Gender Stereotypes and the Evaluation of Men and Women in Military Training

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The present study investigated perceptions of men and women in the Texas A&M Corps of Cadets. For both stereotypes and evaluations of individual cadets enrolled in the training program, men more than women were believed to possess the motivation and leadership qualities necessary for effective military performance, whereas women were believed to possess more feminine attributes that impair effective military performance. Because men and women did not differ on objective measures of military performance, the sex-differentiated evaluations of cadets enrolled in training most plausibly reflect the influence of gender stereotypes rather than performance differences between the sexes. Furthermore, integration of women into the corps was associated with more favorable stereotypic judgments of women and did not reveal a backlash against women in this strongly male-dominated setting.

During the 1970s, many military training programs in the United States extended their admissions policies to include women. Perhaps most noteworthy is the federal legislation passed in 1976 enabling women to be appointed to the navy, army, and air force service academies. Yet integration has proceeded slowly. In the military as a whole, only 14% of the total force is female, and only 2% of the officers are female at the level of brigadier general and rear admiral or higher (U.S. Department of Defense, 1998). Women continue to represent a small minority in
military training programs. In the Corps of Cadets at Texas A&M University, which was the focus of the present research, women comprise only about 6% of the approximately 2,200 members, despite the fact that women make up slightly more than half of the total student body at the university.

The present study provides insight into the slow rate of integration of women into military training programs. We examined the extent to which stereotypes of men and women in the military affect students’ evaluations of themselves and other students as well as students’ actual performance in the training program in which they were enrolled. Because the integration of women was not fully complete in the Corps of Cadets, we also compared the stereotypes of women held by men in integrated and nonintegrated units.

Gender Stereotypes in the Military

According to gender stereotypes, men and women differ on a number of psychological dimensions that are relevant for military performance. Typical men are believed to make decisions more easily and to be more independent, self-confident, competitive, and leader-like than typical women. Typical women are believed to be more helpful, kind, gentle, and emotionally expressive than men (e.g., Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Diekman & Eagly, 2000). The gender-stereotypic beliefs about women are in marked contrast to the attributes required for successful performance as a soldier. The psychological attributes required of a successful soldier are also stereotypic of men, whereas the stereotypic qualities possessed by women are explicitly rejected (Ebbert & Hall, 1993; Francke, 1997).

The discrepancy between stereotypes of women and the attributes required for military roles can yield unfavorable evaluations of women if women are seen as lacking the required masculine attributes and as possessing feminine attributes that render them unfit for military roles (Eagly & Karau, in press; Heilman, 1983, this issue). Women’s token status in military training programs is especially likely to heighten the salience of gender role stereotypes and to yield less positive evaluations of women than men. According to Kanter (1977), token status exacerbates the less positive evaluations of women than men, because tokens receive considerable attention that heightens pressure on them to perform well. Additionally, tokens are isolated from male-based social and professional networks, which increases the appearance of gender-based differences. Tokens are also encouraged to act in gender-appropriate ways. Indeed, a prior investigation of leadership perceptions in the military found stronger evidence of preferential ratings of men in training groups in which women held solo, token status than in groups with greater numbers of women (Biernat, Crandall, Young, Kobrynowicz, & Halpin, 1998). Tokens appear to garner especially hostile reactions when the roles they assume are gender-inappropriate (Yoder, 1991). Indeed, hostile reactions to women as they
integrate into military training programs have been linked to beliefs that women do not belong in the military and that they threaten the established male culture, especially the tradition of all-male activities and the male rite of passage (Ebbert & Hall, 1993; Francke, 1997).

Hostility toward women in military settings is readily apparent in the reactions of cadets enrolled in military training. According to a survey of the 1991 graduating class at West Point, only 15% of female cadets felt totally accepted by their classmates, whereas 37% of African Americans felt totally accepted (reported in Francke, 1997). According to Francke (1997), the integration of women into military training has benefited African Americans in that women have become the primary targets of discrimination. African American male cadets at West Point were told by their white classmates, “You belong in the Corps . . . it’s the women we don’t want” (Francke, 1997, p. 217).

Effects of Gender Stereotypes

The discrepancy between stereotypic attributes of women and those required in the role of soldier may have a variety of effects on the experiences of women in the military. One possible consequence is supervisors’ and colleagues’ lower evaluations of women’s than men’s performance (Heilman, 1983). Indeed, Eagly, Karau, and Makhijani’s (1995) review of objective and subjective indicators of leadership performance in the military found that women performed less effectively than men. That this sex difference in performance evaluation at least in part reflects discrimination is suggested by research findings that, even when the sexes engaged in equivalent leadership behavior, women were devalued when leadership roles required a masculine leadership style and when evaluators were predominantly male (Eagly, Makhijani, & Klonsky, 1992). Thus, the leadership research suggests that the differential evaluations of women and men in military settings are due in part to performance differences between men and women in military roles and in part to discrimination by others against women in these roles.

The extent to which the lower evaluations of women than men in military settings are accurate can be examined by comparing others’ perceptions to alternate sources of evaluation. One approach uses self-ratings as the criterion for accuracy and compares these to others’ judgments (Allen, 1995; Judd & Park, 1993; Martin, 1987). Indeed, self-perceptions of men and women in the military have been found to differ in that female soldiers devalued their own contributions and approached tasks with less confidence than male soldiers (Biernat et al., 1998). Although these findings might suggest that the lower evaluations of women than men are accurate, there is reason to question whether it is appropriate to use self-ratings as an indicator of accuracy of others’ evaluations. Gender stereotypes can influence self-ratings, just as they can influence others’ evaluations. Consistent with this view, people who adopt gender roles as part of their self-concept appear motivated to
respond in gender-appropriate ways, and they evaluate themselves favorably when they act in a stereotypical fashion (Wood, Christensen, Rothgerber, & Hebl, 1997).

An alternative approach to examining the accuracy of the differential evaluations of men and women is to examine whether sex differences exist in objective performance indicators (Judd & Park, 1993). In service academies as well as in the Texas A&M Corps of Cadets, both sexes must meet the same standards for appointment, admission, training, graduation, and commissioning, although adjustments have been made in the physical entrance requirements because of the physiological differences between male and female individuals. Although the comparable requirements imply no sex differences in performance, some evidence reveals sex differences in cadets’ grades and other forms of evaluation in the service academies. In a 1994 study by the General Accounting Office, a higher proportion of female than male cadets at West Point was charged with honor code violations, and female cadets received lower military grades than males in four of the five classes from 1988 to 1992 (Francke, 1997). Similarly, the Women Midshipmen Study Group’s (1990) evaluation of military performance grades between 1985 and 1990 in the U.S. Naval Academy revealed that when sex differences emerged, men tended to outperform women. Although the sex differences in performance might be taken as evidence that the higher evaluations of male than female cadets are accurate, these seemingly objective performance measures could themselves be affected by gender stereotypes. Gender stereotypes might influence instructors’ evaluations of men and women and thus the grades assigned to them in training classes.

In summary, less positive evaluations of women than men in military training programs may arise from the discrepancy between gender stereotypes for women and the requirements of military training. Alternately, the less positive evaluations of women than men could reflect actual differences in performance of the two sexes in the military. To the extent that lesser evaluations of women’s military performance are reflected in self-evaluations and in relatively objective measures such as grades in military science classes, such evaluations may hold a “kernel of truth” and correspond to the lower quality performance of women in military training.

The Present Research

The present investigation evaluated the extent to which gender-stereotypic beliefs influence evaluations of individual men and women enrolled in a military training program. Men and women in the Corps of Cadets at Texas A&M University reported on gender stereotypes by rating the typical and ideal cadet of each sex on a variety of psychological dimensions related to military performance. In addition, respondents rated both themselves and individual male and female classmates. We also obtained information about each cadet’s performance (e.g., overall grade point average [GPA], grades in military science classes, physical training scores).
Given the masculine context of military training and the similarity between the social stereotype of men and the attributes required to be an effective soldier, we anticipated that, in comparison to women, stereotypic men in the corps would be perceived as more leader-like, more competent, and more motivated to perform military tasks. In addition, lower ranking military positions require obeying orders in the status hierarchy (e.g., respect for authority, being tactful). Although these are likely to be effective attributes for those entering military training, they might impair performance in leadership positions. These personal qualities correspond to social stereotypes about women, and we anticipated that stereotypic women in the corps would be judged to possess more of these qualities than stereotypic men.

Overall, we anticipated that sex differences in stereotype ratings (i.e., ratings of the typical male and female cadet and the ideal male and female cadet) would correspond to sex differences in evaluations of fellow class members. If stereotypic beliefs underlie the evaluations of men and women enrolled in the corps, then the sex differences in evaluations of fellow classmates should emerge even when the analyses statistically control for such indicators of stereotype accuracy as classmates’ self-ratings and their performance in the corps. Alternatively, if differences obtained in the ratings of fellow cadets and ratings of typical and ideal cadets reflect a kernel of truth, then we anticipate that sex differences in evaluations of classmates will disappear when analyses are conducted to statistically control for the sex differences in self-ratings and performance measures.

A final focus of the investigation concerned the relation between gender stereotypes and the integration of women. Several of the outfits in our data sample were not integrated with respect to the sexes, and we compared the perceptions of women in integrated and nonintegrated groups. It is not possible to draw causal inferences about integration from our sample, because male cadets chose whether to enter integrated units, and consequently self-selection plausibly accounts for any effects of integration.

Method

Participants

Three hundred fifty three male and twenty-seven female members of the Texas A&M Corps of Cadets (approximately 37% of enrolled cadets) participated in the study. Although the number of women in our sample is small in absolute terms, the 7% of women in the present study compares favorably to the 6% of women in the corps overall. The study was conducted with the approval of the Corps Commandant and the Corps Commander. The First Sergeant of each outfit also was contacted, and he facilitated recruitment by signing up potential participants and arranging meeting rooms. The data were collected at the weekly outfit meetings, and participation was voluntary. Members of the corps are assigned to
outfits of approximately 80 cadets who live together, meet weekly, and participate in corps’ events as a unit. Responses were obtained from 13 of the 30 outfits in the corps. Of these, three were not integrated, five had been recently integrated, and five had been integrated for several years.

Materials

**Self-ratings and others’ ratings.** In a pretest to identify the attributes for the present study, 25 cadets (12 female and 13 male) indicated traits associated with success in the corps. The most frequently mentioned traits were integrity, selfishness (reversed), tactfulness, dedication, physical fitness, leadership, respectfulness of authority, diligence, self-confidence, arrogance (reversed), and motivation. To these, we added the traits of masculinity, femininity, and emotional expressiveness. Ratings of emotional expressiveness failed to load on the gender factor as predicted, and analyses of emotional expressiveness as a separate dimension yielded few effects. Thus, emotional expressiveness will not be discussed further. Participants rated how much they and each member of their class (e.g., freshmen, sophomores) within their outfit possessed each attribute. Ratings were made on 9-point scales anchored by 1 (not at all) and 9 (very much). The rating forms were designed on a grid format in which the traits were listed across the top of the page and participants’ names were listed in the first column.

**Typical and ideal ratings.** Participants rated the typical male cadet, the typical female cadet, the ideal female cadet, and the ideal male cadet on the 14 traits. The ideal cadet was defined as the theoretically perfect cadet, whereas the typical cadet was defined as the average or the most frequently occurring cadet. Ratings were made on 9-point scales anchored by 1 (not at all) and 9 (very much).

**Performance measures.** Participants signed release forms to provide us with access to their GPAs, physical training scores, military science grades, and rank position within their outfit. Physical training scores are the ratings of cadets’ physical fitness and abilities by their superiors. Military science classes are designed to teach leadership skills in the military.

We also obtained information about the rank of each participant (position and degree of authority) in their outfit. Positions within each outfit are awarded by a committee of outfit members, and we interpreted rank as an indicator of success in the corps. Rank codes ranged from 1 (lowest) to 15 (highest) within each outfit.

Procedure

The investigator met with each class separately and described the study as an investigation of corps members’ perceptions of themselves and others. The questionnaire materials were distributed, and confidentiality was emphasized.
Participants rated themselves and each member of their class within outfit on the set of 14 traits. Only outfit members who participated in the study served as targets. Participants were instructed to take their time making all ratings and to think about each person as an individual before rating him or her. They were also instructed to rate each target person on all traits before moving on to the next target. Finally, as participants’ names were listed in alphabetical order on the self- and other-ratings forms, they completed self-ratings based on where their own names occurred alphabetically. Participants then rated the typical male cadet, the typical female cadet, the ideal male cadet, and the ideal female cadet on the same set of traits.

Participants completed the questionnaires wherever they wished, were reminded not to share their responses with anyone, and returned the forms to the investigator. Participants were then given cookies, thanked, debriefed, and excused.

Exploratory Factor Analysis

An exploratory factor analysis using varimax rotation was performed in order to reduce the 14 traits to interpretable factors. The analysis yielded a four-factor solution. Dedication, physical fitness, diligence, and motivation combined to form the motivation factor (α = .83; eigenvalue = 3.30). Leadership and self-confidence combined to form the leadership factor (α = .70; eigenvalue = .86). Integrity, selfishness (reversed), tactfulness, respectfulness of authority, and arrogance (reversed) formed the character factor (α = .78; eigenvalue = 1.90). Although masculinity and femininity (reversed) formed a fourth factor, we decided to retain these as separate variables in the analysis, given that each may contribute to the perception of women in military settings.

Results

Perceptions of Ideal and Typical Cadets of Each Sex

One of the methodological strengths of this study is that the data are generated by group members who live together, work together, and know each other well. This type of data cannot be analyzed with standard procedures, because the scores are not independent. For this reason, ratings of the typical male and female cadet and ratings of the ideal male and female cadet were analyzed using mixed model analyses of variance (ANOVAs). In these analyses, level of gender integration was treated as a between-subjects factor (integrated versus nonintegrated units), sex of the target was treated as a within-subjects factor (typical male cadet versus typical female cadet or ideal male cadet versus ideal female cadet), and group (e.g., class/outfit combinations) was treated as a nested factor within levels of integration. The nested factor of group within integration was used as the error term, and
the degrees of freedom represent the number of groups rather than the number of individuals. Separate models were constructed for ratings of the typical cadet on each of the five dimensions and for ratings of the ideal cadet on each of the five dimensions. Because we were unable to obtain data from the senior class in two outfits, these analyses are based on data from 50 groups rather than 52.

Analyses on ratings of ideal cadets revealed that the ideal female cadet was rated lower than the ideal male cadet on motivation, \( F(1, 48) = 16.31, MSE = 1.05, p < .001, d = .22 \), and leadership, \( F(1, 48) = 23.28, MSE = 1.10, p < .001, d = .36 \) (see Table 1). Furthermore, consistent with gender typing, the ideal female cadet was rated as lower than the ideal male cadet on masculinity, \( F(1, 48) = 900.86, MSE = 3.08, p < .001, d = 1.73 \), and higher on femininity, \( F(1, 48) = 581.49, MSE = 5.26, p < .001, d = -1.64 \). No differences emerged, however, in ratings of the ideal male and female cadet on character (\( F < 1, d = .04 \)), and none of the ratings of ideal male and female cadets varied with whether or not an outfit was integrated.

Analyses on ratings of typical cadets revealed that the typical female cadet was rated lower than the typical male cadet in leadership, \( F(1, 48) = 165.71, MSE = 1.43, p < .001, d = .80 \), and motivation, \( F(1, 48) = 104.12, MSE = 1.66, p < .001, d = .69 \) (see Table 1). Gender typing was evident in that the typical female cadet was rated lower than the typical male cadet on masculinity, \( F(1, 48) = 282.03, MSE = 4.33, p < .001, d = 1.35 \), and higher on femininity, \( F(1, 48) = 281.21, MSE = 4.94, p < .001, d = -1.36 \). Typical female cadets were also judged to possess more character, \( F(1, 48) = 26.11, MSE = 1.40, p < .001, d = -.36 \), than typical male cadets.

Analyses also revealed that the ratings of typical cadets varied with the level of integration (see Table 2). Significant interactions between sex of target and level of integration emerged for motivation, \( F(1, 48) = 8.77, MSE = 1.66, p < .01 \), masculinity, \( F(1, 48) = 9.51, MSE = 4.33, p < .01 \), femininity, \( F(1, 48) = 19.55, MSE = 4.94, p < .001 \), and character, \( F(1, 48) = 6.12, MSE = 1.40, p < .01 \). Leadership perceptions did not yield the Sex × Integration interaction. To decompose these interactions, simple main effects were calculated to evaluate the effects of integration separately on the perceptions of the typical male and the typical female. In general, perceptions of typical female cadets were more favorable with integration, whereas perceptions of typical male cadets remained relatively stable across integrated and nonintegrated outfits. That is, typical women were rated higher in integrated than nonintegrated outfits on the dimensions of motivation, \( F(1, 48) = 10.65, MSE = 2.93, p < .01 \), and character, \( F(1, 48) = 3.84, MSE = 1.92, p < .06 \). Also, gender typing was stronger in integrated outfits than in nonintegrated outfits, with typical female cadets judged higher in femininity, \( F(1, 48) = 21.83, MSE = 6.06, p < .01 \), and lower in masculinity, \( F(1, 48) = 10.96, MSE = 7.25, p < .01 \).

It is interesting to note that the analyses revealed no rater sex differences. That is, male cadets’ perceptions of the typical or ideal male or female cadet did not differ from female cadets’ perceptions of the typical or ideal male or female cadet. Thus, the sexes appear to hold comparable stereotypical perceptions.
Self-Perceptions of Male and Female Cadets

The analyses on self-ratings could be conducted only on the 17 groups with data from female cadets. Thus, self-ratings were evaluated with 2 (sex) × 17 (group) ANOVAs. Given that tests of nonindependence revealed significant group effects, the mean square from the Group × Sex interaction was used as the error term. The results revealed that male cadets rated themselves as higher in masculinity than did female cadets, $F(1, 16) = 91.88$, $MSE = 4.30$, $p < .01$, $d = 4.21$ (see Table 3). Female cadets rated themselves as higher in femininity than did male cadets, $F(1, 16) = 173.67$, $MSE = 2.83$, $p < .01$, $d = -5.00$. No significant sex differences emerged, however, on self-perceptions of motivation, $d = .50$, leadership, $d = .72$, or character, $d = -.04$.

Perceptions of Male and Female Cadet Classmates

Analyses on perceptions of individual male and female cadets among their fellow classmates could be conducted only in the 17 outfits that included ratings of women. Thus, analyses were performed with a series of 2 (sex) × 17 (group)
ANOVAs, using group (class/outfit combinations) as the unit of analysis. Analyses revealed significant nonindependence in the data and as a result the mean square from the Sex × Group interaction was used as the error term for tests of the sex main effect. As shown in Table 3, individual female cadets were rated lower by their classmates than were male cadets on motivation, \(F(1, 16) = 11.15, \text{MSE} = 1.02, p < .01, d = .78\), leadership, \(F(1, 16) = 13.92, \text{MSE} = 1.58, p < .01, d = 1.35\), and masculinity, \(F(1, 16) = 193.95, \text{MSE} = 1.98, p < .01, d = 4.82\), and higher than their male counterparts on femininity, \(F(1, 16) = 375.05, \text{MSE} = 1.10, p < .01, d = −5.34\). Again, no significant sex differences emerged in analyses of character, \(d = .10\).

Rater sex differences did not emerge in these analysis, indicating that female cadets’ perceptions of fellow group members did not differ from male cadets’ perceptions. Thus, the sexes do not vary in the extent to which they differentiate between male and female classmates.

### Correlations Among Attribute Ratings

Bivariate correlations were calculated to identify the relations between the attribute ratings for self-judgments and those for judgments of fellow cadets. As can be seen from Table 4, ratings of self and others on motivation, leadership, and masculinity tended to cohere. That is, cadets’ self-perceptions that they possessed high levels of one of these dimensions were associated with self-perceptions that they possessed high levels of other dimensions (\(r_s\) ranged from .34 to .52, \(ps < .01\)). Similarly, others’ perceptions across the dimensions of motivation, leadership, and masculinity tended to cohere (\(r_s\) ranged from .50 to .79, \(ps < .01\)).

As anticipated, perceptions of femininity were negatively related to the attributes linked to success in the corps. That is, cadets’ ratings of themselves as more feminine were associated with lower ratings of themselves as motivated, leader-like, and masculine (\(r_s\) ranged from −.70 to −.16, \(ps < .05\)). Similarly, others’ ratings of cadets as more feminine were associated with lower ratings on motivation, leadership, and masculinity (\(r_s\) ranged from −.89 to −.34, \(ps < .01\)).

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**Table 3.** Mean Self-Ratings and Ratings of Fellow Cadets as a Function of the Sex of the Target Cadet

<table>
<thead>
<tr>
<th></th>
<th>Motivation</th>
<th>Leadership</th>
<th>Character</th>
<th>Masculinity</th>
<th>Femininity</th>
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<tr>
<td>Male</td>
<td>7.43 (.73)</td>
<td>7.29 (.54)</td>
<td>6.70 (.60)</td>
<td>8.08 (.54)*</td>
<td>1.74 (.72)*</td>
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<td>Female</td>
<td>7.10 (1.20)</td>
<td>6.57 (1.54)</td>
<td>6.99 (0.99)</td>
<td>2.94 (2.07)</td>
<td>7.34 (1.36)</td>
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<td><strong>Others’ perceptions of classmates</strong></td>
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<tr>
<td>Male</td>
<td>6.80 (.63)*</td>
<td>6.46 (.70)*</td>
<td>6.08 (.76)</td>
<td>7.66 (.61)*</td>
<td>1.86 (.62)*</td>
</tr>
<tr>
<td>Female</td>
<td>5.91 (1.11)</td>
<td>5.06 (0.94)</td>
<td>6.26 (1.12)</td>
<td>2.66 (0.98)</td>
<td>6.78 (0.91)</td>
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*Perceptions of male cadets were significantly different from those of female cadets, \(p < .01\).
<table>
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*Note. Numbers represent bivariate correlations between cadets’ self-ratings and their classmates’ ratings of the cadets. Higher numbers represent perceptions of the rated cadet as possessing more motivation, leadership, character, masculinity, and femininity.  
*p < .01.
Finally, it is worth noting the high correspondence between self-perceptions and others’ perceptions on the gender-typed dimensions ($r_s = .73$ and $.70$ for femininity and masculinity, respectively, $p_s < .01$). This strong coherence across the two forms of assessment suggests a high level of consensus in the criteria corps members are using to generate the evaluations—a consensus that is consistent with the idea that gender stereotypes are a central component of evaluations in the corps. In comparison, moderate levels of correspondence emerged across self-ratings and others’ ratings on the other dimensions of judgment ($r_s$ ranged from $.33$ to $.52$, $p_s < .01$).

**Sex Differences in Performance**

The analyses of performance measures could be conducted only with the 17 outfits in which we obtained data from women. To determine whether men and women differed on the actual performance measures, a series of $2 (\text{sex}) \times 17 (\text{group})$ ANOVAs were performed using group (class/outfit combinations) as the unit of analysis. Results provided evidence of nonindependence, and the mean square from the Sex $\times$ Group interaction was used as the error term for tests of the sex main effect. No significant differences in performance between male and female cadets emerged on any of the measures. For semester GPA, men ($M = 2.57$, $SD = .36$) did not differ from women ($M = 2.46$, $SD = .85$, $F < 1$), $d = .20$. For cumulative GPA, men ($M = 2.61$, $SD = .26$) did not differ from women ($M = 2.51$, $SD = .65$, $F < 1$), $d = .19$. For physical training scores, men ($M = 246.08$, $SD = 51.88$) did not differ from women ($M = 242.67$, $SD = 52.99$, $F < 1$), $d = .19$. For military science grades, men ($M = 3.75$, $SD = .38$) did not differ from women ($M = 3.71$, $SD = .58$, $F < 1$), $d = .10$. For rank, men ($M = 4.89$, $SD = 3.37$) did not differ from women ($M = 3.41$, $SD = 3.20$, $F < 1$), $d = .31$.

**Sex-Differentiated Evaluations of Others Controlling for Self-Ratings and for Performance**

Although the lack of sex differences in performance suggests that the sex-typed evaluations of male and female cadets are not due to these cadets’ actual performance in the corps, we examined this possibility directly by conducting the analyses on perceptions of others after controlling for the performance measures. Given that semester GPA and cumulative GPA were highly correlated ($r = .81$), these measures were combined into a single index. In each model, sex, group, grade (semester GPA combined with cumulative GPA), military science grade, physical training, and rank were entered as simultaneous predictors. As would be expected given the lack of sex differences in performance, the analyses controlling for performance did not reduce the sex differences in perceptions of fellow classmates. Analyses of others’ ratings controlling for performance revealed that male...
cadets were seen as higher than their female counterparts in masculinity, $F(1, 11) = 193.44, MSE = 1.19, p < .01$, motivation, $F(1, 11) = 11.79, MSE = 1.74, p < .01$, and leadership, $F(1, 11) = 5.33, MSE = 2.33, p < .05$, and lower in femininity, $F(1, 11) = 508.04, MSE = .48, p < .01$. No differences emerged in perceptions of male and female cadets on character ($F < 1$).

Self-ratings provide an alternate index of accuracy of perceptions. To examine whether others’ ratings of male and female cadets are an accurate representation of the differential self-ratings of male and female cadets, we conducted the analyses of ratings of others after controlling for self-ratings on each of the relevant dimensions. These analyses continued to reveal sex-differentiated perceptions such that, when controlling for self-ratings, female cadets were rated lower than male cadets in masculinity, $F(1, 16) = 30.66, MSE = 1.73, p < .01$, motivation, $F(1, 16) = 12.04, MSE = .57, p < .01$, and leadership, $F(1, 16) = 11.23, MSE = .98, p < .01$. In addition, female cadets were rated as higher in femininity than male cadets, $F(1, 16) = 49.06, MSE = .97, p < .01$. Male and female cadets were not rated differently on character ($F < 1$).

**Discussion**

The present study documented the effects of gender stereotypes on evaluations of women in the male-dominated environment of a military training institution. In comparison to stereotypic females, stereotypic male cadets were judged to possess more of a cluster of attributes associated with motivation, including dedication, physical fitness, and diligence. Stereotypic male cadets also were judged to possess more leader-like qualities than females, including leadership and self-confidence. Furthermore, as would be expected, ideal and typical male cadets were judged to be more masculine and less feminine than ideal and typical females. Thus, corps members’ perceptions of typical and ideal cadets correspond on several dimensions to the general societal-level stereotypes of men and women (e.g., Broverman et al., 1972).

The pattern of findings suggests that the impact of stereotypic beliefs in military settings is problematic for women because of the discrepancy between the attributes that comprise the social stereotype of women and the attributes required for effective military performance (Eagly & Johannesen-Schmidt, this issue; Eagly & Karau, in press; Heilman, 1983, this issue). The sex differences that emerged in students’ judgments of typical and ideal cadets were largely to the detriment of women. That is, the gender-stereotypic judgments identified several attributes related to success in the corps that were more characteristic of male cadets than females. The impact of stereotypic beliefs is additionally problematic for women because effective military performance requires the rejection of a number of stereotypically feminine qualities (Ebbert & Hall, 1993; Francke, 1997). The
negative impact of feminine qualities was apparent in that greater femininity was associated with less motivation and less leadership.

The parallel sex differences that emerged with the stereotypes of women and the evaluations of individual cadets enrolled in military training are consistent with our claim that sex-based evaluations arise from gender stereotypes. That is, in stereotypic judgments as well as in judgments of individual cadets, women were rated lower on the dimensions of leadership and motivation (with the exception of self-ratings). Female cadets were also judged to possess less masculinity and more femininity than male cadets. Yet ratings of character (i.e., whether one was selfless, tactful, and respectful of authority, lacked arrogance, and possessed integrity) did not favor men generally, and in fact typical women were judged higher in character than typical men.

An alternate account attributes sex-based evaluations of cadets to actual differences in the performance or self-concepts of men and women in the corps. To address this possibility, we evaluated performance in terms of students’ grades, their rank in the corps, and their physical training scores, and we evaluated cadets’ self-ratings on the judgment dimensions. The pattern of findings for the performance measures did not correspond to the sex differences in evaluations of men and women. No sex differences emerged on any performance measure, suggesting that actual performance differences do not underlie the differential evaluation of men and women in military training. Furthermore, analyses that statistically controlled for performance revealed that female cadets were perceived by their classmates as lower in motivation, leadership, and masculinity than male cadets and as higher in femininity. The pattern of findings for the self-ratings also did not correspond to the sex differences in evaluation of men’s and women’s motivation and leadership. No sex differences emerged on self-ratings despite female cadets’ being rated by their fellow classmates as significantly lower in motivation and leadership than male cadets. Some correspondence between self-ratings and ratings of others did emerge with masculinity and femininity, such that female cadets perceived themselves and were perceived by their classmates as more feminine than male cadets. In like fashion, male cadets perceived themselves and were perceived by their classmates as more masculine than female cadets. When we conducted analyses that statistically controlled for self-ratings, however, female cadets still were seen as less motivated, less leader-like, less masculine, and more feminine than male cadets. Thus, female cadets were seen by their classmates as less leader-like, less motivated, less masculine, and more feminine than they judged themselves. Overall, these results indicate that sex differences in evaluations do not reflect a kernel of truth as represented by sex differences in performance or by sex differences in self-ratings.

Although our research demonstrated the usefulness of gender stereotypes as an explanation for the lower evaluation of women than men in military training programs, we recognize that a variety of factors may account for the poor
representation of women in military settings. For example, a social dominance theory perspective suggests that men are more likely to be attracted than women to military contexts and other hierarchy-enhancing roles because of men’s greater disposition to support hierarchical organizations (Pratto, 1996). Although we did not assess sex differences in social dominance directly, such differences in our study might have emerged in the self-ratings of leadership. Men did not, however, rate themselves as more leader-like than did women. Whether sex differences in social dominance can explain men’s role in military settings requires additional research.

Effects of Integration on Evaluations of Women

Integration of women into the outfits in our sample affected stereotypic perceptions of the typical female cadet and had little impact on perceptions of the typical male. Integration increased the favorability of perceptions of women such that typical women were perceived to be more motivated and to possess more character in integrated than nonintegrated outfits. In addition, integration appeared to accentuate a conventional gender-typed view of female cadets, in that typical women were perceived as less masculine and more feminine in integrated than nonintegrated outfits. This accentuation of gender stereotypes supports previous findings that token women in male-dominated employment settings are encouraged to act in gender-appropriate ways (Kanter, 1977).

Although the effects of integration cannot be interpreted in a causal fashion, because male cadets can select outfit membership, it is noteworthy that integration did not have detrimental effects on perceptions of women. Hostility toward women in military roles has been documented in some detail in earlier research (Ebbert & Hall, 1993; Francke, 1997), and we had anticipated that women’s presence in the corps might generate animosity. It is possible that the positive effects associated with integration in this context are due to the location of the Corps of Cadets on a college campus composed of equal numbers of males and females. Cadets’ daily interaction with women differentiates officer training programs on college campuses from the military service academies and may qualify the tradition of all-male activities. For this reason our findings may not generalize to other military training programs such as the academies.

Conclusion

The present findings reveal that sex remains an important distinguishing characteristic among cadets in military training. We argue that gender stereotypes negatively influenced cadets’ evaluations of their women classmates. These stereotypes may also be responsible for women cadets’ judgments of their own fitness for training in the military. Our findings build on earlier research documenting the
less positive evaluations of women’s than men’s leadership abilities in military settings (e.g., Biernat et al., 1998; Rice, Instone, & Adams, 1984). The present work links the lower evaluations of women enrolled in military training to general gender stereotypes and demonstrates that these extend to perceived motivation as well as leadership.

The marked impact of gender stereotypes in military training is likely maintained in part through structural factors such as the limited numbers of women currently enrolled in training programs and the male-dominated history of the military. Another important factor is that the roles and activities performed by military personnel continue to be differentiated by sex. Even though female and male students fill exactly the same educational roles in a training program, in the military at large women continue to be excluded from active combat, which is a highly valued activity in the military (Ebbert & Hall, 1993; Francke, 1997). Lessening of the impact of gender stereotypes in military settings may depend on achieving equivalency between men and women in the numbers of each sex and in the roles they enact.

References


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