Gender Schemas in College Students

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Author Notes

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Abstract

173 female and 137 male university students were asked to give an example of their masculine and of their feminine behavior and to rate themselves on stereotyped and neutral traits. The sexes differed in the frequencies with which they used some specific themes in their examples. Approximately 10% of each sex stated that they never behaved in a manner characteristic of the other sex and were labeled traditional gender schematics (TGSs). TGS men rated themselves as less feminine on the trait ratings than did other men. TGS women rated themselves as less masculine and as more feminine than did other women. Ss who wrote about typical masculine or feminine behaviors did not rate themselves highly on the corresponding traits.
Gender Schemas in College Students

The term "gender schema" is used to refer to the knowledge, beliefs, and attitudes we have about gender, both for ourselves and for others. Gender schemas are learned quite early, and once learned, these schemas affect processing of gender-related material (e.g., Liben & Signorella, 1987). Major models of gender schemas, however, make competing predictions about the precise nature of gender schemas and their effects (e.g., Bem, 1981; Markus, Crane, Bernstein, & Siladi, 1982). The purpose of the present research was to provide further information on the nature of gender schemas through the use of open-ended data.

The broadest claims about the nature of gender schemas have been made by Bem in her gender schema theory. Bem defines gender-schematic processing as "'a generalized readiness ... to encode and to organize information - including information about the self - into the culture’s definitions of maleness and femaleness'" (1985, p. 182). She believes that self-ratings on the stereotypically masculine (M) and feminine (F) traits from the Bem Sex-Role Inventory (or BSRI; Bem, 1974) can be used not only to predict self-related information processing, but also as an indicator of...a general tendency to partition the world into masculine and feminine categories" (Bem, 1982, p. 1193). Specifically, Bem believes that the traditionally sex typed (i.e., feminine women [high F and low M scores] and masculine men [high M and low F scores]) will have the greatest probability of engaging in gender-schematic processing. Persons who are not sex typed (i.e., with one of the three remaining possible combinations of M and F scores) are considered to be aschematic, and therefore with the lowest probability of engaging in gender-schematic processing.

A contrasting view held by Markus and her associates (Crane & Markus, 1982; Markus et al., 1982; Markus, Smith & Moreland, 1985) is that extreme endorsement of traits such as those on the BSRI reflects the presence of self-schemas, or "a merging of the self-concept with the network of knowledge relevant to masculinity or femininity" (Markus et al., 1982, p. 39). According to this approach, sex-typed men have self-schemas organized primarily around masculine concepts, while sex-typed women have self-schemas organized primarily around feminine concepts. Only high androgynous women and men (high on both M and F traits) are considered by Markus to have true gender schemas because such persons are the only ones with well-developed masculine and feminine components to their self-schemas. Low androgynous women and men (low on both M and F) are considered to be aschematic, because their self-schemas contain neither well-developed masculine nor well-developed feminine components.
Conclusions about gender schemas have also been complicated by the methodological issues raised by the use of M and F trait rating measures. Spence and Helmreich argue that typically used "masculine" and "feminine" traits are primarily instrumental and expressive personality traits, respectively, and not indicators of "global masculinity and femininity" (Spence & Helmreich, 1982, p. 367). Spence (e.g., 1985) carries this argument even further and suggests that there are no specific sets of traits that are consistently associated with one's self-concept as male or female. Instead, we all have complex notions of masculinity and femininity that include far more than a small set of traits. Spence and Sawin's (1985) open-ended data indicated that femininity and masculinity were defined by both sexes as complex multi-dimensional concepts.

There is also evidence that the traditional M and F rating scales are not inclusive enough. Several studies using open-ended questionnaires that have shown that most subjects do not spontaneously mention items from the commonly used rating scales, such as the BSRI and the Personal Attributes Questionnaire (or PAQ; Spence, Helmreich & Stapp, 1974), when asked either about themselves or about definitions of masculinity and femininity in general (e.g., Jackson, 1985; Myers & Gonda, 1982a, 1982b; Spence & Sawin, 1985). The open-ended responses have also identified areas that have been neglected by most rating scales, such as physical attributes and appearance (Myers & Gonda, 1982b; Spence & Sawin, 1985).

In the present research we addressed some of the above issues by comparing the responses to open-ended questions about masculine and feminine behavior with the traditional M and F trait ratings. College students were asked to complete a variant of the task used by Markus et al. (1982), wherein subjects were asked to supply examples of their own behaviors. But where Markus et al. gave subjects specific traits to which to respond, we asked for examples of masculine and feminine behaviors. After completing the open-ended task, subjects were also asked to rate themselves on M, F and neutral (N) traits.

By using the explicit masculine and feminine cues, we hoped to accomplish two things. First, we wanted to see which examples subjects have stored under the categories of "feminine" and "masculine." Should subjects use BSRI or PAQ traits or related themes only infrequently, it would raise serious doubts about the meaning of subjects' endorsement of such items. In addition, subjects' themes will be compared to the M and F trait ratings, to test the competing hypotheses about the nature of knowledge structures in sex-typed and androgynous persons.

Second, using an open-ended format leaves open the possibility that some
subjects will refuse to answer one or both questions. Spence and Helmreich (1982) suggested that the gender schematics might be the ones who give the most bipolar responses to questions about being feminine and masculine. In other words, rather than viewing all sex-typed persons as gender schematics, those persons who essentially say “I’m never masculine and I’m always feminine (or vice versa) would be gender schematic. Other subjects may refuse to answer questions that call for the use of the labels masculine and feminine. Such subjects may he aschematic in the sense that they do not accept culturally defined gender categories. The question would then be whether such persons rate themselves relatively low on the M and F traits (i.e., low androgynous), or whether they rate themselves as relatively high on both the M and F traits (i.e., high androgynous).

Method

Subjects.

The subjects were 173 women and 137 men from general psychology classes at the University of Pittsburgh who received class credit for their participation. The ethnic composition of the sample was 89% white, 8% black, and 3% other ethnicity, according to subjects’ own ratings.

Materials.

Each subject was asked to respond to two open-ended items, one about masculine and one about feminine behavior. The exact wording was as follows (with the changes for the feminine version in parentheses): "Describe a time when you acted in a masculine (feminine) manner. Why did you feel that your actions were masculine (feminine) in this situation. In the second part of the questionnaire, subjects were asked to describe themselves on each of 73 personality traits using a 7- point scale. Eleven M and 11 F traits that had appeared on previous inventories or in open-ended research were used to form the M and F scales, while the remaining traits served as fillers.

Procedure.

Subjects were tested in groups of 5 to 20. All subjects completed the open-ended questionnaire first, and the trait ratings second. On the open-ended questionnaire, one-half of the subjects answered the question about masculine behavior first and one-half answered the question about feminine behavior first.
**Scoring.** Responses to the open-ended questionnaire were coded for the presence or absence of major themes. The themes were chosen from items that frequently appear on the rating scales and/ or are cited on open-ended questionnaires. For the question about masculine behavior, the themes chosen were aggression, leadership/taking charge, and athletic/physical activity. Anyone who gave an example using some other theme was coded into the "other" category. Some of the subjects did not respond with an example. These responses fell into one of three categories: those who denied engaging in masculine behavior, those who said that their behavior was always masculine, and those who refused to classify their behavior as either masculine or feminine.

For the question about feminine behavior, the themes were physical appearance/dress, warmth/caring toward others, fear/timidity, or other. As with the masculine question, some of the subjects did not respond with an example of feminine behavior, but instead fell into one of three categories: those who denied engaging in feminine behavior, those who said that their behavior was always feminine, and those who refused to classify their behavior as either masculine- or feminine. Thus, subjects’ responses to each open-ended question were coded into one of seven categories. A subset of responses was rated by two raters. Interrater agreement was 81.6%.

**Results**

**Responses to Open-Ended Questions About Masculine and Feminine Behavior.**

Equally high proportions of men and women (about 90%) were able to give examples of their masculine behavior. Among these subjects, however, there was a sex difference in the frequencies with which various themes were cited, $\chi^2 (3, N = 278) = 15.05, p = .002$. The differences occurred only on the use of leadership and athletic themes, with leadership cited more frequently by men (23%) than by women (12%) and athletic/physical activity more frequently by women (32%) than by men (15%). The aggression theme was the most common type of example given for masculine behavior across both sexes (31% and 32% for women and men, respectively). Only 14% of the women and 19% of the men failed to cite one of the three themes of interest.

For the question about feminine behavior, 84% of the subjects were able to give examples of feminine behavior. More women (88%) than men (77%) were able to give such examples. There was also a sex difference in the frequencies with which the various themes were cited, $\chi^2 (3, N = 259) = 21.64, p < .001$. Physical appearance was cited more frequently by women (31%) than by
men (8%), while warmth/caring was cited more frequently by men (18%) than by women (12%). Fear/timidity themes were cited equally frequently by both sexes (14% each). There was less consensus on the feminine than on the masculine themes, with 31% of the women and 37% of the men failing to cite one of the three major themes.

The next comparisons involve the small percentage who did not give examples of masculine and/or feminine behaviors. Men denied other-sex behavior (15%) significantly more frequently than did women (7%), \( Z = 2.38, p = .009 \). There were also trends toward more women (2%) than men (0%) denying same-sex behavior, \( Z = 1.55, p = .06 \), more women (6%) than men (3%) claiming that they always behave in a same-sex manner, \( Z = 1.40, p = .08 \), and more men (7%) than women (3%) refusing to classify their behavior as masculine or feminine, \( Z = 1.51, p = .07 \).

**Comparisons of Open-Ended Responses to Trait Ratings**

**Masculine behavior.** Groups of subjects were formed based on their responses to the open-ended questions. Those persons whose answers fell into one of the three masculine categories of interest (aggression, leadership/taking charge, athletic/physical activity) but who also answered the feminine question were labeled the Aggressive, Leadership, Athletic groups, respectively. Those who wrote on some other theme were not considered in this analysis. The comparison groups were composed of those persons who refused to answer one or both questions. The group we labeled Traditional Gender Schematics were those men and women who denied other-sex behavior, but who answered the question about same-sex behavior by giving an example or by saying that they always behaved in a same-sex manner. Thus, men who denied feminine behavior, but who gave, for example, an aggressive answer for the masculine question were included in the TGS Group, and not in the Aggressive group. The group we labeled Aschematic were those men and women who refused to answer the masculine or the feminine question because they refused to classify their behavior as masculine or feminine.

There were some categories that did not have enough subjects to be included in the analysis. For example, Nontraditional Gender Schematics would be persons who denied same-sex behavior, but there no men who denied masculine behavior and only three women who denied feminine behavior. There were also the persons who stated that they always behaved in a same-sex manner. Many of these persons also denied other-sex behavior and thus are included in the Traditional Gender Schematic group. Those few remaining
subjects who said that they always behaved in same-sex manner but gave an example of other-sex behavior were eliminated from further analyses.

Sex (women, men) X masculine response group (Aggressive, Leadership, Athletic, Traditional Gender Schematic, Aschematic) ANOVAs were done on the masculine trait ratings. In addition to the average rating on the 11 M traits (M scale score), ratings on individual traits from the M scale were also of interest, namely, "aggressive," "acts as a leader," "athletic," and "masculine."

On the traits "aggressive" and "acts as a leader," there were only marginally significant effects for sex, with men tending to rate themselves higher than women. On the trait "athletic," however, there was a large effect for sex, $F(1, 196) = 28.79$, $p < .001$, $d = .77$, with men rating themselves as more athletic than did women ($M_s = 5.31$ & $4.36$). On the trait "masculine" there was an interaction of sex and masculine response category, $F(4, 196) = 2.44$, $p = .048$. For women, planned contrasts showed that those in the Aggressive, Leadership, and Athletic groups rated themselves as more masculine than did the Traditional Gender Schematics, $t = 3.11$, $p < .05$, $d = .59$. Those in the three theme groups did not differ from the Aschematics, nor did the Aschematics differ from the Traditional Gender Schematics. For men, none of the contrasts was significant. Subsumed by the interaction was a main effect for sex, $F(1, 196) = 361.25$, $p < .001$.

On the M scale score, there was a main effect for sex, $F(1, 196) = 8.12$, $p = .005$, $d = .41$, with men having higher average scores than women ($M_s = 4.97$ & $4.81$).

Feminine behavior. The same Traditional Gender Schematic and Aschematic groups described above were used as the comparison for the analysis of the responses by those who wrote on one of the three feminine themes of interest (physical appearance/dress, warmth/caring about others, fear/timidity). Those men and women who wrote on one of the feminine themes but who also answered the masculine question were put in the Appearance, Warmth, and Fear groups, respectively.

Sex (women, men) X feminine response group (Appearance, Warmth, Fear, Traditional Gender Schematic, Aschematic) ANOVAs were done on the responses to the feminine traits. In addition to the average F scale score, the individual traits of interest were "concerned about appearance," "warm," "dependent," and "feminine."

On the trait "concerned about appearance," there were main effects for sex, $F(1, 151) = 15.70$, $p < .001$, and for feminine response group, $F(4, 151) = 2.88$, $p = .025$. Women rated themselves as more concerned about appearance than did men, $M_s = 6.08$ v. $5.55$, $d = .64$. Surprisingly, however,
contrasts showed that the Appearance group ($M = 5.52$) was less concerned about appearance than were the Warmth (M= 5.98) and Fear (M = 6.01) groups, $t = 3.73, p < .01, d = .62$.

On the trait “warmth” there was also a main effect for sex, $F (1, 151) = 11.15, p = .001$, with women rating themselves as higher in warmth than did men, $Ms = 5.94$ v. 5.54, $d = .54$. On the trait "dependent," there were no significant effects. On the trait "feminine," there was an interaction of sex and feminine response category, $F (4, 151) = 3.04, p = .019$. For men, those who wrote on the themes rated themselves as more feminine than did the Traditional Gender Schematics, $t = 3.00, p <.05, d = .80$. For women, Traditional Gender Schematics rated themselves as more feminine than did those who wrote on the themes, $t = 3.05, p < .05, d = .66$. Subsumed by the interaction was a main effect for sex, $F(1, 151) = 681.08, p < .001. d = .54$.

On the F scale score, the only significant effect was a main effect for sex, $F(1,151) = 15.40, p <.001$. The average for women was 5.27 and for men was 5.00, $d = .64$.

**Discussion**

The majority of our respondents had no difficulty describing a situation in which they had displayed behavior characteristic of the other sex. Many of the examples given also matched traits from the M and F trait rating scales. The correspondence was particularly high for M traits, where 82% of the subjects wrote about aggressive, leadership, or athletic behavior. For the F traits, 59% of the subjects used one of the three examples for which we had searched, but only one of those themes appears on both the BSRI and PAQ (warm). The most commonly used theme, appearance, and the fear/timidity theme do not appear as F traits on the PAQ or BSRI. Among those subjects who did not give one of the three examples of interest, stories about crying were common. Such an item is on the PAQ but on the M-F scale rather than on the F scale. Thus, there is some evidence for the rating scales as valid measures of masculine and feminine self-concepts, but evidence also that important themes of femininity, such as appearance, fearfulness, and crying, have been neglected by these scales.

Our results can be interpreted as providing some support for gender schema theory. Traditional gender schematics used more extreme ratings on the traits "masculine" and "feminine" compared to others of the same sex. If Spence and Helmreich (1982) are correct about "masculine" and "feminine" ratings providing a good gender schematicity measure, then men and women who deny other-sex behavior are the gender schematics. But such persons do not make up
as large a proportion of the population as Bem is claiming. Only 6% of the women and 11% of the men in our sample denied other-sex behavior. Nor was the failure to find associations between denying other-sex behavior and overall sex-typing scores supportive of Bem’s position. Further research is necessary to confirm whether persons who deny other-sex behavior engage in gender-schematic processing as Bem defines it.

Another issue is the nature of aschematics. Markus and associates argue that only the low androgynous are schematic, while Bem feels that all non-sex-typed are schematic. We labeled those who refused to categorize behavior as masculine and feminine as the aschematics, but, contrary to either theory, such persons exhibited no distinctive pattern of M and F scores.

A more problematical finding for Markus’s approach was our failure to find consistent associations between the types of behaviors mentioned and the trait ratings for these same behaviors. Markus and her associates assume that those who are self-schematic for a particular trait will readily describe themselves acting in a manner consistent with that trait and will rate themselves highly on the trait. There is a difference, however, between the procedures used by Markus et al. (1982) and those we used, besides the fact that we asked for masculine and feminine behaviors rather than specific traits. Markus et al. asked for as many examples as possible for each trait while we asked for only one. There is a possibility that limiting persons to only one trait causes them to cite only the most stereotyped example that they can think of. If so, it is interesting that so many subjects, both male and female, cited examples that could be viewed as negative.

Conclusions

Our results showed that women and men will write about themes from the commonly used personality inventories when asked about their masculine and feminine behaviors. There was, however, a greater correspondence for the masculine than for the feminine themes. In spite of this general correspondence, individuals’ use of themes did not relate to their self-ratings on the traits or on the scale scores. The association that did emerge most strongly was the tendency of the persons who denied other-sex behavior to give extreme ratings on the traits "masculine" and "feminine." These persons may be the gender schematics as Bem defines it. Those who refused to classify behaviors as masculine or feminine did not appear to be aschematic as is currently defined. The results support the position of Spence and associates that the connection between those behaviors and traits that are gender stereotyped and masculinity and femininity in the self-concept is weak.
References


