mandatory?
_____	3. Are the education cuts and tuition hikes imposed by the Klein government a necessary strategy for eliminating the province's debt?
_____	4. Should all Albertans who were sterilized during the eugenics movement (for example, because they were classified as mentally retarded) receive compensation from the Alberta Government?
_____	5. Should capital punishment (i.e., for serious offenders) be reinstated in Canada?
_____	6. Should people have the right to die when they choose (i.e., because of a debilitating disease)?

PLEASE KNOCK ON THE DOOR BESIDE YOUR DESK WHEN YOU FINISH THIS PAGE, THEN WAIT FOR YOUR RESEARCHER TO RETURN.

Appendix C

QUESTIONNAIRE BOOKLET

Please complete each page of this booklet in the order in which it appears. Do not work ahead. Again, all of your responses are strictly confidential and anonymous. Please turn the page and begin.

Code No. _____

How seriously did you take the instructions given by the experimenter before your 10-minute discussion? That is, to what extent did you seriously and intentionally try to be persuasive and convincing during the discussion (try to be supportive and encouraging of your partner during the discussion) (try to discuss with your partner the perspective on the issue that you were assigned)? Please respond by circling one of the numbers in the scale below.

1	2	3	4	5	6	7
did not take instructions seriously at all						took instructions very seriously

Please go on to the next page.

Think for a few moments about the discussion you and your partner had. As you review in your mind the points and ideas that the two of you discussed, think about how you discussed the issue with your partner: What purposes or objectives were you trying to achieve during your discussion? You may have started your conversation with only one or two objectives, but developed others as the conversation went on. Please list and describe these objectives in the space below. (Note that we are not asking you to list each of the points and ideas that you and your partner discussed; rather, we are asking you to list the objectives you were trying to achieve during your discussion.)

Please go on to the next page.

The following items ask about your experience of the 10-minute discussion. Using the rating scales provided, rate each item by circling a number.

1. How much did you enjoy your discussion?

1	2	3	4	5	6	7
did not enjoy it at all						enjoyed it a great deal

2. How much did you like your partner?

1	2	3	4	5	6	7
did not like partner at all						liked partner a great deal

3. How psychologically comfortable did you feel during your discussion?

1	2	3	4	5	6	7
not at all comfortable						very comfortable

4. How self-confident did you feel?

1	2	3	4	5	6	7
not at all confident						very confident

5. How competent did you feel?

1	2	3	4	5	6	7
not at all competent						very competent

6. How well do you think you presented yourself?

1	2	3	4	5	6	7
presented myself poorly						presented myself very well

Please go on to the next page.

7. How concerned were you with convincing your partner that your ideas were most important?

1	2	3	4	5	6	7
not at all concerned						very concerned

8. How concerned were you with supporting and encouraging your partner?

1	2	3	4	5	6	7
not at all concerned						very concerned

9. How persuasive do you think you were?

1	2	3	4	5	6	7
not at all persuasive						very persuasive

10. How supportive do you think you were?

1	2	3	4	5	6	7
not at all supportive						very supportive

11. Think about the goal(s) you had during your discussion. How successful do you think you were in achieving your goal(s)?

1	2	3	4	5	6	7
not at all successful						very successful

12. How much do you think your partner enjoyed the discussion?

1	2	3	4	5	6	7
did not enjoy it at all						enjoyed it a great deal

Please go on to the next page.

13. How much do you think your partner liked you?

1	2	3	4	5	6	7
did not like me at all						liked me a great deal

14. How psychologically comfortable do you think your partner felt during the discussion?

1	2	3	4	5	6	7
not at all comfortable						very comfortable

15. How self-confident do you think your partner felt?

1	2	3	4	5	6	7
not at all confident						very confident

16. How competent do you think your partner felt?

1	2	3	4	5	6	7
not at all competent						very competent

17. How well do you think your partner presented himself/herself?

1	2	3	4	5	6	7
presented self poorly						presented self very well

18. How concerned do you think your partner was with convincing you that his/her ideas were most important?

1	2	3	4	5	6	7
not at all concerned						very concerned

19. How concerned do you think your partner was with supporting and encouraging you?

1	2	3	4	5	6	7
not at all concerned						very concerned

Please go on to the next page.

20. How persuasive do you think your partner was?

1	2	3	4	5	6	7
not at all persuasive						very persuasive

21. How supportive do you think your partner was?

1	2	3	4	5	6	7
not at all supportive						very supportive

22. How successful do you think your partner was in achieving his/her goal(s)?

1	2	3	4	5	6	7
not at all successful						very successful

Please go on to the next page.

Did you hear anything about this study before coming in today for your session? If so, what?

What do you think was the nature of this study? That is, what do you think we were interested in testing or finding out in this study?

Is English your native language or, at least, one of the languages you spoke as a small child?

_____ Yes
_____ No

Please indicate: (a) your sex: _____ Male
_____ Female

(b) your age: _____ years

PLEASE LET THE RESEARCHER KNOW THAT YOU ARE FINISHED.

Appendix D

Coding Manual for Verbal Reinforcers and Spoken Ideas

Verbal Reinforcers

Definition. Verbal reinforcers are minimal responses spoken by the listener while or immediately after the speaker's turn. Verbal reinforcers are not attempts to claim the "floor, " or the right to speak. Rather, their function is to signal acknowledgment, agreement, attention, or need for clarification (Duncan, 1972, 1974; Marche & Peterson, 1993). Common forms of verbal reinforcers include "mm-hmm," "uh-huh," "right," "really?" and "okay." They can also take on the form of sentence completions (finishing the speaker's sentence for him or her after a short pause, or saying the same thing at the same time as the speaker) and brief restatements (repetitions) of the speaker's words.

Rules.

1. The original speaker must continue speaking following the listener's reinforcing response for the response to be coded as a verbal reinforcer.

(a) If a period of > 2 sec elapses between a break in the speaker's speech and a reinforcing response made by the listener, this response is not coded as a verbal reinforcer.

(b) If, following the listener's reinforcing response, the listener continues to speak, this is considered a speaking turn and therefore the response is not coded as a verbal reinforcer.

Exception: If a period of > 2 sec elapses between the listener's reinforcing response and her/his next spoken words, the reinforcing response will be coded as a verbal reinforcer, since the listener paused for a sufficient length of time to allow the original speaker to continue if she/he desired.

2. Reinforcing responses are not coded as verbal reinforcers when they occur during "collaborative floors" (Edelsky, 1981). A collaborative floor occurs when the floor is shared by more than one speaker. Because the norm in collaborative floors is for speakers to take the floor from each other for brief periods in response to previous speakers' speech, distinguishing among verbal reinforcers, supportive interruptions, and legitimate turns is extremely difficult. For this reason, verbal reinforcers are not coded during collaborative floor speech segments.

3. The listener can verbally reinforce the speaker more than once in a given turn. If it is unclear whether more than one verbal reinforcer has been uttered, the following guideline is used: If there is a pause between two (or more) "parts" of the listener's speech, each part meeting the definitional criteria for verbal reinforcers, and during that pause the original speaker has spoken, each part is coded as a verbal reinforcer. Otherwise, the listener's reinforcing response is coded as only one verbal reinforcer.

Speech example. The following excerpt is transcribed according to guidelines described by Sacks, Schegloff, and Jefferson (1974). The double oblique (//) indicates the point at which the speaker's speech is overlapped by the speech of a second speaker. A single right hand bracket (]) indicates the point in the current speaker's speech at which the second speaker's overlapping speech ends. Numbers in parentheses indicate elapsed time, in seconds and tenths of seconds. Verbal reinforcers, as coded according to the definition and rules described above, are underlined.

F This, oh also there's no chance of them ever getting bail or // uh] y'know escaping or anything //(1.5)] which'd be good

M // Yeah that's true

M // That's true

M I think it, I think, like, for ch- you talk about cheaper tax-wise?

F Mm-hmm

M I already commented on this, but- I think they should get'em to start- if a convicted killer, they should get'em on more of a work program // (1.0)] building license plates for us

F // Mm-hmm

F Yeah th-actually, th- //

M // You know, for the rest of their life, that'll make them not ever want to do it again

F Mm-hmm (3.5) although, if they're in jail they get free room and board // and food] and everything

M // Yeah that's true

Spoken Ideas

Definition. Spoken ideas were defined as points, ideas, or arguments made by speakers in favor of their assigned perspective or in contradiction of their partner's assigned perspective. Individual ideas can have common elements (e.g., one can be an elaboration of the other), but each idea must either express support of the speaker's perspective or refute his/her partner's perspective in a way that is unique to that idea.

Rules.

1. Several ideas can be expressed in a single speaking turn or even in a single statement. Conversely, it may take a speaker several statements in order to express a single idea.

2. (a) Repetitions of the same idea or a similar idea are counted as separate ideas if the repeated idea occurs in a different speaking turn than the one in which the idea was first expressed.

2. (b) Repetitions of the same idea are not counted as separate ideas if they occur in the same speaking turn or if the repetition is elicited in response to a request from the other interactant to repeat the idea.

Speech example. The following excerpt is from a discussion of the HIV topic. The male in the example was assigned the "no" perspective (i.e., the perspective that HIV testing of professional athletes in contact sports should not be mandatory), whereas the female was assigned the "yes" perspective. Each idea is underlined and numbered in brackets.

M Uh, is the purpose of this sport - is the purpose of the testing actually (0.3) for the benefit of the safety of the athletes, or, for like the media [1]? Like (0.5) I-like-I-I sometimes I question whether um (0.5) you do all this testing. W-why? Right? //] Like why are you doing all this testing? Is it because, so the media can have something else to write about. One other concern is, a lot of the results can be (0.4) um tampered with [2], or how accurate are the results [3]?

F // Mm-hmm

F They'll exploit it

M Yeah

F Um. Too, that can also go the other way is um, sometimes you notice that the (0.3) if there's like a - a (0.3) a sports celebrity that is infected, then, like, knowledge is - is further (0.4) y'know people take more interest in it [4]? //] Whether if it's just the-the regular society like, people that are infected at, when it's like a celebrity, then people usually take a-a keener interest in it and find out more about it

M // Yes