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ABSTRACT

Following the reasoning of "expectation states theory", the present study was designed to answer three questions: (1) Is the task orientation of males and females different when they work on a task together? (2) Is the task orientation of males and females working on a task, separately, different? and, (3) If there are differences, will status theory account for them? Forty male and forty female high school students served as subjects in the study and were placed in several different mixed- and same-gender groups. The group task was a board game which required collective decision-making and allowed investigation of the effect of female status on the emergence of female leadership. Results showed that mixed-gender groups were more active than single-gender groups, and that when males engage in collective tasks with females they are excessively active. While the analysis helped dispel prevalent notions that males are, in fact, more task-oriented than females, it shed little light on the extent of status differentiation, based on gender, that occurs within groups. (Author/PC)

The Modification of Female Leadership Behavior in the Presence of Males

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Introduction

My original conceptualization of this research, and hence the title of this paper, was to examine "The Modification of Female Leadership Behavior in the Presence of Males." In retrospect, having analyzed the data, it might better have been called, "The Modification of Male Leadership Behavior in the Presence of Females." And the differences in those two titles should provide educators with food for thought, especially since the enactment of Title IX legislation to eliminate sex discrimination in the schools.

In the literature, there is a rather consistent finding that, in mixed sex groups, men are more active than women, are more influential than women and are more task oriented than women. By these three indicators, we may conclude that leadership in mixed-gender groups is typically conceded to the males. One explanation frequently offered for this finding is that males are simply more active and overtly aggressive than females. Another is that males and females are simply socialized to occupy different roles in society, with the males occupying the instrumental roles and the females occupying the expressive roles.

Another explanation is that males and females simply expect that males are more likely to be competent at a task than are females and that, therefore, females are more likely to defer to the males under certain conditions. In

this case the expectation is based, not on specific role expectations for instrumental or expressive behavior, but rather on the relative value accorded males and females in the society.

The formal theory of diffuse status characteristics and expectation states (Berger, Cohen, and Zelditch, Jr., 1972) argues that when a group is working on a valued task, when there is some competence which is instrumental to the successful completion of the task, when the individuals in the group are task-focused and collectively oriented, and finally, when the individuals involved differ on one and only one diffuse status characteristic -- under these four conditions, the group members will expect the high status individuals to be more competent at the task. Status, in this case, refers to the value attributed to the different states of the differentiating characteristic. That is, for example, the characteristic "gender" has two different states: male and female. With each state of the characteristic is associated a value, a set of specific evaluated competencies and a general expectation state having the same value as the state of the characteristic.

Expectation states theory predicts that under the conditions just mentioned the relative power and prestige of group members will be determined by their relative status. If "gender" functions as a status characteristic, therefore, with the male state more highly valued than the female state, the theory predicts that males will be more likely to hold positions of power and prestige in mixed-gender groups than will females.

Following the reasoning of the foregoing theory, the present study was designed to answer three questions: (1) is the task orientation of males and females working on a task together different; (2) is the task orientation of males and females working on a task separately different; and (3) if there are any differences, will status theory account for them?

Procedure

In order to examine the effect of the status characteristic "gender" on task oriented leadership of mixed-sex groups, the following study took place. Forty male and forty female high school students matched on age, verbal ability, and cognitive style, who did not know each other, were assigned to work on a group task known only as "The Game." All subject played "The Game" twice. Half the subjects worked first in four-person groups of their own gender, while half of the subjects worked first in groups composed of two males and two females. For the second round, those who had played first in a mixed-gender group played in a single-gender group, while those who played first in a single-gender group played in a mixed-gender group. Groups were completely recomposed between rounds of "The Game," so that no individuals played with any other individual twice.

Because the study sought to investigate the effect of female status on the emergence of female leadership (and, incidentally, the effect of male status on the emergence of male leadership), an experimental environment had to be created that was balanced as to males and females and hence initially equal in status for both. In order to accomplish this, several steps were taken. First, there were two male and two female host experimenters. Second, the instructions for "The Game," were tape recorded three times, once by a female voice, once by a male voice, and once by male and female voices alternating. Third, the single-gender groups were assigned a host experimenter of the same gender and listened to the recorded instructions in the same gender voice; the mixed-gender groups were equally divided according to the sex of the host experimenter and listened to the instructions spoken by alternating male and female voices.

The task which the groups worked on was a board game, the object of which was to move a token from one side of a board to the other, moving along a set of interconnected paths and accumulating points. Winning the game was defined as reaching the goal in fourteen rolls of the die. An incentive was a hypothetical "high score" which the team was encouraged to surpass. "The Game" requires collective decision-making, is apparently valued, and is ambiguous, lacking any rational "best strategy." It permits many alternative suggestions which must be resolved into a group decision, and permits the observation of emergent leadership.

The entire game sequence was recorded on videotape. The number of task-related remarks initiated by each group member was counted by observers coding the tapes. This data serves as the basis for the ensuing analysis.

Results

The first question to be answered is: are females and males different with regard to task orientation? The measure of task orientation used here is the total number of task-oriented acts initiated as coded from the videotape.

Table 1 shows that, as far as group totals are concerned, male groups and female groups are equally task oriented, with male groups having a lower mean for initiation but greater variance. What is notable about Table 1, however, is that the mixed-gender groups are so much more active than the all-male groups ($t = 2.40$; $p < .05$). It seems that if male groups and female groups do not differ as to task oriented activity, then groups of both males and females should not be so much more active than either male or female groups. We would like to know to which sex -- if either -- this greater activity may be attributed.

According to status characteristic theory, males will be more active than females in mixed-gender groups. As Table 2 shows, it is true that the average male appears to initiate more task-related acts than does the average female in a mixed-gender group. (A statistical test is not feasible, as these are dependent measures). However, while the average female initiates neither more nor less in mixed groups than in all-female groups, the average male initiates significantly more in groups of males and females than he initiates in all-male groups ($t = 2.76$; $p < .001$). This accounts, therefore, for the finding that mixed-gender groups are more active than single-gender groups. When males engage in collective tasks with females they are excessively active.

It was noted that half the subjects played the game initially in mixed-gender groups, while half played the game initially in either all-male or all-female groups. Those who played first in a single-gender group had an opportunity to develop a self expectation for their own competence at "The Game" without reference to the comparative competence of males and females. Those who played "The Game" first in a mixed-gender group were most likely to be influenced by expectations external to the game. In short, we would anticipate greater differences between the amount of task-oriented activity exhibited by males and females in naive mixed-gender groups than in experienced mixed-gender groups.

As Table 3 indicates, females who had an opportunity to form a self-evaluation of their own competence vis-a-vis the task <u>independent</u> of males, are significantly more active in mixed-gender groups than females who are first exposed to the task in mixed-gender groups ($t = 2.876$; $p < .005$). The group of females who obtained their experience in an all-female setting appear to be equally as active as the males in either setting.

Although the previous analyses help to dispell the prevalent notion that males are ipso facto more task-oriented than females, they shed little light on the extent of status differentiation, based on gender, that occurs within groups. One problem which frequently confronts researchers dealing with intra-group phenomena is that most parametric statistics are designed to test for group differences on independent measures. The interactions of individuals in groups are hardly independent; measures taken of such interactions are equally dependent.

This need for a statistical tool to help analyze status discrepancies within groups led to generating a hypothetical distribution of such activity, using a computer assisted technique known as a "Monte Carlo."[1] One hundred four-person groups were simulated. The number of acts initiated by each hypothetical group member (a statistical individual) was converted to a percent of the group's total. Means and standard deviations of the percentage of acts initiated by the statistical individuals, ordered by magnitude of measure in session, are given in Figure 1.

Against the standard provided by the Monte Carlo, it is possible to examine status differences within groups. Figure 1 presents the percentage of acts initiated by the more active and less active males and females in mixed-gender groups, and compares these figures with the Monte Carlo data.

In naive mixed-gender groups, the status differential between males and females is greatest. While the more active male is not statistically different from the most active statistical individual, the more active female is only as active as the third most active statistical individual. Furthermore, while

[1]The assistance of Dr. Ledyard R. Tucker in developing and running the "Monte Carlo" is gratefully acknowledged.

the less active male is not statistically different from the third most active statistical individual, the less active female is not statistically different from the least active statistical individual. All other comparisons between actual and statistical individuals show significant differences. It is possible to say, therefore, that in naive mixed-gender groups the more active male is more active than both the females and that the less active male is both as active as the more active female and more active than the less active female. In short, over a set of task groups whose members have no other basis than gender for attributing task competence to themselves or others, a pattern of male dominance -- but not female inactivity -- emerges.

A somewhat different pattern of task leadership occurs when the group members have had a prior experience of the task from which to obtain a self-evaluation of competence relative to the task. In this case, while the more active male is again as active as the most active statistical individual, the more active female is both significantly more active than the second most active statistical individual and less active than the most active statistical individual. The less active female is not significantly different from the third most active statistical individual, while the less active male is significantly less active than the least active statistical individual. Thus, in these experienced groups, while the more active male is still more active than the more active female, the difference is not so great as before; and the less active male has become significantly less active than both of the females. That is, the degree to which the expectations associated with states of the diffuse status characteristic "gender" are able to influence emergent task leadership may be modified by an experience which provides males and females an opportunity to evaluate their own competence without regard to gender.

Implications

What implications does this research hold for educators? First, it seems safe to say that simply equalizing educational opportunities for males and females -- for which the naive mixed-gender groups are an analog -- will not be sufficient to alter the pattern of male leaderhship which is all too characteristic of this society. As long as there are widespread beliefs that males are somehow "better" than females, then work groups -- be they classrooms, teams of scientific researchers, or presidential cabinets -- will have male leadership with its consequent influence. Second, the problem does not appear to be, as initially hypothesized, that women need to be more assertive, that is, that female leadership is modified in the presence of males. Quite the contrary; it appears that male leadership is modified by the presence of females. Which leads me to my final inference: that the type of males and females best able to work together in an equal status manner may be those who have developed self-expectations for competence at the particular task by learning the task first with members of their own sex.

As a postscript let me add that I recognize the untimeliness of this last inference. It is a muddle. Although separate may be inherently unequal, together in this case seems to be also unequal. In a society in which men and women are unequal, treating boys and girls equally will only result in producing men and women who are unequal. Interventions, as they say, are needed.

Table 1

Means and Standard Deviations of Total Task-Related Acts Initiated in Four-Person Groups

Group Type	Mean Acts Initiated	S.D.
Female (N = 8 groups)	91.4	12.77
Male (N = 10 groups)	82.5	26.38
Mixed (N = 17 groups)	103.5	18.56

Table 2

Means and Standard Deviations of Individual Task-Related Acts Initiated by Males and Females in Four-Person Groups

Gender of Subject	Mean Acts Initiated	S.D.
Female		
In female group (N = 32)	23.31	8.63
In mixed group (N = 34)	24.41	9.23
Male		
In male group (N = 40)	22.13	11.88
In mixed group (N = 34)	27.32	12.18

Table 3

Means and Standard Deviations of Individuals Task-Related Acts Initiated by Males and Females in Naive and Experienced Mixed-Gender Groups

Gender of Subject	Mean Acts Initiated	S.D.
Female		
In naive group (N = 16)	19.93	6.28
In experienced group (N = 18)	28.38	9.76
Male		
In naive group (N = 16)	28.31	9.92
In experienced group (N = 18)	26.44	14.04

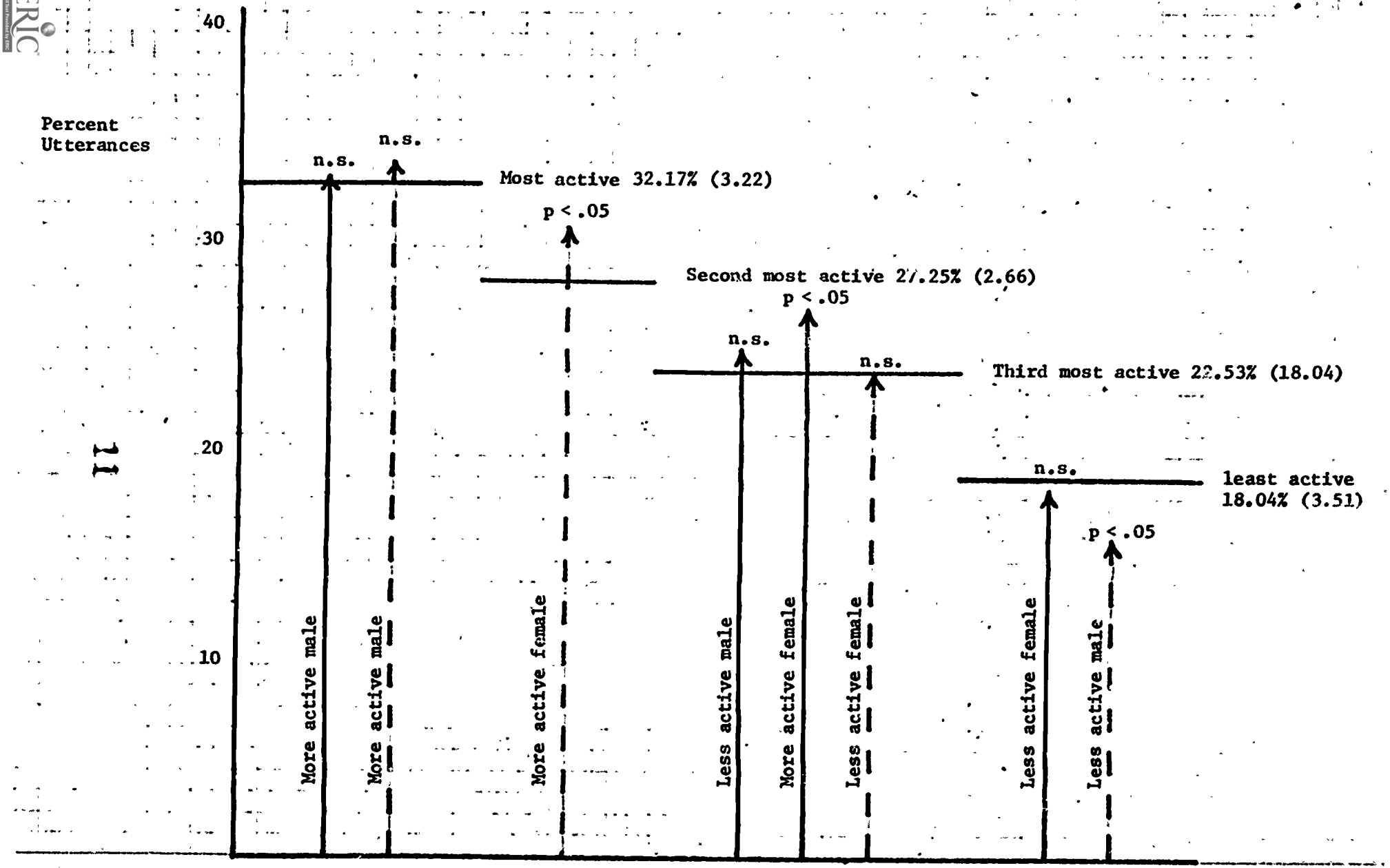

Figure 1

Comparisons of the Mean Percent of Utterances of statistical individuals in four-person groups, ordered by magnitude of contribution within group, to Mean Percent of Task Oriented Acts of males and females in four-person groups, ordered by sex and by magnitude of contribution within group.