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**RELATION OF FEAR OF SUCCESS TO SEX ROLE IDENTITY AND OTHER
PERSONALITY VARIABLES**

City University of New York

Ph.D. 1982

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RELATION OF FEAR OF SUCCESS TO SEX ROLE IDENTITY
AND OTHER PERSONALITY VARIABLES

by
JILL BELLINSON

A dissertation submitted to the
Graduate Faculty in Psychology
in partial fulfillment of the requirements for
the degree of Doctor of Philosophy,
The City University of New York.

1982

APPROVAL PAGE

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ABSTRACT

RELATION OF FEAR OF SUCCESS TO SEX ROLE IDENTITY AND OTHER PERSONALITY VARIABLES

by

Jill Bellinson

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In a study of the relation between Fear of Success (FOS) and various personality variables, 200 college students were asked to supply information about their age, race, marital status, ordinal position in family, educational level, major in school, educational and occupational aspirations, and parental education and occupation. Subjects also completed a Bem Sex Role Inventory and wrote one Hornerian projective story in which they proposed a hypothetical future for a male or female protagonist successfully performing in a typically male-dominated (physics) or female-dominated (elementary education) graduate school field. Two methods of scoring were used for the projective stories: the pres-

ent/absent system originally devised by Horner and the revised numerical system (Horner et al., 1973). The two methods were not significantly related to each other; the present/absent system seems to be the more sensitive. No relation was found between any of the demographic variables and FOS, using either scoring system. Neither sex of stimulus person nor sex-role-appropriateness of stimulus task is related to FOS. There is some relation of FOS to sex role identity: feminine subjects produce the most FOS imagery and androgynous subjects the least. Subjects who endorse a high degree of traits stereotypically associated with the opposite sex produce less FOS imagery than subjects who do not endorse these traits. Both these findings hold true only when the dichotomous present/absent scoring system is used; the numerical system showed no relation between FOS and any of the variables measured. The implications of this are discussed. The presence and importance of bizarre themes in some stories are mentioned. It is suggested that the methods of measuring and scoring both Fear of Success and sex role identity are not yet developed to their optimum usefulness.

ACKNOWLEDGEMENTS

I would like to express my appreciation to all those whose cooperation and support helped bring about the completion of this document. My committee, and especially my committee chair, Herbert Nachin, provided encouragement and guidance far beyond the call of ordinary duty, on extremely short notice and whenever needed. I am grateful to Terri Smith and Rosalie Maimonie for the quantity and quality of effort they put into scoring, to my students for acting as good-natured subjects and judges, and to my statistical consultant, Lawrence Krasnoff, for serving as far more than a statistical consultant. My parents, friends, and colleagues were supportive, understanding, stimulating, and patient as the situation required and whenever called upon. I am especially thankful to Aaron Albert, whose unwavering confidence and support helped make an apparently impossible task seem surmountable.

CONTENTS

APPROVAL PAGE	11
ABSTRACT	111
ACKNOWLEDGEMENTS	v

page

Achievement Motivation	3
Motive to Avoid Success	6
Male Fear of Success	11
Definition of Fear of Success	13
Sex Role Identity	19
BSRI	21
Androgyny	22
Relation of FOS to Sex Role Identity	25
Present study	29
 METHOD	 41
Subjects.	41
Procedure.	41
Data Analysis	45
 RESULTS	 52
BSRI scores.	56
Fear of Success scores.	61
Relation of demographic variables to FOS	62
Hypothesis a.	64
Hypotheses b.	65
Hypothesis c.	65
Hypothesis d.	65
Hypothesis e.	66
Hypothesis f.	67
Relation of FOS scores to BSRI scores	66
FOS scores and collapsed BSRI scales.	71
Interaction Effects	73
FOS for SRI Groups and Male/Female SP's	74
FOS for SRI Groups and Sex Role of Cue Task	77
 DISCUSSION	 82
FOS and sex role identity results	83
FOS scoring systems	88

Summary	92
<u>Appendix</u>	<u>page</u>
A. APPENDIX I. SAMPLE QUESTIONNAIRE	96
REFERENCE NOTES	102
REFERENCES	106

LIST OF TABLES

<u>Table</u>	<u>page</u>
1. Demographic Data	53
2. Major Fields of Study	54
3. Sex Role Typing of Occupations Reported	56
4. Occupational Prestige	57
5. Educational Levels	58
6. Recategorization of BSRI Groups	60
7. Relation between Demographics and FOS	63
8. FOS scores for Bem's Sex Role Categories	68
9. FOS scores for Collapsed Sex Role Categories	69
10. FOS for Own- and Cross-sex-role Identified Subjects	70
11. FOS and Other SRI Groupings	71
12. BSRI, Sex of SP, and FOS	75
13. Collapsed BSRI, Sex of SP, and FOS	75
14. Own- and Cross-Sex Role Identity, Sex of SP, and FOS	76
15. Other SRI Groupings, Sex of SP, and FOS	77
16. BSRI, Sex Role of Task, and FOS	78
17. Collapsed BSRI, Sex Role of Task, and FOS	79
18. Own- and Cross-SRI, Sex Role of Task, and FOS . . .	79
19. Other SRI Groupings, Sex Role of Task, and FOS . . .	81
20. Relation of Bizarre Theme FOS to Sex of Subject . .	91

It was once universally assumed that boys will be boys, girls will be girls, and very little about boys and girls will ever be alike. The snakes-and-snails/ and-everything-nice theory of child development held that there was an inherent difference in personality between the two sexes which was unalterable. Psychologists, ethologists, and biologists as well as fairy tale writers and poets held this belief in the innate differences in male and female traits, with only a few heretics daring to suggest that women were smart enough to vote or agile enough to wear trousers or strong enough to hold open their own doors. As these radical feminists became more vocal, their views became more acceptable, and even mainstream academic science began to question the traditional view of sex differences.

It became reasonable to question whether differences were innate or environmentally produced or caused by some interaction between biology and environment. Psychologists, among other professionals, applied themselves to the question of which traits, if any, were inherently different in males and females and which, if any, were environmentally induced.

Traditional ideas that males are masculine, females feminine by nature have been questioned. Masculine and

feminine traits have been discussed, debated, defined and often discarded over the last decade.

Studies have been conducted and theories developed in an attempt to define the exact nature of the differences and then explain the etiology of those differences.

Ethologists (eg. Birdwhistell, 1970; Hubbard and Lowe, 1979; Lorenz, 1970; Money and Ehrhardt, 1972, 1976; Money and Tucker, 1975; Tobach and Rosoff, 1978, 1980) have applied themselves to the problem by attempting to distinguish sex differences that are species-specific from those that are present across species, in the belief that differences that are universal, or at least present in several animal species, are likely to be inherent in humans as well.

Developmental psychologists (eg. Kohlberg and Ziegler, 1967; Lee and Stewart, 1976; Maccoby, 1966; Tobach and Rosoff, 1980; Unger and Denmark, 1975) have studied the appearance of sex differences, from the neonatal period on through the ages, again searching for some insight into the etiology of differences.

Social psychologists, too, (eg. Frieze, Parsons, Johnson, Ruble, and Zellman, 1978; Maccoby and Jacklin, 1974; Terman and Miles, 1936; Tobach and Rosoff, 1980; Unger and Denmark, 1975; Williams, 1979) have examined sex differences in humans. Here, the discussion has centered around the social environment's role in influencing sex differences.

The central issue across all fields of study is the question of which, if any, differences between the sexes are innate and which are acquired through conditioning or some other form of social interaction. Thus far, the literature proves inconclusive. Some differences, or lack of differences, such as size (Anastasi, 1958; Bayley, 1940; Bernard, 1964; Freedman, 1968; Terman and Tyler, 1954), physical strength (Appar, 1953; Bayley, 1933, 1965; Garn, 1957, 1958), and level of activity (Bayley, 1933; Garn, 1957, 1958; Goldberg and Lewis, 1969) at birth, seem to be "wired in" in males and females differently. Others, such as physical strength and activity level in adulthood (see, for example, Gadparille, 1972; Oetzel, 1966), seem to have a great deal to do with the life experiences each sex has - life experiences determined by social norms and role expectations and a variety of environmental influences. The actual differences are yet to be delineated, and the causes of those differences are far from being understood; the issues are ripe for research and debate.

Achievement Motivation

One example of the kind of research which has revealed sex differences is the research into achievement motivation; McClelland and Atkinson (Atkinson, 1958, 1974; Atkinson and Birch, 1978; Atkinson and Feather, 1966; Atkinson and

Litwin, 1960; Atkinson and Raynor, 1974; McClelland, Clark, Roby, and Atkinson, 1949; McClelland, Atkinson, Clark and Lowell, 1953) defined a motivation to succeed (need achievement) which was particularly high among upper socio-economic class and educated Americans and which could be measured using a projective test. Subjects were asked to tell stories to a series of Thematic Apperception Test cards, which were developed for this purpose; stories were then scored for the presence of an apparent concern with success in a variety of professional and social situations. An individual's achievement motivation score could reliably predict behavior in other situations; high need achievers prefer to take medium risks, while subjects low in need for achievement take either very great risks or no risk at all (Atkinson, 1958; Atkinson and Feather, 1966; Atkinson and Litwin, 1960; Weinstein, 1969). This was found to hold in a variety of situations, including a horseshoe-throwing task (high need achievers chose to stand in the middle of the field while low need achievers stood either extremely close to the target or extremely far from it (Atkinson and Feather, 1966)), basketball shooting (deCharms and Dave, 1965), shuffleboard play (Atkinson, Bastian, Earl and Litwin, 1960), choice of school major (Isaacson, 1964), and occupational aspirations (Mahone, 1960). High need achievers were found to perform better at a variety of tasks, such as school achievement (Strodtbeck, 1956), and laboratory decod-

ing tests (Lowell, 1952; Wendt, 1955). In addition, need achievement increased under "arousal" conditions which stress the importance of intelligence, leadership, and competition (Atkinson, 1958; Atkinson and Birch, 1978; McClelland et al., 1949; McClelland et al., 1953; Veroff, Wilcox, and Atkinson, 1953).

It was noted, however, (Atkinson, 1958; Field, 1953; French and Lesser, 1964; Lesser, Krawitz and Packard, 1963; McClelland et al., 1953; Veroff, et al., 1953) that the connection between need achievement and behavior held only for male subjects. The TAI could be administered to females, and measurements of need achievement could be taken using the same parameters that applied to males and even showed women having higher need Achievement scores than men (Atkinson, 1958; Veroff et al., 1953), but achievement motivation scores did not predict behavior in females (Atkinson, 1958; Atkinson and Birch, 1978; Horner 1974a, 1974b; Lesser et al., 1963; McClelland et al., 1949; McClelland et al., 1953; Stein and Bailey, 1973; Veroff et al., 1953; Horner, Note 1). Female high need achievers were as likely to stand close to or far from the target as were low need achievers, and those who chose medium risks were not likely to have any specific level of need achievement (Atkinson, 1958). Need achievement in women did not increase when they were exposed to so-called motive induction cues stressing intelligence and leadership ability (Field, 1953; McClelland et al.,

1949; Veroff et al., 1953). In one study (French and Lesser, 1964), females' need achievement imagery increased when arousal instructions stressed feminine areas such as family management or social skills, but another (Friedrich, 1976) did not show this effect. The differences between the sexes were noted, and then females were disregarded in designing further research into achievement motivation (Atkinson, 1958), since there was no predictive value to the measure among females. It was hypothesized that females did not really develop need for achievement.

Motive to Avoid Success

Matina Horner (1972, 1974a, 1974b; Horner and Walsh, 1974; Horner, Note 1; Horner, Note 2) was not satisfied with that conclusion, and she set about reviewing McClelland and Atkinson's (1953) data. She hypothesized that women did indeed develop differential levels of need achievement in exactly the same way that men did, but there was a second motivation active in women which altered the manner in which need achievement affected behavior. Women experience a motive to succeed just as men do, Horner said, but they also experience a motive to avoid success. On reviewing the stories women told in response to projective cues in McClelland and Atkinson's original research, Horner discovered that women and men seemed to be equally concerned with

achievement in the stories; that is, there were equal numbers of stories referring to professional achievement and doing well in school and a career. But in the women's stories there appeared also to be a mention of negative consequences following that success. This seemed to follow previous research into TAT stories (Scott, 1956) showing indications of threat in projective stories when anxiety-producing stimulation is present. Following Scott's example, Horner proposed that women feel threatened by success, believing that it will be followed by unpleasant events. She devised a test for this Motive to Avoid Success (MAS) (Horner, Note 1; Horner, Note 2; Horner and Fleming, Note 3; Horner, Tresemer, Berens, and Watson, Note 4), using a TAT-like measure in which she presented the verbal cue 'At the end of the first year of medical school, Anne/John finds her/himself at the head of her/his class.' Horner's hypothesis was that females presented with the possibility of Anne succeeding at such a difficult and highly prestigious task would fear for her success, projecting negative endings for the stories, while males discussing John's success would propose positive endings. Indeed, Horner's research confirmed that hypothesis. Anne's success was likely to be denied, or she was projected to fail in the following semester or drop out of school altogether. She was also thought to be a personally undesirable person, one who lacked beauty and social skills and could not date or

marry in spite of desires to do so. Males writing about young doctor John, however, described him as a dashing character, full of nothing but positive traits and likely to become a successful doctor as well as maintain a successful personal life, including marriage and a family. Horner interpreted her results as indicating that however attractive professional success might be to women, they feel that women who achieve must suffer in some other realm.

Horner believed that women felt that success in medical school (which she assumed to be similar to success in general) was "unfeminine" and that women who perceived success as fearful did so because of a fear that they, too, would be unfeminine in such a position. Horner came to this conclusion because fear of success (FOS) was so much more common in her female subjects (65.6% compared to 9.1% for males) and because of the content of the women's stories. Frequently, (Horner, 1972, 1974a, 1974b; Horner and Walsh, 1974; Tresemer, 1976a, 1977; Horner, Note 1; Horner, Note 2; Fleming, Beliner, and Esposito, Note 5) they talked of Anne's doubts about her normality as a woman or of her fear of social rejection. Anne was projectively described as having no friends or losing all her friends or as being, either before or after her success, unattractive, undatable, unmarriageable, and lonely in spite of strong desires to have friends and dates and a family. Women described Anne as "snotty, conniving, goody-goody, conceited;" "masculine

looking;" "not terribly concerned about her appearance." She was described as unattractive in face, figure, or manners by 70% of the women subjects (Horner, Note 1, Note 2). She "couldn't marry," "doesn't go out," or has "lonely Friday and Saturday nights;" or she becomes happier by dropping out of medical school altogether to become a nurse or social worker or wife and mother. Her wishes were not to remain successful but to have friends and a home, husband, and family. These desires were thought by Horner (Note 1) to be typically feminine desires, and the lack of gratification projected by women onto successful figures was thought to be a fear of loss of that femininity.

Recent research suggests that Horner's conclusion may have been overly simplistic. Males have demonstrated a higher degree of the Motive to Avoid Success than she originally hypothesized. As many as 35% to 76.2% of male subjects have created Fear of Success (FOS) stories in some studies (Crealock, 1978; Dalsimer, 1975; Gearty and Milner, 1975; Hoffman, 1974, 1977; Makosky, 1976; Wood and Greenfield, 1976; Zuckerman and Wheeler, 1975; Jordan, Note 6; Peplau, Note 7), as compared to 9.1% of Horner's (Note 1) males and 65.6% of her females.

Some research indicated that it was not women's feelings about people's success that Horner measured but rather people's feelings about women's success. When females were given IAT cues proposing John's success (Brown,

Jennings, and Vanik, 1974; Feather and Raphaelson, 1974; Monohan, Kuhn, and Shaver, 1974), they projected unmitigated success for him, just as male subjects did. Moreover, when males were asked to discuss consequences of Anne's career success, their stories were as full of negative imagery as Horner's original females' stories. In fact, some studies (Alper, 1974; Deaux and Enswiller, 1974; Entwistle and Greenberger, 1972; Feather and Raphaelson, 1974; Feldman-Summers and Kiesler, 1974; Lockheed, 1975; Monohan et al., 1974; Robbins and Robbins, 1973; Solomon, 1975; Touhey, 1974) have shown males to be more concerned about female success - i.e. to tell more FOS stories about a successful female - than females are. Thus, Fear of Success seems to be in large part everyone's fear of female's success, not a motive present primarily in human females.

This raises many questions about the nature of Fear of Success. Horner originally proposed that it was women's fear of the loss of femininity that they thought would accompany "defiance of prescribed sex roles" (Horner and Walsn, 1974, p.139) by success in a male-dominated field. If so, several researchers claimed (Alper, 1974; Depner and O'Leary, 1976; Lockheed, 1975; Lockheed-Katz, 1974; O'Leary, 1974; O'Leary and Hammack, 1975; Stake, 1976), then success in more feminine, or at least non-masculine, fields should be more acceptable.

Indeed, this has been shown to be the case in several studies. When the female protagonist succeeds in nursing school or at planning a garden party (Depner and O'Leary, 1976; O'Leary and Hammack, 1975), subjects project less FOS imagery than when she is in medical school. In fact, when the medical school class is hypothetically composed of 50% women, subjects fear her success less than when she is proposed as the only woman in her class (Lockheed, 1975; Lockheed-Katz, 1974). When the medical reference is dropped but success in an undefined academic area or in a more acceptably feminine skill is proposed (Alper, 1973; Breedlove and Cicirelli, 1974; Bremer and Wittig, 1980; Cherry and Deaux, 1978; Crealock, 1978; Depner and O'Leary, 1976; Fleming, 1978; O'Leary, 1974), there is less FOS imagery projected by both male and female subjects, although a few studies (Hoffman, 1974; Robbins, Note 8; Turner, Note 9) have not shown this effect (Zuckerman and Wheeler, 1975).

Male Fear of Success

In recent research, males have shown greater FOS than originally hypothesized by Horner. They have written up to 35 to 76% FOS-present stories (Crealock, 1978; Dalsimer, 1975; Gearty and Milner, 1975; Hoffman, 1974, 1977; Makosky, 1976; Wood and Greenfield, 1976; Zuckerman and Wheeler,

1975) when the protagonist is a male, and are like female subjects in producing the same difference in FOS imagery dependent on the femininity of the task. In fact, in some studies (Feather and Raphaelson, 1974; Hoffman, 1974; Levine and Crumrine, 1975; Lockheed, 1975; Krishnan, Note 10), males differentiated between acceptable success for women at feminine tasks and unacceptable success for women at unfeminine tasks more than female subjects.

The content of male FOS stories is often different from that of female subjects. For stories about a male protagonist, when male subjects project FOS imagery, it rarely describes the kind of affiliative loss, questions about normality, or denial that female subjects do, but usually contains questions about slipping to second or lower place during the following semester, doubts about the worth of self-sacrifice, or descriptions of a dull personality in someone who studies a great deal (Dalsimer, 1975; Hoffman, 1974, 1977; Horner, 1972, 1974b; Lockheed, 1975; Tresemer, 1977; Horner, Note 1; Paludi, Note 11). These stories also contain jokes, pessimism, hostility and violence more than women's FOS stories (Horner, 1972, 1974b; Tresemer, 1977).

When men write about successful female stimulus persons, their stories are usually focused on her sexuality or sexual problems. Men de-sex Anne (Horner, 1972, 1974a; Lockheed, 1975; Horner, Note 1), writing that she wakes up in the morning with a "muscular and unfeminine body," devel-

ops "five-o'clock shadow," denies her "true feminine self" (Lockheed, 1975); or they over-sex her, writing that she gets ahead by distracting male classmates with her beauty or buys grades from her professors with her sexuality (Lockheed, 1975; Lockheed-Katz, 1974), or she "lets all the boys lay her" as she becomes "a whore, then a prostitute" (Monohan et al., 1974). It seems from these stories that men are concerned about the incompatibility of successful achievement and femininity just as women are, even if the methods of expression are different from those of female subjects.

Definition of Fear of Success

Thus, the question seems to be raised continually of whether Fear of Success is a motive expressed within women or toward women; that is, whether the fear is by women who succeed or is about the success of women.

Horner proposed FOS as a motive, similar to the achievement motive defined by McClelland et al. (Atkinson, 1958, 1974; Atkinson and Birch, 1978; Atkinson and Feather, 1966; Atkinson and Litwin, 1960; Atkinson and Raynor, 1974; McClelland, et al., 1949; McClelland, et al., 1953), which was a "latent, stable personality disposition, acquired early in life in conjunction with sex-role standards" (Horner, Note 1). She felt that it was a culturally influenced drive which developed because of contradictory social

messages encouraging (masculine) achievement success and (feminine) affiliative success (Horner, 1970, 1972, 1974a; Horner, Note 1). The internal standards of femininity are inconsistent with the achievement motive, and thus a motive to avoid success evolves (Fleming, 1975; Horner, 1972, 1974a; Fleming et al., Note 5; Horner, Note 1).

Research since Horner has shown that FOS imagery is produced in response to same-sex cues (presumably a projective task eliciting imagery about the self in such a hypothetical successful position) and also in response to cross-sex cues (not a projective task per se, but eliciting imagery about a hypothetical other in a successful position). Since subjects produce different degrees of FOS imagery depending on the type of task being succeeded at, and since male subjects also produce FOS imagery but do so primarily in stories referring to successful women, and since all subjects project FOS more often in response to cues about successful women than cues about successful men, the Fear of Success motive would seem to be a fantasy about women who succeed, particularly women who succeed at tasks which are not typically expected for women. It would seem, then, that FOS is not a trait developed simply as a consequence of growing up as a female in this society; it is not purely a function of one's female identity. At the very least, it is a consequence of an interaction between one's gender identity - one's identity as male or female - and

one's knowledge of role norms for males and females in the environment. But the differences between male and female subjects are not the most significant ones; studies show insignificant differences between male and female subjects in the amount of FOS imagery they produce (Feather and Simon, 1975; Garland and Smith, 1981; Heilbrun, 1976; Robbins and Robbins, 1973; Solomon, 1975; Spence, 1974; Tresemer, 1973; Krishnan, Note 10) or, at most, differences between male and female subjects in addition to significant differences in response to protagonists of different sexes (Bremer and Wittig, 1980; Brown et al., 1974; Cherry and Deaux, 1978; Crealock, 1978; Intons-Peterson and Johnson, 1980; Janda, O'Grady, and Capps, 1978; Lockheed, 1975; Monohan et al., 1974; Spence, 1974; Paludi, Note 11). Thus it would seem that the sex-of-subject factor is not even a primary one, and role norms for males and females should be examined more closely as the origin of the Motive to Avoid Success.

Western society's role norms dictate that males be successful at careers while females generally are not, and that certain careers are more typically male-dominated than others. For instance, medical school is more normally male-dominated than nursing school, which is predominantly female. These norms are manifest in Fear of Success research when subjects project more FOS imagery for Anne at the head of her medical school class than at the head of her nursing

class (Depner and O'Leary, 1976; O'Leary and Hammack, 1975), or when the content of subjects' stories predicts that she drops out of medical school and becomes a nurse instead (Horner, 1972, 1974a; O'Leary and Hammack, 1975; Horner, Note 1).

In addition, the effect of role norms can be seen when norms are artificially created, such as where subjects are told that Anne's class is composed of 50% women or that she is the only woman in her class, and subjects respond with greater FOS for the sole woman than the one surrounded by women, who is thus in an acceptably female occupation (Lockheed, 1975; Lockheed-Katz, 1974).

The current study was proposed to examine further the role of sex role norms in Fear of Success motivation. A female protagonist was presented in a cue suggesting that she is successful at a typically male-dominated or typically female-dominated professional school, and FOS imagery was scored for both male and female subjects. Thus, FOS for a female protagonist who succeeded at a typically male-type and a typically female-type task was assessed for both male and female subjects.

A second side of this issue was also examined: what do subjects feel about males who are successful at out-of-role-norm tasks? If FOS imagery is greater when females succeed at male-type tasks - that is, when they cross sex role boundaries - wouldn't it also be greater when males

cross their own sex role boundaries? Some research has addressed this issue and shown that subjects produce FOS imagery in response to men succeeding at typically female-dominated occupations (Breedlove and Cicirelli, 1974; Cherry and Deaux, 1978; Garland and Smith, 1981; Janda et al., 1978) but there is also some evidence that men are projectively permitted success even in stereotypically feminine fields (Intons-Peterson and Johnson, 1960; O'Leary and Donahue, 1978; Touhey, 1974). In the current study, male protagonists were presented as succeeding at tasks which are typically male-dominated and typically female-dominated, and FOS imagery was measured.

If Fear of Success is indeed a motive activated in response to a person crossing sex role boundaries, as research on successful women at male-type tasks would seem to indicate, then there should be more FOS imagery projected in response to a cue about a male succeeding at a typically female occupation than one succeeding in a typically male field.

Fear of Success does appear to be a function of one's understanding of the appropriate roles females and males play in the environment. But the TAI is a projective task, and, as such, it evokes some of the internal fantasies of the person responding to the cue; thus, the FOS imagery produced should also be a function of something within the responder. True, understanding of appropriate roles is

internalized - and indeed the internalization of social norms may be all that is expressed in the IAT stories. However, different people respond to the task differently, with different amounts and different types of Fear of Success or non-Fear of Success imagery. Thus, it is likely that there is some factor in the subject's internal psychological make-up which is being expressed in addition to the degree of knowledge of social norms; the degree to which the subject accepts those norms is also expressed.

The question then arises, what determines a person's acceptance of norms imposed by society? One's knowledge of those norms certainly plays a part, and thus exposure to mainstream sex role stereotypes is important, as is intelligence, which affects the amount of one's environment one is likely to observe and understand. But subjects in most psychological research are college students, and thus are predominantly upper-middle-class and of above average intelligence, yet still there are individual differences in the degree of FOS imagery expressed.

Since Fear of Success seems likely to be fear of a person's crossing norms of sex role boundaries, it could be proposed that one's feelings about one's own sex role identity plays an important part in determining one's Fear of Success level - or the level to which one fears others crossing sex role boundaries.

Sex Role Identity

Sex role identity is a concept which has been discussed at length in recent years. Popular and professional literature has reported theories, hypotheses, research, and debates related to sex roles. Old ideas about masculinity and femininity have been largely discarded, replaced by new concepts about the importance of biological, cultural, and social factors and the potential for alternate roles.

The concepts of masculinity and femininity were originally defined as opposite ends of a single continuum, with males properly falling at one end and females properly at the other. The Minnesota Multiphasic Personality Inventory (MMPI) (1943) scale 6, for example, was designed to test whether a person was deviant from her or his appropriate sex role identity and hence disturbed. Questions assessed interests, hobbies, sensitivities, preferences, and typical relationships, to place testees at the masculine or feminine end of the scale. While a T-ratio is used to compare masculine to feminine test responses, the final score is a single number referring to deviancy from socially expected sex roles.

Since the MMPI, the concept of sex role identity has been discussed at length and redefined. The concept of males being inherently masculine, females feminine has been questioned, leading to questions about the definitions of the terms themselves. If the terms do not mean strictly

"male" and "female," then they must be seen as meaning "characteristic of a male" or a female. But these characteristic qualities - including typically (Webster, 1977) such traits as strength, vigor, and virility for masculinity and gentleness, delicacy, and modesty for femininity - are not present solely in the "appropriate" sex. Men are not always strong and are often modest; women are not always delicate and are often vigorous. Thus, the terms are not synonymous with maleness and femaleness, and both should be applicable to both males and females.

Many theorists (Bem, 1974, 1977; Heilbrun, 1973; Jung, 1953, 1959; Singer, 1972, 1977; Bem, Note 12, Note 13) have proposed the idea that masculinity and femininity are not opposite ends of one continuum, whereon each individual can be placed at some intermediary point, but rather that they are two separate variables which can and should be measured independently. The scales can be seen to measure "separate orthogonal dimensions" (Major, 1979). Psychologists studying these dimensions began by attempting to define and enumerate the traits which would be described as masculine and feminine. The dimensions have been described as instrumental-expressive (Parson and Bales, 1955), outer-inner (Erikson, 1964), active-passive (Maccoby, 1966), agency-communion (Block, 1973); and have included a variety of measurement techniques including analysis of spontaneous play (Erikson, 1964), Adjective Check Lists (Gough and

Heilbrun, 1965; Heilbrun, 1976), questionnaires (Spence and Helmreich, 1978; Spence, Helmreich, and Stapp, 1975), C-sorts (Block, 1973), and use of various parts of other tests such as the Strong Vocational Interest Blank and the MMPI (Berzins, Welling and Wetter, 1978; Constantinople, 1973; Wiggins and Holzmueller, 1978).

BSRI

One such measure of masculine and feminine traits was developed by Sandra Bem (1974) as a self-descriptive questionnaire. She began by asking judges to list characteristics "socially desirable" for a man and for a woman, asking men and women to choose characteristics for both sexes but paying special attention to items judged desirable for the judges' own sex. Thus, she chose traits judged highly sex-typed (i.e., differentially desirable for one sex over the other) and therefore stereotypically "masculine" and "feminine." The scale also included items judged equally desirable for males and females, the neutrally socially desirable items.

Once the scale was developed to include items stereotyped as expected differentially for males and females, Bem used the scale as a self-report measure, in which subjects were asked to rate the degree to which they possessed each of 60 characteristics (20 each of masculine, feminine, and neutrally socially desirable traits). While the traits were

by definition thought to be preferable for one sex over the other, she proposed that when subjects were asked to rate themselves as to the degree to which they possessed each of the characteristics, the scale would not be endorsed differentially by males and females. As has been suggested by several other authors (Jung, 1953, 1959; Heilbrun, 1973; Plato, 1937; Singer, 1972, 1977; Spence and Helmreich, 1978; Spence et al., 1975), she proposed that both masculinity and femininity are present in everyone to a certain degree. A person of either sex can be highly masculine or highly feminine (and low in the other list of traits). In fact, it is possible for an individual to be highly masculine and highly feminine at the same time; that is, it is possible for one person to incorporate traits of agency, independence, and dominance (traditionally masculine traits) and be simultaneously communion-oriented, gentle, and compassionate (traits traditionally associated with femininity).

Androgyny

The term androgyny (Bem, 1974; Jung, 1953, 1959; Heilbrun, 1973; Plato, 1937; Singer, 1972, 1977; Spence and Helmreich, 1978; Spence et al., 1975) has been coined from the Greek words andro (meaning male) and gyne (meaning female) to label these people who are both masculine- and feminine-identified. Androgynous individuals are those males and females who score high in traits stereotypically

masculine and stereotypically feminine simultaneously. The subjects are thought to be highly mature (Block, 1973), and well adjusted (Gilbert, 1981; Kaplan, 1976; Kravetz and Jones, 1981; Rohrbaugh, 1979), with "optimal cognitive functioning" (Maccoby, 1966) and a great degree of flexibility in functioning without constraints according to the demands of the situation (Bem, 1974).

Research into the functioning of androgynous individuals has shown less optimism than the theoretical description predicts. There is fairly consistent evidence that androgynous subjects have higher self-esteem than any other group (Bem, 1977; Jones, Chernovetz and Hansson, 1978; Kelly and Worell, 1977; O'Connor, Mann and Bardwick, 1978; Orlofsky, 1977; Spence and Helmreich, 1978; Spence et al., 1975; Allgeier, Pryzbyla, and Ruth, Note 14; Watson, Note 15; Wetter, Note 16). Other studies have shown androgynous subjects to be highest in intellectual abilities (Berzins, et al., 1978; Helmreich, Wilhelm, and Stapp, 1975), creativity (Hargreaves, Stoll, Farnworth, and Morgan, 1981), athletic, scientific and literary pursuits (Woods, Note 17), social skills (Berzins et al., 1978; Helmreich et al., 1975; Stokes, Childs, and Fuhrer, 1981), and - as predicted - flexibility (Bem and Lenny, 1976; Jones et al., 1978; Higgins and Holzmueller, 1978; Allgeier et al., Note 14). Sex-typed individuals, especially masculine males and feminine females, have been shown to have greater discomfort at

performing cross-sex-typed tasks (Bem, 1977; Bem and Lenny, 1976; Bem, Martyna and Watson, 1976), and have made self-defeating choices rather than do so (Bem and Lenny, 1976). Sex role measures have been related to anxiety, self-criticism, depression, problem drinking, neurosis, and requests for counseling (Worell, 1978).

However, the evidence is far from conclusive. Some studies have shown many strengths and weaknesses to be related to absolute degree of masculinity (Antill and Cunningham, 1979; Moore and Rosenthal, 1980) or femininity (Antill and Cunningham, 1980; Berzins et al., 1978) rather than to the balance of the two, and some analyses across studies have suggested that there is no relation to flexibility (Locksley and Colten, 1979) or psychopathology (Worell, 1978). Recent researchers have warned against trying to apply sex-role-identity to too many different realms of functioning (Spence and Helbreich, 1980).

In spite of the warning, it does appear probable that the degree to which one incorporates stereotypically socially-approved traits into one's self-identity does influence one's perceptions and experiences of many other aspects of one's life.

Relation of FOS to Sex Role Identity

It seems likely that Fear of Success may be related in some way to sex role identification. In some FOS studies, (Alper, 1973; Breedlove and Cicirelli, 1974; Bremer and Wittig, 1980; Cherry and Deaux, 1978; Crealock, 1978; Depner and O'Leary, 1976; Fleming, 1978; O'Leary, 1974; O'Leary and Hammack, 1975), women are projectively permitted success at feminine occupations. Thus, male success is acceptable and female success at feminine tasks is acceptable. When boundaries are crossed, however - when a woman succeeds at a male-dominated and therefore (stereotypically) masculine task - both sexes demonstrate fear for her success. It would be interesting to investigate the relation between FOS projected onto a successful woman and the sex role identity of the subject who projects that FOS. If FOS is a fear of crossing sex role boundaries in a hypothetical (or projected) other, the degree to which one crosses sex role boundaries in one's own life should be related to the degree to which one fears it for others. Are subjects who have adopted a cross-sex role identity themselves more or less likely to project FOS imagery onto a stimulus person who crosses sex role boundaries than those who do not cross sex role boundaries in their own self identity?

For instance, what about masculine women, whose interests are likely to be in masculine tasks? They are forbidden success, in fantasy at least, by both men and

women. Since their interests are in masculine fields, they are likely to want to pursue masculine occupations. Since they are assertive and instrumental, they may be likely to succeed at such tasks. What are their fantasies about people who succeed in these fields?

Similarly, androgynous women have some interests along masculine lines, are likely to actively and assertively pursue their interests, and are flexible (Bem and Lenny, 1976; Jones et al., 1978; Wiggins and Holzmueller, 1973; Allgeier et al., Note 14) and scholastically able (Berzins, et al., 1978; Helareich, Wilhelm, and Stapp, 1975; Woods, Note 17) and therefore likely to succeed. What are their fantasies about successful women?

Some studies have addressed this issue, in testing the relation between FOS and various measures of masculinity and femininity, traditionalism, and attitudes toward women and the feminist movement. Research has shown that traditionally-oriented subjects sometimes have higher FOS (Alper, 1973; Makosky, 1976; O'Leary and Hammack, 1975) than non-traditionally-oriented subjects, sometimes lower (Caballero, Giles, and Shaver, 1975; Jordan, Note 6), and sometimes neither higher nor lower (Depner and O'Leary, 1976; Peplau, 1976; Jordan, Note 6; Peplau, Note 7). Zuckerman and Wheeler (1975) have concluded that, overall, there is no relation between orientation and FOS.

The question addressed here, however, relates not to attitudes toward women or traditional vs. radical political beliefs but rather to the subjects' own sex role identity. This has been tested less often and using such a wide variety of measuring instruments that conclusions are difficult to draw. Some studies (Heilbrun, Kleemeier, and Piccola, 1974; Major, 1979) show that cross-sex-identified subjects tell more FOS stories than own-sex-identified; sometimes they tell fewer FOS stories (Heilbrun, et al., 1974); often there is no relation perceivable (Depner and O'Leary, 1976; Fresemer, 1977; Baruch, Note 18; Stericker, Note 19). Methods of testing sex role identity range from asking whether subjects thought they were more like their mothers or their fathers (Heilbrun et al., 1974), through a few Bem scale studies (Major, 1979; Jenkins, Note 20, Note 21; Stericker, Note 19), to a variety of other questionnaires (Depner and O'Leary, 1976; Heilbrun et al., 1974; Baruch, Note 18).

Some research has addressed the converse question: the question of sex role identity in high vs. low FOS subjects. There is some evidence that women who express FOS imagery see themselves as less feminine than the low FOS group (Makosky, 1976; Jenkins, Note 20, Note 21; Parker, Note 22), although they do not see femininity and home as less important than the low FOS subjects. The relationship has not been tested for male subjects.

A second issue of interest relates to the interaction between sex role identity of subject, sex role identity of task, and FOS. It has been suggested (O'Dowd and Beardslee, 1967) that people have attitudes about characteristics associated with occupations. These include such characteristics as ambition, intelligence, responsibility (Lifschitz, Note 23), and conservatism (Zeldow, 1976; Lifschitz, Note 23). More importantly, people's ratings of tasks depend on the sex of the person occupying that role (Garsky, 1975; Suchner and More, 1975; Touhey, 1974; Lifschitz, Note 23). Personality characteristics are differentially attributed to males and females (Broverman, Vogel, Broverman, Clarkson and Rosenkrantz, 1972; Williams, Bennet, and Best, 1975), and people react to the appropriateness of males or females occupying various roles. Most studies have shown that hypothetical persons (Costrich, Feinstein, Kidder, Marecek, and Pascale, 1975; Kristal, Sanders, Spence, and Helmreich, 1975; O'Leary and Donohue, 1978; Shaffer and Wegley, 1974) or games (Montemayor, Note 24) are rated as more likeable if they are thought to be gender-appropriate, although O'Leary (O'Leary, 1974; O'Leary and Donahue, 1978) has found no decrement in liking for a male stimulus person who is portrayed as feminine. How do subjects who identify themselves as endorsing cross-gender-appropriate traits for themselves react to stimulus persons performing similarly gender-inappropriate tasks? Do subjects who identify them-

selves as interested in cross-sex-appropriate tasks find success more salient and thus fear it more? Or do they experience success as more desirable and thus fear it less?

Present study

The present experiment was designed to pose the aforementioned questions. A group of men and women were each asked to produce one projective story, in which the protagonist was either male or female and the task was either a traditionally masculine or a traditionally feminine one. The story begins, "At the end of the first semester in graduate school in which Nancy/Steven is studying to become a physicist/elementary school teacher, she/he finds that she/he has the best grades in the class."

These occupations were chosen because they represent areas salient to the subject population, which is concentrated in departments of education and the natural sciences; because they require success in graduate school for occupational success; and because they are likely to be thought of as masculine and feminine, both because of the stereotypicality of the tasks and because of the real representation in physical science of 88% males (National Academy of Science, 1981) and in elementary school education of 85% females (U.S. Dept. of Commerce, 1973).

Subjects were then asked to complete the story, describing the protagonist and proposing a hypothetical future for her or him. Both Nancy and Steven were assigned masculine and feminine tasks for different subjects, and both male and female subjects were asked to form projective stories for protagonists of both sexes. This technique tests Fear of Success imagery for someone of the opposite, as well as the same, sex as the subject.

Subjects were asked about family background, intelligence, major in school, and educational and occupational goals for themselves, in order to measure the relation between these factors and Fear of Success. Based on answers to Bem's Sex Role Inventory, each subject was categorized as masculine-, feminine-, or androgynous-identified, or undifferentiated. The relation between sex role identity and FOS imagery was assessed.

The following hypotheses were made concerning Fear of Success level:

1. There are no differences in FOS between male and female subjects. Previous research (Glancy, 1970; Hoffman, 1971; Wood and Greenfield, 1976; Horner, Note 1) has shown conflicting results. Tresemer (1977) analyzed 56 studies of FOS, finding "tremendous variability between studies" (p. 117), but a significantly higher proportion of FOS stories told by female subjects. Further analysis of the same

studies with an attempt to control for the variability in data collection techniques revealed no significant difference between subjects. It is hypothesized here that other factors account for the occasionally observed sex-of-subject differences, rather than a real difference between sexes in FOS level.

2. There is more FOS imagery for a female projective protagonist than for a male. That is, when task conditions are disregarded, both male and female subjects demonstrate greater Motive to Avoid Success for Nancy than for Steven.
3. There is more FOS imagery generated for protagonists performing cross-sex tasks than same-sex tasks. This corresponds to Lockheed's (Lockheed, 1975; Lockheed-Katz, 1974) findings that both male and female subjects project more FOS onto Anne when they believe she is the only woman in her medical school class than when they believe her class is 50% women, and others' findings (Alpert, 1973; Breedlove and Cicirelli, 1974; Bremer and Wittig, 1980; Cherry and Deaux, 1978; Crealock, 1978; Depner and O'Leary, 1976; Fleming, 1978; Intons-Peterson and Johnson, 1980; O'Leary, 1974; O'Leary and Hammack, 1975) that less FOS imagery is produced for protagonists in sex-role appropriate fields of success. All subjects apparently accept success more readily when the task

is not heavily cross-sex-identified. In this study, Nancy performing successfully as a physicist and Steven as an elementary school teacher should evoke more FOS imagery from both sex subjects than either protagonist in the same-sex task condition.

Seven additional hypotheses are made concerning the correlation between FOS level and other personality variables.

a)

High FOS subjects tend to have higher intelligence level, as shown in higher self-reported SAT scores.

Horner's research (Note 1) has shown FOS to be greater in honors students than in students with lower aptitude and achievement levels. Other studies have shown contradictory relationships between FOS and ability, with some studies showing a positive relationship between FOS and various measures of ability or achievement (Caballero, et al., 1975; Hoffman, 1974; Horner, 1972, 1974a; Sorrentino and Short, 1974), some showing a negative relationship (Boggs and Pappas, Note 25; Stericker, Note 19; Zuckerman, Allison, and Marion, Note 26), and some showing mixed or no significant relationship (Bright, 1970; Entwistle, 1972; Heilbrun et al., 1974; Lesser et al., 1963; O'Leary and Hammack, 1975; Peplau, 1973, 1974; Topol and Reznikoff, 1979; Zanna, 1973; Baruch, Note 18; Beldner, Note 27; Gross and Detterbeck,

Note 28; Jordan, Note 6; Major and Sherman, Note 29). Analyzing aggregated data from several studies conducted from Horner's 1968 data to 1977, Tresemer (1977) determined that there is, on the whole, no relationship between FOS and ability. It may be that college students as a whole have fairly uniform abilities and thus no correlation can be found within the small range. Nevertheless, the relationship was tested here, with a predicted positive relationship between self-reported SAT scores and FOS.

b)

The high FOS subject group has a higher proportion of first-borns and only children than the low-FOS group.

Horner (1972, 1974a, 1974b; Note 1, Note 2) has proposed that FOS occurs in people who view success as a relevant possibility for themselves and as relevant to their own futures. Since first and only children are often high achievers (Altus, 1966; Apperly, 1939; Schachter, 1963; Schubert, Wagner, and Schubert, 1977), success is a relevant possibility for many of them, and they are likely to be highly represented among those who fear success. It is hypothesized that the correlation operates in the reverse direction also - that is, first and only children are more likely to fear success than later-born children - but the scope of the present study does not permit measurement of that relationship.

c)

High FOS subjects have high educational aspirations.

Again, success must be viewed as relevant or there would be no reason to fear it. Thus, high FOS subjects are those who wish for and believe in succeeding, but are also afraid of the consequences.

d)

The educational and occupational goals of high FOS subjects are higher than the educational and occupational level of the same-sex parent.

Since the same-sex parent is seen as a role model for most college students, there could be some ambivalence about succeeding or desiring to succeed beyond the level of achievement of that parent.

There have been some preliminary findings in this direction. For example, Fleming (1978) found greater FOS among lower class compared to middle class Black women college students; thus, women surpassing their parents' socioeconomic status by going to college have higher FOS than those whose parents had been college-educated and/or held managerial positions similar to those probably aspired to by their daughters.

It has been tentatively shown that women whose mothers work outside the home have higher educational and career goals than women whose mothers do not work (Marini,

1978; Sutherland, 1978; Tangri, 1972). These seem to be women who have aspirations as high as or higher than their mothers and, with high aspirations for themselves, may have high FOS (see hypothesis c above). There has been some relationship found between FOS and successful same-sex parent, especially for girls (Dalsimer, 1975; Miller, 1980; Jordan, Note 6; Tresemer, Note 30), although some studies have found no relation (Feather and Raphaelson, 1974; Tresemer, 1977; Baruch, Note 18), or a relationship between girls' FOS and education/occupation of their fathers (Horner, 1972; Note 2)

e)

High FOS subjects are likely to have one parent who has succeeded at a sex-inappropriate task.

For instance, there should be more mothers of high FOS subjects who have a college education, more mothers who work outside the home, and more mothers with higher educational level and/or higher occupational status than their husbands.

Women whose mothers have succeeded have higher educational and career goals for themselves (Marini, 1978; Sutherland, 1978; Tangri, 1972) and thus, perhaps, higher FOS (see hypothesis c above). This may also hold for sons of women who work outside the home. Previous research has been inconclusive, showing high FOS in homes where fathers

were more educated than mothers (thus not crossing sex role boundaries) (Horner, 1970), a positive relationship between maternal education/ employment and FOS (Peplau, 1973, 1974; Jordan, Note 6), or no relation between employment of mother and FOS (Tresemer, 1977; Saruch, Note 18; Jordan, Note 6).

f)

High FOS subjects are likely to have chosen majors in cross-sex-type fields.

If FOS is a concept for those who find success salient (Fleming, 1977a; Horner, 1972, 1974a; Fleming et al., Note 5; Horner, Note 1, Note 2) and if it is related to a fear of crossing sex role boundaries (Horner, 1972, 1974a, 1974b; Horner, Note 1), then it should be more prevalent in subjects who have considered crossing sex role boundaries in their own choice of occupation.

Previous research has been inconclusive, showing positive relationships between choice of cross-sex-role-appropriate major and FOS (Garland, 1972; Holstrom, 1972; Locknead, 1975; Rappaport and Rappaport, 1972; Tangri, 1972), a slight negative relationship (Horner, 1972, 1974a; Fleming, 1977b, 1978; Horner, Note 1; Beldner, Note 27), mixed relationships (Hoffman, 1977; Boggs and Pappas, Note 25), or no relationship (Breedlove and Cicirelli, 1974; Gearty and Milner, 1975; Tresemer, 1976, 1977; Baruch, Note 18; Gearty and Milner, Note 31; Zuckerman, Allison, and Marion, Note 26).

In this study, subjects' reported majors were coded as typically male-dominated, female-dominated, or neither by ten undergraduate judges, and the relation between choice of major and FOS was assessed.

g)

FOS is related to sex-role identity.

It is here proposed that FOS is actually fear of breaking socially prescribed norms. Thus there is a fear of a woman succeeding at a masculine task (Alpert, 1973; Bremer and Wittig, 1980; Cherry and Deaux, 1978; Crealock, 1979; Depner and O'Leary, 1976; Fleming, 1978; Horner, 1972, 1974a; O'Leary and Hammack, 1975; Horner, Note 1, Note 2), especially if she is the only woman attempting the task (Lockheed, 1975; Lockheed-Katz, 1974). On an individual level, FOS may represent a fear of loss of socially prescribed sex-role identity (Horner, Note 1); that is, subjects with high FOS may projectively fear loss of their own femininity (females) or masculinity (males).

Therefore, because of the salience of this fear, subjects with high cross-sex role identity are more likely to fear success at a cross-sex task than those subjects with a same-sex role identity. Participation in a cross-sex task is more relevant to these subjects; success is more possible for them; and therefore FOS imagery is more likely to be projected.

For instance, a woman who sees herself as highly masculine-identified is likely to be interested in attempting masculine tasks and view success at these tasks as important - and possibly fearful - much more than a woman who sees herself as feminine-identified, who is likely to be uninterested in such tasks and to allow unambiguous success to those who desire it. Therefore, masculine-identified women should have higher FOS than non-masculine-identified women.

In addition, highly feminine-identified women are secure enough in their socially-expected sex role identity not to fear breaking social norms by succeeding at a socially-unexpected task; they remain feminine, and therefore socially-acceptable, no matter what task they attempt. Thus, women with a high feminine sex role identity should have lower FOS imagery.

Male subjects should perform similarly; there should be less FOS imagery produced by masculine-identified (same sex role identified) men than by feminine-identified (cross sex role identified) men, because men with a strong socially prescribed masculine identity should fear loss of that identity less than those in greater danger of breaking socially prescribed norms.

It is therefore predicted that there is a high representation of cross-sex-identified individuals in high FOS groups, especially when the story involves success at a

cross-sex-appropriate task. When the story cue involves a same-sex-appropriate task, cross-sex-identified subjects should demonstrate less FOS imagery, since success at these tasks serves to reaffirm social norms; thus there should be a low representation of cross-sex-identified subjects in groups projecting high FOS for performance of sex-appropriate tasks.

Androgynous subjects pose an interesting question. Interest in and success at cross-sex tasks are relevant to them since they are highly identified with cross-sex traits; but they are also highly same-sex-identified, so they maintain a secure socially-acceptable role identity. In keeping with Bem's (1974) description of androgynous individuals as more flexible and more adaptable, it is proposed that there should be a low representation of androgynous subjects in the high FOS group.

Undifferentiated subjects are again difficult to predict. They may behave like same-sex-identified subjects in that they have little to fear, being unlikely to cross sex-role boundaries themselves. On the other hand, they have no secure socially-prescribed sex role identity to reassure themselves of their acceptability regardless of potential cross-sex-role behavior. It is hypothesized that the latter is more relevant here, and that undifferentiated subjects are in the high FOS category primarily; however, this has been shown to be a proportionately small group,

sometimes as low as 1% of all subjects (Ben, 1977), and thus may not be represented in large enough numbers to be testable.

METHOD

Subjects.

Subjects were 200 students, equal numbers of males and females, who were enrolled in psychology classes at a small college campus of a private university in New York State. In order to maintain homogeneity of sample and to be sure that the cue of young student in graduate school was relevant (Veroff, Atkinson, Field, and Gurin, 1974), only subjects ranging in age from 17 to 25 years were included.

Procedure.

Each subject was administered a questionnaire containing the following three parts (see Appendix 1):

1. Personal data sheet. Information was collected concerning subjects' age, race, marital status, ordinal position in the family, self-reported SAT scores, educational level, major in school, occupational and educational aspirations, and parental education and occupations.

2. Bem Sex Role Inventory. The BSRI was administered to each subject. On the basis of the answers to the self-rating questionnaire, subjects were classified into eight groups: masculine, feminine, androgynous, and undifferenti-

ated groups of males and females. Classification was made using Bem's recommended (Bem, personal communication, 1978) t-ratio/median split technique (Bem and Watson, Note 32): each subject received a total masculinity and a total femininity score. A t-ratio (Bem and Watson, Note 32) was computed to determine whether the subject's score was highly masculine (low feminine), highly feminine (low masculine), or equally masculine and feminine. The last group was then further divided into high masculine-high feminine (Bem's androgynous subjects) and low masculine-low feminine (undifferentiated subjects) according to whether their scores fell above or below the sample median scores.

3. Projective story. Each subject was asked to produce one Hornerian projective story in which the protagonist was either male or female and the task was either feminine or masculine. Subjects were directed to complete the story, describing the protagonist and proposing a hypothetical future for her or him.

The story cues were: "At the end of the first semester of graduate school in which Nancy/Steven is studying to become a physicist/elementary school teacher, she/he finds that she/he has the best grades in the class."

There were thus four conditions for the story cues:

Nancy as physicist

Nancy as elementary school teacher

Steven as physicist

Steven as elementary school teacher

Twenty-five males and 25 females were assigned each story cue. Fear of Success imagery was thus assessed for same-sex and opposite-sex protagonist as they succeeded at sex-appropriate and sex-inappropriate tasks.

Each story was rated by one of two undergraduate psychology students acting as judges and using the scoring system developed by Horner and Fleming (Note 3). Judges were first trained using the Horner and Fleming (Note 3) training manual and reached criterion accuracy of 85% or better. Stories were scored for the presence of mention of:

1.

Negative consequences of success contingent
on some action by the protagonist (+2)

2.

Negative consequences noncontingent on the
protagonist's action but created by
external factors (+2)

3.

Interpersonal engagement (+2)

4.

Relief of tension or deprivation (+1)

5.

Absence of instrumental activity by
protagonist (+1)

6.

Absence of mention of others (-2)

Each story was assigned a Fear of Success factor ranging from -2 to +8. A factor of +2 was added to each FOS score so that there existed no scores with a negative value. Thus, the scores used for analysis ranged from 0 to +10.

It has been shown that there is a slight positive correlation between story length and FOS imagery (Sorrentino and Short, 1974; Tresemer, 1976a, 1977; Jenkins, Note 20, Note 21). The correlation was tested here and stories were corrected for verbal fluency (Veroff, et al., 1974; Winter, 1973).

Data Analysis

Statistical analysis of the data was performed in order to account for the variance in FOS imagery according to the independent variables measured.

In spite of the attention which has been paid to FOS in over 150 studies (Rohrbaugh, 1979) and to the scoring of FOS imagery (Curtis, Zanna, and Campbell, 1977; Fleming, 1977; Good and Good, 1973; Major, 1979; Pelcquin, 1981; Spence, 1974; Ward, 1978; Cohen, Note 33; Fleming, et al., Note 5; Garner, Gumpert, and Cannavan-Gumpert, Note 34; Paludi, Note 11; Pappo, Note 35;) there has been little agreement or conclusiveness over scoring systems. The recommended system (Fleming, personal communication, 1979) is a revised version (Horner and Fleming, Note 3) of that developed by Horner et al. (Note 4) and described above, but it is unclear whether the numerical scores of FOS are actually useful as such. The scale devised by Horner and Fleming (Note 3) was created by empirical means, in an attempt to better define factors involved in the imagery of those Horner (Note 1) originally judged to be high in FOS (Tresemmer, 1976a, 1976b, 1977; Horner et al., Note 4). The data collected in Horner's original study (collected in 1964) were discussed, conceptualized, coded and analyzed until the six categories were identified; five of them tended to be present in stories of Horner's FOS-present group, and the sixth tended to occur in Horner's FOS-absent group, thus

being contraindicative of FOS. The categories were weighted according to the degree to which they accounted for the variance in Horner's performance groups, using a regression equation.

Since the production of the scoring manual, very few studies have applied the scoring system. Many studies (Depner and O'Leary, 1976; O'Leary and Hammack, 1975; Topol and Reznikoff, 1979) continued to use Horner's (Note 1) present/absent formulation or the redefinition of that categorical system described in later reports (Horner, 1972; Note 2). Even those studies which did use the new scoring system frequently reverted to a present/absent system in analyzing data (Gearty and Milner, 1975; Heilbrun et al., 1974; Paludi, Note 11), used the six categories separately (O'Leary and Hammack, 1974; Krishnan, Note 10), analyzing which subject behaviors correspond to stories containing imagery in each of the categories independently, or created some combination of numerical/categorical scoring (Major, 1979; Marshall and Karabenick, 1977).

In order to use the scores in parametric statistical analyses, it is necessary that the scale be shown to be at least an interval scale. The FOS scoring system used here has never been shown to be such a scale. It is indeed a numerical scale, but there is no pressing reason to believe that a FOS score of +8 is twice as great as a score of +4, or even that a score of +8 is at all greater than a score of

+4. It could be that mention of any of the FOS factors are indicative of a motive to avoid success, and that subjects with any positive FOS score at all are qualitatively different from those who score 0 or -2. Testing this assumption is beyond the scope of the current paper and was not attempted here; it is mentioned only so that the danger of using untested scales as quantitative measures can be kept in mind.

For the purposes of the present analysis, the FOS scores were treated twice. First, corrected scores of 0 to 10 were assumed to be interval measurements with means normally distributed across population samples. Thus, t-tests and analyses of variance were performed on FOS scores of various subjects groups.

However, it has never been shown in the literature that the scale is indeed an interval scale, and it was not here assumed to be necessarily so. Therefore, a second analysis of each relationship was performed, dividing subjects into FOS-present and FOS-absent groups, based on whether the projective story produced had been assigned a corrected FOS score above 2. FOS-absent subjects thus were those whose stories contained none of the scored categories (scored 0 and corrected to +2) or contained only category #6, Absence of mention of others (scored -2 and corrected to 0), which is counterindicative of FOS. Chi-square tests of independence were then performed on groups of FOS-present and FOS-absent subjects.

Subjects were examined for differences in FOS accounted for by sex of subjects, sex of protagonist in assigned projective story, and sex-appropriateness of task described in projective story cue. Groups also were compared for their intelligence (as indicated by self-reported SAT scores), educational and occupational aspirations, ordinal position in family, parental occupational status, and choice of college major.

The main analysis was to examine the relation of FOS to sex role identity of subjects. While hypotheses A, B, and C above suggest that there are effects--or lack thereof--for sex of subject, sex of protagonist, and sex-appropriateness of protagonist's task, the main purpose of this research was to study the effects of subjects' role identity on projective imagery, and it is believed that there are such effects. To test this, FOS imagery was analyzed for subjects who had been classified as masculine, feminine, androgynous and undifferentiated according to their scores on the BSRI.

Here, too, there are questions about the scoring of the measurement (Kaplan and Sedney, 1980; Kelly and Worell, 1977; Locksley and Colten, 1979; Worell, 1978; Sedney, Note 36). The BSRI has been subject to various measures of validity (Antill and Russell, 1980; Cunningham and Antill, 1980; Worell, 1978), factor analysis (Gaudreau, 1977; Gross, Batlis, Small, and Erdwins, 1979; Moreland, Gulanick,

Montaque, and Harren, 1978; Pearson, 1980; Whetton and Swindelles, 1977; Johnson and Black, Note 37; Powell, Note 38), and multiple regression (Bem, 1977; Cronbach and Furby, 1970; Hargreaves, et al., 1981; Ho and Zemaitis, 1980; Strahan, 1975; Meyers and Sugar, Note 39), in attempts to refine and quantify the instrument. Here, too, there is insufficient evidence to suggest that this is an interval scale and, in fact, Bem (personal communication, 1977) claims that it is not. She recommends maintaining use as a categorical scale, assuming that there is a threshold level of masculinity and femininity (at or about the population median) which influences the way one perceives and behaves. People who are much more masculine than most of the population, for example, are not likely to be different from those who are only moderately more masculine than most; it is the mere fact that one is masculine that matters and whether one is equally feminine or significantly less feminine. Bem's recommended scoring system was used here to create categorical division of subjects, and analysis of variance was conducted comparing mean FOS scores for each of the four groups. Then a 2x4 chi-square test of independence was performed for FOS-present and FOS-absent subjects in each of the four sex role identity groups.

Further analysis was performed in which subjects had been reclassified as own-sex identified (masculine-identified males and feminine-identified females) or cross-sex

identified (feminine-identified males and masculine-identified females) and again mean FOS scores and presence or absence of FOS were compared in the four groups using a second ANOVA and a second 2x4 chi-square.

In addition, BSRI groups were reclassified according to the absolute degree of masculinity, femininity, own-sex-role-identity, and cross-sex-role-identity present, and these groups were compared for FOS imagery. That is, for example, high masculine subjects are those who have been classified as masculine and those who are androgynous (high in both masculinity and femininity), while low masculine subjects are those classified as feminine or as undifferentiated (low on both scales). Similarly, a subject who is high in cross-sex identity is one who is high in that scale only (masculine females and feminine males) or one who is high in both scales (androgynous males and females).

Thus, FOS scores were compared using six different classification systems for the BSRI:

- 1) Bem's original masc/fem/andr/undf
- 2) own SRI/cross SRI/andr/undf
- 3) absolute degree of masc
- 4) absolute degree of fem
- 5) absolute degree of own SRI
- 6) absolute degree of cross SRI

Repeating these same six SRI classification systems, scores for FOS imagery were examined according to sex of

stimulus person and sex-role character of the task at which the stimulus person has succeeded in the cues assigned to subjects. Analyses of variance and chi-square tests of independence were conducted comparing FCS scores of various SRI subjects telling stories about a male stimulus person (Steven) to stories about a female stimulus person (Nancy), and tests were conducted comparing various SRI subjects' stories about stimulus persons succeeding at sex-role-appropriate tasks (Steven as a physicist and Nancy as an elementary school teacher) and at sex-role-inappropriate tasks (Steven as an elementary school teacher and Nancy as a physicist)

Through these statistical measures, hypotheses 1-3 and a-g above were tested, and the relationship of Fear of Success to sex role identity and other personality variables was examined.

RESULTS

Demographic data are listed in Table 1. Subjects' ages ranged from 17 to 25, with a mean of 19.5 and a median and a mode of 19 years. Year in school ranged from one to four, with a mean of 1.96, median of 2, and mode of 1. SAT scores fell in all 5 categories, from 'less than 700' (category 1) to 'above 1300' (category 5) for the combined Verbal and Quantitative scores. Mean SAT score was 2.95, meaning almost at the '900 to 1100' level. Median and modal category was '900 to 1100'.

Subjects were predominantly Caucasian, with 15 Blacks, 4 Hispanics, and 6 Others. Marital status was single for all but 5 subjects. Most (64%) subjects lived in school dorms, with 12% living with friends, 16.5% with family, and 7% living alone. Subjects' ordinal positions in their families were 8% only children, 29.5% first-borns, 24.5% youngest children, and 31% listed as 'none of these,' here thought of as middle children. These were collapsed for analysis into first-and-only's, 37.5% (N=75), and later-born's, 55.5% (N=111).

School majors were judged as stereotypically masculine or stereotypically feminine by 10 undergraduate students. Majors were listed in random order and, paralleling Bem's

TABLE 1
Demographic Data

	Mean (SD)	Median	Mode
Age	19.5 (1.42)	19	19
Year in school	1.96 (1.06)	2	1
SAT scores	2.95 (0.96)	9-1100	9-1100
	N		%
Race			
Caucasian	172		86
Black	15		7.5
Hispanic	4		2
Other	6		3
Marital status			
Single	195		97.5
Married	5		2.5
Living arrangements			
Dorms	128		64
With family	24		12
With friends	33		16.5
Alone	14		7
Ordinal position			
Only child	16		8
First born	59		29.5
Youngest	49		24.5
None of these	62		31

(1974) method of classifying traits as masculine or feminine, judges were asked whether they believed one would be more likely to find a male majoring in such a field or a female. Fields rated as male- or female-dominated by 65% of the judges or more were considered to be stereotypically masculine or stereotypically feminine, respectively. Fields

in which there was no agreement by more than 65% of the judges were considered to be neither masculine nor feminine but rather gender-neutral fields. Results show that 48.5% of all subjects were majoring in masculine fields, 36.5% in feminine fields, and 7.5% neutral (the rest were undecided or not indicated). (See Table 2.) A further breakdown was examined to determine the gender-appropriateness of the major for the subject; that is, whether the subject was majoring in a field in which gender typing was consistent with sex - masculine majors for males and feminine for females - or not. It was found that 128 subjects were majoring in sex-role-appropriate fields and 42 in sex-role-inappropriate; all other subjects were neutral or undecided. (See Table 2.)

TABLE 2
Major Fields of Study

	N	%
Sex role type of major		
Masculine	97	48.5
Feminine	73	36.5
Neutral	15	7.5
Undecided/no response	15	7.5
Sex role appropriateness		
Own sex role major	128	64
Cross sex role	42	21

Sex role typing of occupations was accomplished similarly to major fields; occupations were listed and judges asked whether a male or a female would typically be found performing at that occupation. Whenever 65% of judges agreed, the occupation was categorized as masculine or feminine. Where there was not agreement, the occupation was considered gender-neutral. Fathers were found to be in masculine jobs for 69% (N=138) of all subjects, in feminine jobs for 4.5% (N=9) of the subjects, in neutral jobs for 11.5% (N=23). (See Table 3.) Mothers were in masculine jobs for 10.5% (N=21), feminine jobs for 68% (N=136), neutral jobs for 11% (N=22). Subjects' choice of occupational aspirations for themselves was masculine for 39% (N=78), feminine for 23% (N=46), neutral for 12% (N=24). Subjects chose cross-sex appropriate occupations (i.e. masculine occupations for female S's, feminine occupations for males) 16% of the time, own-sex appropriate occupations 46% of the time (the rest were sex-neutral or unreported).

It should be noted that the majority of those reporting cross-sex appropriate occupations were female subjects; only 7 males reported having chosen stereotypically feminine occupations.

Occupations were also rated for degree of prestige entailed. For this, a list developed by Hodge et al. (Hodge, Siegel, and Rossi, 1966) was used. This is a list of 90 professions which were ranked in order of prestige

TABLE 3

Sex Role Typing of Occupations Reported

	N	%
Fathers' occupations		
masculine	138	69
feminine	9	4.5
neutral	23	11.5
Mothers' occupations		
masculine	21	10.5
feminine	136	68
neutral	22	11
Own occupational aspirations		
masculine	78	39
feminine	46	23
neutral	24	12
own-sex-appropriate	92	46
cross-sex	32	16

after interviews with 651 subjects serving as judges in 1963. In the current study, Hodge's list was divided into deciles, and occupations listed by subjects were assigned a decile score according to where in the list the reported occupation fell. For occupations not listed by Hodge, three judges were asked to find the nearest equivalent set of occupations from Hodge's list, and the corresponding decile score was assigned. Subjects' fathers' occupations fell into prestige deciles from 1 to 10, with a mean of 6.2, median of 6, and mode of 6. (See Table 4.) Mothers ranged from 1-9, with a mean of 4.9, median of 5, and mode of 4. Subjects aspirations were for occupations in the fifth to

the tenth decile, with a mean of 7.6, median of 7.5 and mode of 9.

TABLE 4
Occupational Prestige

	Decile	(SD)
Fathers' occupations		
mean	6.2	(1.8)
median	6	
mode	6	
Mothers' occupations		
mean	4.9	(1.4)
median	5	
mode	4	
Subjects' aspirations		
mean	7.6	(1.2)
median	7.5	
mode	9	

Education for subjects' parents were graded in six steps, from less than high school graduation (score of 1) through graduate school degree (score of 6). Fathers had a mean education of 3.49, where category 3 was some college and category 4 was graduation from college, a median of a Bachelor's degree, a mode of a high school diploma. (See Table 5.) Mothers had a mean education of 3.09, median of some college, and a mode of a high school diploma. Subjects were rated as aspiring solely to finish a Bachelor's degree (36%) or aspiring to graduate school (64%). Their answers often

did not include information about what graduate degree they sought, so further breakdown was not possible.

TABLE 5
Educational Levels

Fathers' education			
mean	3.49	(SD 1.6)	
median	4.0		
mode	2.0		
Mothers' education			
mean	3.09	(SD 1.3)	
median	3.0		
mode	2.0		
Subjects' aspirations			
graduate school	64%	N=128	
no graduate school	36%	N= 72	

BSRI scores.

On the Bem Sex Role Inventory, median masculinity score was 4.90; median femininity score 4.85. Subjects were classified using Bem's recommended (Bem, personal communication, 1978) t-ratio/median split technique into the following groups:

Near masculine	37	Subjects	18.5%
Masculine	38		19
Near feminine	27		13.5
Feminine	30		15
Androgynous	32		16
Undifferentiat.	36		18

Because near-masculine and near-feminine subjects consist of subjects who score masculinity and femininity totals which are different from each other even though not as different as masculine and feminine groups, and since subject groups were in danger of becoming too small for meaningful analysis, sex role identity groups were collapsed into four categories:

Masculine	75	Subj	37.5%
Feminine	57		28.5
Androgynous	32		16
Undifferentiat.	36		18

Analyses are reported for both the original Ben categories and the four collapsed categories.

For several analyses, subjects are recategorized according to scores on the BSRI. They were first classified as own-sex-identified (masculine males and feminine females) (102 S's) or cross-sex-identified (feminine males and masculine females) (30 S's), and compared to the above groups of androgynous and undifferentiated subjects. (See Table 6.)

A second reclassification involved the absolute degree of masculinity or femininity endorsed by subjects. Subjects with high masculinity scores - i.e. masculine subjects and androgynous ones - were compared to subjects with low masculinity scores - i.e. feminine and undifferentiated subjects. This was also done for femininity scores. (See Table 6.) Subjects were fairly evenly divided among the high and low groups in each method of categorizations. There were 107 high masculine subjects and 93 lows; there were 89 high feminines and 111 lows.

TABLE 6
Recategorization of BSRI Groups

	N	%
Own-sex-identified	102	51
Cross-sex-identified	30	15
Androgynous	32	16
Undifferentiated	36	18
High masculine	107	53.5
Low masculine	93	46.5
High feminine	89	44.5
Low feminine	111	55.5
High own-SRI	134	67
Low own-SRI	66	33
High cross-SRI	62	31
Low cross-SRI	138	69

This analysis was also performed for high and low degrees of own-sex-role identity (masculine males, feminine females, and all androgynous subjects compared to feminine males, masculine females, and all undifferentiated subjects) and for high and low degrees of cross-sex-role identity (feminine males, masculine females, and androgynous subjects compared to masculine males, feminine females and undifferentiated subjects). Data are presented in Table 6. Subjects seem to fall more often into high own-sex-role identity groups, with low cross-sex-role identity; high own-sex-role group contained 134 S's, with 66 S's in low

own-sex-role group, while 62 S's had high cross-sex-role identity and 134 S's had low cross-sex-role identity.

Fear of Success scores.

Fear of Success scores were assigned by two judges who reached criterion for scoring according to the system developed by Horner and Fleming (Note 3). Judges' accuracies on training trials ranged from 81.6% to 100% for Judge #1, and 88.5% to 100% for Judge #2, with means of 89.7% and 94.5%, respectively, and median accuracy of 90.5% and 96% respectively.

Subjects' FOS scores ranged from -2 to +5, corrected to 0 to +7. Mean FOS score was 2.42, corrected (SD 1.7); median was 2, corrected.

Subjects wrote stories which ranged in length from 6 words to 537 words, with a mean of 107.1 (SD 70.2) and a median of 95; 75% of all subjects wrote stories between 60 and 133 words long. Correlation between FOS score and story length was calculated to be .34. Horner (Horner and Fleming, Note 3) recommends correcting for story length if the correlation is greater than .25. Therefore, all FOS scores were corrected for length (Veroff et al., 1974; Winter, 1973), and it is those length-corrected scores which are reported throughout.

The second measure of Fear of Success was one in which categorical FOS scores were converted to a present-absent

system. If judges scored no FOS categories for a subject or scored only the 'Absence of Others' category which is counterindicative of FOS, the story was considered to be free of FOS imagery and was scored FOS-absent; if the story received any score other than an uncorrected score of 0 or -2, the story was scored FOS-present. There were 105 (52.5%) FOS-present stories and 95 (47.5%) FOS-absent stories.

Relation of demographic variables to FOS

The relation between demographic variables and FOS, both mean corrected FOS scores and percent of FOS-present stories, is presented in Table 7.

Mean corrected FOS scores for male subjects was 1.78, for female subjects 1.35 ($t=1.90$, $df=198$, $p=.06$). This is the only one of the comparisons which even approaches significance, and even this is not statistically significant. All other comparisons are not significant at the $p=.05$ level. Fifty-four percent of male subjects produced FOS-present stories, 49% of female subjects produced FOS-present stories ($\chi^2=.18$, $df=1$, $p=.67$). All subjects produced average FOS scores of 1.63 for a male stimulus person (SP), 1.49 for a female SP ($t=0.61$, $df=193$, $p=.54$). FOS imagery was present for 52% of stories written about a male SP and 53% about a female SP ($\chi^2=0.02$, $df=1$, $p=.89$).

Data were then evaluated for SP's performing their own sex appropriate task (male SP at a masculine task, female SP

TABLE 7

Relation between Demographics and FOS

Subject	Mean FOS	(SD)	p	% FOS	p
male	1.78	(1.7)		54	
female	1.35	(1.5)		51	
			.06		.67
Stimulus Person					
male	1.49	(1.7)		52	
female	1.63	(1.5)		53	
			.54		.89
Sex role of task					
SP's own	1.69	(1.6)		56	
cross	1.44	(1.6)		49	
			.28		.32
Ordinal position					
first/only	1.55	(1.6)		50.6	
later born	1.57	(1.6)		54.0	
			.93		.62
Educational aspirations					
grad school	1.64	(1.7)		52.3	
no grad school	1.42	(1.5)		52.8	
			.35		.95
Compared to occupation of parent					
higher asp.	1.62	(1.7)		56.7	
same level	1.12	(1.5)		40.0	
lower asp.	1.60	(1.5)		48.3	
			.44		.29
Compared to education of parent					
higher asp.	1.47	(1.7)		50	
same level	1.77	(1.5)		59.1	
lower asp.	1.95	(1.6)		58.3	
			.40		.52
For cross-sex appropriate parent					
cross-app.	2.04	(1.8)		53.3	
no cross	1.48	(1.6)		52.4	
			.08		.92
Major academic field					
masculine	1.63	(1.6)		52.6	
feminine	1.52	(1.6)		50.7	
neutral	1.66	(2.0)		60	
			.87		.93
own-sex-app.	1.63	(1.7)		52.3	
cross-sex	1.41	(1.4)		50	
			.44		.79

at a feminine one) or a cross sex appropriate task (male SP at a feminine task, female SP at a masculine one), with results showing mean FOS score of 1.69 for own-sex-appropriate tasks and 1.44 for cross-sex-appropriate tasks ($t=1.09, df=198, p=.28$), and 56% FOS-present stories for own-sex-appropriate task, 49% FOS-present stories for cross-sex-appropriate task ($\chi^2=0.98, df=1, p=.32$). None of these comparisons is significant. These comparisons address Hypotheses 1-3 above. Hypothesis 1 is supported; that is, there is no relation between sex of subject and FOS imagery, by either method of scoring FOS. Paradoxically, this is the one comparison which approaches significance ($p=.06$) and it is the one which was hypothesized to be non-significant. There is no support for Hypothesis 2 or 3, which predicted that there would be a relation between FOS and sex of stimulus person in the story cue and between FOS and the sex-role-appropriateness of the task performed in the cue for the stimulus person assigned.

Hypothesis a.

There is no support for Hypothesis a - that FOS is related to SAT scores. The Pearson product-moment correlation coefficient is $r=-0.08$ ($p=.25$). Mean SAT scores for FOS-present subjects was 2.90 (score of 3 was '900-1100') (SD 1.0), mean SAT for FOS-absent subjects was 3.05 (SD 1.0) ($t=0.98, df=189, p=.33$).

Hypotheses b.

Average FOS for first-born and only children subjects was 1.55, for later-born subjects 1.57 ($t=.0$, $df=198$, $p=.93$). Data are presented in Table 7. Of first-born and only children, 50.6% created FOS-present stories, with 54% of later borns creating such stories ($\chi^2=.24$, $df=1$, $p=.62$). Neither test reveals a significant relation.

Hypothesis c.

For subjects who aspire to graduate school, mean FOS score was 1.64, with 52.3% writing FOS-present stories. For those not aspiring to graduate school, mean FOS score was 1.42, with 52.8% FOS-present imagery ($t=.94$, $df=198$, $p=.35$; $\chi^2=.003$, $df=1$, $p=.95$). Neither relation is significant. (See Table 7.)

Hypothesis d.

Analysis of variance was conducted comparing FOS scores of subjects who aspire to occupations and educational levels which are higher than, equal to, and lower than those of their same-sex parent. These data are also presented in Table 7. Average FOS scores for subjects with higher occupational aspirations than their same-sex parent averaged 1.62, with mean FOS score of 1.12 for subjects with equal occupational aspirations, and 1.60 for those with lower aspirations ($F=.82$, $df=2$, $p=.44$). FOS imagery was present

in 56.7%, 40%, and 48.3% of these groups, respectively ($\chi^2=2.51$, $df=2$, $p=.29$). The relation is not significant. The similar comparison of subjects' educational aspirations as compared to the educational level of their same-sex parent revealed mean FOS scores of 1.47, 1.77, and 1.95 for subjects aspiring to achieve education higher than, equal to, and lower than their same-sex parent ($F=.93$, $df=2$, $p=.40$). FOS imagery was present in 50%, 59.1%, and 58.3% of the three groups ($\chi^2=1.29$, $df=2$, $p=.52$). This relation is not significant, either.

Hypothesis 9.

Occupations of subjects' parents were categorized as masculine or feminine as described above. Subjects with at least one parent involved in a cross-sex-role appropriate field (i.e. a mother in a stereotypically masculine field or a father in a stereotypically feminine one) scored a mean FOS score of 2.04, with 53.3% FOS-present stories; subjects without such a parent scored mean FOS of 1.48, with 52.4% FOS imagery ($t=1.76$, $df=198$, $p=.08$; $\chi^2=.01$, $df=1$, $p=.92$). (See Table 7.) A second analysis, not presented in Table 7, was performed in which parents were categorized as cross-sex-appropriate if, contrary to typical and stereotypical roles, mother's occupational prestige was higher than father's. This was the case for 43 subjects (21.5%). These subjects scored mean FOS of 1.34 (SD 1.6), with FOS-present

in 51.2% of their stories. Subjects whose parents did not reverse traditional sex roles in this way scored mean FOS of 1.62 (SD 1.6) and FOS-present imagery in 52.9% of their stories ($t=1.01$, $df=198$, $p=.32$; $\chi^2=.04$, $df=1$, $p=.84$). None of these tests of the relation between FOS and cross-sex-appropriateness of parental occupation is significant.

Hypothesis f.

The relation of FOS to subjects' choice of major is also presented in Table 7. Subjects who chose typically masculine fields for their major scored FOS scores of 1.63, with 52.6% FOS-present stories; subjects in feminine majors scored mean FOS of 1.52, with 50.7 FOS-present stories; subjects with neutral majors scored mean FOS of 1.66, with 60% FOS-present stories ($F=0.24$, $df=3$, $p=.87$; $\chi^2=.44$, $df=3$, $p=.93$).

When majors were regrouped according to own-sex-identified (masculine majors for male subjects and feminine majors for females) and compared to cross-sex-identified majors, average FOS scores were 1.63 and 1.41, respectively ($t=0.77$, $df=168$, $p=.44$), with FOS imagery present in 52.3% of own-sex-appropriate majors and 50% of cross-sex-appropriate majors ($\chi^2=.07$, $df=1$, $p=.79$). Again, there is no support for this hypothesis, that FOS is related to choice of academic major.

Relation of FOS scores to BSRI scores

Fear of Success scores for subjects categorized using Bem's system for sex role identity groups was presented in Table 8. Mean FOS score for near masculine subjects was 1.75, for masculine S's 1.81, 1.07 for near feminine, 2.04 for feminine, 0.98 for androgynous, and 1.61 for undifferentiated ($F=2.20$, $df=5$, $p=.055$).

TABLE 8
FOS scores for Bem's Sex Role Categories

	N	Mean FOS	(SD)	p	%FOS	p
Near masculine	37	1.75	(1.7)		62.2	
Masculine	38	1.81	(1.4)		55.3	
Near feminine	27	1.07	(1.7)		44.4	
Feminine	30	2.04	(1.6)		70	
Androgynous	32	.98	(1.4)		31.2	
Undifferentiat.	36	1.61	(1.8)		50	
				.055		.038

Percentages of FOS present imagery are also presented in Table 8. Near masculine subjects wrote FOS imagery in 62.2% of their stories, masculine S's in 55.3%, near feminine in 44.4%, feminine in 70%, androgynous in 31.2%, and undifferentiated subjects in 50% of their stories ($\chi^2=11.77$, $df=5$, $p=.038$). This shows the relation between FOS and sex role identity to be significant at the $p=.05$ level when the scoring system used is a present/absent one; while the

differences are in the same direction for the two types of scoring and the probabilities of obtaining effects of the obtained size are close for the two, the continuous numerical system approaches but does not arrive at significance.

Bem's categories were then collapsed into four groups, combining near masculine and near feminine groups with the groups to which they were 'near'. As can be seen in Table 9, the relation is not significant for either scoring system using the collapsed groups. Combined near masculine and masculine

TABLE 9

FOS scores for Collapsed Sex Role Categories

	N	Mean FOS	(SD)	p	%FOS	p
Masculine	75	1.78	(1.5)		58.7	
Feminine	57	1.58	(1.7)		57.9	
Androgynous	32	.98	(1.4)		31.2	
Undifferentiat.	36	1.61	(1.8)		50	
				.133		.053

subjects scored mean FOS of 1.78, with FOS imagery present in 58.7% of their stories; combined near feminine and feminine subjects scored a mean FOS of 1.58, with FOS imagery in 57.9% of stories; androgynous and undifferentiated subjects are as listed above. For mean FOS scores, $F=1.88$ for 3 degrees of freedom and a probability of obtaining such an

effect of $p=.133$, not significant. For FOS-present scores, $\chi^2=7.69$ for 3 degrees of freedom and $p=.053$, not significant but very close. As above, the present/absent scoring system seems to be a more sensitive measure of differences between groups. In addition, the differences between collapsed and uncollapsed Bem categories should be noted; these will be discussed further below.

For subjects grouped by own-sex-role identity and cross-sex-role identity and compared to androgynous and undifferentiated subjects, data are presented in Table 10. Mean FOS scores for the four groups

TABLE 10					
FOS for Own- and Cross-sex-role Identified Subjects					
	N	Mean FOS	(SD)	p	%FOS
Own-sex-role	102	1.67	(1.6)		59.8
Cross-sex-role	30	1.77	(1.5)		53.3
Androgynous	32	.98	(1.4)		31.2
Undifferentiat.	36	1.61	(1.8)		50
				.16	.04

are 1.67, 1.77, 0.98, and 1.61, respectively ($F=1.73$, $df=3$, $p=.16$). Fear of Success imagery was present in 59.8%, 53.3%, 31.2% and 50% of the groups ($\chi^2=8.08$, $df=3$, $p=.04$). The relation between FOS and Own- and Cross-sex- role-identity is significant for the present/absent scoring system but not for the numerical system.

FOS scores and collapsed BSRI scales.

Table 11 presents data for subjects scoring high and low in several different scales of sex role identity. First are data for subjects scoring high and low in absolute degree of masculinity. High scorers are masculine subjects and androgynous, low are feminine and undifferentiated. Also presented are subjects high in femininity (feminine and androgynous S's), own-sex-role identity (masculine males, feminine females, and all androgynous), or cross-sex-role identity (feminine males, masculine females, and all androgynous subjects), which are compared to subjects low in these scales (the second scale for each group plus undifferentiated subjects).

TABLE 11
FOS and Other SRI Groupings

	N	Mean FOS	(SD)	p	%FOS	p
High masculine	107	1.54	(1.5)		50.5	
Low masculine	93	1.59	(1.7)		54.3	
				.83		.54
High feminine	89	1.36	(1.6)		48.3	
Low feminine	111	1.72	(1.6)		55.9	
				.12		.29
High own SRI	134	1.51	(1.5)		53.0	
Low own SRI	66	1.68	(1.6)		51.5	
				.48		.64
High cross SRI	62	1.36	(1.5)		41.9	
Low cross SRI	138	1.65	(1.7)		57.2	
				.24		.04

Subjects high in masculinity scored mean FOS of 1.54, or 50.5% FOS-present; compared to a mean of 1.59 and 54.8% FOS present for low masculine $\bar{x}$'s ($t=.21$, $df=198$, $p=.83$; chi-square=.38, $df=1$, $p=.54$). High femininity subjects scored mean FOS of 1.36, 48.3% FOS-present; low femininity subjects scored 1.72, 55.9% FOS-present ($t=1.57$, $df=198$, $p=.12$; chi-square=1.13, $df=1$, $p=.29$).

Subjects high in the absolute degree of their own sex role identity - i.e. masculine males, feminine females and androgynous subjects - scored FOS of 1.51, 53.0%. Low own-sex-role-identity subjects (feminine males, masculine females and undifferentiated subjects) scored FOS of 1.68, 51.5% ($t=.71$, $df=198$, $p=.48$; chi-square=.04, $df=1$, $p=.84$). For cross sex role identity of subjects, the relation to FOS is possibly significant. High cross-sex-role-identified subjects (feminine males, masculine females, and all androgynous subjects) scored average FOS of 1.36, with 41.9% FOS-present imagery in their stories. Low cross-sex-role-identified subjects (masculine males, feminine females, and all undifferentiated subjects) scored mean FOS of 1.65, with 57.2% FOS-present imagery ($t=1.18$, $df=198$, $p=.24$, $df=1$, $p=.04$).

Of the eight comparisons listed above and in Table 11, only one is statistically significant: FOS is significantly lower in subjects who have a high degree of cross sex role identity, whether it is accompanied by a high degree of

own-sex-role identity (as in androgynous subjects) or not, only when FOS is scored using a dichotomous present/absent scoring system.

Interaction Effects

The next group of analyses are similar to those listed above, with the exception that, in addition to being broken down into sex role identity categories in the several ways suggested above, subjects are also grouped according to whether they have written stories about a male stimulus person (SP) or a female SP, and then whether the stimulus person was presented in the story cue as performing a sex-role-appropriate task (male SP at a masculine task, female SP at a feminine one) or a sex-role-inappropriate task (male SP at a feminine task, female SP at a masculine one).

For this set of analyses, data scored for presence or absence of FOS were analyzed using a logistic multiple regression procedure (Bishop, Feinberg, and Holland, 1975; Cox, 1970). These analyses require examination of a 3-way table, in which several categories of sex role identity are crossed with two levels of stimulus person (male or female) or two levels of task (own- or cross-sex- appropriate), and scored as one of two levels of FOS (present or absent). The analyses are not possible using a standard chi-square test of independence, but a logistic regression procedure makes a dichotomous variable (in this case, present/absent FOS)

analyzable in the same way as a continuous one. The procedure takes a logistic transform of the probability of the odds for binary data and does analysis of variance by the method of maximum likelihood on the transformed data. The analysis is comparable to a chi-square on a 2x2 table and allows generalization to multiple variables analogous to factorial ANOVA.

In the tables to follow, results are presented as percentages of FOS-present stories just as in Tables 1-11, with chi-square statistics and probabilities as above; the difference is that the statistics were created using a logistic regression procedure.

FOS for SRI Groups and Male/Female SP's

The first set of analyses represents the interaction between sex role identity, by the methods of categorization suggested above, gender of stimulus person in story cue, and FOS. The relation for Bem's categories of sex role identity and the other two variables are presented in Table 12.

The relation between these variables and the collapsed version of Bem's sex role identity grouping is presented in Table 13.

While it may be interesting to note that apparently masculine subjects project more FOS for female SP's and feminine subjects project more FOS for male SP's, the differences are not significant.

TABLE 12

BSRI, Sex of SF, and FOS

	Mean FOS (SD)		Mean FOS (SD)		% FOS	
	Male SP		Female SP		Male SP	Female SP
Near masc	1.40	(1.7)	2.04	(1.6)	58.8	65
Masc	1.47	(1.6)	2.01	(1.4)	35.7	66.7
Near fem	1.12	(1.9)	.96	(1.3)	38.9	55.6
Fem	2.57	(1.7)	1.63	(1.5)	84.6	58.8
Andr	.99	(1.5)	.96	(1.3)	41.2	20
Undif	1.63	(1.7)	1.56	(1.9)	57.1	40
		F=1.00	df=5		chi-sq=9.42	df=5
		p=.42			p>.10	

TABLE 13

Collapsed BSRI, Sex of SP, and FOS

	Mean FOS (SD)		Mean FOS (SD)		% FOS	
	Male SP		Female SP		Male SP	Female SP
Masc	1.44	(1.6)	2.02	(1.4)	48.4	65.9
Fem	1.73	(1.9)	1.40	(1.5)	58.1	57.7
Andr	.99	(1.5)	.96	(1.3)	41.2	20
Undif	1.63	(1.7)	1.56	(1.9)	57.1	40
		F=0.94	df=3		chi-sq=5.04	df=3
		p=.42			p>.10	

The relation between FOS, sex of SF, and BSRI as categorized according to own-sex-role identity (masculine males and feminine females) or cross-sex-identity (feminine males and masculine females), compared to each other and androgynous and undifferentiated S's is presented in Table 14.

TABLE 14

Own- and Cross-Sex Role Identity, Sex of SP, and FOS

	Mean FOS (SD)		Mean FOS (SD)		% FOS	
	Male SP		Female SP		Male SP	Female SP
Own SRI	1.48	(1.7)	1.84	(1.6)	54.2	64.8
Cross SRI	1.95	(1.9)	1.61	(1.0)	50	56.2
Andr	.99	(1.5)	.97	(1.3)	41.2	20
Undif	1.64	(1.7)	1.56	(1.9)	57.1	40
	F=0.45		df=3		chi-sq=4.06	
	p=.72				p>.20	

There is a slight tendency here for own-sex-identified subjects to project more FOS onto a female stimulus person and for cross-sex-identified subjects to project more onto a male SP, but these differences are not significant and conclusions about the existence of a relation should not be drawn.

Table 15 illustrates the relation between two measures of FOS for male and female SP and subjects' absolute level of masculinity, femininity, own sex role identity and cross sex role identity.

Again, there are some interesting tendencies which could be noticed, but no relationship is statistically significant, and no inferences can be drawn other than that the variables are not related.

TABLE 15
Other SRI Groupings, Sex of SP, and FOS

	Mean FOS (SD)		Mean FOS (SD)		% FOS	
	Male SP		Female SP		Male SP	Female SP
High masc	1.28	(1.6)	1.75	(1.5)	45.8	54.2
Low masc	1.69	(1.8)	1.46	(1.6)	57.7	51.2
	F=2.36 df=1		chi-sq=1.09 df=1			
	p=.13		p>.20			
High fem	1.47	(1.8)	1.24	(1.4)	52.1	43.9
Low fem	1.52	(1.6)	1.91	(1.6)	51.9	59.3
	F=1.79 df=1		chi-sq=1.20 df=1			
	p=.18		p>.20			
High own	1.35	(1.7)	1.65	(1.6)	50.3	55.1
Low own SRI	1.76	(1.8)	1.59	(1.5)	54.3	48.4
	F=.95 df=1		chi-sq=0.46 df=1			
	p=.33		p>.30			
High cross	1.42	(1.8)	1.30	(1.2)	45.2	38.7
Low cross	1.53	(1.7)	1.78	(1.6)	55.1	59.4
	F=.58 df=1		chi-sq=0.51 df=1			
	p=.45		p>.50			

FOS for SRI Groups and Sex Role of Cue Task

The next set of analyses present the relation of Fear of Success and various sex role identity groupings as they interact with the sex-role-appropriateness of the task presented in the story cue. FOS scores were compared for all the above-mentioned types of sex role identity groupings and for the differences between scores when the stimulus person in the cue is presented as performing a sex-role appropriate task (a male SP succeeding at a masculine task, a female SP succeeding at a feminine task) or a sex-role inappropriate

task (a male SP succeeding at a feminine task, a female SP succeeding at a masculine one).

Data for this analysis as performed on Sam's original six sex role identity groups and the collapsed version of these groups are presented in Tables 16 and 17.

TABLE 16					
BSRI, Sex Role of Task, and FOS					
	Mean FOS (SD)	Mean FOS (SD)	% FOS		
	Approp. Task	Non App.	Approp.	NonApp.	
Near masc	1.92 (1.6)	1.61 (1.7)	81.2	47.6	
Masc	1.99 (1.4)	1.62 (1.5)	55	55.6	
Near fem	1.48 (1.8)	.78 (1.5)	63.6	31.2	
Fem	2.24 (1.8)	1.77 (1.4)	70.6	69.2	
Andr	.97 (1.4)	.99 (1.4)	31.6	30.8	
Undif	1.50 (1.8)	1.70 (1.7)	41.2	57.9	
	F=0.32	df=5	chi-sq=7.16	df=5	
	p=.90		p>.10		

There is a slight effect observable for sex-role-appropriateness of task among sex-typed subjects, but for androgynous and undifferentiated subjects, there is no significant effect for this nor are there interaction effects which are significant.

Again, there is a slight but nonsignificant tendency for sex-typed (masculine and feminine) subjects to project more FOS onto stimulus persons performing sex-role-appropriate tasks, but the variables are not significantly related.

TABLE 17

Collapsed BSRI, Sex Role of Task, and FOS

	Mean FOS (SD)		% FOS	
	Approp. Task	Non App.	Approp.	NonApp.
Masc	1.96 (1.5)	1.62 (1.6)	66.7	51.3
Fem	1.94 (1.8)	1.23 (1.5)	67.9	48.3
Andr	.97 (1.4)	.99 (1.4)	31.6	30.8
Undif	1.50 (1.8)	1.70 (1.7)	41.2	57.9
	$F=0.71$	$df=3$	$chi-sq=3.80$	$df=3$
	$p=.55$		$p>.30$	

The relation between sex-role-appropriateness of task and FOS for subjects grouped as own sex-role-identified, cross sex-role-identified, androgynous, and undifferentiated is presented in Table 18.

TABLE 18

Own- and Cross-SRI, Sex Role of Task, and FOS

	Mean FOS (SD)		% FOS	
	Approp. Task	Non App.	Approp.	NonApp.
Own SRI	1.92 (1.7)	1.44 (1.6)	67.3	52.8
Cross SRI	2.04 (1.4)	1.50 (1.6)	66.7	40
Andr	.97 (1.4)	.99 (1.4)	31.6	30.8
Undif	1.50 (1.8)	1.70 (1.7)	41.2	57.9
	$F=0.56$	$df=3$	$chi-sq=3.90$	$df=3$
	$p=.65$		$p>.20$	

As above, sex-typed subjects appear to project more FOS onto SP's performing own-sex-appropriate tasks than SP's performing cross-sex-appropriate tasks, but the relationship is not significant nor are there any significant interaction effects.

The final set of analyses is that examining the relation of the sex role of the task assigned to stimulus persons in story cues and sex role identity grouped according to high and low degrees of masculinity, femininity, own-sex-role identity, and cross-sex-role identity. These data are presented in Table 19.

Once again, it can be seen that there is in all groups a slight tendency for subjects to project more FOS onto stimulus persons performing own-sex-appropriate tasks, but there are no significant main or interaction effects.

TABLE 19

Other SRI Groupings, Sex Role of Task, and FOS

	Mean FOS (SD) Approp.Task	Mean FOS (SD) Non App.	% FOS Approp. NonApp.	
High masc	1.62 (1.5)	1.46 (1.6)	54.5	46.2
Low masc	1.77 (1.8)	1.41 (1.6)	57.8	52.1
	F=0.19 p=.66	df=1	chi-sq=0.04 p>.80	df=1
High fem	1.55 (1.7)	1.15 (1.5)	53.2	42.9
Low fem	1.81 (1.6)	1.64 (1.6)	56.5	53.4
	F=0.25 p=.61	df=1	chi-sq=0.13 p>.70	df=1
High own	1.66 (1.7)	1.35 (1.6)	57.4	48.5
Low own SRI	1.75 (1.6)	1.61 (1.6)	53.1	50
	F=0.12 p=.73	df=1	chi-sq=0.15 p=.70	df=1
High cross	1.44 (1.5)	1.26 (1.5)	47.1	35.7
Low cross	1.81 (1.7)	1.51 (1.6)	60.6	54.2
	F=0.07 p=.80	df=1	chi-sq=0.11 p>.70	df=1

DISCUSSION

The results of tests of the relation between FOS and other variables seem to paint a more and more enigmatic picture of Fear of Success. The current study shows FOS to be unrelated to such demographic variables as sex of subject, ability (as measured by self-reported SAT scores), ordinal position in the family, educational aspirations, relative educational and occupational aspirations as compared to achievements of same-sex parent, sex-role-appropriateness of parental achievements, or subjects' major in school. This would seem to indicate that FOS is not a motive which is internally generated and related to various aspects of an individual's environment and development.

FOS is not here related to such aspects of testing as sex of stimulus person or sex-role-appropriateness of task presented in the cue. This is perhaps the most surprising finding, since much previous research has shown FOS to be greater for female stimulus persons than for male and because the sex-role-appropriateness of the SP's task has frequently been relevant in the FOS research, for a female SP at least. It may be that subjects are developing (or not developing) FOS differently in 1982 or that the subject population in a small private college outside an urban area

is a different population from those tested previously. In any case, FOS does not seem here to be projected differentially for male and female stimulus persons or for S2's succeeding at own- or cross-sex-appropriate tasks.

FOS and sex role identity results

The relation of FOS to sex role identity is puzzling, here as in previous research. While absolute degrees of masculinity, femininity, and own-sex role identity can be ruled out as distinguishing fearers of success from nonrearsers, other categorization systems yield equivocal results. Two comparisons yield significant differences (at the $p=.05$ level) in present/absent FOS scores among sex role identity groups: the expanded Bem categorization system ($p=.04$) and the own- vs. cross-sex role identity grouping ($p=.04$), when androgynous and undifferentiated subjects are left in the comparison. Examination of the percentages of FOS-present imagery in the expanded Bem categorization system reveals that androgynous subjects are significantly lower in FOS than subjects who are categorized as masculine ($\chi^2=6.00$, $df=1$, $p<.02$), near masculine ($\chi^2=7.20$, $df=1$, $p<.01$), feminine ($\chi^2=9.5$, $df=1$, $p<.01$), near feminine ($\chi^2=6.5$, $df=1$, $p<.02$), or undifferentiated ($\chi^2=5.8$, $df=1$, $p<.05$). That is, androgynous subjects have lower FOS than any other group.

The other five groups are not significantly different from each other except that the feminine subjects tell more FOS-present stories than masculine ($\chi^2=3.9$, $df=1$, $p<.05$), or near masculine ($\chi^2=5.1$, $df=1$, $p<.05$), or near feminine ($\chi^2=4.4$, $df=1$, $p<.05$). While the feminine group has significantly higher FOS than either masculine group, the near feminine group does not, and the near feminine group is significantly different from the feminine group itself. This implies that the near feminine group does not closely enough resemble the feminine group for the two to be combined, and this may be the reason that the testing of combined BSRI groups does not yield significant differences among groups: the near feminine group may be diluting the scores of the feminine group so that the combined set resembles masculine and near masculine subjects, more closely than the feminine group would alone. There is also a suggestion in this finding which supports Bem's contention that the scales should be seen as useful primarily for categorizing subjects rather than as continuous measures. There seems to be a minimum amount of femininity required to make subjects behave as feminine rather than the way masculine or near masculine subjects behave; this minimum amount does not seem to be present in near feminine subjects, who apparently behave more like masculine and near masculine subjects than like feminine.

Another way of conceptualizing this finding is to notice that the pure feminine group has the highest FOS and the androgynous group has the lowest. Apparently, a high amount of unmitigated femininity leads to high FOS imagery, while if the femininity is not present (as in masculine and undifferentiated subjects) or if the femininity is tempered by an almost equal amount of masculinity (as in near masculine and near feminine S's), then the amount of FOS imagery projected drops. If the femininity is balanced by an equal degree of masculinity (as for androgynous subjects), the FOS imagery produced is lowest of all.

Examination of the significant differences in FOS imagery found using the own- vs. cross-sex-role BSRI grouping system reveals that the effects are produced exclusively by the significantly lower FOS scores of androgynous subjects. Own- and cross-sex identified subjects do not differ from each other ($\chi^2=2.1$, $df=1$, $p>.10$) or from undifferentiated subjects ($\chi^2=0$, $df=1$, $p>.99$). Androgynous subjects' FOS-present stories are significantly fewer than own-sex-role identified ($\chi^2=7.9$, $df=1$, $p<.01$), cross-sex-role identified ($\chi^2=5.8$, $df=1$, $p<.02$), and undifferentiated ($\chi^2=5.8$, $df=1$, $p<.02$).

The primary finding, then, is that androgynous subjects tell stories containing FOS-present imagery less often than any other sex role identity group. This supports Bem's (1974) contention that androgynous people are more adaptive

than other types of individuals; here, they permit success to hypothetical stimulus persons and, presumably, strive more unambivalently for their own success. A tentative explanation for the findings is that unmitigated femininity is least adaptive (here, it leads to the highest number of FOS-present stories), that any amount of masculinity present in the sex role identity is more adaptive, that a balanced and high amount of both masculinity and femininity is most accepting of success. The method of categorization using the BSRI, however, remains in question.

One other relationship between FOS and BSRI showed significant results: absolute degree of cross-sex-role identity endorsed by subjects was related to FOS using the present/absent scoring system ($p=.04$). Subjects with a high endorsement of cross-sex-role identified traits (males with a high degree of feminine traits and females with a high degree of masculine traits), regardless of whether those were accompanied by a high degree of own-sex-role traits (as in androgynous subjects), told significantly fewer FOS-present stories than subjects with low endorsement of cross-sex-role-identified traits. This would seem to lend additional support to the hypothesis that FOS is related to SRI, but for reasons converse to those stated in the introduction to this paper. Subjects who have incorporated a number of cross-sex-identified traits in their own identity seem to be more able to permit success to a hypotheti-

cal other. Rather than a high degree of own-sex role identity lending sex-role security, as hypothesized in the introduction, it seems that a high degree of cross-sex role identity does.

It could be that the differences are due to the androgynous subjects who are included in the high cross-sex-role group, who have been shown above to have significantly lower FDS scores. Or it could be that the differences are due to androgyny in another way. It may be that masculinity and femininity are not equivalent in male and female subjects; male subjects who are masculine are endorsing a stereotypical socially appropriate role, while females who are masculine are endorsing a socially unexpected role. Perhaps females develop some degree of femininity regardless of how much masculinity they endorse, and so so-called masculine females are actually somewhat androgynous females, certainly more androgynous than masculine males, who may have developed minute amounts of femininity if any, since this would not be societally encouraged. Similarly for males: feminine males may have a greater degree of socially expected masculinity than feminine females and thus are somewhat androgynous, even if their femininity scores are significantly higher than their masculinity scores. Thus, cross-sex-role identified subjects may actually have a larger amount of mitigating own-sex-role identity than own-sex-role identified have of cross-sex-role identity. The entire cross-sex-

role identified group may be behaving somewhat like androgynous subjects, and producing lower FOS scores than the own-sex- role identified group.

FOS scoring systems

The finding that FOS is in some way related to BSRI is encouraging, but it must be tempered by the knowledge that the only method of testing which reveals significant differences in levels of FOS among sex role identity groups is the dichotomous present/absent technique. The numerical system, for all its computational convenience, does not seem to be as sensitive a scoring system. It may be that the limited range of scores, from -2 to +10 (in this data, only from -2 to +7), is not broad enough to permit identification of intergroup differences, particularly when the scores must be corrected for story length. A long story can receive only a low FOS score, regardless of the amount of FOS imagery included. Consider, for example, a 537-word story containing a long list of success-fearing images:

...the elated feeling doesn't last forever; soon she realizes that she's got a lot of work to do to keep up her success...she throws the books on the bed and...says "what the hell, man? Who needs this shit?"...[she] walks to the zoo...she ignores those library books on her bed and socializes a lot, but the distant future is no fun because she has to... go to work and it cramps her style...she never becomes a teacher because...she would rather bum around Europe.

This story, corrected for length, receives approximately the same FOS score as the 13-word story

Steven's confidence was greatly boosted and his abilities were greatly enhanced by this.

and a lower score than a 68-word story about Nancy who

...is also the best looking [in the class]. She soon finds a boy friend...they live together the rest of their graduate school years and once they are settled and get jobs they get married and live happily ever after.

There can be no intuitive doubt that the imagery in the long story represents high FOS on the part of the subject writing the story, but the numerical score assigned must be adjusted for the extreme length of the story, and it is then included among the lower scoring stories. In a dichotomous system, this can be included in the FOS-present group, while the second story would be considered FOS-absent.

There is still a third type of scoring system which is mentioned in Horner's research but largely ignored. Many subjects write what Horner calls bizarre stories, which include themes of violence or strangeness or denial of the story cue. Horner (1970, 1972, 1974(b), Note 1) reports deaths due to car accidents, announcements that the female student was an imaginary conglomerate of male students who made up a student ID number and took exams for "Anne", and implications that the stimulus person was in the top 10% of her class or at the top of a nursing school rather than a

medical school class. Here, there are bizarre themes such as

...he fails all his courses and becomes a cripple in a wheel chair from an automobile accident

...Steven got run over by a pizza delivery truck...

...she becomes exposed to radioactive isotopes... is dying of radiation poisoning...hurls herself off the Empire State Building. Unfortunately, she lives and is forced to live out her life as a human vegetable... one day her mom pulls the plug.

he invents a bomb and destroys the world.

Themes of denial occur when subjects talk about "selling O.J. on the beach" or interest in "natural eating and nutrition...Western philosophies and... acupuncture" rather than even mentioning graduate school or a career future. These stories also discuss SP's who drop down or fail in the next semester or who change their field to become a philosopher, travelling minstrel, or "hit man for the Mafia."

A comparison of this scoring system (presence or absence of bizarre themes) with other systems shows that it is not related to the numerical system ($F=1.88$, $df=2$, $p=.16$) but is related to the present/absent system ($\chi^2=17.97$, $df=2$, $p=.0001$). When other variables are compared for the degree of bizarre themes present in FOS, there are no significant relations (as is also true for other scoring systems) for sex of stimulus person, sex-role-appropriateness of task, BSRI, expanded or collapsed, own sex role

identity, or absolute degree of masculine, femininity, own- or cross-sex role identity. There is, however, a difference for sex of subject. Table 20 shows that males write bizarre and denial themes more often than females ($\chi^2=9.04$, $df=2$, $p=.01$).

TABLE 20			
Relation of Bizarre Theme FOS to Sex of Subject			
	bizarre	denial	none
Male S	19	20	61
Female S	8	12	60
		$p=.01$	

The stories written are for both male and female stimulus persons equally and for both own- and cross-sex-role appropriate tasks.

High FOS stories under the present/absent or the numerical scoring systems include themes such as the following.

...it was perhaps a fluke that she was the best in her class the first semester, since her grades the next semester aren't that good...

...he will be a well educated welfare recipient

...she then quits her job in order to raise her family...

...she knew she was destined for the life of a housewife...

...since the year he dropped out he has never been happier.

These are clearly stories which question the value or possibility of success. There are also stories which question success with more unusual themes.

...she received the job. She was very happy about it, almost crazy with excitement... Nancy was arrested and arraigned [sic] two years later for child molesting.

...Steven is really John and John is really May, well he will be after his trip to the Johns-Hopkins Institute next spring.

...though she had high grades she didn't know about guys with high heels.

...she becomes a full-fledged pill popper... a total wreck...becomes a prostitute to pay the rent...

...she gets cancer and dies.

...he soon becomes an alcoholic and...when he receives the Nobel Prize he belches and slobbers all over the King of Sweden.

Some of these are scored high in FOS by the traditional systems and some are not. It would seem, however, that they are qualitatively different from the more conservative themes described above and thus are created by different types of subjects. This has yet to be tested.

Summary

In sum, FOS remains an enigma. It is not here related to any of the demographic variables hypothesized to have some relation.

It is related in some way to sex role identity, but in exactly what way is not clear. A high degree of feminine

identity in a subject seems to be associated with a great deal of FOS when it is not mitigated by some degree of masculinity; people with a high endorsement of traits stereotypically associated with the opposite sex seem to have less FOS than people who do not endorse those traits themselves; androgynous subjects seem to have less FOS than all other groups.

All of the above, however, is only true when the dichotomous present/absent system of FOS scoring is used. The numerical system, while computationally convenient, does not prove sensitive in identifying differences between groups. This may be because the range of numerical scores is too narrow and because the correction for story length tends to dilute the degree of FOS in long stories so that the range is narrowed even further. The scoring of bizarre themes and denial of the success assigned in the story cue may play a more important part in the motive to avoid success than has been assumed; this variable should be examined more carefully.

The concept of FOS, then, remains unexplained here but of continuing interest. It is intuitively obvious that there is a difference between a person who writes about a successful graduate student as:

...he applies himself and finally becomes an excellent elementary school teacher.

...she is really happy with her job!

[Steven]...will take a job in his field after graduating and will due [sic] well in that as well.

...his life will be happy and he'll get what he wants.

and one who writes:

...she may be another Farrah Fawcett but this is unlikely. She...may become frustrated and end up going insane.

This immediately goes to his head...because of his bragging no girls even want to be seen with him...he is now messy and fat...you can find him in [a] gutter on the Bowery.

...because of his stuck up attitude he loses all his friends...

...soon he is so conceited people start to hate him...what Steven is left with in the end is the best grades in his physics class and all alone.

...will graduate highest in class and be the worst teacher from that school ever to come out.

...she's not as happy as she thought she'd be...

...[she] yearn[s] for something 'sweeter'

...his grades will go down but he will be happier...

...life seems pretty bleak...

The second group seems clearly to have different views about success in life than the first group, and seems therefore to have a different psychological make-up, with different developmental environment. As we currently examine the field, however, there are no reliably observable differences in demographics or identity features of the groups.

How can those who view success for males and females at own- and cross-sex appropriate tasks as unequivocally beneficial be identical to those who fear it, dread it, dislike it enough to kill successors off or doom them to lives maimed, depressed, lonely and drug-addicted rather than permit them to enjoy their success? Shouldn't these two groups have some important features of their development which distinguish them? Haven't they acquired different views of authorities, peers, and themselves? Don't they perceive their roles in the world and the way they compare to those around them differently? Mustn't they have different conceptions of their own social appropriateness and the social appropriateness of those around them?

It seems impossible that examination of these questions should yield the answer that success-fearers and nonfearers are identical in all features; it is more probable that we haven't yet found the successful examination technique.

Appendix A

APPENDIX I. SAMPLE QUESTIONNAIRE

Please answer the following questions:

Age: _____ Sex: M F Year in school: _____ Major: _____ 97

Total combined SAT scores: Less than 700 700-900 900-1100 1100-1300 Above 1300

Ethnicity: Black Caucasian Hispanic Other (_____)

Marital status: single married widowed separated/divorced

Do you live: in dorm with family with friends alone

Are you: oldest child in your family youngest only child none of these

What is the occupation of your: self _____ full or part time? _____
 father _____ full or part time? _____
 mother _____ full or part time? _____

What is your occupational goal for yourself? _____ full or part time? _____

What is the highest level of education achieved by your: self _____
 father _____
 mother _____

What is your educational goal for yourself? _____

On the following page, you will be shown a large number of personality characteristics. Please use those characteristics in order to describe yourself. That is, please indicate, on a scale from 1 to 7, how true of you these characteristics are. Please do not leave any characteristics unmarked.

Example: sly

- Mark a 1 if it is NEVER OR ALMOST NEVER TRUE that you are sly.
- Mark a 2 if it is USUALLY NOT TRUE that you are sly.
- Mark a 3 if it is SOMETIMES BUT INFREQUENTLY TRUE that you are sly.
- Mark a 4 if it is OCCASIONALLY TRUE that you are sly.
- Mark a 5 if it is OFTEN TRUE that you are sly.
- Mark a 6 if it is USUALLY TRUE that you are sly.
- Mark a 7 if it is ALWAYS OR ALMOST ALWAYS TRUE that you are sly.

Thus, if you feel it is sometimes but infrequently true that you are "sly," never or almost never true that you are "malicious," always or almost always true that you are "irresponsible," and often true that you are "carefree," then you would rate these characteristics as follows:

Sly	3	Irresponsible	1
Malicious	1	Carefree	5

DESCRIBE YOURSELF

1 2 3 4 5 6 7
 NEVER OR USUALLY SOMETIMES BUT OCCASIONALLY OFTEN USUALLY ALWAYS OR
 ALMOST NEVER NOT INFREQUENTLY TRUE TRUE TRUE ALWAYS OF
 TRUE TRUE TRUE TRUE TRUE ALWAYS TRUE

Self reliant	
Yielding	
Helpful	
Defends own beliefs	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

The following is the beginning of a story about a hypothetical character named Nancy.

Please complete the story. Describe Nancy - what she looks like, acts like, thinks like, and wants.

Make up an ending for the story, telling what happens to Nancy in the immediate future and the distant future.

At the end of the first semester in graduate school in which Nancy is studying to become a physicist, she finds that she has the best grades in the class.

The following is the beginning of a story about a hypothetical character named Nancy.

Please complete the story. Describe Nancy - what she looks like, acts like, thinks like, and wants.

Make up an ending for the story, telling what happens to Nancy in the immediate future and the distant future.

At the end of the first semester in graduate school in which Nancy is studying to become an elementary school teacher, she finds that she has the best grades in the class.

The following is the beginning of a story about a hypothetical character named Steven.

Please complete the story. Describe Steven - what he looks like, acts like, thinks like, and wants.

Make up an ending for the story, telling what happens to Steven in the immediate future and the distant future.

At the end of the first semester in graduate school in which Steven is studying to become a physicist, he finds that he has the best grades in the class.

REFERENCE NOTES

1. Horner, M.S. Sex differences in achievement motivation and performance in competitive and noncompetitive situations (Doctoral dissertation, University of Michigan, 1968). Dissertation Abstracts International, 1969, 30, 407B. (University Microfilms No. 69-12, 135.)
2. Horner, M.S. The motive to avoid success and changing aspirations of college women. Women on campus: 1970, A symposium. Center for continuing education of women, Ann Arbor, Mich., 12-23.
3. Horner, M.S. and Fleming, J. Revised scoring manual for an empirically derived scoring system for the motive to avoid success. Unpublished manuscript, 1977. (Available from the second author, 392 Central Park West, Apt 14-C, New York, New York 10025.)
4. Horner, M.S., Tresemer, D.W., Berens, A.E., and Watson, I., Jr. Scoring manual for an empirically derived scoring system for the motive to avoid success. Paper presented at the annual meeting of the American Psychological Association, Montreal, 1973.
5. Fleming, J., Beliner, J., and Esposito, R.P., On the projective measurement of Fear of Success. Unpublished manuscript, 1981. (Available from the first author, 392 Central Park West, Apt 14-C, New York, New York 10025.)
6. Jordan, J. The relationship of sex-role orientation to competitive and noncompetitive behaviors. Unpublished doctoral dissertation, Harvard University, 1973.
7. Peplau, L.A. The impact of fear of success, sex-role attitudes, and opposite-sex relationships on women's intellectual performance: an experimental study of competition in dating couples. Unpublished doctoral dissertation, Harvard University, 1973.
8. Robbins, R.B. Achievement performance and fantasy arousal in college women as a function of the motive to avoid success, problem format, and relationship to experimenter (Doctoral dissertation, Temple University, 1973). Dissertation Abstracts International, 1973, 34, 2950B. (University Microfilms No. 73-30, 172)

9. Turner, M.E. Sex role attitudes and fear of success in relation to achievement behavior in women. (Doctoral dissertation, Fordham University, 1974). Dissertation Abstracts International, 1974, 35, 24513-24523. (University Microfilms No. 74-25, 086)
10. Krishnan, A. Achievement motivation correlates: Sex differences in high school seniors. Paper presented at meeting of the American Psychological Association, September, 1979.
11. Paludi, M.A. Fail: Fear of success. Paper presented at seventh annual conference of the Association for Women in Psychology, Los Angeles, March, 1980.
12. Bem, S.L. Psychology looks at sex roles: Where have all the androgynous people gone? Paper presented at UCLA Symposium on Women, May, 1972.
13. Bem, S.L. Beyond androgyny: Some presumptuous prescriptions for a liberated sexual identity. Keynote address for APA-NIMH Conference on The Research Needs of Women, Madison, Wisconsin, May, 1975.
14. Allgeier, E.R., Przybyla, D.P.J., and Ruth, R., The relationship of androgyny to several indices of psychological functioning. Paper presented at the American Psychological Association convention, New York City, September, 1979.
15. Watson, R.I., Jr. Motivational and sex differences in aggressive behavior. Unpublished doctoral dissertation, Harvard University, 1974.
16. Wetter, R.E. Levels of self-esteem associated with four sex role categories. In R.Bednar (Chair), Sex roles: Masculine, feminine, androgynous or none of the above? Symposium presented at the meeting of the American Psychological Association, Chicago, August, 1975.
17. Woods, M.M. The relation of sex role categories to autobiographical factors. In R.Bednar (Chair), Sex roles: Masculine, feminine, androgynous or none of the above? Symposium presented at the meeting of the American Psychological Association, Chicago, August, 1975.
18. Baruch, G.K. The motive to avoid success and career aspirations of fifth and tenth grade girls. Paper presented at meeting of the American Psychological Association, Montreal, August, 1973.

19. Stericker, A. Fear-of-success in male and female college students: sex-role identification and self-esteem as factors. Unpublished doctoral dissertation, Loyola University of Chicago, 1975.
20. Jenkins, S.R. And what do you mean by success? Fear of success and personal success goals. Paper presented at the meeting of the Eastern Psychological Association, Philadelphia, 1979.
21. Jenkins, S.R. Fear of success, sex roles, and personal success goals. Paper presented at the meeting of the American Psychological Association, New York City, 1979.
22. Parker, V.J. Fear of success, sex-role orientation of the task, and competition condition as variables affecting women's performance in achievement-oriented situations. (Doctoral dissertation, Ohio University, 1971). Dissertation Abstracts International, 1972, 32, 5495B. (University Microfilms No. 72-9593)
23. Lifschits, S. The interface of sex-role and occupational stereotypes. Paper presented at meeting of the American Psychological Association, Montreal, September, 1980.
24. Montemayor, R. Children's performance on and attraction to an activity as a function of masculine, feminine or neutral labels and sex role preference. Paper presented at the annual meeting of the Eastern Psychological Association, Boston, April, 1972.
25. Boogs, K.R. and Pappas, J.P. Psychosocial variables influencing women's choices of traditional vs. nontraditional careers. Paper presented at meeting of the American Psychological Association, New York City, 1979.
26. Zuckerman, M., Allison, S.N., and Marion, S.P. The effects of the motive to avoid success on performance and attribution of success and failure. Unpublished manuscript, University of Rochester, New York, 1974.
27. Beláner, J. Fear of success in college women and its relation to performance in achievement situations. (Ph.D. dissertation, New York University, 1976). Dissertation Abstracts International, 1976, 37 (University Microfilms No. 76-19,001)
28. Gross, H.J. and Dettterbeck, J.A. Adjustment and achievement as a function of the motive to avoid success in college women. Paper presented at the annual meeting of the Western Psychological Association, 1972.

29. Major, B.N. and Sherman, R.C. The competitive woman: Fear of success, attractiveness, and competitor sex. Paper presented at the annual meeting of the American Psychological Association, 1975.
30. Tresemer, D. Success avoidance and gender role (Doctoral dissertation, Harvard University, 1974). Dissertation Abstracts International, 1975, 35, 42638. (University Microfilms No. 75-4933)
31. Gearty, J.Z. and Milner, J.S. The motive to avoid success in women. Paper presented at the annual meeting of the Southeastern Psychological Association, Hollywood, Florida, 1974.
32. Bem, S.L. and Watson, C. Scoring packet: Bem Sex-Role Inventory. Unpublished manuscript, 1976. Available from the first author.
33. Cohen, N. Explorations in the fear of success. Unpublished doctoral dissertation, Columbia University, 1974.
34. Garner, K., Gumpert, P. and Canavan-Gumpert, D. The neurotic fear of success: Psychodynamic and social psychological perspectives. Paper presented at the 86th annual convention of the American Psychological Association, Toronto, August, 1978.
35. Pappo, M. Fear of success: a theoretical analysis and the construction and validation of a measuring instrument. (Doctoral dissertation, Columbia University, 1972). (University Microfilms No. 262-161)
36. Sedney, M.A. Femininity, masculinity, and androgyny: Students' translations of psychological constructs into daily behaviors. Paper presented at meeting of the Association for Women in Psychology, Santa Monica, California, March, 1980.
37. Johnson, S.J. and Black, K.N. A comparison of two factor analyses of the Bem Sex Role Inventory. Paper presented at meeting of the American Psychological Association, Toronto, 1978.
38. Powell, G.N. Factor analysis of the BSRI revisited: A comprehensive study. Paper presented at meeting of the American Psychological Association, New York, September, 1979.
39. Meyers, A.M. and Sugar, J. A critical analysis of scoring the BSRI: Implications for conceptualization. Paper presented at meeting of the American Psychological Association, Toronto, August, 1978.

REFERENCES

- Alper, T. G., The relationship between role orientation and achievement motivation in college women. Journal of Personality, 1973 41, 9-31.
- Alper, T. G., Achievement motivation in college women: a now-you-see-it-now-you-don't phenomenon. American Psychologist, 1974, 29, 194-203.
- Altus, W. D., The first born as a conservative: Adler revisited. American Psychologist, 1966, 18, 356.
- Anastasi, A. Differential psychology: Individual and group differences in behavior. (3rd ed.) New York: The Macmillan Company, 1958.
- Anderson, R., Motive to avoid success: A profile. Sex Roles: A Journal of Research, 1978, 4 (2), 239-248.
- Antill, J.K. and Cunningham, J.D., The relation of masculinity, femininity, and androgyny to self-esteem. Australian Journal of Psychology, 1980, 32(3), 195-207.
- Antill, J.K. and Cunningham, J.D. Self-esteem as a function of masculinity in both sexes. Journal of Consulting and Clinical Psychology, 1979, 42(4), 783-785.
- Antill, J.K. and Russell, G., A preliminary comparison between two forms of the Bem Sex Role Inventory. Australian Psychologist, 1980, 15(3), 427-435.
- Apqar, V. A., A proposal for a new method of evaluation of the newborn infant. Current Researches in Anesthesia and Analgesia. 1953, 32, 260-267.
- Apperly, F. L., A study of American Rhodes scholars. Journal of Heredity, 1939, 30, 493-495.
- Atkinson, J. W. (ed.) Motives in fantasy, action, and society. Princeton, N.J.: Van Nostrand, 1958.
- Atkinson, J. W. The mainsprings of achievement-oriented activity, in Atkinson, J. W. and Raynor, J. O., Motivation and achievement, Washington, D.C.: V.H.Winston and Sons, 1974., 13-41.

- Atkinson, J.W., Bastian, J.R., Earl, R.W., and Litwin, G.H. The achievement motive, goal setting, and probability preferences. Journal of Abnormal and Social Psychology, 1950, 60, 27-36.
- Atkinson, J. W. and Birch, D., Introduction to Motivation, (2nd ed), New York: D. Van Nostrand Co, 1978.
- Atkinson, J. W. and Feather, N. T. (eds), A theory of Achievement Motivation, New York: Wiley and Sons, 1965.
- Atkinson, J. W. and Litwin, G. H. Achievement motivation and test anxiety conceived as motive to approach success and motive to avoid failure. Journal of Abnormal and Social Psychology, 1960, 60, 50-63.
- Atkinson, J. W. and Raynor, J. O., Motivation and achievement, Washington, D.C.: V.H.Winston and Sons, 1974.
- Baefsky, P. M. and Berger, S. E., Self-sacrifice cooperation and aggression in women of varying sex-role orientations. Personality and Social Psychology Bulletin, 1974, 1, (1), 296-298.
- Bakan, D. The quality of human existence. Chicago: Rand McNally, 1966.
- Bardwick, J. M. and Douvan, E., Ambivalence: the socialization of women, in Gornick, V. and Moran, B. K. (eds), Women in sexist society, New York: Basic Books, 1971, 147-159.
- Bayley, N. Mental growth during the first 3 years: a developmental study of 61 children by repeated tests. Genetic Psychology Monograph, 1933, 14, 1-92.
- Bayley, N., Studies in the development of young children. Berkeley: University of California Press, 1940.
- Bayley, N., Comparisons of mental and motor test scores for ages 1-15 months by sex, birth order, race, geographical location, and education of parents. Child Development, 1965, 36, 379-411.
- Bem, S.L., The measurement of psychological androgyny. Journal of Consulting and Clinical Psychology, 1974, 42(2), 155-162.
- Bem, S. L. On the Utility of alternative procedures for assessing psychological androgyny. Journal of Consulting and Clinical Psychology, 1977, 45(2), 196-205.

- Bem, S. L. and Bem, D. J., Case study of a non-conscious ideology: Training the woman to know her place. in Bem, D. J. (ed), Beliefs, attitudes, and human affairs, Belmont, Ca.: Brooks/Cole, 1970.
- Bem, S.L., and Lenney, E. Sex typing and the avoidance of cross-sex behavior. Journal of Personality and Social Psychology, 1976, 33, 48-54.
- Bem, S.L., Martyna, W. and Watson, . Sex typing and androgyny: Further explorations of the expressive domain. Journal of Personality and Social Psychology, 1976, 34, 1016-1023.
- Bernard, J., Prediction from human fetal measures. Child Development, 1964, 35, 1243-1248.
- Serzins, J.I., Welling, M.A., and Wetter, R.E., A new measure of psychological androgyny based on the Personality Research Form. Journal of Consulting and Clinical Psychology, 1978, 46(1), 126-138.
- Birdwhistell, R. L., Kinesics and context: Essays on body motion communication. Philadelphia: University of Pennsylvania Press, 1970.
- Bishop, Y.M.M., Feinberg, S.E., and Holland, P.W., Discrete multivariate analysis. Cambridge, Ma: MIT Press, 1975.
- Block, J. H., Conceptions of sex-role: some cross-cultural and longitudinal perspectives. American Psychologist, 1973, 6, 512-526.
- Breedlove, C. J. and Cicirelli, V. G., Women's fear of success in relation to personal characteristics and type of occupation. Journal of Psychology, 1974, 86, 181-190.
- Bremer, I.H., and Wittig, M.A., Fear of success: a personality trait or a response to occupational deviance and role overload? Sex Roles, 1980, 6(1), 27-46.
- Bright, M.V., Factors related to the traditionality or innovativeness of career choices in black college women. Unpublished master's thesis, Howard University, 1970. Cited in Mednick, M.I.S., Motivational and personality factors related to career goal of black college women (91-09-70-35). Springfield, Va.: Manpower Administration, U.S. Dept. of Labor, 1973 (NTIS No. PB 218-969)
- Broverman, I. K., Vogel, R. S., Broverman, D. M., Clarkson, F. E., and Rosenkrantz, P. S., Sex role stereotypes: a current appraisal. Journal of Social Issues, 1972, 28, 59-78.

- Brown, M., Jennings, J., and Vanik, V. The motive to avoid success: a further examination. Journal of Research in Personality, 1974, 8, 172-176.
- Caballero, C.M., Giles, P. and Shaver, P. Sex-role traditionalism and fear of success. Sex Roles, 1975, 1, 319-326.
- Cherry, F. and Deaux, K., Fear of success versus fear of gender-inappropriate behavior, Sex Roles: A Journal of Research, 1978, 4 (1), 97-101.
- Constantinople, A. Masculinity-femininity: An exception to a famous dictum? Psychological Bulletin, 1973, 80, 389-407.
- Costrich, N., Feinstein, J., Kidder, L., Maracek, J., and Pascale, L. When Stereotypes hurt: Three studies of penalties for sex-role reversals. Journal of Experimental Social Psychology, 1975, 11, 520-530.
- Cox, D.R., The analysis of binary data. London: Methuen Press, 1970.
- Crealock, C., Sex, vocational stereotype and fear of success in faculty of education students. Ontario Psychologist, 1978, 10(1), 15-19.
- Cronbach, L.J. and Furby, L. How should we measure "change" - Or should we? Psychological Bulletin, 1970, 74, 68-80.
- Cunningham, J.D. and Antill, J.K., A comparison among five masculinity-femininity-androgyny instruments and two methods of scoring androgyny. Australian Psychologist, 1980, 15(3), 437-448.
- Curtis, R.C., Zanna, M.P., and Campbell, W.W.Jr. Sex, fear of success, and the perceptions and performance of law school students. American Educational Research Journal, 1975, 12(3), 287-297.
- Dalsimer, K., Fear of academic success in adolescent girls. Journal of the American Academy of Child Psychiatry, 1975, 14, (4), 719-730.
- Deaux, K. and Emswiller, T., Explanations of successful performance on sex-linked tasks: what is skill for the male is luck for the female. Journal of Personality and Social Psychology, 1974, 29, (1), 80-85.
- Deaux, K., White, L. and Farris, E., Skill is luck: Field and laboratory studies of male and female preferences. Journal of Personality and Social Psychology, 1975, 32, (4), 629-636.

- deCharms, R. and Dave, P.N. Hope of success, fear of failure, subjective probability, and risk-taking behavior. Journal of Personality and Social Psychology, 1965, 1(6), 558-568.
- Depner, C.S. and O'Leary, V.Z. Understanding female careerism: Fear of success and new directions. Sex Roles, 1976, 2(3), 259-268.
- Entwistle, D., To dispel fantasies about fantasy-based measures of achievement motivation. Psychology Bulletin, 1972, 77, 377-391.
- Entwistle, D.R. and Greenberger, E. Adolescent's views of women's work roles. American Journal of Orthopsychiatry, 1972, 32, 648-656.
- Epstein, C. F., Bring women in: Rewards, punishments and the structure of achievement, in Kundsir, R. B., Women and success: the anatomy of achievement, New York: Wm Morrow and Co, 1974, 13-21.
- Erikson, E., Inner and outer space: Reflections on womanhood. in R.J. Lifton (Ed.), The woman in America. New York: Houghton Mifflin, 1964.
- Esposito, R. R., The relationship between the motive to avoid success and vocational choice. Journal of Vocational Behavior, 1977, 10, 347-357.
- Feather, N. T. and Raphaelson, A. C., Fear of success in Australian and American student groups: Motive or sex-role stereotypes? Journal of Personality, 1974, 42, 190-201.
- Feather, N. T. and Simon, J. G., Fear of success and causal attribution for outcome. Journal of Personality, 1973, 41, 525-542.
- Feather, N.T. and Simon, J.G. Reactions to male and female success and failure in sex-linked occupations: impressions of personality, causal attributions, and perceived likelihood of different consequences. Journal of Personality and Social Psychology, 1975, 31, 20-31.
- Feldman-Summers, E. and Kiesler, S.B. Those who are number two try harder: the effect of sex on attributions of causality. Journal of Personality and Social Psychology, 1974, 30, 846-855.

- Field, W. F., The effects on thematic apperception of certain experimentally aroused needs, in McClelland, D., Atkinson, J. W., Clark, R. A., and Lowell, E. L. (eds), The Achievement Motive, New York: Appleton, Century-Crofts, 1953.
- Fleming, J., On "Do women fear success?" Letter replying to David Tresemer, Signs: Journal of Women in Culture and Society, 1977, (3), 706-717. (a)
- Fleming, J., Predictive validity of the motive to avoid success in Black women, Humanitas: Journal of the Institute of Man, 1977, 13, 225-244. (b)
- Fleming, J., Fear of success, achievement-related motives and behavior in Black college women, Journal of Personality, 1978, 46, 694-716.
- Freedman, D. G., Personality development in infancy: A biological approach. In S. L. Washburn and P. D. Jay (eds), Perspectives in human evolution. New York: Holt, Rinehart and Winston, 1968, 258-287.
- French, E.G. Some characteristics of achievement motivation. Journal of Experimental Psychology, 1955, 50, 232-236.
- French, E. G. and Lesser, G. S., Some characteristics of the achievement motive in women. Journal of Abnormal and Social Psychology, 1964, 68, 119-129.
- Friedrich, L. K., Achievement motivation in college women revisited: Implications for women, men, and the gathering of coconuts. Sex Roles, 1976, 2 (1), 47-61.
- Frieze, I. H., Parsons, J. E., Johnson, P. B., Ruble, D. N., and Zellman, G. L., Women and sex roles: A social psychological perspective. New York: Norton, 1978.
- Gadparille, W. J., Research in the physiology of maleness and femaleness. Archives of General Psychiatry, 1972, 26, 193-206.
- Garland, H. and Smith, G.B. Occupational achievement motivation as a function of biological sex, sex-linked personality, and occupation stereotype. Psychology of Women Quarterly, 1981, 5(4), 568-585.
- Garland, T.N., The better half? The male in the dual profession family. In C. Safilios-Rothschild (ed.), Toward a sociology of women. Lexington, Ma.: Xerox College Publishing, 1972.
- Garn, S. M., Roentgenogrammetric determinants of body composition. Human Biology, 1957, 29, 337-353.

- Garn, S. M., Fat, body size and growth in the newborn. Human Biology, 1958, 30, 265-280.
- Garsky, J.P. Role variation as a determinant of attributed masculinity and femininity. Journal of Psychology, 1975, 21, 31-37.
- Gaudreau, P. Factor analysis of the Bem Sex-Role Inventory. Journal of Consulting and Clinical Psychology, 1977, 45(2), 299-302.
- Gearty, J.Z. and Milner, J.S. Academic major, gender of examiner, and the motive to avoid success in women. Journal of Clinical Psychology, 1975, 31, 13-14.
- Gilbert, L.A., Toward mental health: the benefits of psychological androgyny. Professional Psychology, 1961, 12(1), 29-38.
- Glancy, D.J. Women in law: the dependable ones. Harvard Law School Bulletin, 1970, 21, 23-33.
- Goldberg, P., Are women prejudiced against women? Transaction, 1968, 5, 28-30.
- Goldberg, S. and Lewis, M., Play behavior in the year old infant. Child Development, 1969, 40, 21-31.
- Good, L.K. and Good, K.C. An objective measure of the motive to avoid success. Psychological Reports, 1973, 33, 1009-1010.
- Gough, H.G. and Heilbrun, A.E. Manual for the Adjective Check List and the Need scales for the ACL. Palo Alto, Ca.: Consulting Psychologists Press, 1965.
- Gross, R., Battis, N., Small, A. and Erdwins, C. Factor structure of the Bem Sex-Role Inventory and the Personal Attributes Questionnaire. Journal of Consulting and Clinical Psychology, 1979, 47(6), 1122-1124.
- Hargreaves, D., Stoll, L., Farnworth, S. and Morgan, S., Psychological androgyny and ideational fluency. British Journal of Social Psychology, 1981, 20(1), 53-55.
- Hawley, P. Perceptions of male models of femininity related to career choice. Journal of Counseling Psychology, 1972, 19, 308-313.
- Heilbrun, A.E. Measurement of masculine and feminine sex role identities as independent dimensions. Journal of Consulting and Clinical Psychology, 1976, 44, 183-190.

- Heilbrun, A. B., Kleemeier, C. and Piccola, G., Developmental and situational correlates of achievement behavior in college females. Journal of Personality, 1974, 42, 420-436.
- Heilbrun, C.G., Toward a recognition of androgyny. New York: Harper Colophon, 1973.
- Helmreich, R., Wilhelm, J. and Stapp, J. Life history questionnaire (short form): Instrument, norms, and intercorrelations. JSAS Catalog of Selected Documents in Psychology, 1975, 5, 327. (Ms. No. 1098)
- Ho, R. and Zemaitis, R., Behavioural correlates of an Australian version of the Bem Sex Role Inventory. Australian Psychologist, 1980, 15(3), 459-466.
- Hodge, R.W., Siegel, P.M., and Rossi, P.H., Occupational prestige in the U.S. 1925-1963. in R. Bendix and S.M. Lipset (eds.), Class, status and power: Social stratification in perspective, 2nd ed. New York: Free Press, 1966, 322-334.
- Hoffman, L. W., Fear of success in males and females: 1965 and 1971. Journal of Consulting and Clinical Psychology, 1974, 42, 353-358.
- Hoffman, L. W., Fear of success in 1965 and 1974: A follow-up study. Journal of Consulting and Clinical Psychology, 1977, 45 (2), 310-321.
- Hollander, J., Sex differences in sources of self-esteem. Journal of Consulting and Clinical Psychology, 1972, 38, 343-347.
- Holstrom, L.L., The two-career family. Cambridge, Ma.: Schenkman, 1972.
- Horner, M. S., Femininity and successful achievement: a basic inconsistency, in Bardwick, J.M., Douvan, E., Horner, M.S. and Gutmann, D. Feminine personality and conflict, Belmont, Ca.:Brooks/Cole, 1970, 45-74.
- Horner, M. S., Toward an understanding of achievement-related conflicts in women. Journal of Social Issues, 1972, 28, 157-175.
- Horner, M. S., The measurement and behavioral implications of fear of success in women, in Atkinson, J. W. and Raynor, J. O., Motivation and achievement, Washington, D.C.: V.H.Winston and Sons, 1974., 91-117. (a)

- Horner, M. S., Performance of men in noncompetitive and interpersonal competitive achievement-oriented situations, in Atkinson, J. W. and Raynor, J. O., Motivation and achievement, Washington, D.C.: V.H. Winston and Sons, 1974, 237-254. (b)
- Horner, M. S. and Walsh, M. R., Psychological barriers to success in women, in Kundsir, R. B., Women and Success: the anatomy of achievement. New York: Wm Morrow and Co, 1974, 138-144.
- Hubbard, R. and Lowe, M. (eds), Genes and Gender II, New York: Gordian Press, 1979.
- Intons-Peterson, M.J. and Johnson, H. Sex domination of occupations and the tendencies to approach and avoid success and failure. Psychology of Women Quarterly, 1980, 4(4), 526-547.
- Isaacson, R. L., Relation between achievement, test anxiety, and curricular choices. Journal of Abnormal and Social Psychology, 1964, 63, 447-452.
- Jackaway, R. and Tzevan, R., Fear of failure and fear of success: two dimensions of the same motive? Sex Roles, 1976, 2, 283-294.
- Janda, L. H., O'Grady, K. E., and Capps, C. F., Fear of success in males and females in sex-linked occupations. Sex Roles: a Journal of Research, 1978, 4 (1), 43-50.
- Joesting, J. and Whitehead, G. I., Equalitarianism, curiosity and creativity: Partial replication. Psychological Reports, 1976, 38 (2), 369-370.
- Jones, W.H., Chernovetz, M.E.O'C., and Hansson, R.O. The enigma of androgyny: Differential implications for males and females? Journal of Consulting and Clinical Psychology, 1978, 46(2), 298-313.
- Jung, C.G. Two Essays on Analytical Psychology, Collected works, Vol. 7, Princeton: Princeton University Press, Bollingen Series XX. Edited by Read, H., Fordham, M., and Adler, G. Translated by R.F.C. Hull, 1953.
- Jung, C.G. The archetypes and the collective unconscious. Collected works, Vol. 9,1., Princeton: Princeton University Press, Bollingen Series XX. Edited by Read, H., Fordham, M., and Adler, G. Translated by R.F.C. Hull, 1959.

- Kaplan, A.G., Androgyny as a model of mental health for women: From theory to therapy. In A.G. Kaplan and J.P. Bean (eds.) Beyond sex-role stereotypes: Readings toward a psychology of androgyny. Boston: Little, Brown, 1976.
- Kaplan, A.G. and Sedney, M.A., Psychology and sex roles: An androgynous perspective. Boston: Little, Brown, 1980. 45(6), 1185-1186.
- Kelly, J.A., Caudill, M.S., Hathorn, S., and O'Brien, C.G., Socially undesirable sex-correlated characteristics: Implications for androgyny and adjustment. Journal of Consulting and Clinical Psychology, 1977,
- Kelly, J.A. and Worell, J., New Formulations of sex roles and androgyny: A critical review. Journal of Consulting and Clinical Psychology, 1977, 45(6), 1101-1115.
- Kohlberg, L. and Zigler, E., The impact of cognitive maturity on the development of sex-role attitudes in the years 4 to 8. Genetic Psychology Monographs, 1967, 75, 100-105.
- Kravetz, D. and Jones, L.E., Androgyny as a standard of mental health. American Journal of Orthopsychiatry, 1981, 51(3), 502-509.
- Kristal, J., Sanders, D., Spence, J. T., and Helmreich, R., Inferences about the femininity of competent women and their implications for likability. Sex Roles, 1975, 1 (1), 33-40.
- Larwood, L., O'Carrole, M. and Logan, J., Sex role as a mediator of achievement in task performance, Sex Roles, 1977, (2), 111-116.
- Lee, P. C. and Stewart, R. S., Sex differences: Cultural and developmental dimensions. New York: Urizen Books, 1976.
- Lesser, G. S., Krawitz, R. and Packard, R., Experimental arousal of achievement motivation in adolescent girls. Journal of Abnormal and Social Psychology, 1963, 66 (1), 59-66.
- Levine, A. and Crumrine, J., Women and the fear of success: a problem in replication. American Journal of Sociology, 1975, 80, 964-974.
- Lockheed, M. E., Female motive to avoid success: a psychological barrier or a response to deviancy? Sex Roles, 1975, 1 (1), 41-50.

- Lockheed-Katz, M. Female motive to avoid success: a psychological barrier or a response to deviancy? Paper presented at the annual meeting of the American Educational Research Association, Chicago, April, 1974. (ERIC Reproduction Document No. ED 089 153)
- Locksley, A. and Colten, M.E. Psychological androgyny: A case of mistaken identity? Journal of Personality and Social Psychology, 1979, 37(6), 1017-1031.
- Lorenz, K., Studies in animal and human behavior (vol. 1). Cambridge: Harvard University Press, 1970.
- Lowell, E.L. The effect of need for achievement on learning and speed of performance. Journal of Psychology, 1952, 33, 31-40.
- Maccoby, E. E. (ed), The development of sex differences. Stanford, Ca.: Stanford University Press, 1966.
- Maccoby, E. E. and Jacklin, C. N., The psychology of sex differences. Stanford, Ca.: Stanford University Press, 1974.
- Mahone, C. H., Fear of failure and unrealistic vocational aspirations. Journal of Abnormal and Social Psychology, 1960, 60, 253-261.
- Makowsky, V.P. Sex-role compatibility of task and of competitor, and fear of success as variables affecting women's performance. Sex Roles, 1976, 2, 237-248.
- Makowsky, V.P. Fear of success, sex-role orientation of the task, and competition conditions as variables affecting performance in achievement oriented situations. Unpublished manuscript, St. Lawrence University, 1972, cited in O'Leary, V.E., Some attitudinal barriers to occupational aspirations in women. Psychological Bulletin, 1974, 81(11), 809-826.
- Major, B. Sex-role orientation and fear of success: Clarifying an unclear relationship. Sex Roles, 1979, 5(1), 63-70.
- Marini, M. M., Sex differences in the determination of adolescent aspirations: a review of research. Sex Roles: A Journal of Research, 1978, 4 (5), 723-754.
- Marshall, J.M. and Karabenick, S.A. Validity of an empirically derived projective measure of fear of success. Journal of Clinical and Consulting Psychology, 1977, 45(4), 564-574.

- McClelland, D. C., Risk-taking and children with high and low need for achievement, in Atkinson, J. W. (ed), Motives in fantasy, action and society. Princeton: Van Nostrand, 1958, 306-321.
- McClelland, D. C., Atkinson, J.W., Clark, R. A., and Lowell, E. L. (eds), The achievement motive. New York: Appleton Century-Crofts, 1953.
- McClelland, D. C., Clark, R. A., Roby, T. B., and Atkinson, J. W., The projective expression of needs. IV. The effect of need for achievement on thematic apperception. Journal of Experimental Psychology, 1949, 39, 242-255.
- Miller, J.R., Relationship of fear of success to perceived parental attitudes toward success and autonomy in men and women. Psychological Reports, 1980, 47(1), 79-86.
- Milton, C. A., Five studies of the relationship between sex-role identification and achievement in problem solving. (Tech. Rep. 3) New Haven, Ct.: Yale University, Dept of Industrial Administration and Dept of Psychology, Dec., 1958.
- Minnesota multiphasic personality inventory. New York: Psychological Corporation, 1943.
- Monohan, L., Kuhn, M. and Shaver, P., Intrapsychic versus cultural explanations of the 'fear of success' motive. Journal of Personality and Social Psychology, 1974, 29, 60-64.
- Money, J. and Ehrhardt, A. A., Man and woman, boy and girl. Baltimore: The Johns Hopkins University Press, 1972.
- Money, J. and Ehrhardt, A. A., Fetal hormones and the brain: Effects on sexual dimorphism of behavior - a review. in P. C. Lee and R. S. Stewart (eds) Sex differences: Cultural and developmental dimensions. New York: Urizen Books, 1976, 323-355.
- Money, J. and Tucker, P., Sexual signatures: on being a man or a woman. Boston: Little, Brown, and Company, 1975.
- Moore, S.M. and Rosenthal, D.A., Sex-roles: Gender, generation, and self-esteem. Australian Psychologist, 1980, 15(3), 467-477.
- Moreland, J.R., Gulanick, N., Montague, E.K., and Harren, V.A. Some psychometric properties of the Bem Sex Role Inventory. Applied Psychological Measurement, 1978, 2, 249-256.

- Morgan, S. W. and Hausner, B., Behavioral and fantasied indicators of avoidance of success in men and women. Journal of Personality, 1973, 41, 457-470.
- National Academy of Sciences, Doctorate recipients from U.S. Universities, 1980. Annual summary report. Washington, D.C.: National Academy of Sciences, 1981.
- O'Connor, K., Mann, D.W. and Bardwick, J.M. Androgyny and self-esteem in the upper-middle class: A replication of Spence. Journal of Consulting and Clinical Psychology, 1978, 46, 1168-1169.
- O'Dowd, D. and Beardslee, D. Development and consistency of student images of occupations. Monograph of the Department of Health, Education, and Welfare, Washington, D.C., 1967.
- Oetzel, R. M., Annotated bibliography and classified summary of research in sex differences. in Maccoby, E. E. (ed) The development of sex differences. Stanford, Ca.: Stanford University Press, 1966, 223-351.
- O'Leary, V.E., Some attitudinal barriers to occupational aspirations in women. Psychological Bulletin, 1974, 81(11), 809-826.
- O'Leary, V.E. and Donoghue, J.M. Latitudes of masculinity: Reactions to sex-role deviance in men. Journal of Social Issues, 1978, 34(1), 17-28.
- O'Leary, V. E. and Hammack, B., Sex-role orientation and achievement context as determinants of the motive to avoid success. Sex Roles, 1975, 1, 225-234.
- Orlofsky, J.L. Sex role orientation, identity formation, and self-esteem in college men and women. Sex Roles, 1977, 3, 561-575.
- Parsons, T. and Bales, R.E., Family socialization and interaction process. Glencoe, Ill: Free Press, 1955.
- Patty, R. A., The motive to avoid success and instructional set. Sex Roles, 1976, 2, 81-83.
- Pearson, J.C., A factor analytic study of the items in three selected sex-role instruments. Psychological Reports, 1980, 46(3), 1119-1126.
- Peloquin, L.J., Fear of success: Theory, methodology, and research. Catalogue of Selected Documents in Psychology, 1981, 11, 25, MS 2231 (87).

- Peplau, L.A. Fear of success in dating couples. Sex Roles, 1976, 2, 249-258.
- Plato. The dialogues of Plato, Vol. I, translated by E. Vieuwitt. New York: Random House, 1937.
- Rapaport, R. and Rapaport, R.N., The dual-career family: A variant pattern and social change. In C. Safillios-Rothschild (ed.), Towards a sociology of women. Lexington, Ma.: Xerox College Publishing, 1972.
- Raynor, J.O., Relationships between achievement-related motives, future orientation, and academic performance. Journal of Personality and Social Psychology, 1970, 15, 28-33.
- Robbins, L. and Robbins, E., Comment on: Toward an understanding of achievement-related conflicts in women. Journal of Social Issues, 1973, 29, 133-137.
- Rohrbaugh, J. B., Women: Psychology's puzzles. New York: Basic Books, Inc., 1979.
- Rosen, B. and Jerdee, T. H., The influence of sex-role stereotypes on evaluations of male and female supervisory behavior. Journal of Applied Psychology, 1973, 57, 44-48.
- Sadd, S., Miller, F.D., and Zeitz, B., Sex role and achievement conflicts, Personality and Social Psychology Bulletin, 1979, 5 (3), 352-355.
- Schachter, S., Birth order, eminence, and higher education. American Sociological Review, 1963, 28, 757-767.
- Schubert, D., Wagner, M. E., and Schubert, H. J. P., Family constellation and creativity: First-born predominance among classical music composers. Journal of Psychology, 1977, 95, 147-149.
- Scott, W. A., The avoidance of threatening material in imaginative behavior. Journal of Abnormal and Social Psychology, 1956, 52, 338-346.
- Shaffer, D. R. and Wegley, C., Success orientation and sex-role congruence as determinants of the attractiveness of competent women. Journal of Personality, 1974, 42, 586-600.
- Shaver, P., Questions concerning fear of success and its conceptual relatives. Sex Roles: A Journal of Research, 1976, 2 (3), 305-320.

- Shaw, J.S. and Rodriguez, W., Birth order and sex type. Psychological Reports, 1981, 48(2), 387-390.
- Shinar, E. Personal perception as a function of occupation and sex. Sex Roles, 1978, 4, 679-693.
- Singer, J., Boundaries of the Soul. Garden City, NY: Doubleday and Company, 1972.
- Singer, J., Androgyny: toward a new theory of sexuality. Garden City, NY: Anchor Books, 1977.
- Solomon, L.Z. Perception of a successful person of the same sex or the opposite sex. Journal of Social Psychology, 1975, 95, 133-134.
- Sorrentino, F. M. and Short, J. A., Effects of fear of success on women's performance of masculine versus feminine tasks. Journal of Research in Personality, 1974, 8, 277-290.
- Spence, J., The Thematic Apperception Test and attitudes toward achievement in women: a new look at the motive to avoid success and a new method of measurement. Journal of Consulting and Clinical Psychology, 1974, 42, 427-437.
- Spence, J.T. Traits, roles and the concept of androgyny. In J.E. Gullahorn (Ed.), Psychology and women: In transition. Washington, D.C.: V.H. Winston and Sons, 1979.
- Spence, J.T. and Helmreich, R.L. The Attitudes Toward Women Scale: An objective instrument to measure attitudes toward the rights and roles of women in contemporary society. JSAS Catalog of Selected Documents in Psychology, 1972, 2, 66.
- Spence, J.T. and Helmreich, R.L. Masculinity and femininity: Their psychological dimensions, correlates and antecedents. Austin: University of Texas Press, 1978.
- Spence, J.T. and Helmreich, R.L. Masculine instrumentality and feminine expressiveness: Their relationships with sex role attitudes and behaviors. Psychology of Women Quarterly, 1980, 5(2), 147-163.
- Spence, J.T., Helmreich, R.L., and Stapp, J. Ratings of self and peers on sex role attributes and their relation to self-esteem and conceptions of masculinity and femininity. Journal of Personality and Social Psychology, 1975, 32, 29-39.

- Stake, J. E., The effect of probability of forthcoming success on sex differences in goal setting: a test of the fear of success hypothesis. Journal of Consulting and Clinical Psychology, 1976, 44 (3), 444-448.
- Stein, A. H. and Bailey, M. M., The socialization of achievement orientation in females. Psychological Bulletin, 1973, 80, 345-366.
- Stephan, W. G. and Woodridge, D. W., Sex differences in attribution for the performance of women on a masculine task. Sex Roles, 1977, 3 (4), 321-328.
- Stokes, J., Childs, L. and Fuehrer, A., Gender and sex roles as predictors of self-disclosure. Journal of Counseling Psychology, 1981, 28(6), 510-514.
- Strahan, F. Remarks on Bem's measurement of psychological androgyny: Alternatives, methods and a supplemental analysis. Journal of Consulting and Clinical Psychology, 1975, 43, 568-571.
- Strodtbeck, F.L. Family interaction, values, and achievement. In McClelland, D.C., Baldwin, A.L., Bronfenbrenner, U. and Strodtbeck, F.L., Talent and society. Princeton: Van Nostrand, 1958.
- Suchner, R. and More, E. Stereotypes of males and females in two occupations. Journal of Vocational Behavior, 1975, 6, 1-8.
- Sutherland, S. L., The unambitious female: women's low professional aspirations. Signs: Journal of Women in Culture and Society, 1978, 3 (4), 774-794.
- Tanqri, S. S., Determinants of occupational role innovation among college women. Journal of Social Issues, 1972, 28, 177-199.
- Terman, L. and Miles, C. C., Sex and personality: studies in masculinity and femininity. New York: McGraw-Hill, 1936.
- Terman, L. M. and Tyler, L. E., Psychological sex differences. In L. Carmichael (ed), Manual of child psychology (2nd ed). New York: John Wiley and Sons, 1954.
- Tobach, E. and Rossoff, B. (eds), Genes and gender. New York: Gordian Press, 1978.
- Tobach, E. and Rossoff, B. (eds), Genes and gender III. New York: Gordian Press, 1980.

- Topol, P. and Reznikoff, M. Achievers and underachievers: A comparative study of fear of success, educational and career goals, and conception of woman's role among high school senior girls. Sex Roles, 1979, 5(1),
- Touhey, J. Effects of additional women professionals on ratings of occupational prestige and desirability. Journal of Personality and Social Psychology, 1974, 29, 86-89.
- Tresemmer, D. Research on fear of success: Full annotated bibliography. JSAS Catalog of Selected Documents in Psychology, 1976, 6(2), 38, Ms. 1237. (a)
- Tresemmer, D. W., The cumulative record of research on "fear of success." Sex Roles: a Journal of Research, 1976, 2 (3), 217-236. (b)
- Tresemmer, D. W., Do women fear success? Signs: Journal of Women in Culture and Society, 1976, 1, 863-874. (c)
- Tresemmer, D. W., Fear of success. New York: Plenum Press, 1977.
- Under, R. K. and Denmark, F. L., Woman: Dependent or independent variable? New York: Psychological Dimensions, Inc., 1975.
- U.S. Dept of Commerce, Council of Economic Advisors, Where women stand in the professions. Washington, D.C.: U.S. Government Printing Office, 1973.
- Veroff, J., Atkinson, J. W., Field, S. C., and Gurin, G., The use of thematic apperception to assess motivation in a nationwide interview study. Psychology Monographs, 1960, 74 (whole No.499), reprinted in Atkinson, J. W. and Raynor, J. O., Motivation and achievement, Washington, D.C.: V.H.Winston and Sons, 1974.,
- Veroff, J., Wilcox, S. and Atkinson, J. W., The achievement motive in high school and college-age women. Journal of Abnormal and Social Psychology, 1953, 48, 103-119.
- Ward, C., Is there a motive to avoid success in women? Human Relations, 1978, 31 (12), 1055-1067.
- Webster, N. New twentieth century dictionary of the English language, unabridged. (2nd ed) New York: Wm Collins and World Publishing Co, 1977.
- Weinstein, M.S. Achievement motivation and risk preference. Journal of Personality and Social Psychology, 1969, 13(2), 153-172.

- Wendt, H.W. Motivation, effort, and performance. in McClelland, D.C. (ed.), Studies in motivation, New York: Apoleton-Century, 1955.
- Whetton, C. and Swindells, T. A factor analysis of the Ben Sex-Role Inventory. Journal of Clinical Psychology, 1977, 33, 150-153.
- Wiggins, J.S. and Holzmuller, A. Psychological androgyny and interpersonal behavior. Journal of Consulting and Clinical Psychology, 1978, 46(1), 40-52.
- Wiggins, J.S. and Holzmuller, A., Further evidence on androgyny and interpersonal flexibility. Journal of Research in Personality, 1981, 15(1), 67-80.
- Williams, J. H. (ed), Psychology of women. New York: Norton, 1979.
- Williams, J., Bennett, S. and Best, D. Awareness and expression of sex stereotypes in young children. Developmental Psychology, 1975, 11, 635-642.
- Winter D.G. The power motive. New York: The Free Press, 1973.
- Wood, M.M. and Greenfield, S.T., Women managers and fear of success: a study in the field. Sex Roles, 1976, 2, 375-387.
- Worell, J. Sex roles and psychological well-being: Perspectives on methodology. Journal of Consulting and Clinical Psychology, 1978, 46(4), 777-791.
- Zanna, M. P., Intellectual competition and the female student. Princeton: Princeton University Press, 1973 (ERIC Document Reproduction Service, No. ED072 389).
- Zeldow, P.B. Psychological androgyny and attitudes toward feminism. Journal of Consulting and Clinical Psychology, 1976, 44(1), 150.
- Zuckerman, M. and Wheeler, L., To dispel fantasies about the fantasy-based measure of fear of success. Psychological Bulletin, 1975, 82, (6), 932-946.