SEX-ROLE ORIENTATION AND FEAR OF SUCCESS

A thesis submitted in partial satisfaction of the requirements for the Masters of Arts in
Psychology
(Community/Clinical Psychology)

by

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ABSTRACT

CLARIFYING THE RELATIONSHIP BETWEEN
SEX-ROLE ORIENTATION AND FEAR OF SUCCESS

by

Morgan Lynn

Master of Arts in Psychology

Inconsistencies in research concerning the relationship between Fear of Success (FOS) and sex-role orientation may be due to the use of sex role inventories which treat masculinity and femininity as end points of a bipolar continuum. The Bem Sex-Role Inventory (BSRI; Bem, 1974), which treats masculinity and femininity as separate dimensions, was administered to 102 female introductory psychology students from Moorpark Community College in addition to measures of FOS, achievement motivation and performance.

This research replicated a study conducted by Major (1979) with the modification that the participants competed in a mixed-sex situation.

It was predicted that women who were androgynous (high feminine and high masculine) would evidence less FOS than women who were high masculine or high feminine. It was
also predicted that women who embraced masculine characteristics (androgynous and sex-reversed) would be higher in achievement motivation, but that in a mixed-sex competitive situation, sex-reversed women would experience a decrement in performance.

These predictions were not supported by the data; however, sex-reversed women did score significantly higher than all other women in achievement motivation.
CLARIFYING THE RELATIONSHIP BETWEEN
SEX-ROLE ORIENTATION AND FEAR OF SUCCESS

Morgan Lynn
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INTRODUCTION

More than a decade ago, Matina Horner (1968) introduced the concept of "fear of success," a psychological explanation to account for the observed failure of bright women to achieve academically and professionally. Horner followed McClelland, Atkinson, Clark and Lowell (1953) in defining achievement as competence in a situation in which there are standards of excellence. The person with high achievement motivation has developed an internal standard of excellence, is independent, persistent, undertakes realistic tasks, performs well academically, and has clearly understood goals.

Postulated within the context of Atkinson's expectancy-value theory of achievement motivation, fear of success (FOS) was conceived of as an inhibitory tendency against achievement-directed behavior stemming from the negative consequences anticipated for success. Expectancy-value theory of motivation emphasizes equally the significance of two elements. The first is a stable, enduring personality characteristic called motive (M). The second element comprises two specific, more transient properties that
define the challenge offered by the specific situation:

(1) The expectancy (E) or probability of a certain outcome occurring, and (2) the incentive value (I) or attractiveness of that outcome to the person involved. The second element, comprised of E and I, acts on one's motives in determining the resultant strength of one's motivation. Expectancy-value theory distinguishes between expectancy, motive and motivation. In order for any motive to influence behavior, it must first be aroused by one's expectancy of the success of one's actions and by the incentive value of the expected success. Motive is internalized and stable. Expectancy and incentive value are transient and situational. Thus, the strength of one's motivation is influenced by both the stable, enduring, internalized motive and also by the transient, situational properties, expectancy and incentive value.

Within this expectancy-value theoretical framework, methods were developed to assess achievement motivation. Beginning with traditional clinical assumptions that human motives are expressed in fantasy or imaginative behavior, McClelland, et al (1953) found that one could validly and reliably assess individual behavior in response to Thematic Apperception Test (TAT) cues. The criteria for determining strength of achievement and motivation were empirically derived and a scoring manual was developed. (McClelland, et al, 1953; Atkinson, 1958.) According to these investigators, achievement imagery is reflected by concern with
standards of excellence and with performing well, by unique accomplishments, by persistent and varying attempts to achieve and by good or bad feelings regarding the consequences of the efforts.

Expectancy-value theory of achievement motivation then predicts an increase in thematic apperception need-for-achievement imagery following competitive achievement motivation arousing cues stressing the appeal to competency and mastery. However, when tested, the female response to achievement arousal conditions posed a problem. Although men's and women's need-for-achievement imagery was equal when assessed following neutral instructions, women, unlike men, did not show an increase in thematic apperception need-for-achievement following instructions designed to arouse competitive achievement motivation. (McClelland, et al, 1953; Veroff, Wilcox and Atkinson, 1953). Horner (1968) conceptualized this response phenomenon as avoidance or fear of success (FOS). She saw it as resulting from motive, a stable personality trait caused by the internalization of parental and social values characterized by the notion that femininity and individual achievement reflecting intellectual competence or leadership potential are mutually exclusive, antagonistic goals.

Horner (1972) hypothesized that females expect achievement to yield such negative consequences as social rejection and/or feelings of being unfeminine. In order to
test her hypothesis, she asked females in her study to construct a short story in response to the verbal projective cue, "After first term finals, Anne finds herself at the top of her medical school class." Males were asked to respond to the John form of the stimulus cue. Stories written by the participants were scored for motive to avoid success (or fear of success) by a simple present-absent system based norms provided by Scott (1958) which indicate responses that are likely in a TAT when a person is confronted with a cue that represents a threat rather than a goal or that simultaneously represents a goal and threat. Horner scored a story as registering fear of success when its imagery reflected serious concern about success such as the following:

1) negative consequences because of success
2) anticipation of negative consequences because of success
3) negative effect because of success
4) instrumental activity away from present or future success
5) any direct expression of conflict about success
6) denial of effort in attaining the success, cheating or any other attempt to deny responsibility or reject credit for the success
7) denial of the situation described by the cue
8) bizarre, inappropriate, unrealistic, or non-adaptive responses to the situation described by the cue

Analysis of the stories revealed that 65% of the female participants wrote stories exhibiting fear of
success imagery, while less than 10% of the males wrote fear of success stories. Horner (1972) concluded that most women have a motive to avoid success, and that this motive is a latent and stable personality disposition which was acquired early in life which results in the expectancy, across situations, that high performance will be followed by negative consequences and will, therefore, produce anxiety. This anxiety apparent in the TAT stories may be assumed to function in real-life situations to inhibit the action expected to have negative consequences.

The commonly used projective technique employed by Horner (1972) in this study was thought to encourage the participant to identify with the stimulus person, thus revealing his or her personal motives regarding success. However, other researchers (Monahan, Kuhn and Shaver, 1974) have suggested that participants may not have been identifying with Anne, but were rather responding to the cue in terms of their knowledge of prevailing sex-role stereotypes. They suggest that the imagery described by participants might well reflect cultural stereotypes of appropriate behavior for men and women, rather than a personality disposition unique to women.

Monahan, et al, 1974, reasoned that because of the incomplete design used by Horner (i.e., males receiving the John cue and females the Anne cue), it is indeterminable whether responses were due to sex of subject (suggesting an "intra-psychic" explanation involving fear and conflict
particular to females) or sex of stimulus person (suggesting a "cultural" explanation connoting both sexes' knowledge of prevailing sex-role stereotypes). They posited that if both males and females wrote negative responses to the Anne cue, the "cultural" explanation would be supported.

To test this hypothesis, Monahan, et al. (1974) presented both male and female participants (120 boys and girls aged 10 to 16) with both the Anne and John cues used by Horner (1972). Analysis of their data indicated that males exhibited a significantly higher proportion of negative responses to the Anne cue than the females exhibited (68% and 51% respectively), though females' responses approached significance in the same direction. Neither sex, however, showed a high proportion of negative responses to the John cue (21% and 30%, respectively). This suggests that the responses reflect beliefs held by both sexes that females embarking on a professional career in a traditionally male-dominated field anticipate, and to a considerable extent experience, all sorts of difficulties, hardships, and internal and external conflicts. Additionally, successful females are often viewed as unattractive, immoral and dissatisfied.

Further investigation of a cultural explanation of FOS was conducted by Cherry and Deaux (1978). These researchers postulated that both males and females would show evidence of "fear of success" when success was achieved in
a non-traditional field, supporting the contention that adherence to cultural norms is the central issue. Thirty-nine males and fifty-seven females were asked to write about one of four themes presented: "After first term finals, (Anne (John) finds herself (himself) at the top of her (his) nursing (Medical) school class."

Results supported a cultural explanation for FOS. Both males and females created FOS imagery for a woman in a non-traditional career field (i.e., medicine) and likewise for a male in a non-traditional career field (i.e., nursing).

Lockheed (1975) found that when the activity is described as typical for both sexes, there were no sex differences in the incidence of reported "FOS." Lockheed tested 269 undergraduates in San Francisco Bay Area colleges. She used Horner's Anne cues with modifications. In one instance, Anne was described as being the only female in medical school. In the second cue, half the class are females. Results indicated that both males and females wrote fewer negative responses to the cue in which medical school attendance was more typical for women. Lockheed states that, "The determination of what arena is appropriate for female success and accomplishment is largely a matter of historical and social definition. What is particularly relevant is that medical school attendance has not been considered an appropriate arena for female
success. Today the fact that fewer than 25% of medical school students are female documents this assertion."

Feather and Raphaelson, 1974; and Robins and Robins, 1973, have enlarged the study of external social deterrents of FOS by giving both male and female stimulus cues to both male and female participants. In both studies, authors found that male participants wrote more FOS stories for the female stimulus cue than for the male stimulus cue. These researchers conclude that negative responses (both male and female) represent culturally defined appraisals of professional possibilities for women.

Feather and Raphaelson (1974) concluded: "It is likely Horner's procedure is tapping socially acquired theories or stereotypes concerning what are thought to be appropriate achievement for males and females in our society and the consequences of violating the norms for each sex. It is also probable that these stereotypes are shared by males and females, that they may vary across different social groups depending upon socialization and that they are not fixed; but responsive to social change, perhaps differentially so for the two sexes." (p. 201)

Other researchers (Jellison, Jackson-White, Bruder, and Martyna, 1975; Spence, 1974; Tresmer, 1974) conclude that female avoidance of success is not a personality disposition, but is situationally determined. It is primarily dependent on the expectancies about the positive or negative consequences of behavior; that these
expectancies are functions of cues in the specific situation. Situation theorists view the cue responses as objectively realistic, negative reactions to specific socially perceived threatening situations.

While recognizing the heuristic importance of Horner's work, situation theorists maintain that her conclusions about motivation are at best simplistic and at worst damaging to the movement to change some of the external barriers to women's success. Spence (1974) pointed out that sex-role expectations are social realities and that responses of participants in Horner's study may reflect these situational barriers rather than psychological dispositions.

In view of the fact that sex-role stereotypes seem to be changing, other researchers (O'Leary and Hammack, 1975; Makosky, 1976; Peplau, 1976; Depner and O'Leary, 1976; Major, 1979) have tried to relate FOS to women's sex role orientation. Peplau (1979) writes, "During the past decade, there has been considerable change in sex-role attitudes. Today perhaps only women who maintain traditional beliefs about the feminine role are affected by fear of success."

Peplau (1976) examined the effects of FOS, sex-role attitudes and competition on women's intellectual performance. She tested ninety-one college-aged dating couples for FOS using the TAT type cue, "Diane has just received word that she is one of the three students in the state to
receive a perfect score on her LSAT." After completing the stories, students worked individually on the timed scrambled words task used by Horner (1968) which was designed as the neutral (non-arousing) condition. A month later students returned and were randomly assigned to either an individual-competition or team-competition testing condition. The only difference between these two conditions was the instructions on how the task would be scored. In the individual-competition condition, members of the couple were told that their scores would be directly compared. Tests would be scored immediately, and at the end of the session they would be told their own and the score of their dating partner. In the team-competition condition, students were told that they and their dating partner would receive only a single team score based on their own and their partner's joint performance. In addition they were told that they and their dating partner had been paired with another couple team. At the end of the session, they would receive their own team score and the score of the competing team.

Fear of success imagery was scored present or absent according to Horner's (1968) criteria. Also, a ten-item sex-role traditionalism scale was used to classify subjects as traditional or liberal in their sex role attitudes. The ten item questionnaire asked the extent of agreement or disagreement with statements such as, "Women could run most businesses as well as men could." and "In marriage, the
husband should take the lead in decision making." Additional questions assessed support for the goals of the women's movement and students' personal career aspiration.

Peplau (1979) found that women who combine sex-role traditionalism and fear of success may be the most affected by the particular experimental condition to which they are assigned, performing worse than women in the individual-competition condition and better than other women in the team condition. When working non-competitively, traditional women with FOS perform significantly better than all other women.

These data support Alper's (1974) suggestion that women's achievement behavior is affected by both sex-role orientation and conflict about femininity. Further, the data clearly indicate that women high on Horner's measure do not have a broad fear of achievement. While they may differ in the kind of setting that facilitates maximum performance, the image of high FOS women as intellectually disabled by achievement conflicts is unwarranted. Peplau (1979) states, "What fear of success appears to represent is a particular sensitivity to the sex-role implications of achievement settings and a concern that achievement behavior be manifested in sex-role appropriate ways."

Results of other studies attempting to determine the relationship between sex-role orientation have proved inconsistent (see Zuckerman and Wheeler, 1975; Tresmer, 1977, for a review of many of these). For example,
Caballero, Giles and Shaver (1975) state that casual inference might lead one to believe that because FOS stories portray ambitious women in a negative light, FOS would be especially high among traditional or conservative subjects. However, whenever this prediction has been tested (as a result of several undergraduate projects conducted by Phillip Shaver), the results have indicated the opposite. Often the most traditional subjects write about Anne's success in medical school in something like the following terms: "I'm sure she and her Women's Lib group will be very happy." In other words, the traditional subjects do not seem to identify with Anne in the way they are expected to when writing "projective" stories. This suggests, in line with some of Horner's claims that FOS responses reflect actual conflicts in the life of ambitious, non-traditional women.

Caballero, Giles and Shaver argued that FOS should be more likely among ambitious, non-traditional women. Their measure of sex-role orientation consisted of selected items from a questionnaire designed by Robert Brannon of Brooklyn College. They found that high FOS women were less traditional in their conception of appropriate behavior for males and females and held more positive attitudes toward the women's movement than did the no-FOS women. They state that FOS is not a correlate of traditional femininity, but seems to be a reaction by ambitious women to the
threatening conditions they actually encounter or imagine encountering.

In contrast, O'Leary and Hammack (1975) hypothesized that traditionally sex-role oriented women, as measured by the Wellesley Role Orientation scale, would show greater FOS than non-traditionally oriented females. Their results showed that non-traditionally oriented females generated fewer success-avoidant response across cues than either moderate or traditionally oriented females. Subjects wrote TAT stories in response to four cues in a variety of achievement situations. However, analyses of the proportion of FOS imagery generated by non-traditional subjects across cues indicated that they did respond to the masculine and feminine competitive success cues with FOS imagery more frequently than to either the social-domestic or artistic cues. These researchers conclude that for the non-traditionally oriented female subject, the context in which female competitive success determines the arousal of FOS imagery.

Additional investigation by Depner and O'Leary (1976) failed to find a relationship between sex-role orientation as measured by the Mafferr Inventory of Feminine Values, and FOS, or, as in a study by Makosky (1976) - using an author developed questionnaire to measure role orientation - found that although high FOS women rated a home and family more important and a professional career less important than did
no-FOS women, they also considered themselves less feminine than did no-FOS women.

One difficulty with past research relating sex-role orientation of FOS lies in the use of a variety of sex-role inventories which treat masculinity and femininity as two endpoints of a bipolar continuum. Persons have been classified as either masculine or feminine, active or passive, traditional or non-traditional. However, research by Bem (1974) and Spence, Helmreich and Stapp (1975) has indicated that the dimensions of masculinity and femininity may be orthogonal. These researchers have developed the concept of androgyny. The androgynous individual embraces both masculine and feminine traits in his or her self-image, while the sex-typed (masculine male or feminine female) or sex-reversed (feminine male or masculine female) person rejects the characteristics of one sex and embraces the characteristics of the other. Undifferentiated individuals exhibit low endorsement of both masculine and feminine traits. Androgyns have been found to exhibit greater behavioral flexibility than non-androgyns; androgynous individuals of both sexes are better able than non-androgyns to perform both masculine and feminine behaviors when the situation dictates one or the other as appropriate (Bem, 1975; Bem and Lenny, 1976).

Additionally, androgyns have been found to be higher in self-esteem than non-androgyns. Spence states, "Highly significant positive correlations between masculinity and
self-esteem were found in both sexes, while significant positive correlations between femininity and self-esteem were also found in both men and women. These data suggest that androgyny conceived of as the possession of a high degree of both masculinity and femininity, may lead to the most socially desirable consequences, the absolute strengths of both components influencing attitudinal and behavioral outcomes for the individual." (Spence, et al, 1975).

From these results, Major (1979) speculated that androgynous women might be more flexible in their perceptions of appropriate roles for themselves and thus less likely to see successful competition as sex-role inappropriate for themselves. Major (1979) hypothesized that androgynous women would exhibit less FOS imagery than either sex-typed, sex-reversed or undifferentiated women.

She further hypothesized that androgynous or sex-reversed women would not differ in achievement motivation or in achievement behavior, since both groups embrace masculine characteristics which are traditionally associated with achievement. Additionally, both androgynous and sex-reversed women were expected to be higher in achievement motivation and achievement behavior than sex-typed or undifferentiated women, since both of these latter groups reject masculine traits in their self-concepts. Results of her study support these predictions with the exception of sex-reversed women who
exhibited the highest level of FOS. Major speculates that the reason for this difference may be due to the fact that achieving women who reject feminine characteristics are more likely to suffer negative consequences for success than achieving women who are also feminine, or they may be more anxious about additional loss of perceived femininity, which might occur with success in a non-traditional career field. Major (1979) states, "Results indicate that the relationship between sex-role orientation and fear of success may be better understood by considering masculinity and femininity as the separate and orthogonal dimensions."

THE PRESENT STUDY

Attempting to differentiate women on the basis of FOS, past research has tended to try to fit women into only two categories, those who are afraid of success and thus inhibited by it and those who are not fearful of success and thus may not be inhibited in achievement-oriented performance.

As pointed out before, the profile of the woman who is fearful of success is an ambiguous one. Not only is the relationship between sex role orientation and FOS unclear, but the relationships among achievement motivation, performance and FOS are equally inconsistent. (See Zuckerman and Wheeler, 1975, for a review of this issue.)

Is the FOS woman achievement motivated, successful and anxious about success or is she passive and achievement
avoiding due to anxiety over success? The portrait of the non-fearful woman is equally unclear. Is she successful, striving and free from anxiety or is she free from anxiety about success because she has never achieved or succeeded? Major (1979) investigated these questions in a study that has been partially replicated here. She examined the relationships among sex-role orientation as measured by the BSRI, FOS and achievement orientation both on a performance measure and a personality measure.

From scores on the BSRI, four groups of women were identified: Androgynous (high masculine, high feminine), sex-typed (low masculine, high feminine), sex-reversed (high masculine, low feminine), and undifferentiated (low masculine, low feminine). It was predicated that androgynous women would evidence the least fear of success of the four groups. It is unclear from previous investigations of Horner's theory whether women who endorse masculinity and reject femininity or those who endorse femininity but reject masculinity are highest in FOS.

Major's results indicate that the relationship between sex-role orientation and fear of success may better be understood by considering masculinity and femininity as separate and orthogonal dimensions. Within the two groups of women who ascribed masculine characteristics to themselves (androgynous and sex-reversed) level of fear of success differed greatly depending upon whether the women also endorsed or rejected feminine characteristics in their
self image. Women who described themselves as possessing both masculine and feminine traits scored lowest in FOS, while women who described themselves as masculine and not feminine scored highest in FOS.

Major speculates that sex-reversed women are perhaps more likely to suffer negative consequences for success than those androgynous women who also endorse feminine characteristics as well as masculine. She further speculates that sex-reversed women may be anxious about additional losses of perceived femininity which might occur with success in a gender inappropriate situation. Major's results may be due to the fact that women in her study were attending a private university geared toward engineering and the sciences - traditionally male-dominated fields of study. The present study proposes to replicate Major's findings with a population who may have different perceptions of academic success for women. Major also hypothesizes that had the sex-reversed women in her study competed in a mixed-sex situation rather than same-sex situation, the sex-reversed women might have performed worse than androgynous women. In order to test this hypothesis, the present study had women compete in a mixed-sex situation.

METHOD

Subjects. The subjects for this study were undergraduate students enrolled in introductory psychology courses at Moorpark Junior College, Moorpark, California. Data was
gathered from 105 females and 114 males. Data was analyzed for 102 females. The data for three females was discarded from the analysis because their scores fell exactly on the median and they could not be appropriately classified. Scores for the males were not analyzed as part of this study.

**Stimulus material.** The stimulus material used in this study consisted of the Bem Sex Role Inventory, the achievement subscales of the Jackson Personality Research Form, Form A, an objective measure of Fear of Success developed by Major, and an anagram solving task.

The Bem Sex Role Inventory (Bem, 1974), is a sixty-item scale that treats femininity and masculinity as two independent dimensions, thus enabling a person to indicate whether she or he is high on both dimensions ("androgyneous"), low on both dimensions ("undifferentiated"), or high on one dimension but low on the other (either "feminine" or "masculine") (Appendix A).

The Personality Research Form, Form A (Jackson, 1967), contains a twenty-item sub-scale measuring achievement motivation (Appendix B). Jackson defines achievement motivation as aspiring to accomplish difficult tasks, maintaining high standards, and willing to work toward distant goals; responding positively to competition and willing to put forth effort to attain excellence. Derived from Murray's personality theory, the twenty items were selected from a pool of one hundred, based on high biserial
correlation with total scale score and low correlation with scores on other trait scales and on a Desirability scale. Normalized standard scores are provided from a sample of 1,000 male and 1,000 female students from over 30 North American colleges and universities. Reliability coefficients are as follows: Odd-even - .86; Kuder-Richardson - .91, Test-retest - .80. Evidence for the validity of this scale is indicated by several studies which found significant correlations between this scale and behavioral ratings by peers and with the achievement via conformance sub-scale of the California Psychological Inventory.

Also, a revised FOS scale (Major, 1979) was used. The modified FOS scale was designed to provide an objective, easily scorable measure of FOS yielding continuous rather than dichotomous data. For this revised scale, two verbal cues were presented to subjects: Cue 1, "After first term finals, Anne finds herself at the top of her medical school class," and Cue 2, "Mary has just received word that out of a class of 50, she alone passed the entrance exam and is being assigned the important position abroad." Following each cue were thirty potential consequence statements; fifteen positive and fifteen negative. Subjects were asked to indicate the likelihood of each consequence statement on a nine-point scale. Ratings for the 60 statements were totaled with scores having a potential range of 60 (negative consequences extremely unlikely and positive consequences extremely likely) to 540 (negative
consequences extremely likely and positive consequences extremely unlikely). This modified scale correlates positively and significantly with Horner's projective measure of FOS \( r(40) = .43 \ p < .01 \) and the response to the two cues were positively correlated, \( 4(40) = .53 \ p < .001 \). Finally, an anagram task similar to that used by Horner (1968) was used. Subjects were asked to construct as many words as possible in a six-minute time period from the master word "generation."

Procedure. Subjects were tested in introductory psychology classes. The BSRI, PRF and revised FOS scale were administered in a counter-balanced order. After completing these three scales, subjects were given the anagram task - a behavioral measure of achievement performance.

The performance measure is defined as the number of words subjects constructed from a master word "generation" in the final two minutes of a six-minute test, timed aloud in one-minute intervals. To provide an achievement situation in which subjects felt their performance would be evaluated against a standard of excellence and against other persons' performance, the task was introduced as a measure of intellectual ability and subjects were told that their scores would be compared to those of their classmates. The classroom setting provided a mixed sex competitive situation in which measures were administered to both males and females; however, males' scores were not
analyzed. Their presence in this study served only to provide a mixed-sex competitive situation. Subsequent to the anagram task, all subjects were debriefed.

RESULTS

To classify females into groups in the BSRI, a median of 4.90 on the femininity scale and 4.95 on the masculinity scale was used. This system is based on 1978 normative data on Stanford students report by Bem. Those scoring above 4.90 on the femininity scale and above 4.95 on the masculinity scale were classified as androgynous, while those scoring below these medians were considered Undifferentiated. Women scoring above the median on the femininity scale and below the median on the masculinity scale were classified as sex-typed, while those above the median on the masculinity scale and below the median on the femininity scale were classified as sex-reversed. Data for those who scored exactly 4.90 on the femininity scale or 4.95 on the masculinity scale were discarded from further analysis. Thus, three scores were eliminated from this study.

Fear of success. Subjects scores on the revised FOS scale ranged from 121 to 276. The mean score obtained was 192.09.

A one-way between groups analysis of variance was computed on FOS scores. Results indicated no significance - F(3,98) = 2.352, p = .0769 differences between groups. (See Table 1.)
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Table 1
Results of Analysis of Variance
Mean FOS, achievement and androgynous scores of subject groups.

<table>
<thead>
<tr>
<th>Androgynous</th>
<th>Sex-type</th>
<th>Sex-reversed</th>
<th>Undifferentiated</th>
<th>MSe</th>
<th>F</th>
<th>P</th>
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<tr>
<td>FOS</td>
<td>200.98</td>
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<td>Achievement</td>
<td>12.89</td>
<td>12.26</td>
<td>15.82</td>
<td>11.65</td>
<td>8.73</td>
<td>5.20</td>
</tr>
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<td>Motivation</td>
<td>(27)</td>
<td>(47)</td>
<td>(11)</td>
<td>(17)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>5.63</td>
<td>5.10</td>
<td>6.36</td>
<td>5.71</td>
<td>11.15</td>
<td>0.497</td>
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<tr>
<td>Behavior</td>
<td>(27)</td>
<td>(47)</td>
<td>(11)</td>
<td>(17)</td>
<td></td>
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</tbody>
</table>

*Parentheses indicate the number of subjects upon which each mean was based.
Achievement motivation. Scores on the achievement subscale of the Personality Research Form ranged from 4 to 18 of the possible 0 to 20 range with a mean of 12.37. The analysis of variance for achievement motivation scores indicated that the difference between groups was significant - $F(3,98) = 5.20$ $p < .01$. (See Table 1.) Neuman-Keuls tests indicated that sex-reversed women were significantly higher in achievement motivation than androgynous, sex-typed or undifferentiated women, $p < .05$.

Achievement behavior. Analysis of variance performed on the number of words subjects constructed in the final two minutes of the anagram test indicated no significant differences between groups - $F(3,98) = .032$, $p = .8528$.

DISCUSSION

Results of this study failed to replicate findings in the Major (1978) study.

The range of FOS scores in this study was narrower than in the Major study, ranging from 121 to 276 versus 100 to 308. In the Major study, planned comparisons indicated a significant difference between androgynous women and the other three groups combined. This study found no significant differences. In the Major study, Neuman-Keuls procedures indicated sex-reversed women were significantly higher in FOS than all other groups of women. This study failed to replicate these findings. While finding no
overall significant differences among the four groups of women in level of FOS, inspection of the mean of androgynous and sex-reversed women suggests that sex-reversed women were lower in FOS than androgynous women. Androgyns had a mean FOS score of 200.89, while sex-reversed scored 168.45. These two groups of women scored in the opposite direction of the same groups in the Major study. In the Major study, androgyns mean FOS score was 188.95, as opposed to the sex-reversed group whose mean score was 226.00. (See Table 2 for a comparison of this study with the Major study.)

One hypothesis for this result might be the difference in populations studied. It is plausible that sex-reversed women attending a midwestern university which is oriented toward science and engineering (as in the Major study) than may experience more negative consequences such as affiliative loss as a result of their success than may women attending a Southern California Junior College oriented towards transfer education (general education requirements) and vocational education in an atmosphere that is probably not as competitive or non-traditional. There may also be more support for sex-reversed women in the greater Los Angeles area than in a small midwestern town.

It is also equally plausible that sex-reversed women participating in this study in 1983 (as opposed to 1975)
Table 2
Comparison of Major Study; the Present One

Major's Study - Single Sex Situation

<table>
<thead>
<tr>
<th></th>
<th>Androgynous</th>
<th>Sex-type</th>
<th>Sex-reversed</th>
<th>Undifferentiated</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOS</td>
<td>188.95</td>
<td>201.22</td>
<td>226.00</td>
<td>206.69</td>
</tr>
<tr>
<td>(55)</td>
<td>(88)</td>
<td>(26)</td>
<td>(36)</td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>13.82</td>
<td>11.75</td>
<td>12.88</td>
<td>11.25</td>
</tr>
<tr>
<td>Motivation</td>
<td>(55)</td>
<td>(87)</td>
<td>(26)</td>
<td>(36)</td>
</tr>
<tr>
<td>Achievement</td>
<td>6.34</td>
<td>5.80</td>
<td>7.54</td>
<td>6.21</td>
</tr>
<tr>
<td>Behavior</td>
<td>(35)</td>
<td>(46)</td>
<td>(13)</td>
<td>(24)</td>
</tr>
</tbody>
</table>

The Present Study - Mixed-Sex Situation

<table>
<thead>
<tr>
<th></th>
<th>Androgynous</th>
<th>Sex-type</th>
<th>Sex-reversed</th>
<th>Undifferentiated</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOS</td>
<td>200.98</td>
<td>194.53</td>
<td>168.45</td>
<td>198.41</td>
</tr>
<tr>
<td>(27)*</td>
<td>(47)</td>
<td>(11)</td>
<td>(17)</td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>12.89</td>
<td>12.26</td>
<td>15.82</td>
<td>11.65</td>
</tr>
<tr>
<td>Motivation</td>
<td>(27)</td>
<td>(47)</td>
<td>(11)</td>
<td>(17)</td>
</tr>
<tr>
<td>Achievement</td>
<td>5.63</td>
<td>5.10</td>
<td>6.36</td>
<td>5.71</td>
</tr>
<tr>
<td>Behavior</td>
<td>(27)</td>
<td>(47)</td>
<td>(11)</td>
<td>(17)</td>
</tr>
</tbody>
</table>

*Parentheses indicate the number of subjects upon which each mean was based.
have been exposed to more positive role models in terms of successful women and are less likely to associate success with affiliative losses or "further loss of femininity" as Major suggests. Perhaps only those women who endorse both feminine and masculine characteristics are in conflict over the implications of success.

Unlike the Major study, the difference among the groups should be attributed to the fact that sex-reversed women had higher scores than the means of the other three groups.

In the area of achievement behavior, Major had suggested that future research on achievement behavior in a mixed-sex situation might show a decrement in performance on the part of sex-reversed women. In testing this hypothesis, the present study found no significant differences among the four groups of women when competing in a mixed-sex situation. While not statistically significant, inspection of the means of the four groups of women indicated, as in the Major study in a single-sexed situation, that the sex-reversed women performed the best. Means for all four groups were slightly higher in the Major study than in the present one.

Thus, the present study does not support speculations that sex-reversed women are more fearful of success, or suffer a decrement in achievement behavior by their non-endorsement of feminine characteristics. Nor does it support Major's contention that androgynous women are more
achievement motivated while possessing less fear of success.

The objective type fear of success measure used in this study cites traditional alternatives to success such as being a wife and mother or having the approval of males. It would be interesting to examine the results of this same study using Horner's original measure of FOS which allows for a wider range of responses. Perhaps women either no longer value more traditional alternatives or do not see them as mutually exclusive.
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APPENDIX A
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Defend my own beliefs</th>
<th>Adaptable</th>
<th>Flatterable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never or almost never true</td>
<td>Affectionate</td>
<td>Dominant</td>
<td>Theatrical</td>
</tr>
<tr>
<td>Usually not true</td>
<td>Conscientious</td>
<td>Tender</td>
<td>Self-sufficient</td>
</tr>
<tr>
<td>Sometimes but infrequently true</td>
<td>Independent</td>
<td>Conceited</td>
<td>Loyal</td>
</tr>
<tr>
<td>Occasionally true</td>
<td>Sympathetic</td>
<td>Willing to take a stand</td>
<td>Happy</td>
</tr>
<tr>
<td>Often true</td>
<td>Moody</td>
<td>Love children</td>
<td>Individualistic</td>
</tr>
<tr>
<td>Usually true</td>
<td>Assertive</td>
<td>Tactful</td>
<td>Soft-spoken</td>
</tr>
<tr>
<td>Almost</td>
<td>Sensitive to needs of others</td>
<td>Aggressive</td>
<td>Unpredictable</td>
</tr>
<tr>
<td>True</td>
<td>Reliable</td>
<td>Gentle</td>
<td>Masculine</td>
</tr>
<tr>
<td>Almost</td>
<td>Strong personality</td>
<td>Conventional</td>
<td>Gullible</td>
</tr>
<tr>
<td>True</td>
<td>Understanding</td>
<td>Self-reliant</td>
<td>Solemn</td>
</tr>
<tr>
<td>Almost</td>
<td>Jealous</td>
<td>Yielding</td>
<td>Competitive</td>
</tr>
<tr>
<td>True</td>
<td>Forceful</td>
<td>Helpful</td>
<td>Childlike</td>
</tr>
<tr>
<td>Almost</td>
<td>Compassionate</td>
<td>Athletic</td>
<td>Likable</td>
</tr>
<tr>
<td>True</td>
<td>Truthful</td>
<td>Cheerful</td>
<td>Ambitious</td>
</tr>
<tr>
<td>Almost</td>
<td>Have leadership abilities</td>
<td>Unsystematic</td>
<td>Do not use harsh language</td>
</tr>
<tr>
<td>True</td>
<td>Eager to soothe hurt feelings</td>
<td>Analytical</td>
<td>Sincere</td>
</tr>
<tr>
<td>Almost</td>
<td>Secretive</td>
<td>Shy</td>
<td>Act as a leader</td>
</tr>
<tr>
<td>True</td>
<td>Willing to take risks</td>
<td>Inefficient</td>
<td>Feminine</td>
</tr>
<tr>
<td>Almost</td>
<td>Warm</td>
<td>Make decisions easily</td>
<td>Friendly</td>
</tr>
</tbody>
</table>
DIRECTIONS: For the next 20 statements, indicate whether the statement is true about you or false. Please do not leave any statement unmarked.

1. I enjoy doing things which challenge me.
2. Self-improvement means nothing to me unless it leads to immediate success.
3. I get disgusted with myself when I have not learned something properly.
4. I work because I have to and for that reason only.
5. I will keep working on a problem after others have given up.
6. I try to work just hard enough to get by.
7. I often set goals that are very difficult to reach.
8. I would rather do an easy job than one involving obstacles which must be overcome.
9. My goal is to do at least a little bit more than anyone else has done before.
10. I really don't enjoy hard work.
11. I prefer to be paid on the basis of how much work I have done rather than on how many hours I have worked.
12. I have rarely done extra studying in connection with my work.
13. People have always said that I am a hard worker.
14. When people are not going to see what I do, I often do less than my very best.
15. I don't mind working while other people are having fun.
16. It doesn't really matter to me whether I become one of the best in my field.
17. Sometimes people say I neglect other important aspects of my life because I work so hard.

18. I am sure people think that I don't have a great deal of drive.

19. I enjoy work more than play.

20. It is unrealistic for me to insist on becoming the best in my field of work all of the time.
On the next page you will see a verbal cue. Your task is to rate the probability or likelihood that the statements that appear on the pages following the cue are accurate descriptions of the situation presented in the cue. Try to imagine what is going on, what the situation is, what led up to the situation, what the people are thinking and feeling and what they will do.

On each page you will see the following scale:

1 ------------------------------------------ 9

extremely unlikely
extremely likely

Next to each of the statements there will appear a blank _________.

If you think that a statement is extremely likely to be an accurate description of the situation described in the cue, place a 9 in the blank next to the statement. If you think that a statement is extremely unlikely to be an accurate description of circumstances surrounding the situation described in the cue, place a 1 in the blank next to the statement.

There are no right or wrong statements. You are free to assign any number from 1 through 9 to a statement, depending on how probable or likely you think a statement is to be true, given the verbal cue situation.

What is important is to assign the number that you think best describes or represents the likelihood of a statement being an accurate description of the situation presented in the verbal cue.

The statements that you are to rate will appear on the pages following the verbal cue. You will have a few seconds to look at the verbal cue and then 8 minutes to rate the statements. Rate the statements according to your first impressions from the cue and work rapidly. I will keep time and tell you when it is time to finish.
MARY HAS JUST RECEIVED WORD THAT OUT OF A CLASS OF 50, SHE, ALONE, PASSED THE ENTRANCE EXAM AND IS BEING ASSIGNED THE IMPORTANT POSITION ABROAD.
1. Mary thinks the new position will be challenging and that she will enjoy her work and the new experiences abroad. She is sure that this is just what she wants.

2. Mary felt sad when she received notification of her assignment; she felt sorry for all of the other students who wanted the position and didn't get it.

3. Mary is an attractive girl. She is popular, sincere and has a well-rounded personality.

4. Mary is happy that she got the position, but finds that it is being a maid for a family in England; she is disappointed to receive such menial work, for she had wanted a secretarial job.

5. Mary enjoys her time abroad and meets some interesting people, but she leaves her job and returns home with plans of settling down, getting married and maybe teaching a foreign language part-time.

6. Mary had a clear mind going into the exam; she was well-prepared, tried to do her best, and was confident that she would do well.

7. After considering the decision carefully, Mary decides to reject the assignment and not go overseas after all.

8. Mary has realized a dream come true - a lot of dreaming, hard work and studying went into getting to this point. She has always wanted to go abroad to work and this is just the opportunity.

9. Mary has always been at the head of her class; she has had to study all of the time and was practically a social outcast in school.

10. Mary is the best qualified person for the position, over and above her performance on the exam.
11. Mary worked hard to reach this goal, but didn't have to sacrifice an active social life to reach it.

12. Mary is disappointed that her roommate didn't pass. They had studied together and planned their trip together. Mary wanted the job, but not nearly as much as her roommate, who is crushed.

13. Mary pursues her ambitions with zeal, gets married and continues to be recognized for outstanding achievements.

14. Mary's supposedly close friends don't act so close anymore since she got the assignment. They treat her as if she were a genius and feel that she just couldn't be interested in their "common" affairs.

15. Mary accepts the important position with no hesitation. She is sure this is just what she wants and that she can handle the job competently; she will have a fascinating life.

16. Mary takes the position abroad, but suffers a severe case of "culture shock." She misses her family and finds her job to be a drag. She tries to stick it out but eventually comes home where things are more secure.

17. Mary is the type who likes to be first and deserves to be. She proves that as a woman she is just as qualified as any man to hold this important job.

18. Mary's parents don't want her to go. They feel she was just lucky in doing so well on the test and that she just doesn't have the qualifications for the position; they are afraid she will fail.

19. Mary's friends and classmates are ecstatic over her assignment and help her get ready to go.

20. Mary is having mixed feelings now that she's received notification that she has been selected. She is apprehensive of her new responsibilities and the new social scene; she is having doubts as to her abilities.
21. Mary goes abroad and finds her work extremely stimulating and rewarding.

22. Mary has cheated before when something big was at stake and this test was no exception. She cheated on it and ended up being the only one with a passing grade.

23. Mary works diligently at her job and is responsible for some important research. She becomes famous.

24. The other students are jealous of Mary; they are uncertain that she deserved this honor and attribute her success to the fact that she is a "brown-noser."

25. Mary is really proud and excited about her accomplishment; so are her friends, classmates and family.

26. Mary can't decide if it is all worth it. She is having second thoughts about leaving her family and friends behind her. She is torn between the opportunity and forsaking the people she loves.

27. After a few months on the new job, Mary is promoted to a higher, more responsible and more important position.

28. Mary took the test just for fun, just to see how she'd do on it. She was really surprised she did so well since she's always been an easygoing student and didn't study well. She figures she was just plain lucky.

29. Mary goes abroad to take the important position. She enriches herself as a person, broadens her perspective of different cultures and has a great time.

30. Mary's best friend, who also tried for the position, is hurt and envious. They try not to let it interfere, but the closeness between them is gone. They feel uncomfortable with each other and their friendship gradually dissolves.
AFTER THE FIRST TERM FINALS, ANNE FINDS HERSELF AT THE TOP OF HER MED SCHOOL CLASS.
1. Anne is a warm, sincere person with a positive attitude toward life.

2. Guys just pass Anne by; she'll probably never get married.

3. Anne has been dissatisfied lately; she has little social life, medical school costs a lot of money, and she would like to go to Europe and travel around. She is unsure that medicine is the right field for her - sometimes she wishes she were in something else.

4. Everyone is happy that Anne made it, and she is particularly well accepted by her professors.

5. Anne's parents are proud of her accomplishments, but are still anxiously awaiting her marriage. Anne's mother is disappointed that Anne isn't more interested in a future as a wife and mother.

6. Anne becomes a successful doctor; she marries another doctor and they both continue to practice medicine.

7. Anne is proud of herself and the fact that she did so well.

8. The other medical students mostly males, resent her success. They feel degraded, are jealous of her and generally make life miserable for her.

9. Anne didn't study for finals at all, and it was a miracle to her that she ended up at the top of her class.

10. Anne will be a success and graduate at the top of her class, having deserved it all.

11. Anne's boyfriend is a little disappointed and hurt that she did so much better than he. He tries not to let it bother him, but he eventually breaks up with her and marries another woman.

12. Several hospitals offer her jobs after internship - she gets a fine job.
13. Anne is struggling with herself because she doesn't want to brag of her accomplishments and is afraid of being considered a bookworm. She is afraid of being unattractive to guys.

14. Anne becomes a prominent physician, one of the best in her field.

15. Anne is lonely, friendless; she has never had time for anything but study and she sometimes envies the carefree girls around her.

16. Anne has studied hard and diligently and is well liked and admired for her devotion.

17. Anne's parents are proud of her accomplishments and really are glad that she is going to be a doctor.

18. Anne lets her studies slide and becomes more socially oriented.

19. Anne is sure that her decision to enter medical school was right and that she is as good as everyone else.

20. Anne will have to work harder and harder to stay at the top because the other students are trying to beat her; the competition gets tougher and tougher and the pressure increases. Anne is afraid she'll lose her standing next term.

21. Anne is a pretty girl with lots of dates and social activities to fill her spare time.

22. Anne will finish medical school and start her career enthusiastically; then she falls in love and switches to a teaching job.

23. Anne has always liked medicine and finds her studying interesting.

24. Anne has slaved her way through high school and college; she has completely given up social and recreational activities to study.

25. Actually, Anne is in medical school to make her ambitious parents happy. She has always wanted to be an artist, but her parents consider it to be a shoddy profession.
26. Anne is enthused with her work and is very motivated to keep at it.

27. Anne had a difficult time getting into med school and used quite a bit of pull with an old friend of the family to get in. Since then, she has felt a personal obligation to the doctor who got her into do well.

28. Anne sees a purpose in what she is doing and has always been satisfied and confident in her work.

29. Anne is glad that she worked hard to get the grades. She realizes that the years of studying prior to this were worthwhile.

30. Chances are that Anne will never become a doctor, but will hold a common job such as managing a store.