

**LEADERSHIP EMERGENCE AND GENDER ROLES:
A CONTEXTUAL EXAMINATION**

by

Amy Beth Gershenoff

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Roseanne J. Foti, Ph.D., Chair

Neil M.A. Hauenstein, Ph.D.

Robert J. Harvey, Ph.D.

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(ABSTRACT)

Research suggests that gender role, rather than sex, is associated with the perception of individuals as leaders. The current study tests the effect of gender role on leadership emergence by using a pattern approach and manipulating task-type. 200 female undergraduate subjects, categorized based on their personality pattern of three variables (i.e., masculinity, femininity, and intelligence), were placed in groups of four members. Groups were randomly assigned to a consensus building or initiating structure task condition. Hypothesis one, which predicted that feminine-intelligent individuals would emerge more than masculine-intelligent or mixed personality pattern individuals in the consensus building task condition, was not supported. However, support was found for hypothesis two which predicted that masculine-intelligent individuals would be perceived as more leader-like than feminine-intelligent or mixed personality pattern individuals in the initiating structure task. Partial support was found for the emergence of androgynous-intelligent individuals in the consensus building task condition (hypothesis three), but full support was found for the emergence of androgynous-intelligent individuals in the initiating structure task (hypothesis four). The implications of these findings and directions for future research are discussed.

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INTRODUCTION

Leadership emergence is a result of the consensual agreement in the perceptions of fellow group members that one individual is the leader (Hall, Workman, & Marchioro, 1998). According to Lord and Maher (1991), leadership involves the behaviors, traits, and outcomes produced by leaders and the interpretation of these elements by followers. Research in small group leadership has focused on finding individual differences that predict leadership emergence. One individual difference that has been widely researched is the effect of sex on leadership emergence, generally supporting males as leaders (Hegstrom & Griffith, 1992). However, these differences may be better explained by gender role identity differences (Goktepe & Schneier, 1989; Hall et al., 1998; Kent & Moss, 1994; Moss & Kent, 1996).

Gender roles and biological sex are often confused in both psychology and social and organizational life. It is often thought that gender role is necessarily dictated by biological sex; that males are necessarily masculine and females are necessarily feminine. One of the reasons for this confusion is that these terms have been used interchangeably in the literature on leadership emergence in organizations.

While there is a correlation between sex and gender, gender is actually a distinct and culturally constructed phenomenon. To clarify, gender roles are defined as the shared expectations of individuals that are based solely on their socially identified sex (Eagly, 1987). Bem (1974) classified gender roles by identifying characteristics that are more valued for one sex or the other in American society. Hence, attributes and behaviors found to be more desirable for men than women are identified as masculine, and characteristics and behaviors that are more desirable for women than men are identified as feminine. Furthermore, Bem identified psychological androgyny as high levels of both masculine and feminine attributes and behaviors.

Past research on gender stereotypes has clearly established the existence of different expectations of attributes and behaviors for men and women based on their gender roles (Bakan, 1966; Broverman, Vogel, Broverman, Clarkson, & Rosencrantz,

1972; Eagly & Karau, 1991; Eagly & Wood, 1991; Hall, 1984). According to Bem, it is an individual's gender role identity and not their biological sex that determines the degree to which particular traits and behaviors are manifested. In this paper, and consistent with the more recent trend in the literature, gender will be defined socially, and sex will be defined biologically (Berdhal, 1996). Hence, a relationship between gender, not sex, and leadership emergence is proposed.

Because sex is not responsible for the manifestation of traits and behavior, it is not surprising that studies that have explored the relationship between sex and leadership emergence have found inconsistent results. Some find a sex difference, with a preference for male leadership (Carbonell, 1984; Fleischer & Chertkoff, 1986; Hegstrom & Griffith, 1992; Megargee, 1969). Other studies have failed to find a sex difference in the proportion of males and females that emerge as leaders (Anderson & Schneier, 1978; Schneier & Bartol, 1980). However, researchers that have examined the effects of gender on leadership emergence have found more consistent results (Goktepe & Schneier, 1989; Kent & Moss, 1994; Moss & Kent, 1996; Powell & Butterfield, 1979), generally supporting a preference for masculine leadership. Therefore, sex may only be a proxy variable, and gender may be the true cause of differences in leadership emergence.

The current research will study the effects of the combination of gender and intelligence on leadership emergence. A significant relationship between intelligence and leadership emergence has clearly been established in the leadership literature (Lord, DeVader & Alliger, 1986; Lord, Foti, & DeVader, 1984; Smith & Foti, 1998; Zaccaro, Foti, & Kenny, 1991). Gender and intelligence will be studied using a pattern approach. This approach makes it possible to group individuals together using the interaction of theoretically distinct variables, and to distinguish between individuals based on these subgroups (Smith & Foti, 1998). In this study, the variables that will be included in the pattern will be masculinity, femininity, and intelligence.

Traditionally, differences in leadership emergence have been studied in "neutral" situations such as required course projects (Goktepe & Schneier, 1989; Kent & Moss,

1994; Luthar, 1996; Moss & Kent, 1996). However, studies in the social psychological literature have found differential effects of gender associated with different types of tasks in nonorganizational settings (Bem, 1975; Bem & Lenney, 1976). In addition, these studies found a positive effect for psychological androgyny across tasks. Therefore, it is likely that leadership emergence is not only a function of person traits, but that different task types lead to different leadership outcomes.

Thus, the purpose of this study is to examine the effect of gender on leadership. Of particular interest is a) the effect of task type as a moderator of gender role on leadership emergence and b) the effect of psychological androgyny on leadership emergence. The differentiation between task types may lead to a preference for different types of leaders. This would indicate that depending on the nature of the situation, different gender-typed leadership behavior may be preferable. Moreover, it is possible that psychological androgyny is advantageous because it allows the individual to be flexible and emerge as a leader in situations that demand either masculine or feminine leadership.

The Trait Approach to Leadership Emergence

Early research on leadership emergence sought to identify those traits which distinguished leaders from followers (Bird, 1940; Jenkins, 1947). Although Mann (1959) supported Stogdill's (1948) findings of the relationships between intelligence and dominance with leaders, he found the relationships to have little strength (median $r = .25$). Furthermore, Barnlund's (1962) failure to find stable and consistent leadership characteristics through the variation of both group membership and task using a rotation design seemed to negate the trait hypothesis of leadership emergence. Taken together, these findings severely reduced research on individual differences in leadership emergence.

Research in the 1980's on the relationship between traits and leadership emergence suggested that stable differences do exist, renewing interest in this area of study. Kenny and Zaccaro (1983) reexamined Barnlund's (1962) findings using the Social Relations Model (Kenny, 1981) and found that 49 to 82 percent of the variance in leadership can be attributed to a stable characteristic. Lord, DeVader, and Alliger (1986) reanalyzed Mann's (1959) qualitative findings using meta-analysis, and found sizable and consistent associations between some traits (e.g., intelligence, dominance, and masculinity-femininity) and leadership emergence. Several studies have subsequently shown stable and consistent trait associations with the perception of leadership. In particular, a significant relationship between intelligence and leadership emergence has been demonstrated by several researchers (Lord, et al. 1986; Lord, Foti, & DeVader, 1984; Smith & Foti, 1998; Zaccaro, Foti, & Kenny, 1991).

Although the relationship between intelligence and leadership emergence has been clearly established, linkages between gender differences in the perception of leadership have not been as well established. Gender role theory (Eagly, 1987) states that societal gender roles, which are expectations that apply to individuals based on their socially identified sex, specify role specific behaviors that are appropriate for men and role specific behaviors that are appropriate for women (Eagly, & Karau, 1991). This theory maintains that people develop gender role expectations for themselves and

others based on their beliefs about what constitutes acceptable behavior for men and women. (Eagly & Johnson, 1990; Eagly, Makhijani, & Klonsky, 1992). A meta-analysis by Eagly and Karau (1991) which interpreted studies of sex differences in leadership emergence in terms of gender role theory revealed that sex differences in leadership behavior can be explained by a tendency to conform to gender role.

In the current examination, gender role will be studied using Bem's (1974) definitions of masculinity, femininity, and androgyny. Although masculinity and femininity are often thought of as opposite ends of a continuum, they are actually independent dimensions (Bem, 1974). An individual of either sex can be either masculine, feminine, both (androgynous), or neither (undifferentiated). Masculinity is defined by the degree to which an individual associates with those characteristics found to be more desirable for men than women in American society, and femininity is defined by the degree to which an individual associates with those characteristics that are more desirable for women than men.

According to Bem, "masculinity has been associated with an instrumental orientation, a cognitive focus on 'getting the job done'; and femininity has been associated with an expressive orientation, an affective concern for the welfare of others ". Positive relationships between masculinity and leadership emergence have been supported (Kent & Moss, 1994; Moss & Kent, 1996; Powell & Butterfield, 1979). There is less of a linkage between the femininity trait and the perception of leadership. However, research by Ross and Offerman (1997) suggests that feminine attributes were positively associated with transformational leadership. According to Bass (1985), transformational leaders can create drastic changes in organizations by engaging in behaviors that convey charisma, intellectual stimulation, and individualized consideration. This finding suggests that a relationship between feminine traits and the perception of leadership may exist.

Gender schema theory (Bem, 1981; 1985) states that highly gender schematic individuals come to perceive, evaluate, and regulate their own behavior in terms of the

culturally prescribed roles that are desirable for his or her sex. Accordingly, the highly gender schematic individual is motivated to maintain a self-concept that is consistent with societal norms for his or her sex (Bem, 1987; Kagan, 1964; Kohlberg, 1966). This is accomplished by engaging in behaviors that are considered appropriate for his or her sex, and divorcing his or her self from behaviors that are undesirable for his or her sex. Bem (1975) found that highly gender-schematic individuals had behavioral deficits, and were unable to display gender role adaptability and effectively engage in behaviors across situations that required characteristics of the opposite sex.

Psychological Androgyny. Behavioral evidence exists to support the claims that sex-typed individuals, more than androgynous individuals are limited in their adaptability to situations that require cross-sex behavior in nonorganizational situations. Bem (1975) found sex-typed individuals demonstrated behavior deficits to adapt their behavior to situations that required cross-sex behavior. However, androgynous individuals, regardless of sex, displayed “masculine” independence when faced with pressure to conform, and showed “feminine” playfulness when given the opportunity to interact with a kitten. Bem and Lenney (1976) found that sex-typed individuals were more likely than either androgynous or sex-reversed individuals to avoid cross-sex behavior, and to prefer sex-appropriate behavior, even when that choice cost them money.

Based on these findings, Bem (1975; 1976) asserts that the androgynous personality type is healthiest, because androgynous individuals are able to show flexibility in their behavior, and are better able to adapt to situations that demand behavior that is stereotypically more appropriate or desirable for one sex or the other. The psychologically androgynous personality endorsed high levels of both masculine and feminine behaviors and characteristics (Bem, 1974). That is, androgynous individuals are able to adapt their behavior to match the demands of the situation. They can display behaviors that are masculine, instrumental, and assertive as well as behaviors that are feminine, expressive, and yielding.

The few empirical studies that have examined the role of psychological androgyny and perceptions of leadership have generally found support for a relationship between androgyny and leadership emergence on neutral tasks. For example, in initially leaderless groups that only allowed for one emergent leader, Moss and Kent (1996) found that masculine personality types emerged as the leader most often, but in groups that allowed for multiple emergent leaders, both masculine and androgynous group members emerged. Furthermore, Kent and Moss (1994) found that androgynous and masculine subjects were most likely to emerge as the leader in gender-neutral task situations. These findings suggest that further exploration of the linkage between psychological androgyny and leadership emergence is necessary.

The concept of psychological androgyny is comparable to Hall, Workman, and Marchioro's (1998) description of flexibility. Hall et al. define behavioral flexibility as an individual's ability to perceive different situational demands and his or her ability and willingness to form different behavioral responses depending on the context (Bass, 1990; Zaccaro, Gilbert, Thor, & Mumford, 1991). Hall et al. interpret Bem's concept of androgyny as one of at least three operationalizations of behavioral flexibility, citing that androgynous individuals have a wider range of behavioral responses from which to draw, and are more likely to choose behaviors that match the demands of the situation.

Pratch and Jacobowitz (1996) found a correlation between an adaptability construct called active coping, and perceptions of leadership effectiveness. Androgyny is conceptually distinct from active coping because coping refers to an individual's ability to tolerate varying levels of difficulty and stress in a situation, whereas androgyny refers to high levels of both masculine and feminine traits. Although androgyny is correlated with behavioral flexibility (Bem, 1975; Bem & Lenney, 1976; Hall et al., 1998) it reflects an ability to engage in effective behaviors regardless of stereotypes that such behaviors are more appropriate for one sex or the other; active coping refers to strategies which optimize the adaptive balance between morals and internal psychological needs with the constraints of the environment (Pratch & Jacobowitz, 1996).

Gender role traits have also been studied in terms of agentic and communal personality types. The basis for the agentic-communal duality is an expectation that women display high levels of social characteristics and men are expected to have high levels of instrumental qualities (Bakan, 1966). Bem's (1974) constructs of masculinity, femininity, and androgyny are preferred in the current study for two reasons. First, different authors have defined agenticism and communalism amorphously and inconsistently. Communalism has been described in terms such as playfulness, spontaneity, caring, nurturing, need for affiliation, and lack of self-centeredness (Bakan, 1966; Berdahl, 1996; Pratch & Jacobowitz, 1996) and as concern for others, accomodation, friendliness, and a desire to be at one with others (Eagly & Karau, 1991; Gerber, 1988; Spence & Helmreich, 1978). Agenticism has been described by qualities such as aggressiveness, ambition, dominance, assertiveness, and independence (Bakan, 1966; Berdahl, 1996; Pratch & Jacobowitz, 1996) and self-expansion, urge to master, and competence (Eagly & Karau, 1991; Gerber, 1988; Spence & Helmreich, 1978). A second reason why Bem's conception of gender roles is preferable to the dimensions of agenticism and communalism is that the latter provides no parallel construct to Bem's concept of psychological androgyny.

In summary, despite early findings that failed to find significant relationships between individual differences and leadership, Lord et al.'s (1986) use of meta-analysis revealed consistent relationships between some traits and leadership emergence, renewing interest in this research area. A clear linkage between intelligence and leadership has been established. Furthermore, there is evidence that masculinity is related to leadership, and that femininity may be related to certain kinds of leadership behavior as well.

Patterns and Leadership Emergence

Although many researchers have tried to identify specific traits that correlate with leadership emergence, there has also been evidence that studying groups of relevant traits together in the form of a multi-variate pattern is more useful (Holmes, Sholley, & Walker, 1980; Magnusson, 1995; Smith & Foti, 1998). By using a pattern approach, it is

the interaction of variables and not the individual variables that are being studied. Rather than studying the relationship between individual variables (e.g., examining the extent to which intelligence predicts leadership), this interactionist approach attempts to describe the person in terms of his or her pattern or profile across variables that are relevant to the person's behavior in a particular domain (Gustafson, 1994). Thus, the unit of analysis is the individual and not the variable.

Using a pattern approach involves the application of a statistical method which groups individuals together based on categories that are homogenous with respect to their patterns of values for the variables being studied (Magnusson, 1995). For example, Magnusson, Anderson, & Törestad (1993) examined six variables and classified individuals into eight homogenous groups based on their pattern of scores. The significance of each variable comes from its context; it is not the individual variable, but the variable in combination with other factors in the total pattern at the individual level. Thus, the pattern approach is noncompensatory; high scores on one variable in the pattern do not make up for low scores on another in the prediction of leadership.

The pattern approach has been beneficial in research across a variety of domains. For example, Gibbs (1982) classified female delinquents into four distinct personality patterns based on their composite score on three instruments. Using scores on the MMPI, Goeke, Tosi, and Eshbaugh (1993) found eight separate personality profiles of male felons living in a correctional halfway house. In addition, Tango and Uziuban (1984) used this approach to categorize the personalities of students who are undecided about their career choice.

The pattern approach has also been a useful tool in the study of personality and leadership. McClelland and Boyatzis (1982) supported their hypothesis that the Leadership Motive Pattern, which includes moderate to high need for power, low need for affiliation, and high activity inhibition was related to managerial success for nontechnical managers after eight and sixteen years. Moreover, Sorrentino and Field (1986) classified individuals according to their achievement-related and affiliation-related

motives, and placed them into four person workgroups, with each person varying on their combination of these traits. They found that over the course of five weeks, subjects who were high on both of these variables scored the highest on two measures of leadership emergence and persons who were low on both variables scored the lowest. Finally, Smith and Foti (1998) classified subjects based on their pattern of dominance, general self-efficacy, and intelligence and found that subjects who were high on all three traits emerged significantly more than subjects who were low on all three traits. By studying traits in a pattern rather than individually, more information is available about the individual as a potential leader.

According to Smith and Foti (1998) there are three key aspects of the personality pattern approach that must be present to differentiate among individuals. First, the variables in the pattern must have a theoretical basis and must be supported by past empirical research. Second, every individual is categorized based on one of the patterns of selected variables. In the current study, the three variables involved are masculinity, femininity, and intelligence. Finally, individuals are grouped for study based on their personality pattern and are differentiated based on these sub-groups. In this study subjects' personality pattern will be classified as masculine-intelligent, feminine-intelligent, androgynous-intelligent, or mixed. The classifications are described below:

Masculine-Intelligent Personality. Individuals with masculine-intelligent personalities will be defined as those showing a pattern that is high in masculinity, low in femininity, and high in intelligence (HLH).

Feminine-Intelligent Personality. Individuals with feminine-intelligent personalities will be defined as those showing a pattern that is low in masculinity, high in femininity, and high in intelligence (LHH).

Androgynous-Intelligent Personality. Individuals with androgynous-intelligent personalities will be those showing a pattern that is high in masculinity, high in femininity, and high in intelligence (HHH).

Mixed Personality. Individuals with mixed personalities will be defined as having some other combination of these three traits (HHL, HLL, LHL, LLL or LLH).

Perceptions and Leadership Emergence

Emergent leadership occurs when an individual in a group of people with initially equal status exhibits notably high leadership behavior, and is thereby perceived by the other group members as the leader (Berdahl, 1996). Emergent leaders function in organizations as individuals who assume leadership roles in essentially leaderless groups (Goktepe & Schneier, 1989). Essential to the realization of the leadership role is the role of followers; without the followers' perceptions of leadership and effectiveness, emergence, by definition could not occur (Hollander, 1992; Hollander & Offerman, 1990). Lord and Maher (1990) define leadership emergence as a social-cognitive process. Leadership results as an outcome of traits, behaviors, and outcomes produced by the leader, and perceived by the followers.

Although leadership can be a difficult construct to define for psychologists, people seem to have naive schemas for what makes an individual a leader, including the attributes and boundary conditions for leadership (Offermann, Kennedy, Jr. & Wirtz, 1994). Categorization theory suggests that people classify events and objects by breaking them down into cognitive categories (Rosch, 1978). According to Lord and his associates, (e.g., Lord, Foti, & De Vader, 1984; Lord, Foti, & Phillips, 1982; Lord & Maher, 1991), people use these cognitive categorizations, or implicit theories of leadership, to provide a framework for distinguishing leaders from nonleaders. People use these shared perceptions about leadership attributes to form prototypes of leaders and use these prototypes in order to determine the emergence of leadership. Individuals possessing attributes that are consistent with observers' leadership prototypes produce attributions of leaders and emerge as leaders by meeting the followers' conception of leadership (Hollander & Julian, 1969; Lord, 1985; Nye & Forsyth, 1991). Therefore, traits or prototypes help followers interpret behavior (Mischel, 1973) and access information about the role that the potential leader might play (Lord, et al., 1982).

Deaux and Major (1987) propose a model of social interaction for gender related behavior which lends itself to the study of leadership perceptions. The model suggests that maximal sex differences in leadership styles will emerge when (a) the perceiver has different expectations for male and female leadership styles or (b) gender related beliefs are activated in the perceiver, and (c) the actor has gender-typical leadership experience and preferred leadership style or (d) the situation activates different self-schema regarding leadership style in the actor. Therefore, depending on the context of the group, the interaction between the members of the group may activate expectancies of the emergent leader from the group members and context related self-schemas in the emergent leader, but I will return to this discussion when I discuss task type as a moderator.

Studies in organizational contexts have shown support for gender rather than sex-driven differences in perceptions of leadership. Generally, the trend has been toward a preference for masculine, and androgynous leadership, with feminine leadership being the least desirable. Powell and Butterfield (1979) found that sex of the evaluator did not predict conceptions of a “good manager”, and that despite the gender of the evaluator, support was found for a preference for masculine managers. Furthermore, Cann and Siegfried (1987) found that subjects asked to describe a manager who they would like to have working for them valued masculine traits significantly more than those asked to describe a manager who they would like to report to.

In sum, for the perception of leadership emergence to occur, certain factors must be present (Lord et al., 1984). First, the individual’s attributes and behaviors must be consistent with the follower’s prototype or schema for a leader. Gender roles lead perceivers to certain leadership prototypes based on their gender-related expectations. Second, the followers must recognize these traits in the individual in order to classify them as a leader. Traits are important in the study of leadership emergence because they help perceivers recognize the saliency of prototypical leader attributes and behaviors in individuals. Finally, traits help perceivers to conceptualize what a leader is and to make

the distinction between leader and nonleader when judging leadership emergence in groups.

The Moderating Effect of Task-Type

Bem's (1974) original conception of gender-roles stressed the importance of the interaction between traits and situational constraints. While the above cited studies of gender and leadership emergence in organizational contexts are valuable, they neglect to measure the effect that task has on perceptions of leadership emergence, by using a gender-neutral task, or no task at all. The absence of situational constraints in these studies may explain why feminine leadership has been viewed as undesirable.

Miller (1978) states the characteristics of the contextual environment provide necessary information for identification. Categorization theory suggests that perceivers obtain information from the environment as well as information about the potential leader, which leads to the classification of leadership. The inclusion of contextual and functional information reduces vagueness and helps perceivers make clearer distinctions between categorizations (Lord et al., 1982). This suggests that information about the context specified by task type may contribute significantly to perceivers' interpretation of leadership.

Tasks provide information to the observers about what type of behavior is appropriate in the context. The perception of leadership may depend on whether the task demands that the leader have masculine attributes and behavior such as independence and initiating structure, or feminine attributes and behaviors such as friendliness, and consideration (Hall et al., 1998; Lord & Maher, 1991). Carbonell (1984) extended Megargee's (1969) findings that sex role conflict decreased the emergence of dominant females in mixed sex pairs on a masculine industrial task, and a sex-neutral task. By adding a feminine task, Carbonell found that task moderated the relationship between sex and leadership emergence. More recent studies (Eagly & Karau, 1991; Hall et al., 1998) found only weak moderating effects of task on the relationship between sex and leadership emergence. However, because sex may only be a proxy variable for gender, it

is worthwhile to investigate the effect of gender as a moderator of leadership emergence. That is, regardless of sex, feminine-intelligent individuals may show a higher level of leadership emergence on consensus building tasks, and masculine-intelligent individuals may show a higher level of leadership emergence on initiating structure tasks. Furthermore, androgynous-intelligent individuals may display behavioral flexibility and by adapting their behavior to the context, they may be perceived as leaders in both consensus building and initiating structure situations.

The current research examines the relationship between gender and leadership emergence as moderated by task. A pattern approach including three variables (masculinity, femininity, and intelligence) will be used in order to capture more information about group members than would be possible using a single trait approach. Intelligence has clearly been linked to leadership emergence (Lord et al., 1986; Stogdill, 1948). Masculinity and femininity are orthogonal variables that show varying effects depending on situational constraints. However, only masculinity and androgyny have been linked to leadership in organizational studies. The current study manipulates task as a potential moderating variable, which might explain the absence of feminine leadership emergence in past research.

It is expected that by using task as a moderator, the results will support gender role theory and follow Bem's original conception. That is, masculine-intelligent individuals should emerge in situations that demand behavior that is socially more appropriate for men, and feminine-intelligent individuals should emerge in situations that demand behavior that is socially more appropriate for women. Additionally, it is expected that androgynous-intelligent individuals will show flexibility and adapt their behavior to emerge as leaders in either situation. The specific hypotheses are as follows:

1. According to the gender role congruency theory and Bem's conception of sex role stereotyping, individuals showing feminine-intelligent personality patterns will be perceived as more leader-like than individuals showing masculine-intelligent, or mixed personality patterns on consensus building tasks.

2. According to the gender role congruency theory and Bem's conception of sex role stereotyping, individuals possessing masculine-intelligent personality patterns will be perceived as more leader-like than individuals possessing feminine-intelligent, or mixed personality patterns on initiating structure tasks.

3. According to Bem's conception of gender-role adaptability, individuals possessing androgynous-intelligent personality patterns will be more likely to be perceived as leaders on consensus building tasks than individuals possessing masculine-intelligent, or mixed personality patterns.

4. According to Bem's conception of gender-role adaptability, individuals possessing androgynous-intelligent personality patterns will be more likely to be perceived as leaders on initiating structure tasks than individuals possessing feminine-intelligent, or mixed personality patterns.

METHOD

Subjects and Design

Subjects in this study were 200 undergraduate females from a large state university. In order to control for sex, all female subjects were chosen, because past research has shown that males are more likely to emerge as leaders in mixed-sex groups (Hegstrom & Griffith, 1992; Kent & Moss, 1994). Initially, 601 individuals were asked to complete measures of masculinity and femininity (Bem Sex-Role Inventory, Bem; 1974), and intelligence (Wonderlic Personnel Test, Wonderlic; 1983). Table 1 shows the intercorrelations between the independent variables from the screening.

-Insert Table 1 about here-

Individuals were then classified into masculine-intelligent, feminine-intelligent, androgynous-intelligent, or mixed personality patterns based on these scores. These classifications were based on median splits of scores on measures of three variables: masculinity, femininity, and intelligence. Individuals characterized as masculine-intelligent were high in masculinity, low in femininity, and high in intelligence (HLH). Individuals characterized as feminine-intelligent were low in masculinity, high in femininity, and high in intelligence (LHH). Individuals characterized as androgynous-intelligent were those showing a pattern that is high in masculinity, high in femininity, and high in intelligence (HHH), and individuals with mixed personalities were defined as having some other combination of these three traits (HHL, HLL, LHL, LLL or LLH). See Table 2 for descriptive statistics for the variables of masculinity, femininity, and intelligence, for the original sample of 601, and for the 200 participants in the focal study.

After the original 601 individuals were selected into personality patterns, 200 were selected to participate in the focal study. They were placed into groups of four members, containing one masculine-intelligent personality type, one feminine-intelligent personality type, one androgynous-intelligent personality type, and one mixed personality type. A 4(Personality Type Condition) X 2(Task Assignment Condition) factorial design

was used to study leadership emergence. Groups were randomly assigned to either the initiating structure task or the consensus building task.

-Insert Table 2 about here-

Personality Trait Measures

The Bem Sex-Role Inventory (BSRI). The BSRI contains a masculinity scale, a femininity scale, and a social desirability scale, which contain 20 items each. The masculine and feminine characteristics were selected “on the basis of social desirability and not on the basis of differential endorsement of males and females” (Bem, 1974). Subjects were asked to rate, on a 7-point scale, how well each of the personality characteristics describes her. The scales range from 1 (“Never or almost never true”) to 7 (“Always or almost always true”). Based on these responses, subjects received two separate scores: a masculinity score and a femininity score. Scores are determined by calculating the level of endorsement of items of each scale. Thus, if a subject endorsed the each of the 20 items on the masculinity scale as “occasionally true” (4), they would receive a masculinity score of 80. This method of scoring the BSRI was suggested by Spence, Helmreich, and Stapp (1975) and advocated by Bem and Watson (see Motowildo, 1981). This method has subsequently been the scoring method of choice in the study of gender and leadership (e.g., Goktepe & Schneier, 1988; Kent & Moss, 1994; Moss & Kent, 1996; Powell & Butterfield, 1979). Both scales have been shown to have high internal consistency (Masculinity $\alpha = .86$; Femininity $\alpha = .80$) and test-retest reliability (Masculinity $r = .90$; Femininity $r = .90$) (Bem, 1974). The internal consistency reliability for this sample was .87 for the masculinity scale and .80 for the femininity scale. Although the BSRI is commonly used in research on the effect of gender on leadership, the masculinity scale contains items which directly and indirectly tap leadership. In order to tap behaviors that might be associated with a feminine leadership style, five items were added to the femininity scale (see Appendix A). The internal consistency reliability for the femininity scale with five additional items in this sample was .82. A non-significant chi-square test revealed that adding these items did not change the classification of subjects on the femininity variable because classification

based on Bem's scale with five additional items was not significantly different than classification had Bem's scale been used alone $\chi^2(1, N = 200) = .00, p = 1.0$.

Wonderlic Personnel Test(WPT). The WPT, form A, developed by Wonderlic (1983) was used as a measure of intelligence. This is a timed (12 minute) test with 50 items listed in increasing difficulty. It is a self-administered paper and pencil test. This test was scored by calculating the number of correct responses out of 50. This test has been demonstrated to be valid and reliable as a measure of intelligence (Dodrill, 1981; Dodrill, 1983; Dodrill & Warner, 1988).

Pattern Designations

Personality patterns were determined for each individual in the study based on median splits for each variable (i.e., masculinity, femininity, intelligence) in the pattern. Subjects were classified as high on a variable if their score fell above the median, and low on a variable if they scored below the median on that scale. Subjects whose scores fell on the median for any variable were not selected to participate in the focal study. From the mass testing of 601 subjects, the median masculinity score, divided by 20 items was 4.90, and the median femininity score with five additional items divided by 25 items was 5.28. It is important to note that the masculinity and femininity scores in this sample, when divided by the total number of items in the scale, were comparable to those found in other studies using different types of samples: 4.97 (M) and 5.19 (F) for undergraduate psychology students in Gurman and Long (1992); 5.1 (M) and 4.9 (F) for undergraduate business students in Goktepe and Schneier (1988); 5.3 (M) and 4.7 (F) for undergraduate business students in Kent and Moss (1994).

Although in this sample the median intelligence score was 26, the median score used to classify subjects on this variable was 25, based on prior data ($N = 400$) which found 25 to be the median for this population (Foti & Gershenoff, 1999). Thus, anyone who scored 26 or above on the Wonderlic Personnel Test was considered high in intelligence, anyone who score 24 or below was considered low in intelligence, and anyone who scored 25 was not included in the focal study.

Task Assignments

Initiating Structure Task. In this condition, subjects participated in a manufacturing game used by Zacarro, Foti, and Kenny in their 1991 study and Smith and Foti in 1998. Zacarro et al. pilot tested this activity and found it to be significantly associated with a predominant leadership style of initiating structure. The task involves buying Lego pieces and manufacturing boats, jeeps, and robots to sell back to the buyer for the greatest amount of profit. The task involves not only manufacturing the products, but involves a planning period in which participants need to come up with a cost-effective buying and manufacturing strategy.

Consensus Building Task. In this condition, subjects participated in a problem-solving task called Lost In Summer Camp. This is a consensus building task in which subjects are told a story about several crises going on simultaneously at a summer camp. The subjects are asked to rank order 10 items in order of importance. Subjects were asked to complete the rankings individually, and then as a group. This task involves considerable interaction between group members. A pilot study was conducted to ensure that this task was perceived as more consensus building than initiating structure. Subjects participated in the task, and then were asked to rank the two task descriptions in order of how well they described the task. To facilitate these judgements, definitions of each task were provided. A significant chi-square test revealed that significantly more subjects saw the task as consensus building than initiating structure $\chi^2(1, N = 24) = 10.67, p = .00$.

Dependent Measures

General Leadership Impression. The General Leadership Impression (GLI; Lord, Foti, & DeVader, 1984), was used to measure leadership emergence in this study (see Appendix B). This five-item scale asks participants to rate the other members of the group on their contribution to the group's overall effectiveness on the activity. The range of responses is nothing (marking 1) to an extreme amount (marking 5). GLI scores were calculated for each individual by averaging ratings given by the other three group

members for each ratee. This scale has been shown to have high internal consistency (Cronbach's alpha = .88, Lord et al., 1984; Zaccaro, Foti, & Kenny, 1991).

Leadership emergence was also measured by using a ranking measure identical to the one used by Smith and Foti (1998) in their study of patterns and leadership emergence (see Appendix C). Group members ranked themselves and each other based on their preference for individuals as leaders. Based on these rankings, ignoring the self-rating, a score was computed for the percentage of times an individual was rated by the others as number one. Thus, an individual's score could range from .00 if no other group member ranked her number one to .75 where all three other group members saw her as number one.

Procedure

601 participants were asked to complete the Bem Sex-Role Inventory (Bem, 1974), and the Wonderlic Personnel Test, form A (Wonderlic, 1983) during seven mass screening sessions. Individuals were only allowed to participate once. Personality patterns were determined for each individual in the study based on median splits for each variable. Once patterns were determined, individuals were selected to participate in the focal study. Each experimental group contained one individual with a masculine-intelligent personality type, one individual with a feminine-intelligent personality type, one individual with an androgynous-intelligent personality type, and one individual with a mixed personality type. Table 3 presents the frequency of the four patterns and the LLH subset of the mixed pattern, as well as the means, medians, and standard deviations for each of the personality traits, by pattern.

-Insert Table 3 about here-

A power analysis was conducted based on theoretically and methodologically similar studies (e.g. Kent & Moss, 1994; Moss & Kent, 1996; Smith & Foti, 1998) revealing that 25 groups (4 participants per group) would need to be included in each cell of the experimental design to detect a significant effect ($\beta=.80$, $\alpha=.05$). Groups were

randomly assigned to either the initiating structure task or to the consensus building task. In both tasks, the experimenters explained the exercise and obtained informed consent from the participants. Sessions in both tasks lasted approximately forty-five minutes. In both conditions, after the task was completed and materials were collected by the experimenters, subjects were asked to rate each other on perceptions of leadership using the General Leadership Impression (GLI) and rank themselves and each other in terms of leader preference. In order to ensure confidentiality, subjects were given identification numbers (1-4) in place of names to report on the exit questionnaire and were asked to turn away from each other while completing the measures. After the questionnaires were collected, the experimenters debriefed the participants as to the true purpose of the study.

RESULTS

In order to test my hypotheses, a series of contrasts were tested at alpha level .05. Based on nonsignificant results of Levene's test of homogeneity of variances, equal variances were assumed in these analyses unless it is noted otherwise. Hypothesis one predicted that individuals showing feminine-intelligent personality patterns would be perceived as more leader-like than individuals showing masculine-intelligent or mixed personality patterns in the consensus building task condition. Individuals showing a feminine-intelligent personality pattern ($M = 3.44$, $SD = .57$) were not rated significantly higher on the GLI than masculine-intelligent individuals ($M = 3.70$, $SD = .46$; $t(96) = 1.56$, $p > .05$; $\eta^2 = .13$) or mixed personality pattern individuals ($M = 3.19$, $SD = .76$; $t(96) = 1.50$, $p > .05$; $\eta^2 = .13$) in the consensus building task. Furthermore, feminine-intelligent individuals ($M = .18$, $SD = .28$) were not ranked number one significantly more often than masculine-intelligent individuals ($M = .22$, $SD = .27$; $t(96) = .57$, $p > .05$; $\eta^2 = .07$) or mixed personality individuals ($M = .10$, $SD = .18$; $t(96) = 1.13$, $p > .05$; $\eta^2 = .07$) in this condition. Thus, hypothesis one was not supported.

Hypothesis two predicted that individuals possessing masculine-intelligent personality patterns would be perceived as more leader-like than individuals possessing feminine-intelligent or mixed personality patterns in the initiating structure task condition. Subjects with masculine-intelligent personality patterns received significantly higher ratings on the GLI ($M = 3.80$, $SD = .60$) than subjects with feminine-intelligent ($M = 3.40$, $SD = .70$; $t(96) = 2.29$, $p < .05$; $\eta^2 = .09$) or mixed personality patterns ($M = 3.40$, $SD = .73$; $t(96) = 2.18$, $p < .05$; $\eta^2 = .09$). Subjects with masculine-intelligent personality patterns ($M = .37$, $SD = .33$) were also ranked number one significantly more often than subjects with feminine-intelligent ($M = .11$, $SD = .15$; $t(32.94) = 3.59$, $p < .05$, equal variances not assumed; $\eta^2 = .16$) and mixed personality patterns ($M = .12$, $SD = .21$), ($t(40.08) = 3.20$, $p < .05$, equal variances not assumed; $\eta^2 = .16$). Thus, hypothesis two was supported.

Hypotheses three and four predicted that individuals with androgynous personality patterns would emerge as leaders in both the consensus building and initiating structure task conditions. Specifically, hypothesis three predicted that individuals possessing androgynous-intelligent personality patterns would be more likely to be perceived as leaders on consensus building tasks than individuals possessing masculine-intelligent or mixed personality patterns. The results indicate that androgynous-intelligent individuals ($M = 3.76$, $SD = .54$) were not rated significantly higher on the GLI than masculine-intelligent ($M = 3.70$, $SD = .46$; $t(96) = .32$, $p > .05$; $\eta^2 = .13$), but were rated significantly higher than mixed personality individuals ($M = 3.19$, $SD = .76$; $t(96) = 3.40$, $p < .05$; $\eta^2 = .13$) in the consensus building task condition. Furthermore, androgynous-intelligent individuals ($M = .28$, $SD = .25$) were not ranked number one significantly more often than masculine-intelligent ($M = .22$, $SD = .27$; $t(96) = .85$, $p > .05$; $\eta^2 = .07$), but were ranked number one significantly more often than mixed personality individuals ($M = .10$, $SD = .18$; $t(96) = 2.54$, $p < .05$; $\eta^2 = .07$). Thus, hypothesis three was partially supported.

Hypothesis four predicted that individuals possessing androgynous-intelligent personality patterns would be more likely to be perceived as leaders on initiating structure tasks than individuals possessing feminine-intelligent, or mixed personality patterns. The results show that androgynous-intelligent individuals were rated ($M = 3.83$, $SD = .66$) significantly higher on the GLI than feminine-intelligent individuals ($M = 3.40$, $SD = .70$; $t(96) = 2.19$, $p < .05$; $\eta^2 = .09$) and mixed personality pattern individuals ($M = 3.40$, $SD = .73$; $t(96) = 2.08$, $p < .05$; $\eta^2 = .09$). Further support for this hypothesis is evident from the finding that androgynous-intelligent individuals ($M = .25$, $SD = .27$) were ranked number one significantly more often than feminine-intelligent individuals ($M = .11$, $SD = .15$; $t(36.89) = 2.28$, $p < .05$, equal variances not assumed; $\eta^2 = .16$), although not significantly more often than mixed personality individuals ($M = .12$, $SD = .21$; $t(44.83) = 1.92$, $p > .05$, equal variances not assumed; $\eta^2 = .16$) in the initiating structure task condition. Therefore, hypothesis four was partially supported.

In order to handle the criticism that the pattern approach does not provide unique information over using an anova and looking for interactions between the independent variables, a more stringent test of the hypotheses was obtained by repeating the analyses, but allowing the pattern to deviate by one variable. In order to do this, fifteen of the fifty groups contained a member with a personality pattern low in masculinity, low in femininity, and high in intelligence (LLH) as a special case of the mixed personality pattern. The above contrasts were repeated, substituting the LLH's for the inclusive mixed pattern. The results indicate that feminine-intelligent individuals ($M = 3.44$, $SD = .57$) were not rated significantly higher than LLH pattern individuals ($M = 3.28$, $SD = .88$; $t(95) = .79$, $p > .05$; $\eta^2 = .14$) in the consensus building task condition. Furthermore, feminine-intelligent individuals ($M = .18$, $SD = .28$) were not ranked number one significantly more often than LLH individuals ($M = .09$, $SD = .19$; $t(95) = .84$, $p > .05$; $\eta^2 = .07$) in the consensus building task condition. Masculine-intelligent individuals ($M = 3.85$, $SD = .60$) were not rated significantly higher than LLH pattern individuals ($M = 3.65$, $SD = .87$; $t(95) = .70$, $p > .05$; $\eta^2 = .10$) in the initiating structure condition. Masculine-intelligent individuals ($M = .37$, $SD = .33$) were also not ranked number one significantly more often than LLH pattern individuals ($M = .14$, $SD = .28$; $t(11.07) = 1.80$, $p > .05$, equal variances not assumed; $\eta^2 = .16$) in the initiating structure condition. Hence, these more stringent tests did not provide additional support for hypotheses one or two.

Androgynous-intelligent individuals ($M = 3.76$, $SD = .54$) were rated significantly higher than LLH pattern individuals ($M = 3.28$, $SD = .88$; $t(95) = 2.02$, $p < .05$; $\eta^2 = .14$) in the consensus building task condition, providing some support for hypothesis three. However, androgynous-intelligent individuals ($M = .28$, $SD = .25$) were not ranked number one significantly more often than LLH individuals ($M = .09$, $SD = .19$; $t(95) = 1.82$, $p > .05$; $\eta^2 = .07$) in this condition.

Androgynous-intelligent individuals ($M = 3.83$, $SD = .66$) were not rated significantly higher than LLH pattern individuals ($M = 3.65$, $SD = .87$; $t(95) = .63$, $p > .05$; $\eta^2 = .10$) in the initiating structure task condition. In addition, androgynous-

intelligent individuals ($\underline{M} = .25$, $\underline{SD} = .27$) were not ranked number one significantly more often than LLH individuals ($\underline{M} = .14$, $\underline{SD} = .28$; $t(9.29) = .89$, $p > .05$, equal variances not assumed; $\eta^2 = .16$) in this condition. Thus, these analyses did not provide additional support for hypothesis four.

-Insert table 4 about here-

The finding that predicted patterns generally did not emerge significantly more often than the LLH pattern in this study suggests that intelligence is the central trait associated with leadership. However, inspection of Table 4, which shows the intercorrelations of the three independent and two dependent variables, reveals that masculinity is also related to leadership emergence in both task conditions, but it is correlated with intelligence ($r = .30$, $p < .01$ consensus building task; $r = .31$, $p < .01$ initiating structure task).

The correlation between masculinity and intelligence shown in Table 1, raises the question of whether or not being a masculine female presumes an individual is intelligent. To address this question, a comparison was made between the mean intelligence of those individuals classified as masculine-intelligent, and individuals classified as masculine, excluding the intelligence variable from the pattern. The masculine-intelligent pattern ($\underline{M} = 29.48$, $\underline{SD} = 2.89$) was significantly higher in intelligence than the masculine pattern with the intelligence variable excluded from the pattern ($\underline{M} = 26.65$, $\underline{SD} = 4.32$; $t(224) = 5.33$, $p > .05$).

Although the correlation between femininity and intelligence was not significant, a comparison of intelligence between the feminine-intelligent pattern and the feminine pattern excluding the intelligence variable from the pattern was conducted, because an analysis of intelligence in the androgynous-intelligent pattern was desired. The feminine intelligent pattern ($\underline{M} = 29.04$, $\underline{SD} = 3.10$) was significantly higher in intelligence than the feminine pattern with the intelligence variable excluded from the pattern ($\underline{M} = 25.79$, $\underline{SD} = 4.25$; $t(209) = 5.73$, $p > .05$).

These analyses were repeated in order to compare the mean intelligence of the androgynous-intelligent pattern with the androgynous pattern excluding the intelligence variable from the pattern. The androgynous-intelligent pattern ($\underline{M} = 29.86$, $\underline{SD} = 3.76$) was significantly higher in intelligence than the androgynous pattern excluding the intelligence variable from the pattern ($\underline{M} = 25.89$, $\underline{SD} = 5.07$; $t(222) = 5.95$, $p > .05$).

DISCUSSION

The purpose of this study was to examine the effect of gender roles on leadership emergence through the use of a pattern approach and a manipulation of context. Overall, support was found for the emergence of masculine-intelligent and androgynous-intelligent individuals as emergent leaders, but feminine-intelligent individuals were not perceived as leader-like. In accordance with the gender role congruency theory and Bem's (1974) conception of sex role stereotyping, hypothesis one predicted that individuals showing feminine-intelligent personality patterns would be perceived as more leader-like than individuals showing masculine-intelligent or mixed personality patterns on consensus building tasks. This hypothesis was not supported, as feminine-intelligent individuals were neither rated higher nor ranked number one significantly more often than masculine-intelligent or mixed personality pattern individuals. However, hypothesis two which suggested that individuals possessing masculine-intelligent personality patterns would be perceived as more leader-like than individuals possessing feminine-intelligent or mixed personality patterns on initiating structure tasks, was supported through both the ratings and rankings of leadership perception.

In accordance with Bem's (1974) conception of gender-role adaptability, hypotheses three and four examined the relationship between the androgynous-intelligent personality and leader emergence, and it was expected that androgynous-intelligent individuals would display behavioral flexibility and emerge across tasks. The findings were mixed for hypothesis three which predicted that individuals possessing androgynous-intelligent personality patterns would be more likely to be perceived as leaders on consensus building tasks than individuals possessing masculine-intelligent or mixed personality patterns. Androgynous-intelligent individuals were rated higher and ranked number one more often than mixed personality individuals but not masculine-intelligent individuals in this condition. Finally, full support was found for the prediction in hypothesis four that individuals possessing androgynous-intelligent personality patterns would be more likely to be perceived as leaders on initiating structure tasks than individuals possessing feminine-intelligent or mixed personality patterns. This

hypothesis was supported through the measures of both ratings and rankings of leadership perception.

Contrary to the prediction in hypothesis one, the present study found that feminine-intelligent individuals were not perceived as more leader-like than masculine-intelligent or mixed personality pattern individuals in the consensus building task condition. This finding is consistent with studies that have demonstrated that feminine individuals, with the exception of individuals that have undifferentiated gender roles, are least likely to be perceived as leaders in small group situations (Kent & Moss, 1994). The lack of support for this hypothesis is congruent with Heilman, Block, Simon, and Martell's (1989) findings that descriptions of women in general are far less consistent with descriptions of successful managers than are descriptions of men in general. Furthermore, these results reflect their finding that characterizations of successful managers' thought styles, potency, and psychological health were all thought to be more similar to characteristics of male managers than female managers. Taken together, these results suggest a lack of fit between perceptions of individuals as feminine-intelligent and as leaders.

One theoretical explanation for this finding is that feminine attributes are inconsistent with followers' implicit theories of leadership. According to Lord and Maher (1990), people use these cognitive categories to distinguish leaders from non-leaders. It is possible that high levels of femininity, and low levels of masculinity, even when grouped with high levels of intelligence, create an effect that is inconsistent with followers' prototypes for leaders. Feminine-intelligent individuals may not display behaviors, or provide outcomes that match followers' expectations for leaders. Thus, they are not perceived as leader-like.

Another possible explanation for the findings in past studies was the masculine or gender "neutral" nature of the task (e.g., Goktepe & Schneier, 1989; Kent & Moss, 1994; Luthar, 1996; Moss & Kent, 1996). Although Eagly and Karau's (1991) meta-analysis suggested that in accordance with gender-role theory, females are more likely to emerge

as leaders in socially oriented groups, the current manipulation of task condition did not support this theory. The present study attempted to explore the influence of situational cues on perceptions of leadership by testing hypothesis one in a consensus building task condition. That the results still did not support an emergent feminine-intelligent leadership style suggests the possibility that despite my attempt to manipulate the nature of the task, the manipulation may not have been strong enough. This explanation echoes the findings of Hall, Workman, and Marchioro (1998), who explained weak support for the hypothesized effect of the sex-role congruence of the task as potentially due to a lack of overlap between the behavioral demands of the tasks and the feminine characteristic of consideration. Although their study used the manufacturing game, as an initiating structure task, as I did in this study, they used a different task than I did to encourage consensus building. Their “consideration” task involved brainstorming recommendations for dealing with children with AIDS. Because neither of these task manipulations produced a significant effect of a feminine leadership style, one wonders what type of manipulation would produce such an effect, if any.

It is also conceivable that the task did not require subjects to interact long enough for the feminine-intelligent members’ leadership styles to become apparent. However, this explanation contradicts the assertion of implicit leadership theories that does not require specific traits to be exhibited to an extensive degree because perceivers will expand upon the displayed behaviors and make inferences about the target as a leader or non-leader.

That masculinity and intelligence are significantly related to leadership ratings and rankings, and femininity is not, suggests the possibility that femininity is only important to the perception of leadership when it works in conjunction with masculinity and intelligence (i.e., the androgynous-intelligent personality). Kent and Moss (1994) reconciled their finding of androgynous leader emergence as an implication that the possession of feminine attributes may not decrease the likelihood of an individual emerging as the leader, so long as the individual also possesses masculine attributes.

Both masculinity and intelligence have been clearly associated with leadership emergence (Goktepe & Schneier, 1989; Lord, DeVader, & Alliger, 1986; Mann, 1959). Therefore, the finding that the masculine-intelligent personality pattern, which involves high levels of both of these characteristics and low levels of femininity, is associated with leadership in the initiating structure task (hypothesis two) is consistent with past literature in the study of emergence (e.g., Hall et al., 1998). These outcomes may occur because the nature of the task encourages initiating structure behaviors that are congruent with a masculine-intelligent personality pattern. In terms of implicit leadership theories, these results may be explained by an automatic association between perceptions of these individuals' personalities and followers' prototypes for leaders. It may also be that this combination of traits may overlap with other trait combinations, such as a pattern high in dominance, general self-efficacy, self-monitoring and intelligence, which has also been shown to be associated with leadership perceptions in this task condition (Foti & Gershenoff, 1999). The relationship between these two patterns will be examined by comparing the personality patterns in this current study with additional data collected for the personality patterns studied by Foti and Gershenoff (1999).

Another possible explanation is that the combination of characteristics in the masculine-intelligent personality pattern becomes salient to followers during the short amount of interaction time in these tasks. This suggests that it might be important to examine the effects of the masculine-intelligent personality pattern on perceptions of leadership emergence over several interactions to see whether this pattern is only related to immediate perceptions of leadership, or if these perceptions persist over time. It may also be important to link initial perceptions of leadership emergence to perceptions and objective measures of leadership effectiveness. This examination is warranted considering Ross and Offerman's (1997) finding that leader scores on transformational leadership were significantly correlated with subordinate satisfaction, but not with performance. It is possible that the salience of this combination of traits is related to initial perceptions of leadership in initiating structure tasks, but that this combination does not lead to perceptions of effectiveness, or may not be related to leadership over the course of several interactions.

Taken together, the findings of hypothesis one and two suggest an association between the masculine-intelligent personality pattern and leadership emergence, but not between the feminine-intelligent personality pattern and perceptions of leadership. Inspection of the intercorrelations between independent and dependent variables in Table 4, reveals a bivariate relationship between masculinity and leadership ratings and rankings in both task conditions, but not between the femininity variable and these measure of leadership emergence. This finding is consistent with other research on traits and leadership that have showed significant relationships between masculinity and leadership ratings.

The replication of these results may be due to a reliance on Bem's Sex Role Inventory (BSRI; Bem, 1974) as the primary measure of gender role in these studies. The BSRI was developed based on males and females judgement of the social desirability of traits for men and women, and not on the basis of differential endorsement of males and females, and it was not originally intended to be used in the study of leadership. The masculinity scale of the BSRI contains two items which directly tap leadership (e.g., "has leadership abilities", "acts like a leader"). When this is considered in conjunction with the fact that several of the items on the femininity scale are uncomplimentary to women (e.g., "flatterable", "childlike"), two conclusions can be made. First, the significant bivariate correlations between masculinity and measures of leadership emergence are the result of a circular definition and criterion contamination because the dependent variable, leadership emergence, is captured by the independent variable. Second, it is possible that the BSRI, which was developed twenty-five years ago, no longer accurately measures characteristics that are socially desirable for women as we reach the millenium.

If social and cultural norms dictate appropriate behavior for men and women, as suggested by gender role theory, then it seems appropriate that these norms and expectations would change along with increased work and family demands for women. Although I attempted to overcome this potential limitation by adding five additional items to the BSRI, the addition of these items did not change the way subjects were

classified into patterns. Both of these conclusions suggest that additional modification to the BSRI or use of another measure of masculinity and femininity is appropriate for the study of leadership.

Perhaps the most interesting findings in this study were those related to the emergence of androgynous-intelligent individuals. Possession of high levels of all three personality variables lead to the perception of leadership in both the consensus building and the initiating structure task conditions, partially supporting hypothesis three and fully supporting hypothesis four. Support of these hypotheses makes sense given Bem's (1974) argument that androgynous individuals, who have high levels of both masculine and feminine attributes (and high levels of intelligence in this study), are able to display behavioral flexibility and adapt to the demands of the situation. However, it is possible that the positive association between the androgynous-intelligent personality pattern and perceptions of leadership has more to do with the high masculinity and high intelligence in this pattern, and little to do with high femininity. Given that hypothesis three was supported and hypothesis one was not, I suggest that individuals who are high on masculinity, femininity, and intelligence are perceived as leader-like in consensus building situations, however, deviation from this pattern by the masculinity variable leads to nonsignificant results.

Several other studies have found androgyny to be associated with the perception of leadership. Moss and Kent (1996) found that when two leaders were allowed to emerge, androgynous individuals were likely to emerge in addition to masculine individuals in a business class setting. Although findings from the current study suggest that androgynous characteristics match people's prototypes for leaders, and thus automatic associations occur between androgynous individuals and leadership, the Moss and Kent study took place over the course of one semester, and thus a longer interaction time may allow for feminine characteristics in conjunction with masculine characteristics to become important for leadership perception. In addition, Hall et al. (1998) found that inclusion of androgyny in the prediction of leadership emergence lead to an incremental

increase in prediction beyond what was predicted by two other measures of behavioral flexibility.

It has been suggested that the relationship between androgyny and leadership emergence has important implications for women in the workplace. Moss and Kent (1996) suggest that current conceptualizations of leadership are expanding to include both masculine and feminine characteristics. However, based on the findings in this study, it seems more likely that femininity is simply tolerated when in conjunction with masculinity. Further, there is evidence that androgyny may be related to transformational leadership. Bass (1985; 1990) asserts that transformational leader behaviors (e.g., charisma, inspiration, individualized consideration, intellectual stimulation) in addition to traditional transactional leader behaviors (e.g., contingent rewards, passive leadership style), are essential to effective leadership. Hackman, Furniss, Hills and Paterson (1992) reported that, using the BSRI, a balance of masculine and feminine characteristics was predictive of a transformational leadership style. However, the findings in the current study do not suggest that a balance between masculine and feminine traits is necessary, as androgynous-intelligent individuals (HHH) were not significantly different from masculine-intelligent individuals (HLH) in terms of leadership perceptions.

Although in three of the four hypotheses, the expected personality pattern was both rated more leader-like and ranked number one more often than the mixed personality pattern, these results were generally not replicated under the more stringent test, which directly compared the expected pattern with the LLH mixed pattern. Although the interactionist perspective would not break the pattern down to its component parts, this analysis was conducted in order to handle criticisms of the pattern approach. The findings lead one to question the necessity of each part of the pattern, raising the possibility that intelligence, and not gender role, is really driving these results. Although this explanation is plausible, the finding that masculine-intelligent individuals emerged, and feminine-intelligent individuals did not, suggests that more than just intelligence is operating here.

The only comparison in which the expected pattern emerged significantly more than the LLH pattern was in the ratings of androgynous-intelligent versus LLH pattern individuals in the consensus building task condition. This finding is interesting because the comparison between the androgynous-intelligent pattern (HHH) and the LLH pattern provides the most stringent test. It is possible that these results are attributable to the unequal sample sizes in the contrasts used to analyze this data. However, additional research should be conducted to further explore these findings. It may be that the LLH pattern overlaps with other traits not examined here.

It is important to note that although individuals who scored below 25 on the intelligence variable were considered “low intelligence”, this is really a sample specific categorization. Using the median in this sample, such a score is low, however, the true median for intelligence in the population is 18 (Wonderlic, 1983). Thus, it may be more appropriate to call those individuals with scores lower than 25 on the WPT “average intelligence”, and those scoring above 25 “high intelligence”.

Future Research

Research on the effect of gender roles and leadership emergence should continue to test the applicability of feminine attributes to perceptions of leadership in small group settings. Future research should attempt to find a stronger manipulation of the consensus building or consideration task, as well as explore the relationship between the feminine-intelligent personality pattern and other predictors of leadership. Perhaps there is a fourth component to this pattern which would strengthen its association with leadership emergence.

As suggested above, researchers examining the relationship between gender role traits and leadership, should either modify the BSRI to a greater degree than it was in the present study, or try to find alternate measures of masculinity and femininity. This would alleviate the criterion contamination problem caused by items in the masculinity scale that directly tap leadership. Furthermore, a scale that taps attributes currently associated with socially desirable characteristics of women should be used.

According to Lord and Maher (1990) leadership results as an outcome of traits, behaviors, and outcomes produced by the leader and perceived by the followers. Therefore, future replications of this study would benefit from including a measure of behaviors produced by group members as well as a measure of leadership outcomes. Behaviors could be assessed by videotaping groups as they participate in the task and having independent observers code the behaviors of group members. This would allow for a comparison between self-reported traits and actual behaviors engaged in. An assessment of outcomes would provide insight into the link between leadership emergence and effectiveness.

Finally, these findings should be replicated in an organizational setting using self-managed work teams. This would allow for a test of the generality of these findings in mixed sex groups, as same sex groups in organizations are rare. Traits could be assessed as they were in the current study, although the composition of group membership would not be controlled. It would be of great value to conduct this study over a series of group interactions, where real work activities were in effect rather than the contrived nature of the short tasks used in this laboratory setting. This field application would be the first step toward generalizing and applying the findings of this study.

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Table 1 Intercorrelations of independent variables from the mass screening.

	1	2	3
1. Masculinity			
2. ^a Femininity	.03		
3. Intelligence	.10*	-.04	

N = 601

*p < .05

^aFemininity score includes five additional items to Bem's (1974) scale.

Table 2 Descriptive statistics for the three relevant personality traits.

Mass Screening					
<u>N</u> =601	<u>M</u>	<u>SD</u>	Median	Minimum	Maximum
Masculinity	96.58	14.57	98.00	45.00	132.00
^a Femininity	130.56	13.82	132.00	74.00	164.00
Intelligence	25.95	4.76	26.00	8.00	41.00
Focal Study					
<u>N</u> =200	<u>M</u>	<u>SD</u>	Median	Minimum	Maximum
Masculinity	95.26	14.78	98.00	50.00	131.00
^a Femininity	131.02	13.30	133.00	96.00	160.00
Intelligence	28.00	4.59	27.00	16.00	39.00

^a Femininity score includes five additional items to Bem's (1974) scale.

Table 3 Descriptive statistics for subjects in each hypothesized pattern.

Pattern	<u>Masculinity</u>			<u>*Femininity</u>			<u>Intelligence</u>		
	<u>M</u>	Median	<u>SD</u>	<u>M</u>	Median	<u>SD</u>	<u>M</u>	Median	<u>SD</u>
Masc-Intell	107.56	104.5	9.32	118.94	120.50	8.74	29.54	29.00	3.11
Fem-Intell	84.66	86.00	9.72	140.58	139.50	8.04	29.30	28.50	3.25
And-Intell	106.64	106.00	5.90	141.44	140.00	6.13	29.20	29.00	3.78
Mixed	82.16	82.00	9.71	123.12	124.50	11.10	23.26	22.50	4.52
**LLH	83.13	81.00	7.65	121.53	122	8.21	28.93	27.00	3.53

Note High scores indicate high standing on each of the three traits. N = 50 for each pattern. Total N = 200. Masc-Intell: Masculine-Intelligent, Fem-Intell: Feminine-Intelligent, And-Intell: Androgynous-Intelligent.

*Femininity score includes five additional items to Bem's (1974) scale.

**The LLH pattern is a subset of the mixed pattern, which is low in masculinity, low in femininity, and high in intelligence.

Table 4 Intercorrelations of independent and dependent variables in the focal study.

	1	2	3	4	5
1. Masculinity		.01	.30**	.39**	.27**
2. ^a Femininity	-.18		.16	.14	.17
3. Intelligence	.31**	.29**		.16	.07
4. GLI average	.37**	-.10	.28**		.63
5. Ranking	.37**	-.19	.20*	.62**	

Note Coefficients above the diagonal refer to correlations between variables in the consensus building task condition ($N = 100$). Coefficients below the diagonal refer to correlations between variables in the initiating structure task condition ($N = 100$).

* $p < .05$

** $p < .01$

^aFemininity score includes five additional items to Bem's (1974) scale.

APPENDIX A

FIVE ADDITIONAL ITEMS ADDED TO BEM'S FEMININITY SCALE

1. Fosters an environment of mutual trust and understanding in team settings
2. Solicits the input of others when making group decisions
3. Values consensus among group members
4. Listens to opposing views
5. Encourages brainstorming in group decision making

APPENDIX B
GENERAL LEADERSHIP IMPRESSION

The following questions concern your feelings towards and evaluations of **GROUP**

MEMBER _____. Please circle the answer which reflects your feelings.

1. How much did this member contribute to the effectiveness of the task?

Extreme Amount	Substantial Amount	Moderate Amount	Very Little	Nothing
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2. What degree of influence did this member exert in determining the final outcome of the task?

Extreme Amount	Substantial Amount	Moderate Amount	Very Little	Nothing
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3. How much leadership did this member exhibit?

Extreme Amount	Substantial Amount	Moderate Amount	Very Little	Nothing
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4. How much control over the group's activities did this member exhibit?

Extreme Amount	Substantial Amount	Moderate Amount	Very Little	Nothing
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5. If you had to choose a leader for a new task, how willing would you be to vote for this member as leader?

Extreme Amount	Substantial Amount	Moderate Amount	Very Little	Nothing
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APPENDIX C
LEADERSHIP RANKING FORM

If you were asked to meet a second time with this same group to work on the same type of task, please rank in order, your preference for a group leader. Indicate your choice by putting the number assigned to each group member in the space provided.

Please include yourself in the ranking.

Rank #1 (top preference) _____

Rank #2 (second preference) _____

Rank #3 (third preference) _____

Rank #4 (fourth preference) _____