EFFECTS OF SEX AND GENDER ROLE ON LEADER EMERGENCE

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The effects of sex and gender role on self- and group perceptions of leader emergence were examined. Though women were slightly more likely to emerge as leaders than men, gender role had a stronger effect on emergent leadership than sex. Specifically, androgynous and masculine subjects were the most likely to emerge as leaders.

A considerable amount of research has been devoted to understanding the factors associated with individuals emerging as leaders in groups (see Bass [1990] for a review). Two of these characteristics are biological sex and gender role (Goktepe & Schneier, 1989). Past research has consistently shown that men more often emerge as leaders than women (Carbonnell, 1984; Megargee, 1969). This phenomenon has been attributed to internal (Terborg, 1977; Wentworth & Anderson, 1984; White, DeSanctis, & Crino, 1981) and external (Ahrons, 1976; Bowman, Worthy, & Greyson, 1965; Goodale & Hall, 1976; Powell, 1993; Weisman, Morlock, Sack, & Levine, 1976) barriers limiting women’s leader emergence. However, recent evidence suggests that there have been shifts in societal acceptance of women as leaders (Sutton & Moore, 1985) and that some of the barriers that prevented women from emerging as leaders may be coming down (Brenner, Tomkiewicz, & Schein, 1989; Chusmir & Koberg, 1991).

Changes also appear to be occurring in perceptions of the importance of stereotypically masculine and feminine characteristics for leaders. Past research has overwhelmingly associated masculine characteristics with leader emergence (Fagenson, 1990; Goktepe & Schneier, 1989), but recent studies present somewhat different views. For example, Brenner and colleagues (1989) found that female managers described the “successful middle man-

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1 "Leader emergence, as contrasted with leadership, is a product of social interaction and results in a consensus among group members that one [or more] individual(s) could serve the group more usefully in attaining group goals than the other members" (Bass, 1981: 13).
"manager" as possessing both stereotypically masculine and feminine characteristics. Other studies suggest that an androgynous leadership style may help women overcome stereotypes that have prevented them from being viewed as leaders in the past (e.g., Korabik, 1990).

Given what appear to be changing perceptions of leaders, a reexamination of the characteristics of emergent leaders is appropriate. Thus, the purpose of this study was to reexamine the relationships between leader emergence and the characteristics of sex and gender role. Specifically, this study had three objectives: (1) to determine whether men are still more likely to emerge as leaders in group situations, (2) to further investigate the effects of gender role on leader emergence, and (3) to determine whether sex or gender role better predicts leader emergence.

SEX EFFECTS

Over the past three decades, many studies of sex and leader emergence have been conducted. A classic study by Megargee (1969) examined the effects of dominance and sex on leader emergence. In what Megargee intended to be a gender-neutral task, subjects rated high on dominance, as measured by the dominance scale on the California Personality Inventory, (Gough, 1957), and working in same-sex dyads emerged as leaders 69 percent of the time. In mixed-sex dyads with high-dominance men and low-dominance women, the men emerged as leaders 88 percent of the time. However, in mixed-sex dyads with high-dominance women and low-dominance men, the women emerged as leaders only 25 percent of the time. A similar pattern of results was produced when a masculine task was used.

There have been several replications of the original Megargee (1969) study. Anticipating that shifts in societal gender-role expectations would affect the frequency of women's leader emergence, Nyquist and Spence (1986) used what they thought to be a more gender-neutral task and found similar results. In Carbonell's (1984) replication study, only 30 percent of the high-dominance women in mixed-sex pairs became leaders when a masculine task was used. Women were somewhat more likely to emerge as leaders when a feminine task was used, but not more likely than men.

A study by Wentworth and Anderson (1984) included masculine, neutral, and feminine tasks. Using only low-dominance subjects, they found that men emerged as leaders in the masculine and neutral tasks and women emerged in the feminine tasks. Interestingly, those authors attributed women's leader emergence in the feminine tasks to task expertise but attributed men's emergence in the masculine and neutral tasks to role expectations. Thus, the researchers concluded that women must be seen as experts to be perceived as leaders, whereas men become leaders when there are no female experts because it is expected.

Fleisher and Chertkoff (1986) conducted the most recent replication of the Megargee study, using a gender-neutral task. In the critical groups pairing high-dominance women and low-dominance men, women emerged as
leaders 50 percent of the time. An additional feature in this study was that half the subjects in the high-dominance female–low-dominance male dyads received feedback that the women had performed better than the men on a task-related pretest. Results indicated that the men who received this information were significantly more willing to have a female leader than those who did not receive the information. The results of Fleischer and Chertkoff (1986), Wentworth and Anderson (1984), and Carbonell (1984) suggest that women may have been slightly more likely to emerge as leaders in the 1980s than in the 1960s, but their chances of doing so were best when they were perceived as experts.

Finally, Dobbins, Long, Dedrick, and Clemons (1990), using a different research method, asked groups consisting of four subjects to work on a task that allowed them to interact for longer than was allowed in the Megargee paradigm. Upon task completion, subjects were asked to (1) choose one leader and (2) to rate each group member on the extent to which they would like him or her to be leader. Men were rated higher and chosen more often as leaders than women. Thus, even though recent research shows that barriers to female leader emergence are being lowered (Brenner et al., 1989; Chusmir & Koberg, 1991), most research supports the notion that men are still more likely to emerge as leaders than women.

GENDER-ROLE EFFECTS

Because of traditional gender stereotypes, it appears that the possession of feminine characteristics is detrimental to leader emergence, and the possession of masculine characteristics is beneficial (Fagenson, 1990). However, with the women's movement of recent decades, the mass entrance of women into the work force, the increasing number of female managers (Powell, Posner, & Schmidt, 1984), and societal shifts in gender-role perceptions (Helmreich, Spence, & Gibson, 1982), the formerly clear, unambiguous roles of the sexes have been blurred. In principle, the concepts of masculinity and femininity are not necessarily precise correlates of biological sex (Bem, 1974). Thus, a man or a woman may possess either masculine or feminine characteristics, or both. Given the changes in societal perceptions of the role of women and the advancement of some women into leadership positions, it is possible that women today possess more masculine characteristics than they have at any time in the past. Several studies support this contention. For example, Powell and Butterfield (1979) found that female master's in business administration (M.B.A.) students rated themselves higher in masculinity than in femininity. Additionally, women who have chosen traditionally masculine or managerial careers have very likely rejected customary gender stereotypes (Brenner et al., 1989), are more likely to have been raised in families with full-time working mothers (Almquist, 1974), and possess attitudes uncorrelated with interest in traditional feminine professions (Tipton, 1976).

Several studies have shown masculinity to be associated with leader
emergence. In a study by Goktepe and Schneier (1989), college students performed gender-neutral tasks over the course of a semester. The effects of both sex and gender role on leader emergence were assessed. The results indicated that sex had no effect on leader emergence, but gender role did. Specifically, regardless of sex, masculine subjects were more likely to emerge as leaders than feminine, androgynous, and undifferentiated individuals.

A field study by Fagenson (1990) produced similar results. Men and women in this study who were high in an organizational hierarchy were significantly higher on measures of masculinity than were lower-level workers. These significant findings emerged after the researcher had controlled for several important demographic variables.

In view of these findings, we predicted that gender identity would better explain leader emergence than sex.

Hypothesis 1: Men will more often emerge as leaders in group situations than women.

Hypothesis 2: Group members high in masculinity will emerge as leaders more frequently than those low in masculinity.

Hypothesis 3: Gender identity will account for more variance in leader emergence than biological sex.

An additional feature of our study was an attempt to further assess the relationship between gender role and leader emergence. To do this, we followed Bem's (1974) method of classifying individuals on the basis of their levels of both masculinity and femininity, since these are considered to be independent dimensions. Thus, individuals were classified as (1) masculine when they rated high on items assessing masculinity and low on those assessing femininity; (2) feminine, low masculinity and high femininity; (3) androgynous, high masculinity and high femininity, or (4) undifferentiated, low masculinity and low femininity. In view of the research overwhelmingly concluding that masculinity is related to leader emergence, we hypothesized

Hypothesis 4: Individuals classified as masculine or androgynous will emerge as leaders more frequently than individuals classified as feminine or undifferentiated.

However, it was not clear whether having feminine characteristics would strengthen or weaken the prospects of leader emergence for those high in masculinity. Thus, an exploratory aspect of this study was to identify potential differences in leader emergence between masculine and androgynous subjects.

**METHODS**

**Participants**

Participants in this study were 122 undergraduate, mostly nonworking, business students enrolled in one of three upper-division courses in busi-
ness policy or organizational behavior at a large southeastern university. Students in each class were asked to complete questionnaires near the end of the semester, and all agreed. Seven students were eliminated from the study because they did not fully complete all necessary measures, making the final number of participants 115 (67 men and 48 women).

At the beginning of the semester, the students formed 23 groups, each of which had four to seven members. Students selected their own groups under no constraints imposed by the instructors. Proximity was the primary basis of group formation. Twenty-one of the 23 groups (91%) had five or six members, 1 had four members, and 1 had seven members. Group size was not expected to influence leader emergence (Goktepe & Schneier, 1989). However, because there were more men than women overall, the sex composition of the groups was noteworthy. Sixteen of the groups (70%) had at least two women, 6 groups had one woman, and 1 group had no women.

Procedures

Throughout the semester, group members worked together on several required case presentations or written case analyses, depending on the class. These tasks were considered to be gender-neutral (Goktepe & Schneier, 1989) compared to a masculine task such as repairing machinery (Carbonell, 1984) or a feminine task such as planning a wedding budget (Wentworth & Anderson, 1984), both of which have been used in other studies. Preparing the assignments required a significant amount of interaction outside of class. The students' frequent interactions provided the opportunity for them to develop relatively strong perceptions about their group members' leader-related behaviors as well as their own.

Immediately following completion of the final group project, all participants responded to the Bem Sex-Role Inventory (BSRI; Bem, 1974) and to three items designed to measure their perceptions of their own leader behaviors as well as those of their group members.

Measures

**Gender role.** By comparing individuals' scores on the BSRI to the medians for the entire study group on masculinity and femininity, we assigned each individual to one of the four gender-role categories, masculine, androgynous, feminine, and undifferentiated. In these data, the median cutoffs for masculinity and femininity were scores of 5.3 and 4.7, respectively. Individuals categorized as androgynous had mean masculinity and femininity scores of 5.84 and 5.18, and those categorized as masculine had mean masculinity and femininity scores of 5.73 and 4.03. Feminine individuals had mean masculinity and femininity scores of 4.57 and 5.38. Undifferentiated individuals had mean masculinity and femininity scores of 4.59 and 4.09.

**Leader emergence.** Leader emergence was assessed using a three-item scale we developed in previous research (Kent & Moss, 1990). These items are based on research summarized in Bass (1981) that suggests that the
emergent leaders in groups talk more than others, participate more actively, and make more attempts to influence the group. An interesting feature of this instrument is that it allows for the assessment of both self-perceptions of leader emergence and group perceptions, thus providing information about the roles of both internal (self) and external (group) barriers to leader emergence. We used the following measure: “Please rate the extent to which you and each member of your group (1) assumed a leadership role, (2) led the conversation, and (3) influenced group goals and decisions” (1, never, 7, always).

Though this measure has not been widely used to assess leader emergence, it has an important advantage. Other measures force respondents to choose only one leader from a group. In Goktepe and Schneier's (1989) study, for example, 25 percent of the groups were eliminated from statistical analysis because of lack of consensus among group members about choice of a single group leader. We suggest that in leaderless groups or work teams, members may see more than one person as leader and that different members may lead in different situations. The three-item measure used in this study allows for the possible emergence of more than one leader by not forcing subjects to choose between two or more group members who each played significant roles in leading the group. Additionally, the results of our ongoing work with a group of over 100 M.B.A. students at two large southeastern universities (Moss & Kent, 1994) indicate a correlation of .62 (p < .01) between the three-item measure and the conventional measure of leader emergence, which requires subjects to nominate one group member as leader (Bass, 1981: 44).

Self-perceptions of leader emergence were obtained by averaging self-ratings on the three items. Leader emergence scores based on the perceptions of group members were obtained by combining the average rating on the three items into a composite based on the responses of all other group members. The reliabilities for self-reported and group-reported leader emergence were .90 and .94, respectively.

RESULTS

Initial inspection of Table 1 reveals that masculinity was positively and significantly correlated with both self-perceived leader emergence and group-perceived leader emergence, supporting Hypothesis 2. Femininity was not significantly related to either measure of leader emergence. No significant correlation was found between sex and either measure of leader emergence.

Table 2 contains a cross-tabulation of sex and gender role for participants in this study. Approximately the same number of men and women were categorized as androgynous. However, more men were masculine and more women, feminine, and nearly twice as many men as women were undifferentiated.

Because there were fewer women than men in the study and because
TABLE 1
Pearson Correlations*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Means</th>
<th>s.d.</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-perceived leader emergence</td>
<td>5.25</td>
<td>1.83</td>
<td>.90</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. Group-perceived leader emergence</td>
<td>4.81</td>
<td>1.04</td>
<td>.49**</td>
<td>.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sex</td>
<td>.06</td>
<td>.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Masculinity</td>
<td>5.25</td>
<td>0.73</td>
<td>.37**</td>
<td>.22*</td>
<td>.31**</td>
<td></td>
</tr>
<tr>
<td>5. Femininity</td>
<td>4.69</td>
<td>0.75</td>
<td>.08</td>
<td>-.06</td>
<td>-.33**</td>
<td>-.10</td>
</tr>
</tbody>
</table>

* Reliabilities of leader emergence scales are in parentheses. N = 115.

* p < .05

** p < .01

groups varied with respect to sex composition, all analyses controlled for the percentages of women in the groups. Percentage of women rather than number of women was used because percentage allows for variation in group size. We conducted a two-by-four multivariate analysis of covariance (MANCOVA) controlling for the percentage of women in each group with sex and gender role as the independent variables and self- and group perceptions of leadership emergence as the two dependent variables. The results revealed a marginally significant effect for sex (F = 2.50, df = 2, 105, p = .087) and a significant effect for gender role (F = 3.12, df = 6, 210, p = .006).

In order to clarify the MANCOVA results, we conducted 2 two-by-four ANCOVAs in which the percentage of women in each group was a covariate. These analyses revealed significant main effects for gender role on both self-perceptions (F = 5.569, df = 3, 106, p = .001) and group perceptions (F = 4.210, df = 3, 106, p = .007). Sex was not related to self-perceptions of leader emergence (F = .061, df = 1, 106, n.s.), but there was a significant relationship between sex and group perceptions of leader emergence (F = 4.264, df = 1, 106, p = .041). It appears that women (x̄ = 4.94) were slightly more likely to be perceived as leaders by group members than men (x̄ = 4.77) when means were adjusted to account for the percentage of women in a group. There were no significant interactive effects. The percentages of variance explained by gender role and sex for group perceptions were 10.1

TABLE 2
Cross-Tabulation of Sex and Gender and Leader Emergence Ratings

<table>
<thead>
<tr>
<th>Gender-Role Class</th>
<th>Number of Men</th>
<th>Percent of Men</th>
<th>Number of Women</th>
<th>Percent of Women</th>
<th>Self-Perceived Leader Emergence</th>
<th>Group-Perceived Leader Emergence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Means</td>
<td>s.d.</td>
</tr>
<tr>
<td>Androgynous</td>
<td>15</td>
<td>22.4</td>
<td>13</td>
<td>27.1</td>
<td>5.702</td>
<td>0.803</td>
</tr>
<tr>
<td>Masculine</td>
<td>26</td>
<td>38.8</td>
<td>5</td>
<td>10.4</td>
<td>5.613</td>
<td>1.026</td>
</tr>
<tr>
<td>Feminine</td>
<td>9</td>
<td>13.4</td>
<td>21</td>
<td>43.8</td>
<td>4.867</td>
<td>0.953</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>17</td>
<td>25.4</td>
<td>9</td>
<td>18.7</td>
<td>4.833</td>
<td>1.334</td>
</tr>
<tr>
<td>Totals</td>
<td>67</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
percent and 1.3 percent, respectively; thus, results support Hypothesis 3 but do not support Hypothesis 1.

Table 2 reports means and standard deviations for each of the four gender-role classifications. To further explore the relationships between specific gender classifications and leader emergence, we performed pairwise t-tests. These tests revealed that androgynous and masculine participants scored higher on both self- and group perceptions of leader emergence than feminine and undifferentiated individuals.

Specifically, for self-perceptions of leadership, androgynous individuals scored significantly higher than feminine \((t = 3.60, p = .001)\) and undifferentiated individuals \((t = 2.92, p = .005)\). Masculine participants also scored higher on self-reports of leader emergence than feminine \((t = 2.94, p = .005)\) and undifferentiated \((t = 2.49, p = .016)\) people. There were no significant differences in the self-perceptions of leadership held by feminine and undifferentiated participants \((t = 0.11, n.s.)\). On group perceptions of leader emergence, androgynous individuals scored higher than either feminine \((t = 1.87, p = .067)\) or undifferentiated individuals \((t = 1.94, p = .058)\). Similarly, masculine participants scored higher on group perceptions of leadership than individuals classified as feminine \((t = 2.83, p = .006)\) or undifferentiated \((t = 2.76, p = .008)\). There was no significant difference in group perceptions for feminine and undifferentiated individuals. These results support Hypothesis 4.

To address the exploratory component of our study, we conducted a paired comparison between androgynous and masculine individuals. There were no significant differences between these two groups for either self-perceptions \((t = 0.37, n.s.)\) or group perceptions \((t = -0.88, n.s.)\) of leader emergence.

**DISCUSSION**

The most significant result of this study, that androgynous individuals have the same chances of emerging as leader as masculine individuals, has three important implications. First, consistent with previous studies and in support of Hypothesis 2, it is clear that masculinity is still an important predictor of leader emergence. In the correlational analysis, participants' masculinity scores were the only variables significantly associated with either measure of leader emergence. Second, contrary to previous findings, the emergence of androgynous leaders suggests that the possession of feminine characteristics does not decrease an individual's chances of emerging as a leader as long as the individual also possesses masculine characteristics. Third, as an extension, if women in other contexts are more likely to be androgynous than masculine, as they were in our study, they may have better chances of rising to leadership status. Of course, verification of this finding depends upon whether future studies find androgyny to be related to leader emergence in other settings.

The second important finding of the study, contrary to Hypothesis 1,
was that women were slightly more likely than men to be perceived as leaders by group members when the percentage of women per group was controlled statistically. This finding is significantly different from the results of all other studies linking sex to leader emergence. Although some recent studies have found maleness to be less predictive of leader emergence than it has been in the past (e.g., Goktepe & Schneier, 1989), no study has found women more likely to emerge as leaders than men. However, we feel that this finding should be regarded with some caution because of the unequal distribution of women in the student groups studied here and the small amount of variance explained by sex. Future studies should control for the sex composition of subject groups in order to better assess the current status of women with respect to emergent leadership. Even though the current finding is tentative, we should consider alternatives explaining why group members were slightly more likely to perceive women than men as leaders. It is possible that female participants were perceived as leaders because they tended to be more grade conscious than men (Hornaday, Wheatley, & Hunt, 1989) and may have pushed for higher levels of group performance. Alternatively, Eagly’s (1987) gender-role theory may provide some insight. Eagly suggested, and a subsequent meta-analysis confirmed, that men are more likely to emerge as leaders in task-oriented groups, but women are more likely to emerge as leaders in socially oriented groups (Eagly & Karau, 1991). Though the groups in this study were initially task-oriented, they may have developed a social component because this study allowed for extensive interaction time between group members, unlike previous studies in which group members only interacted for a few minutes. As a result, group members may have perceived the women as having considerable influence over the social components of the group. Finally, another possible explanation for this nonconvergent finding is that women are exerting their leadership abilities more today than ever before and group members are becoming more accepting of female leaders.

A third important finding was that gender role is a better predictor of leader emergence than sex. Though women were slightly more likely to be perceived by the groups as leaders, gender role explained more variance in leader emergence. Future studies may need to focus more on gender role than on sex.

Finally, the results on self-perceptions of leadership emergence are interesting. Comparing the effects of gender role on the self- and group perceptions makes it clear that those classified as masculine and androgynous were not only more likely than feminine and undifferentiated subjects to be perceived by their groups as leaders, but were also more likely to perceive themselves as leaders. Also notable was the nonsignificant effect of sex on self-perceptions of leadership emergence, which suggests that women were as likely as men to perceive themselves as leaders. In general, it appears that those whom others perceive as leaders also perceive themselves as leaders.

Naturally, several aspects of the research design limit the validity and generalizability of our findings. One concern is the possibility that results are attributable to common method variance resulting from the administra-
tion of both instruments at one time. We attempted to alleviate this concern by using a method suggested by Podsakoff and Organ (1986). Other concerns include the self-selection of groups, the use of business students as participants, the generalizability of the task, and potential regional differences affecting our participants. These points should be considered in future studies.

The divergent results of this study make evident several directions for future research. First, rather than allowing subjects to form groups on their own, future studies should carefully control for both the sex and gender-role composition of groups. Second, studies should use multiple measures to assess leader emergence (Dobbins et al., 1990). If subjects are forced to choose only one leader from a group, that leader may or may not have the same sex and gender-role classification as those who are rated high on leadership emergence questionnaires. Third, if researchers continue to find that androgynous individuals emerge as leaders, future studies should assess the relative effectiveness of masculine and androgynous leaders. Fourth, studies should be designed to assess the effects of sex and gender role on leader emergence in leaderless groups in organizations. Finally, because emergent leadership is an evolutionary phenomenon, the continual reassessment of who emergent leaders are is essential.

In summary, the results of this study suggest that androgynous individuals and women may be more likely than they were in the past to emerge as leaders in business school settings, where becoming a leader is fairly important. Although we must be cautious in generalizing our results to present business people, we feel that these changes in a college setting mean that future business people may be more accepting of female and androgynous leaders than their counterparts have been in the past. This acceptance could affect the probabilities of emergent leadership for future female and androgynous business people.

Harmon's one-factor procedure was used. Its premise is that if significant relationships between variables are attributable to common method variance, a single, universal factor will emerge from factor analysis. We entered the BSRI ratings, group perceptions, and self-perceptions into the factor analysis, and three very distinct factors emerged (one factor for each of these measures). Factor 1 was group perceptions; loadings for the three items were .88, .91, and .90. Factor 2 was self-perceptions; loadings for the three items were .80, .88, and .87. Factor 3 was the BSRI; loadings for masculinity and femininity were −.52 and .89, respectively. This pattern suggests that common method variance was not a pervasive problem in our study. One criticism of this technique is that the chances of finding a one-factor solution decrease as the number of variables entered into a factor analysis increases. Since we used only three factors, the results of the procedure seem reliable.

REFERENCES


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