An Investigation Into the Relationship between Sex Role Attitudes and Sex-Typed Behaviors

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AN INVESTIGATION INTO THE RELATIONSHIP
BETWEEN SEX ROLE ATTITUDES AND
SEX-TYPED BEHAVIORS.

by

Kim Merrill

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VITA

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INTRODUCTION

The purpose of the present research is to examine the relationship between sex role attitudes and selected behaviors which have been socially designated as more characteristic of one sex than the other. The areas of behavior to be examined are achievement and self disclosure, both of which have been subjected to considerable psychological research. While it is obvious that neither behavior would be ascribed to the exclusive preserve of one sex, nonetheless, achievement and self disclosure do correspond to those constellations of personality characteristics which have been labeled respectively as "masculine" and "feminine." The existence of these associations has been corroborated by numerous independent researchers whose work will be reviewed later. This is not to assert that women are not motivated to excel nor men to reveal personal information. These behaviors were selected, because they possess the dual qualification of a broad relevance to general personality functioning as well as definite sex role associations. This study will assess the strength of these associations--between feminine attitudes and disclosure,
and between masculine attitudes and achievement--using a recently developed scale of sex role identity.

Selected other personality factors which have been shown to affect achievement and self disclosure will also be examined. By also examining these additional variables the intention of this study is to use them as a frame of reference to assess the relative influence of sex role attitudes. Biological sex will also be evaluated in this manner, so as to provide another standard against which to examine the influence of sex role attitudes on achievement and self disclosure.

The measure of sex role attitudes to be used in this study is the Bem Sex Role Inventory (BSRI), a relatively new scale, based on a sociological analysis of sexual identity, which has received a good deal of attention due primarily to its claim to assess psychological androgyny. In order to understand the impact of this perspective on sex identity research, it is useful to briefly review the history of the study of sexual identity and to locate the BSRI within this context. Therefore, the ensuing literature review will take the following format:

The Sociology of Sex Roles and its Relationship to Psychological Theories of Sexual Identity.

Early Investigators in the Field of Sex Role Stereotypes: A Review of the Related Literature.

The Bem Sex Role Inventory (BSRI): How it differs from other Scales of Masculinity-Femininity (MF).

Achievement as a Masculine Activity: A Review of the Related Literature.
Achievement and Locus of Control: Does the Same Relationship hold for Men and Women?


Self Disclosure and Repression-Sensitization: Does the Same Relationship hold for Men and Women?
REVIEW OF THE RELATED LITERATURE

THE SOCIOLOGY OF SEX ROLES AND ITS RELATIONSHIP TO PSYCHOLOGICAL THEORIES OF SEXUAL IDENTITY.

In her review of the major tests of Masculinity-Femininity (MF), Constantinople (1973), comments upon the welter of MF measures and asks rhetorically whether MF can be said to exist at all since it seems to defy measurement. She traces this confusion to the lack of a theoretical basis for MF and makes the following observation:

The terms masculinity and femininity have a long history in psychological discourse, but both theoretically and empirically, they seem to be among the muddiest concepts in the psychologist's vocabulary. A search for definitions related to some theoretical position leads almost nowhere but to Freud and Jung. (p. 389)

Whatever its detractors may say, Freudian theory continues to cast a long shadow over personality research, and Freudian theory is nothing if not a comprehensive analysis of sexual identity. The theoretical coherence of psychodynamic analysis has established the standard against which other personality theories have been, more or less, compelled to prove themselves. Freudian personality theory consist of the analysis of the
individual's development through clearly demarcated stages toward a full, sexually realized maturity. The crucial psychodynamic mechanism whereby sexual differentiation is successfully achieved is through a deep identification with the same sex parent during the oedipal crisis in the genital stage.

Behaviorism, which has been frequently hailed as the great antagonist of psychodynamic theory does not possess a comprehensive theory of personality much less of sexual identity, (as indicated by Hall and Lindsay, 1948). However, some behavioral explanations of personality development reveal strong conceptual parallels with psychoanalytic mechanisms. The Freudian concept of identification finds a behavioral parallel in the concept of modeling. Bandura (1961) proposed the idea of modeling to explain how children acquire certain behaviors. Briefly, he demonstrated that children learn through imitating significant adult figures—in the absence of any further reinforcement. With regard to sexual identity, it can be assumed that children are motivated to identify with the parent of the same sex and thereby acquire a repertoire of sexually appropriate behaviors. Thus, it might be argued that learning theory does not offer a true alternative to the Freudian analysis of sexual identity.

Sociologists have approached personality from a completely different perspective: the principal unit of analysis is not the individual but the group. Society is
seen as an organic entity whose basic structural components are the functions it performs and the goods it distributes. Sociologists analyze the manner in which society allocates these goods and rewards. Social role theorists contend that the characteristics which have come to be described as "masculine" and "feminine" have only superficially to do with biological structures and more fundamentally to do with social structures. These associations have evolved to inform the roles which support the tasks which individuals are expected to perform. While it is true that these roles are allocated on the basis of biological identity, in modern society particularly, there is little intrinsic, necessary relationship between biological identity and sex role.

It could be argued that the sociological explanation of the relationship between sex role and biological gender contrasts with the Freudian theory where sex role or sexually appropriate behaviors are seen as having a necessary and significant relationship with biological sexuality. Modern sex role theorists have refused to see the relationship between sex role and biological sexuality as inevitable or necessary.

Undoubtedly the fundamental reason why the concept of sex role has received so much attention can be traced to the emancipation of women which has accelerated in the last thirty years. Women in large numbers are taking jobs and assuming responsibilities which would have been
essentially barred to them fifty years ago. The terms commonly used to describe this phenomenon are sociological; the phrase, "women's roles are undergoing a process of change," has become a commonplace. A major premise of the researchers in the sociology of sex roles has been that the time is out of joint with regard to social sexual norms. In 1950, Komarovsky wrote, in a very contemporary sounding critique:

[We] accept the general premise that our culture is full of contradictions and inconsistencies with regard to women's roles, that new sociological goals have emerged without parallel development of the social machinery for their attainment, that norms persist which are no longer functionally appropriate to the situations that they apply, that the same situations are subject to the jurisdiction of conflicting codes, that behavior patterns useful at one stage become dysfunctional at another....(p. 508)

It seems that it is precisely these contradictions and inconsistencies, arising from the strains of social and cultural change, which have given rise to the modern concept of sex role. Fifty years ago there was much less dissonance in the social expectations for sexually appropriate behavior, and consequently there was little need to develop a "redundant" concept of sex role, biological sexual identity being sufficient to socially account for male and female behavior.

At this point it is enlightening to recall one familiar critique of Freudian intrapsychic theory: that it is, in many respects, a reflection of the society in which Freud lived. His patients came from the relatively
prosperous Victorian bourgeoisie in which large families were the norm. Women's activities as wives, mothers and managers centered on the family, and thus their roles seemed a "natural" extension of their biological, generative functions. Many femininists are openly antagonistic to Freudian theory for what they see as its propagandistic function in binding women to traditional, family oriented roles. Social role theory, which evaluates familial responsibilities as a species of social tasks without necessary sexual connotations, has become one of the doctrines of the feminist movement.

Due to the concern for women's emancipation there has been a tendency to overlook or downplay the concomitant social pressure on traditional masculine roles. The purpose of this study is to examine the effects on both men and women of traditional expectations for sexually appropriate behavior.
EARLY INVESTIGATORS IN THE FIELD
OF SEX ROLE STEREOTYPES

In the fifties a number of researchers in sociology and related fields were beginning to turn their attention to the significance of sex roles and their relationship to behavior. At this time there was a loose consensus among many researchers that males were more socially valued than females (Dinitz, Dines and Clark, 1954; Fernberger, 1948; Kitay, 1940; White, 1950). However, it seems that it was the work of McKee and Sherriffs (1953, 1957a, 1957b, 1959) and Sherriffs and Jarrett (1953) which gave a focus to this general consensus. They introduced the methodology and raised the questions which were to occupy later researchers.

Their work was stimulated by an incidental finding of Sherriffs and Jarrett (1953) which not only revealed significant attitudinal differences among the sexes, but also a systematic preference for males on the part of both males and females. McKee and Sherriffs (1953, 1957a, 1957b, 1959) proceeded to make a systematic examination of this phenomenon addressed to the following issues:
What are the parameters of sex role expectations and what is the extent of their acceptance? Do men and women agree on the norms for sexually appropriate behavior?

What is the social desirability or value of sex role characteristics? Do men and women agree in rating the overall desirability of masculine and feminine characteristics?

To what extent are these stereotypes incorporated into an individual's self concept?

In order not to artificially constrain the selection of sex role characteristics, McKee and Sherriffs used both open and closed (forced and unforced) methods of item selection in constructing their measures. In the closed choice procedure, students were asked to take Sarbin's adjective checklist three times with the following instructions: 1) Check items true of women, 2) Check items true of men, 3) Check whether the item is more characteristic of men or women. Items identified by the researchers as sex role characteristics were those which were selected 95 percent of the time as being more characteristic of one sex. The nature of the selection criterion which isolated extreme items led McKee and Sherriffs to label these characteristics as stereotypes. The items selected by this procedure were then evaluated in terms of a separately compiled social desirability rating for these same items.

McKee and Sherriffs found a high degree of agreement between men and women regarding the typical characteristics of males and females. Both sexes agreed that men were
(favorably) informal, industrious, calm, logical, ambitious, individualistic, aggressive, dominant as well as (unfavorably) boastful, stubborn, hard-headed and reckless. Concommittantly, both sexes agreed that women were (favorably) poised, tactful, sociable, modest, affectionate, understanding, sensitive and (unfavorably) snobbish, submissive, vain, touchy, fearful, superstitious and frivolous.

When the overall social desirability of these characteristics was examined, it was found that both men and women were significantly more favorable to masculine than to feminine items. This preference was consistent throughout all the methodological variations in item selection. McKee and Sherriffs noted that this preference did not reflect a negative overall valuation of the feminine items, but the fact that the masculine items had a higher overall positive valuation.

McKee and Sherriffs also noted a general tendency for men and women to be much more critical of the typical female than they were of the typical male. In their descriptions of a typical man, males were, in McKee and Sherriffs' words, "lavish with praise," and it seemed that men's negative characteristics were limited to an excess of their favorable qualities. Women essentially agreed with this highly favorable picture. Women, on the other hand, tended to be highly critical of the typical woman and seemed to emphasize female neuroticism. Men were also
very critical of women.

Finally, McKee and Sherriffs examined men's and women's self concepts to determine the extent to which they incorporated sex role stereotypes. Using Sarbin's list, students were asked to describe: 1) Ideal Self, 2) Actual Self, 3) Ideal Opposite Sex Individual, 4) Ideal Same Sex Individual (according to the expectations of the opposite sex). Results showed that men and women did not include as many stereotypic items in their self descriptions and tended to endorse the more favorable items. When beliefs about the opposite sex were examined, it was found that men believe that women want them to possess favorable qualities of both sexes about equally. This belief indeed reflected the characteristics that women desired in the ideal man. However, women's beliefs about what men expect were found to be even more stereotypically feminine than men's actual preferences. This led McKee and Sherriffs to conclude that women exaggerate the extent to which men wish to restrict them from characteristics which are thought to be masculine.

The work of McKee and Sherriffs provided the basis for much of the subsequent research into the nature and ramifications of sex roles. They established that sex role stereotypes do exist and claim a wide acceptance: this has become virtually an article of faith in all of the later research. Following McKee and Sherriffs, sex role research has tended to focus on the relatively
negative social valuation of feminine characteristics and the detrimental effects to women arising from this valuation.

Using an item selection and rating procedure similar to the one developed by McKee and Sherriffs, Rosenkrantz and his colleagues (Rosenkrantz, Vogel, Bee, Broverman and Broverman, 1968) developed a Sex Role Stereotype Questionnaire. They found that masculine characteristics were more highly valued than feminine which the researchers saw as a function of the fact that more male than female traits were positively valued. Of 41 stereotypic items, 29 were masculine valued, 12 were feminine valued. Given the overall greater social desirability of the masculine items, Rosenkrantz et al. expected that in their own self descriptions women would, as a function of social desirability, tend to incorporate many masculine items. They found that while both men's and women's self concepts were less masculine and less feminine respectively than the stereotypic profile for a member of their own sex, both sexes, nonetheless, perceived themselves as differing along a dimension of stereotypic sex differences. The fact that women tended to align themselves with the relatively negative feminine stereotype led the authors to make the following observation:

This implication is particularly surprising when it is remembered that the data providing the basis for this conclusion were gathered from enlightened, highly
selected college girls who typically more than hold their own vis a vis boys, at least in terms of college grades. The factors producing incorporation of the female stereotype along with its negative valuation must be extremely powerful. (p.293)

Other researchers have investigated the negative consequences occurring to women as a result of incorporating stereotypic sex role expectations. Block (1973) examined the effects of sex role typing and socialization on men and women. Her results suggested to her that the socialization process has a differential effect on the development of sexual identity in men and women; for males socialization seems to encourage a more androgynous sex role identity, whereas the socialization of women tends to discourage the development of masculine tendencies. Furthermore, Block found that whereas highly masculine males tend to be well adjusted and successful, among women, the most successful were low feminine females.

The idea that sex-typing is more detrimental to women than to men was supported by the work of Heilbrun (1964, 1968). Using a social deviance hypothesis of psychological adjustment, Heilbrun proposed that sex-typed individuals (individuals who conform to social norms for appropriate sex role behavior) would be more well adjusted than non sex-typed individuals. Heilbrun found that this hypothesis was supported for males in a number of studies; however, the evidence for this proposition in terms of women's adjustment was found to be scarce. After
reviewing nine studies, Heilbrun concluded, "If any trend can be adduced, it would be that femininity in females is associated with poorer adjustment" (Heilbrun, 1968).

Heilbrun (1968) compared masculine and feminine women along the dimensions of instrumental and expressive behaviors. These dimensions were selected because they seemed to epitomize the constellations of behaviors that are stereotypically described as masculine and feminine. Heilbrun found that whereas both groups were essentially equal along the dimension of expressiveness, masculine women scored significantly higher on the instrumental dimension. Heilbrun concluded that the better adjustment of masculine women could be traced, not to their lack of feminine characteristics, but to their incorporation of masculine, instrumental characteristics such as goal-orientation, assertiveness, dominance, etc.

Braverman and her colleagues (Braverman, Braverman, Rosenkrantz and Vogel, 1970) found that the prevailing notions of mental health reflect the social standards implicit in sex role stereotypes. Using the Sex Role Stereotype Questionnaire, they asked clinicians to describe one of three individuals: a healthy, competent, socially mature: 1) Adult, sex unspecified, 2) Man, 3) Woman. They found that the characteristics of a healthy individual differ as a function of the sex of the person judged, and that the behaviors and characteristics which are judged healthy for an adult, sex unspecified, which
are presumed to reflect an ideal standard of health, resemble behaviors judged healthy for men, but differ from behaviors judged healthy for women. Thus, clinicians are more likely to suggest that healthy women differ from healthy men by being more submissive, less independent, less adventurous, more easily influenced, less aggressive, etc.

In conclusion, it seems that while most researchers have agreed in principal that both stereotypic masculine and feminine characteristics have socially positive worth, there has been a tendency in the research to emphasize the detrimental effects to women of their failure to incorporate masculine sex role values. Much less effort has been expended on exploring the potential detriment to men of sex role typing. Thus, it might be argued that the researchers themselves have perpetuated and supported the idea of the negative worth of feminine sex role characteristics despite the fact that certain studies suggest that men benefit from the possession of feminine sex role characteristics (Block, 1970; McKee and Sherriffs, 1957b). Mussen (1964) found that although in adolescence highly masculine boys tended to be better adjusted than less masculine boys, when these groups were evaluated twenty years later, the latter, less masculine group was more successful, more well adjusted. Heilbrun's research (1968) indicates that while successful, well adjusted women gain from incorporating masculine
characteristics, they do not significantly differ from feminine women in their identification with and interest in many feminine values.

The trend in more recent sex role research seems to be toward the proposition that both masculine and feminine values should be accorded equal social worth, and that an individual whose self concept includes both masculine and feminine characteristics has much more flexibility to engage in a wide range of behaviors than a more rigidly sex-typed individual. The Bem Sex Role Inventory (BSRI) epitomizes this new direction in sex role research. It is based on the proposition that masculine values which support instrumental and achieving behaviors are not intrinsically incompatible with feminine values which support nurturing and expressive behaviors. Expressed in terms of a statistical model, this proposition asserts that masculine and feminine characteristics are independent and not related. Sex role researchers define an androgynous individual as someone who possesses both masculine and feminine characteristics in approximately equal measure. In her research with the Personal Attributes Questionnaire (PAQ), another measure of psychological androgyny, Spence (1974, 1975) found that the highest self esteem ratings existed in that group of individuals who endorsed a high proportion of characteristics typical of both sexes.
THE BEM SEX ROLE INVENTORY:
THE THEORY BEHIND ITS CONSTRUCTION
AND HOW IT DIFFERS FROM OTHER SCALES
OF MASCULINITY-FEMININITY (MF).

In her review of the major psychological tests of Masculinity-Femininity (MF), Constantinople (1973) examined the following instruments: the Terman-Miles Attitude Interest Analysis, the Strong Vocational Interest Blank, the Minnesota Multiphasic Personality Inventory and the California Psychological Inventory. She concluded that most of these instruments shared as a basis for their construction several untested assumptions. These assumptions will be presented and discussed.

MF is best defined in terms of sex differences in item response.

MF is a single bipolar dimension ranging from extreme masculinity at one end to extreme femininity at the other.

MF is unidimensional in nature and can be adequately measured by a single score.

All of the above assumptions can be more or less directly tied to biological sex and its basic dichotomy. Thus, in the item selection for these tests, the primary criterion for inclusion was the item's ability to discriminate males from females. As Constantinople points
out, this strictly empirical approach does not contribute to the elucidation of the concept of MF since anything that discriminates men from women is taken as an indicator of MF with no assessment of the centrality of the item to the abstract definition of MF.

The dichotomous nature of biological gender is reflected in the bipolarity of most MF test construction. An item is scored either masculine or feminine, plus or minus. Sexuality is conceived as constituting a single dimension with masculine at one end, feminine at the other, and an individual's score places him or her somewhere along this continuum. This type of construction, by its very nature, rules out any analysis of sexuality as a multidimensional characteristic.

The assumption of a single bipolar dimension has dominated MF test construction despite the fact that the evidence for this assumption is not entirely adequate. Thus, although Terman and Miles (1936) found a low correlation among the several subtests on their MF measure, which counterindicated a unidimensional MF trait, they retained the unidimensional, plus-minus scoring procedure resulting in a single score. The lack of evidence for unidimensionality is further suggested by the fact that when correlational analyses were performed on the major MF tests, the coefficients were not uniformly high, indicating that a considerable portion of the variance associated with any two tests is not held in
common. Constantinople reviews a number of factor analytic studies of these tests which attempt to identify the complex of factors which contribute to MF. While these studies open the way to a more comprehensive understanding of MF, they have not given rise directly to a new sexual identity measure.

The Bem Sex Role Inventory (BSRI) (Bem, 1974) can be seen as a response to some of the objections which Constantinople raises in her critique. An examination of the BSRI and the process of its construction will serve to demonstrate its theoretical and structural departure from the earlier instruments.

Initially, Bem compiled a list of 200 personality characteristics which she felt to be positive in value and either masculine or feminine in tone. This list was then given to a group of judges who were asked to rate, on a seven point scale, the desirability of all characteristics, either for a man or a woman. (No judge was asked to rate both). A personality characteristic qualified as a sex role characteristic if it was independently judged by both male and female judges to be significantly more desirable for one sex \( p < .05 \). Of those characteristics that satisfied these criteria, 20 were selected for the masculinity scale and 20 were selected for the femininity scale.

In the test form of the BSRI, the individual is asked to indicate on a seven point scale how well each of the
characteristics describes himself. On the basis of these responses, the individual receives two scores, a masculine score and a feminine score. In the original presentation of the BSRI (Bem, 1974), the examiner was instructed to derive an androgyny $t$ score for the masculine and feminine scores. The androgyny score is defined as the student's $t$ ratio for the difference between the masculine and feminine self endorsements. The $t$ score was intended to allow the examiner to determine whether a person's endorsement of masculine attributes differed significantly from his endorsement of feminine attributes. Androgynous individuals were defined as those who received a $t$ score of less than the absolute value of one. Note, that according to this criterion, individuals who receive low scores on both masculine and feminine scales are grouped with individuals who receive high scores on both scales. In response to criticisms from Spence (1975) and Strahan (1975), Bem has altered her scoring technique; these alterations will be presented later.

Normative research on the BSRI was done with Stanford undergraduates and volunteers at Foothill Junior College. Coefficient alpha was computed separately in each of the two samples in order to estimate internal consistency; the results showed both scores to be highly reliable; (Masculine score, $\alpha=.86$, .86; Feminine score, $\alpha=.80$, .82). Test-retest coefficients also indicated a high degree of reliability, (Masculine score, $r=.90$; Feminine
score, \( r = .90 \). In the normative sample, males were found to score significantly higher than females on the masculine scale, while the reverse was true for the feminine scale. Approximately 30 percent of the males and females fell into the androgynous category.

In response to criticism from Strahan (1975), Bem now recommends using a simple difference score instead of a \( t \) ratio to determine the difference between the masculine and feminine scales. Another critic, Spence (1975), observed that on the basis of her research, it appeared that individuals who receive high masculine and high feminine scores are different from those who receive low scores on both measures, and that only the former are properly labeled androgynous. Spence suggested that the low-low group is more accurately described as "undifferentiated." Bem's own research (Bem, 1977) indicated to her that this demarcation was warranted, and she now recommends that the masculine and feminine scores of the entire population be divided along a median split and the individuals grouped accordingly into four categories: 1) Low Feminine-Low Masculine, 2) Low Masculine-High Feminine, 3) High Masculine-Low Feminine, 4) High Masculine-High Feminine.

There are several major points where the Bem Sex Role Inventory differs from the scales discussed by Constantinople. One major departure from the earlier scales consists of Bem's decision to reject the conventional bipolar
unidimensional model of masculinity and femininity and to allow for the masculine and feminine traits to vary independently of each other. That is, the structure of the test does not constrain the items in any way. Thus, the BSRI is unlike the earlier MF tests, where for example, an individual who received a high masculine score, was necessarily labeled as low feminine. With the BSRI an individual can receive high scores on both scales.

Constantinople observed that all the major tests of MF lacked a fundamental empirical, theoretical basis. Unlike these scales, the BSRI fits squarely into the theoretical framework developed by the sex role theorists. It is concerned solely with the degree to which the individual identifies with traditional norms for sexually appropriate behavior. These norms provide the guiding principal behind the BSRI item selection. Unlike the earlier instruments, the BSRI is not a direct empirical attempt to assess the more complex phenomenon of Masculinity-Femininity. It is therefore a narrower scale, but because it is focussed and possesses a theoretical base, it is also potentially a more useful scale. In this context, it is enlightening to consider one more of Constantinople's criticisms of the popular MF scales.

Constantinople refers to a study by Nichols (1962) where he evaluated 356 items from popular MF scales along two dimensions: one dimension reflected actual sex differences—the extent to which items successfully
discriminated males from females; the second dimension reflected social stereotypes—the extent to which items discriminated social expectations for masculine versus feminine behavior. Nichols constructed a scatterplot along these two coordinates and identified three types of items: 1) Obvious items—high on both stereotype and actual discrimination, 2) Subtle items—high on actual and low on stereotype discrimination, and 3) Stereotypic items—high on stereotype discrimination but unable to discriminate actual sex differences as successfully as the other two. Constantinople concludes from this that stereotype items constitute a contaminating factor in many popular MF instruments and that what is needed is a means of controlling them.

There is one means of control which Constantinople does not appear to consider: a test composed solely of essentially stereotypic items. The BSRI is such a test. By the very nature of their selection, the BSRI items are stereotypic. Although the BSRI cannot claim to measure MF in its bewildering totality, it does attempt to measure a crucial aspect of MF. Previous research (McKee and Sherriffs, 1953, 1957a, 1957b 1959; Rosenkrantz et al., 1970) has indicated that individuals do incorporate stereotypic characteristics into their self concepts. The BSRI provides an instrument which allows the researcher to explore the ramifications of this incorporation or identification.
Bem (1975) conducted a number of studies to evaluate the validity of the concept of androgyny as measured by the BSRI. She selected two behaviors which seemed to typify stereotypical expectations for masculine and feminine behavior: independence and a gentle playfulness (playing with a kitten). She found that for both males and females, masculine and androgynous subjects were more independent than feminine subjects. In the second activity, however, the hypothesis was confirmed only for male subjects; that is androgynous and feminine males played more with the kitten than masculine males. Among females, sex role preference did not predict amount of time spent playing with the kitten.

In another study, Bem (Bem, Martyna and Watson, 1976) evaluated assertiveness and personal concern as respectively masculine and feminine activities. In the assertiveness condition students were asked to take part in an experiment without pay. Feminine females found it more difficult to say no than masculine and androgynous females. There were no differences in assertiveness according to sex role differences among the male subjects. In the personal concern condition, the researchers evaluated the subjects for sympathy and empathy as a listener. Masculine males were found to be considerably less nurturant and sympathetic than feminine and androgynous males. Feminine females were found to be highly nurturant. Masculine and androgynous females were
not as nurturant as feminine females, but were as nurturant as feminine males.

Based on these experiments and others, Bem concluded that the empirical evidence supports the validity of the scale and the proposition that strict sex role typing can be behaviorally restricting. It appeared to her that androgynous individuals of both sexes possessed the greatest behavioral flexibility.
The relationship between masculine sex role values and achievement can be seen by briefly reviewing some of the masculine sex role values and comparing them with their feminine counterparts. Thus, among the masculine characteristics listed by McKee and Sherriffs (1953), assertiveness, dominance, independence, self confidence, competitiveness and worldliness are obviously much more conducive to achievement that the feminine qualities of being emotional, gentle, dependent and unable to take pressure. In her research with female undergraduates, Komarovsky (1946, 1950) found that these students were able to trace their ambivalence about pursuing a career to the pressures of conflicting demands represented by these norms. However, it was not until Horner (1969, 1970) completed her dramatic research on the fear of success motive in women that the idea that feminine values were antithetical to achievement succeeded in attracting wide attention.

Horner asked male and female undergraduates to write stories about highly successful members of their own sex
and scored the stories for all the unpleasant things that were described about ensuing events or personal characteristics of the successful person. She found that 65 percent of college women described unpleasant events or attributes in discussing successful women, whereas only ten percent of the men gave such descriptions of successful men. Horner felt that women were inhibited in projecting a high level of success for themselves precisely because this scenario conflicted with traditional expectations for feminine behavior.

More recently Monahan, Kuhn and Shaver (1974) used a more complete design to assess fear of success. Adolescent boys and girls were asked to write successful stories about individuals of both sexes. Both males and females gave more negative responses to stories about successful girls; all subjects were positive about male success. These results not only support the earlier research about the universality of sexual stereotypes, but also suggest that sex role expectations may well affect achievement behavior.

In their extensive review of the psychology of sex differences, Maccoby and Jacklin (1974) evaluated several common assumptions about sex differences in achievement. These assumptions included the following:

Men have a greater need for achievement and are more oriented to achievement for its own sake.

Females are motivated to achieve primarily in areas related to interpersonal relations whereas males strive
to achieve in non-person oriented areas including intellectual endeavors.

Female efforts are primarily motivated by the desire to please others regardless of the area of achievement, whereas males are motivated by the intrinsic interest of the task.

Females have low self confidence in many tasks; this is sometimes felt to be part of a generalized lack of self esteem.

To what extent do these assumptions reflect reality? After reviewing the relevant research, Maccoby and Jacklin (1974), conclude that the empirical evidence for these assumptions is at best mixed and inconclusive. There is hardly any basis for the first assumption that men are more motivated to achieve than women. In fact, in the classic work done in the fifties by McClelland (McClelland, Atkinson, Clarke and Lowell, 1953), women received higher achievement scores under neutral conditions. In a review of the more recent research on achievement striving, Maccoby and Jacklin (1974) summarized the results of 23 studies: five showed greater striving in females; four showed greater striving in males; the rest showed no sex differences.

The evidence for the second and third assumptions that women's achievement needs are differently motivated than men's is somewhat less clearcut. McClelland (1953) found that whereas men's achievement scores showed a marked increase under achievement arousing instructions, women's did not. The apparent failure of women to respond to competitive stimuli led some researchers to hypothesize
that women are motivated to achieve interpersonally. Field (Field, 1951) found that in situations involving socially arousing stimuli, women's achievement scores increased more markedly than men's. However, the general hypothesis that women are more motivated by social reinforcement than men has not been borne out by the research. In a review of 26 studies, Maccoby and Jacklin (1974) found no evidence to suggest any differences between the sexes in their preference for social as opposed to nonsocial reinforcement.

Research on the fourth assumption regarding task confidence indicates that while women cannot be said to have generally lower self esteem than men, men do demonstrate greater optimism and confidence in their own performance on a wide variety of tasks. In a review of 15 studies which compared men's and women's expectancies of success in their own performance, Maccoby and Jacklin (1974) found that in 11 studies men and boys exhibited significantly more confidence in their own performance. In analyzing this discrepancy, Maccoby and Jacklin refer to the influence of sex roles. They suggest that feminine values allow women to achieve success in more private, personal areas--areas not measured by the typical achievement measures--and thus women do not share men's needs to place a superordinant emphasis on worldly achievement. They further suggest that the high position of dominance and personal strength in the masculine
hierarchy of values leads males to exaggerate their own abilities and to diminish their weaknesses. In support of this hypothesis they refer to a study by Omark (1973) which used peer ratings to determine a "toughness" hierarchy in a large number of classrooms in several societies; it was found that boys overestimated their position in this hierarchy more than girls did.

In an overall summary of the achievement research, Maccoby and Jacklin (1974) conclude that the assumptions concerning achievement striving have a greater basis in the popular imagination than they do in the actual research.

Maccoby and Jacklin (1974) refer repeatedly to sex role stereotypes through their survey. However, it seems that they tend to downplay these stereotypes or sex role expectations and use them to discount whatever sex differences may have been found. Thus, they point out that lower achievement striving in women indicated by projective techniques (under achievement arousing instructions) could be traced to the artifact that in the early use of these techniques, subjects were given same sex stimulus objects, (i.e., they were asked to invent stories about members of their own sex). Under these conditions there was a tendency for women to give fewer achievement themes than men; however, later research showed that when the stimulus object is masculine, women's achievement themes are equal to men's. This led Maccoby
and Jacklin (1974) to conclude that girls' lower N. Ach. scores on projective tests do not reflect their own motivations, but rather their concepts (which they share with men) concerning the usual characteristics of women and girls. While it is completely legitimate to distinguish sex role expectations from personal self concepts, researchers have shown that these concepts cannot be completely divorced; it has been demonstrated that individuals do, in their personal self concepts, tend to align themselves with the stereotypic social norms for their sex (McKee and Sherriffs, 1957a, 1957b; Rosenkrantz et al, 1970). In taking this posture and divorcing personal motivation from social role expectations, the authors seem unwilling to acknowledge the dissonance inherent in this situation and the potential obstacles to achievement that feminine sex role attitudes constitute.

In concluding this section it seems entirely in keeping with the empirical evidence to reassert the proposition that at the very least, masculine sex role values are more conducive to achievement than feminine sex role values.
ACHIEVEMENT AND LOCUS OF CONTROL:

DOES THE SAME RELATIONSHIP HOLD FOR MEN AND WOMEN?

In an article addressed to the question of sex differences in locus of control, Chandler and Dugovics (1977) make the following observation:

Although locus of control seems established as a theoretical construct with a wide empirical base, sex differences are not consistently reported or analyzed. Usually a correlation is reported for males between internality and a variety of achievement measures, but no such relationship is indicated for females. (p. 47)

Rotter's Locus of Control Scale, published in the sixties, has become a well-established psychological instrument, utilized in almost every area of research. Rotter proposed that consistent individual differences exist among individuals in the degree to which they are likely to attribute success or reward to personal control in the same situation. Internals tend to feel that reward follows from their own actions, while externals tend to feel that reward is controlled by forces outside themselves. As Rotter noted in his 1966 monograph, "It would seem a logical extension of internal--external control that...internals would show more overt striving for achievement." While this supposition has been
generally supported by the research, certain researchers have observed sexual discrepancies in the internality-achievement relationship.

Nowicki and Strickland (1973) found a significant positive correlation between internality and GPA and high achievement scores in reading and mathematics for boys but not for girls. Brown and Strickland (1972) found a significant correlation between internality and participation in college activities, for males but not for females. James, Woodruff and Werner (1976) found a significant relationship between internality and ceasing to smoke for a period of time, again for men but not for women. Schneider (1968) found internality to correlate significantly with preference for skill as opposed to chance activities, for boys but not for girls. Among school children, Hersch (1967) found intensity of achievement striving correlated significantly with male but not with female internality scores.

Nowicki and Strickland (1973) developed a Locus of Control Scale for Children which they administered to subjects in grades three through twelve. They found that subjects became more internal with age, and they perceived a clear relationship between locus of control and achievement scores with the most significant correlations in the male group. They were led to conclude that female achievement does not seem to be predictable from scores on their scale.
Maccoby and Jacklin (1974) also examined comparative studies on locus of control. They reviewed the results from 17 studies and concluded that although the sexes do not differ on these scales through grade school and the high school years, in college there is a trend for women to be externalizers. The explanation they offer for this phenomenon is based on a sex role analysis:

The greater power of the male to control his own destiny is part of the cultural stereotype of maleness, and is inherent in the image of the two sexes portrayed on television and in print. For example, in a recent study of stories in elementary school textbooks, Jacklin and Mischel (1973) found that when good things happened to a male character in a story, they were presented as resulting from their [sic] own actions. Good things happening to a female character (of which there were considerably fewer) were at the initiative of others or simply grew out of the situation in which the girl character found herself. It is not surprising then that young women should be externalizers, by reason of cultural shaping if for no other reason. What is surprising is that the sex difference in this scale does not emerge earlier in life. (p. 157)

In response to the final question posed by Maccoby and Jacklin, the explanation might be offered that young women do not tend to become aware of conflicting social sexual expectations until they reach college. As numerous writers, from Komarovsky to Friedan, have observed, middle class American women have been encouraged to compete with men through their high school years for similar goals--scholarships, admission to the best colleges, etc. Yet in college, when students are faced with decisions relating to careers, women begin to feel the pressures of competing demands and expectations. Although
this situation is rapidly changing, it might not be too farfetched to expect that this situation would, nonetheless continue to pose a dilemma for some women resulting in vacillation and feelings of powerlessness which could result in more external locus of control scores.

In conclusion, it seems reasonable to raise the question of whether masculine values might not moderate the effect of locus of control on achievement striving in a manner that is quite different from the influence of feminine values on locus of control. Another way of expressing this problem is to question the superordinance of locus of control in shaping behavior and to raise the possibility that sex role attitudes may play a crucial role in the behavioral manifestation of this basic characterological trait.
SELF DISCLOSURE AS A FEMININE ACTIVITY:
A BRIEF REVIEW OF THE LITERATURE.

Self disclosure shares with achievement the characteristic of possessing definite sex role connotations. If anything, it seems to be a more distinctly sex-typed behavior than achievement. The popular culture abounds with anecdotes and legends of female garrulousness. A common defense of stereotypes is that they would not exist if they had no basis in reality. The stereotype of the more talkative, open woman finds considerable empirical support. In this section the research revealing sex differences in self disclosure will be reviewed.

For the purposes of the present study, self disclosure has been analyzed into two types of self admission. The first section of the review will focus on general self disclosure. The second will address disclosure of a more specific kind; that is, admission of mild psychological symptomatology. While both types of self disclosure bear a significant relationship to sex role attitudes, it seems that the second, with its overtones of admission of weakness, allows for a closer
scrutiny of particular sex role implications.

The most widely used instrument to assess individual differences in self disclosure has been Jourard's Self Disclosure Questionnaire (Jourard and Lasakow, 1958). It consists of 60 items, ten items in each of six content areas: 1) Attitudes and Opinions, 2) Tastes and Interests, 3) Work or Studies, 4) Money, 5) Personality, 6) Body. Subjects respond to each item by indicating on a three point scale the extent to which the information has been revealed to four target persons: 1) Mother, 2) Father, 3) Best Opposite Sex Friend, 4) Best Same Sex Friend. While research with the Jourard Scale has indicated that it does not successfully predict self disclosure to a research accomplice (Ehrlich and Graeven, 1971; Vondracek, 1969), the scale has been widely used because it is believed to reflect amount and depth of of past disclosure to intimate individuals.

In a review of the literature on self disclosure, in which Jourard's work is accorded a prominent place, Cozby (1973) reports the result of 17 studies; in nine of these studies females reported higher disclosure scores than males; eight studies reported no sex differences. Cozby refrains from any speculation on this discrepancy and limits himself to the observation that, "the fact that no study has reported greater male disclosure may be indicative of actual sex differences." (Cozby, 1973)

It is the premise of this study that a sex role
analysis can at least partially account for the discrepancy between men and women on a self disclosure scale. Feminine values place a high priority on interpersonal, social skills. In a review of 12 studies on social self concept, Maccoby and and Jacklin (1974) found that women and girls tended to rate higher on a social personal orientation scale than men. While masculine values do not especially exclude sociability and interpersonal skills, they do not place as high a value on them as do feminine sex role expectations. However, masculine sex role values, which include such characteristics as independence, autonomy and dominance, would appear to definitely mitigate against admission of weakness and vulnerability. Maccoby and Jacklin (1974) suggested that the findings of greater male defensiveness in several studies could be traced to these expectations.

A wide range of research suggests that men are less willing to admit weakness than women. Sarason and his colleagues (Sarason, Lighthall, Davidson, Waite and Ruebush, 1960) developed several anxiety scales for children (the Test Anxiety Scale for Children, the General Anxiety Scale for Children); in research with these instruments they found a general tendency for girls to score higher than boys. Yet in later work, Sarason and his colleagues (Hill and Sarason, 1966; Sarason, Hill and Zimbardo, 1964) noted that boys score higher on the lie scale and are less willing to admit weaknesses of various
sorts than girls. This raises the question of whether high female anxiety scores do actually reflect real underlying differences.

Maccoby and Jacklin (1974) reviewed 23 studies comparing men and women on general anxiety scales. In no instance did males score higher than females; in 13 studies females scored higher than males. This trend appeared to be even more pronounced at the older age levels; in the nine studies which examined men and women 19 years and older, six showed women scoring significantly higher. Maccoby and Jacklin suggest that these differences do not reflect true underlying differences in level of anxiety, but instead boys' greater unwillingness to admit signs of weakness.

The overt function of a psychological checklist of mild symptomatology is of course to assess the degree of psychological disturbance or anxiety. However, as Maccoby and Jacklin (1974) and Sarason (1964, 1966) have pointed out, such instruments also function covertly as measures of self disclosure, specifically, "negative" self disclosure. The adjective "negative" is used advisedly, because, as has been indicated, the admission of symptoms of anxiety may have completely different connotations depending on whether the sex role perspective is masculine or feminine. Extensive research with the Langner Mental Health Scale, (Langner, 1972) a brief checklist of mild symptomatology, has shown that women consistently endorse
more items than men.

The Langner Mental Health Scale was devised in the fifties for use in the Midtown Manhattan Study, a massive epidemiological study (Langner and Michael, 1963; Srole, Langner, Michael, Oppler and Rennie, 1962). It consisted of 22 items derived from the Neuropsychiatric Screening Adjunct and the Minnesota Multiphasic Personality Inventory. While the scale was intended to provide a means of screening mentally disturbed individuals, subsequent research has shown that it is inadequate for this purpose. Researchers with the Langner Scale have found that college students score higher than predischarge ward patients (Manis, Brawer, Hunt and Kercher, 1963), that neurotics score higher than psychotics (Muller, 1971), and that the scale correlated very highly ($r=.72$) with the Eysenck Neuroticism Scale (Shader, Ebert and Harmatz, 1971). An examination of this research led Seiler (1973) to conclude that the Langner Scale is more suited as a measure of "psychological stress and physiological malaise."

In a study of the population of a New Hampshire township, Phillips and Segal (1970) found women to admit to more items on the Langner Scale than men. They examined 302 individuals over the course of a year for physical and psychological disturbances. They found that more than one third of the female subjects received a score of four or more on the Langner Scale compared to only one fifth of the male respondents.
Phillips and Segal found that the single greatest predictor of psychological disturbance was number of physical illnesses. However, women's mental disturbance scores increased more rapidly with number of physical symptom's than men's. Thus, under roughly equivalent circumstances of objective physical illness, women were more likely than men to report feelings and behavior which were seen by the mental health investigators as signs of psychological disturbance. Furthermore, when the researchers examined the utilization of medical facilities, they found that a higher percentage of women sought help.

In their discussion of these results, Phillips and Segal observed that while their findings accorded with other research, they disagreed with the proposition that these findings reflect a real tendency for women to be more psychiatrically disturbed than men. They suggest that the observed discrepancies result from norms which allow women to confess their vulnerability to stress while stigmatizing the same admission in men as "unmanly." In a proposition foreshadowing the conclusions of Broverman's research, they go so far as to suggest that "the ethic of health is masculine" and refer to a sex role analysis by Gurin:

The male role is closely linked with an active coping interaction with the world, and a man's masculine identity is closely linked to his success in coping with his environment, to his strength in the face of difficulties. It would not be surprising then if a man
defended against feelings that attest to his failure in this respect, and not only experienced such feelings less often than women, but was also less likely to report them if they were experienced. (Gurin, 1960, p. 209-210)
SELF DISCLOSURE AND REPRESSION-SENSITIZATION:
DOES THE SAME RELATIONSHIP HOLD FOR MEN AND WOMEN?

One personality dimension which should obviously affect self disclosure is defensive style. It might be hypothesized that individuals who possess a lower threshold for emotionally sensitive material and who are consequently more aware of intrapersonal phenomena, would tend to disclose more. Studies by a number of researchers using the Byrne Repression Sensitization Scale (Byrne, 1961) have supported this hypothesis, (Kaplan, 1967; Carroll, 1972; Axtell and Cole, 1971; Davis and Sloan, 1974). In these studies, sensitizers, whose defensive style tends to be obsessional and intellectualizing disclosed more than repressors whose defensive style tends to be denying and repressing.

One researcher, however, decided to examine this relationship along sexual lines and found that the positive relationship between sensitization and self disclosure did not hold across sex. In a number of studies, Chelune, using a slightly more complicated measure of self disclosure, found that whereas female sensitizers tended to be high disclosers, male sensitizers had a
significantly lower disclosure rating, (Chelune, 1975; 1976; 1977). In an attempt to account for this discrepancy, Chelune refers to an analysis by Hokanson:

One can infer that females sensitized to potential threat in the interpersonal environment have learned that they can gain control over noxious stimuli and possibly elicit help from friends if they make themselves more vulnerable and disclose themselves more fully. (Hokanson, 1970, p. 82)

This analysis appears to be based on the masculine assumption that admitting fear or anxiety is somehow pusillanimous or at least motivated by the desire to ingratiate oneself and manipulate others. While self disclosure may on occasion achieve these ends, it seems erroneous to suggest that this is its primary function. In fact, many clinically-oriented psychologists see the ability to disclose one's strengths and weaknesses as a prerequisite of a healthy personality. The research presented here suggests that women are supported in self disclosing by feminine sex role norms, while men are inhibited from self disclosing by norms which stigmatize "talking about feelings" and particularly, admitting personal weaknesses, as unmanly. Chelune's research further suggests that the strength of these social sexual norms is such that they can override such a basic personality dimension as defensive style in influencing self disclosing behavior.
Research on achievement and self disclosure indicates that men and women differ in their involvement in these behaviors. Research in the psychology of sex roles has shown that social norms approve different kinds of achieving and disclosing behaviors for men and women. In fact, achievement has been shown to be associated with the instrumentally oriented cluster of masculine characteristics while self disclosure is associated with expressively oriented feminine characteristics. The purpose of the present study is to assess the strength of the relationship between sex role characteristics and these socially designated masculine and feminine behaviors.

The premise of this study is that sex role characteristics are related to achievement and self disclosure and that furthermore when sex differences in these behaviors occur, they can be accounted for by differences in social sexual self concepts. Thus, it would be expected that the difference between men and women in self disclosure would be accounted for by the fact that women include a greater number of feminine characteristics in their self concepts. However, it is
expected that a man who receives a high feminine score would also be a high discloser. Regarding achievement, it is expected that a strong association will be observed between masculine values and achievement striving. Thus, members of either sex who receive high masculine scores will be expected to exhibit a high degree of achievement striving.

In addition to sex role characteristics, this study proposes to evaluate other personality variables which have been shown to affect achievement and self disclosure. Locus of control has been shown to be related to achievement, with internals showing greater achievement striving. Defensive style has been shown to relate to disclosure with sensitizers tending to exhibit a greater amount of disclosure. Furthermore, there is some evidence that the effect of these personality variables is not consistent over sex. These findings raise the question of whether sex role characteristics might not, in some manner, moderate the influence of locus of control and defensive style on behavior. Thus, high feminine sensitizers might be more disclosing than low feminine sensitizers. Similarly, high masculine internals might be more achieving than low masculine internals.

These speculations can be formulated into a series of hypotheses. Two separate measures will be used for both achievement and self disclosure, and these results will be separately analyzed and discussed. The premise of this
study is that the relationship between self disclosure and achievement is one of statistical independence. Although certain initial analyses will be presented for the purpose of providing a clear picture of the data, the principal statistical test will be an analysis of variance, and consequently the hypotheses will be formulated in accordance with this model.

Hypotheses relating to achievement

Two measures of achievement will be used. Four variables will be analyzed in an ANOVA to determine the strength of their relationship to achievement. Each variable will have two levels: 1) Biological sex (men, women), 2) Masculine Sex Role Identification (low, high), 3) Feminine Sex Role Identification (low, high), 4) Locus of Control (external, internal).

Hypothesis 1: A main effect is expected for Masculine Sex Role Identification (Masculine SRI) with high masculine scores related to high Achievement striving.

Hypothesis 2: A main effect is expected for Locus of Control with internality related to high Achievement striving.

Hypotheses relating to self disclosure

Two measures of self disclosure will be used. Four variables will be analyzed in an ANOVA to determine the strength of their relationship to Self Disclosure. Each variable will have two levels: 1) Biological sex (men, women), 2) Masculine Sex Role Identification (low, high),
3) Feminine Sex Role Identification (low, high), 4) Defensive Style (repressors, sensitizers).

**HYPOTHESIS 1**: A main effect is expected for Feminine Sex Role Identification (Feminine SRI) with high feminine values related to high Disclosure.

**HYPOTHESIS 2**: A main effect is expected for Defensive Style with sensitization related to high Disclosure.
METHOD

SUBJECTS

Subjects for the present experiment consisted of 57 male and 57 female undergraduates in Loyola Psychology courses. In return for their taking part in this experiment they received classroom credit.

MEASURES

Each student was given a test booklet composed of a number of questionnaires. The test booklet contained 6 psychological tests as well as a personal information questionnaire. The following tests were administered: the Bem Sex Role Inventory (Bem, 1974), The California Psychological Inventory (Gough, 1964), the Jourard Self Disclosure Scale (Jourard and Lasakow, 1958), the Langner Mental Health Scale (Langner, 1962), the Rotter Locus of Control Scale (Rotter, 1966), the Byrne Repression-Sensitization Scale (Byrne, 1961). Table 1 contains a list of these tests accompanied by the variable which they are expected to measure.
TABLE 1

Tests and Measures in the Psychological Questionnaire

<table>
<thead>
<tr>
<th>TEST</th>
<th>PSYCHOLOGICAL VARIABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEM SEX ROLE INVENTORY</td>
<td></td>
</tr>
<tr>
<td>Masculine Scale</td>
<td>Strength of Masculine values in self concept.</td>
</tr>
<tr>
<td>Feminine Scale</td>
<td>Strength of Feminine values in self concept.</td>
</tr>
<tr>
<td>CALIFORNIA PSYCHOLOGICAL INVENTORY</td>
<td></td>
</tr>
<tr>
<td>Achievement Scale</td>
<td>Degree of Achievement Striving</td>
</tr>
<tr>
<td>PERSONAL INFORMATION QUESTIONNAIRE</td>
<td></td>
</tr>
<tr>
<td>Grade Point Average</td>
<td>Degree of Achievement Striving</td>
</tr>
<tr>
<td>JOURARD SELF DISCLOSURE SCALE</td>
<td>Amount of Self Disclosure--neutral</td>
</tr>
<tr>
<td>LANGNER MENTAL HEALTH SCALE</td>
<td>Self Disclosure--Willingness to admit vulnerability to stress</td>
</tr>
<tr>
<td>ROTTER I-E Scale</td>
<td>Locus of Control</td>
</tr>
<tr>
<td>BYRNE REPRESSION-SENSITIZATION SCALE</td>
<td>Defensive style</td>
</tr>
</tbody>
</table>
PROCEDURE

The subjects were tested in groups of ten or twenty. The testing took place in a large classroom with plenty of available desks. When the students entered the room they were given the test booklet, asked to read the instructions and to fill out the questionnaires truthfully and to the best of their ability. These instructions were accompanied by the suggestion that an hour should provide sufficient time to complete the entire booklet, but if more time was required, they should take it.

Standard instructions accompany most of the tests mentioned in the MEASURES section, and these instructions were included verbatim in the test booklet. However, specialized instructions were devised for the Langer scale.

Since the purpose of using the Langner measure was not to assess degree of psychopathology, but willingness to admit vulnerability to stress, the instructions were formulated to facilitate this end. Students were asked to imagine periods of high stress experienced in the past and to describe their reactions in terms of symptoms experienced.
RESULTS

The results will be presented in three parts. In the first part, male and female subjects will be evaluated across all measures by means of t-tests. In the second part, correlational matrices for achievement and self disclosure will be presented to give an overall picture of the relationship between the variables. The principal analysis will be presented in the third part with the ANOVA tables. The ANOVAs will provide the tests for the hypotheses stated in the third section.

PART 1: A COMPARISON OF MALE AND FEMALE GROUPS

Table 2 gives the mean scores and the t-tests between male and female groups on all measures. As expected, men and women differed on the BSRI in the stereotypic direction with males receiving significantly higher scores (p<.006) on the Masculine scale and females receiving significantly higher scores (p<.001) on the Feminine scale.

Sex differences were also found on the two measures of self disclosure, the Jourard and the Langner scales.

53
TABLE 2

Means and t-Tests between Male and Female Subjects on all Measures

<table>
<thead>
<tr>
<th>VARIABLE (and Measures)</th>
<th>MEN (n=57)</th>
<th>WOMEN (n=57)</th>
<th>t VALUE</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEX ROLE ATTITUDES:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSRI MASCULINE</td>
<td>100.42</td>
<td>93.05</td>
<td>2.81</td>
<td>.006</td>
</tr>
<tr>
<td>BSRI FEMININE</td>
<td>91.47</td>
<td>102.54</td>
<td>-6.33</td>
<td>.000</td>
</tr>
<tr>
<td>LOCUS OF CONTROL</td>
<td>12.17</td>
<td>12.08</td>
<td>.11</td>
<td>.912</td>
</tr>
<tr>
<td>REPRESSION-SENSITIZATION</td>
<td>39.19</td>
<td>42.03</td>
<td>.86</td>
<td>.389</td>
</tr>
<tr>
<td>ACHIEVEMENT:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPA</td>
<td>2.99</td>
<td>2.88</td>
<td>1.26</td>
<td>.212</td>
</tr>
<tr>
<td>CPI ACHIEVEMENT</td>
<td>40.50</td>
<td>442.68</td>
<td>-1.96</td>
<td>.053</td>
</tr>
<tr>
<td>SELF DISCLOSURE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JOURARD SCALE</td>
<td>216.75</td>
<td>2266.26</td>
<td>-4.00</td>
<td>.000</td>
</tr>
<tr>
<td>LANGER SCALE</td>
<td>7.36</td>
<td>10.29</td>
<td>-4.03</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note: df = 113 in all cases
Females scored higher than males on all six of the Jourard subscales, on four of the subscales as well as on the total scale score, women scored significantly higher ($p < .001$). On the Langner scale of symptom admission, women also scored significantly higher ($p < .001$) than men.

On the achievement measures the results were mixed. On the CPI achievement scale, women received a higher score and this difference approached significance at $p < .053$. On the GPA measure, however, the groups did not differ significantly.

On the two personality measures, Locus of Control and Defensive Style, men and women received approximately equal scores.

**PART 2 - MULTIPLE CORRELATION MATRICES FOR ACHIEVEMENT AND SELF DISCLOSURE.**

**ACHIEVEMENT** - Table 3 gives the multiple correlation matrix for the two achievement measures and three variables whose relationship to achievement is to be evaluated. There are several points to be made about the relationships revealed in this table.

The correlation between the CPI Achievement Scale and GPA suggests that these two measures share a limited overlap in measuring the same variable ($r = .19$, $p < .02$). This implication is supported by the fact that both measures correlate positively and significantly ($r = .27$, $p < .002$) ($r = .20$, $p < .015$) with the Locus of Control scores.


TABLE 3

Achievement: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>CPI-ACH</th>
<th>GPA</th>
<th>FEM SCORE</th>
<th>MASC SCORE</th>
<th>LOCUS OF CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI-ACH</td>
<td>$r = 0.19$</td>
<td>$r = 0.01$</td>
<td>$r = 0.20$</td>
<td>$r = 0.27$</td>
<td>$p &lt; 0.02$</td>
</tr>
<tr>
<td></td>
<td>$p &lt; 0.02$</td>
<td>$p &lt; 0.46$</td>
<td>$p &lt; 0.02$</td>
<td>$p &lt; 0.002$</td>
<td></td>
</tr>
<tr>
<td>GPA</td>
<td>$r = 0.17$</td>
<td>$r = 0.15$</td>
<td>$r = 0.20$</td>
<td>$r = 0.20$</td>
<td>$p &lt; 0.02$</td>
</tr>
<tr>
<td></td>
<td>$p &lt; 0.03$</td>
<td>$p &lt; 0.053$</td>
<td>$p &lt; 0.02$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEM SCORE</td>
<td>$r = 0.09$</td>
<td>$r = 0.05$</td>
<td>$r = 0.19$</td>
<td>$r = 0.19$</td>
<td>$p &lt; 0.02$</td>
</tr>
<tr>
<td></td>
<td>$p &lt; 0.17$</td>
<td>$p &lt; 0.29$</td>
<td>$p &lt; 0.02$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MASC SCORE</td>
<td>$r = 0.19$</td>
<td>$r = 0.19$</td>
<td>$r = 0.19$</td>
<td>$r = 0.19$</td>
<td>$p &lt; 0.02$</td>
</tr>
<tr>
<td></td>
<td>$p &lt; 0.02$</td>
<td>$p &lt; 0.02$</td>
<td>$p &lt; 0.02$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOCUS OF CONTROL</td>
<td>$r = 0.19$</td>
<td>$r = 0.19$</td>
<td>$r = 0.19$</td>
<td>$r = 0.19$</td>
<td>$p &lt; 0.02$</td>
</tr>
<tr>
<td></td>
<td>$p &lt; 0.02$</td>
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<td>$p &lt; 0.02$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: $df = 112$ in all cases
These figures duplicate the findings of numerous previous studies which have found a positive relationship between internality and achievement.

There is some suggestion, however, that these measures of achievement differ in their relationship to sex role attitudes. A positive relationship between masculine values and achievement striving had been predicted; however, this prediction was only fulfilled with the GPA measure of achievement and the correlation is not strong ($r=.15, p<.053$). On the CPI achievement measure, masculine scores were in fact negatively correlated with achievement ($r=-.195, p<.019$).

Finally, the positive correlation between masculine scores and locus of control sores ($r=.19, p<.02$) suggests that masculine characteristics do, as Maccoby and Jacklin suggested, include an emphasis on "being in control" and that, in any case, they probably cannot be considered to represent completely independent personality characteristics.

SELF DISCLOSURE - Table 4 gives the multiple correlation matrix for the two self disclosure measures and three of the variables whose relationship to self disclosure is to be evaluated.

The insignificant correlation ($r=.13, p<.08$) between the scores on the Jourard and the Langner scales suggests that for the purposes of our analysis these scales should
### TABLE 4

**Self Disclosure: Correlation Matrix**

<table>
<thead>
<tr>
<th></th>
<th>JOURARD</th>
<th>LANGNER</th>
<th>FEM SCORE</th>
<th>MASC SCORE</th>
<th>REPRESS-SENSITIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOURARD</td>
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<td>r=.23</td>
<td>r=.21</td>
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<td>p&lt;.08</td>
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<td>p&lt;.08</td>
<td>p&lt;.006</td>
<td>p&lt;.01</td>
<td>p&lt;.15</td>
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</tr>
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<td>LANGNER</td>
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<td></td>
<td>r=-.18</td>
<td>r=.52</td>
<td>p&lt;.01</td>
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<td></td>
<td>p&lt;.01</td>
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<td>p&lt;.03</td>
<td>p&lt;.0001</td>
<td></td>
</tr>
<tr>
<td>FEM SCORE</td>
<td></td>
<td></td>
<td></td>
<td>r=.09</td>
<td>p&lt;.17</td>
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<td></td>
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<td></td>
<td></td>
<td>p&lt;.21</td>
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</tr>
<tr>
<td>MASC SCORE</td>
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<td></td>
<td></td>
<td>r=-.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p&lt;.001</td>
</tr>
<tr>
<td>REPRESS-SENSITIZATION</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Note: df=112 in all cases*
be considered separately as measuring relatively different aspects of self disclosure. This distinction would appear to gain further support from the other relationships. It was expected that Repression-Sensitization would reveal a positive relationship with Self Disclosure; however, it was only correlated with scores on the Langner scale ($r = .52, p < .0001$).

Femininity scores did, as expected, correlate positively with both Self Disclosure measures ($r = .23, p < .006$) ($r = .22, p < .009$). However, Masculinity scores also correlated positively with scores on the Jourard scale ($r = .20, p < .014$), but negatively with scores on the Langner scale ($r = -.18, p < .029$).

Finally, there was no correlation between Repression-Sensitization and Femininity, but a significant negative correlation between Masculinity and Repression-Sensitization ($r = -.28, p < .001$) suggests that the two are related and that high masculine individuals tend to avoid emotionally disturbing material. These relationships suggest that while highly feminine individuals tend to view general disclosure and admission of anxiety in the same light, highly masculine individuals, on the other hand, may feel positively toward general disclosure, but negatively toward anything that smacks of "admitting weakness."

**PART 3 - ANOVAS ON THE DEPENDENT MEASURES**

Due to the fact that the "independent" variables were
related and nonorthogonal, it was not possible to obtain equal cell frequencies. A Least Squares Analysis of Variance was used to correct for this nonorthogonality.

According to Bem's recommendation, the sex role scores were divided along a median split into two groups, high and low. The remaining variables were also split along the median into two groups accordingly: MASCULINE SEX ROLE IDENTIFICATION (SRI) [53 thru 96=LOW(1), 97 thru 126=HIGH(2)]; FEMININE SEX ROLE IDENTIFICATION (SRI) [64 thru 92 =LOW (1), 98 thru 123=HIGH (2)]; REPRESSION-SENSITIZATION [5 thru 40=REPRESSOR (1), 42 thru 92=SENSITIZER (2)]; LOCUS OF CONTROL [1 thru 12 =EXTERNAL (1), 13 thru 20=INTERNAL (2)].

ACHIEVEMENT - Table 5 presents the Sums of Squares for the GPA measure of the Achievement variable. The F value for the entire model (F=1.37) fails to reach significance at p<.185. Thus, the entire model with its four variables and their interaction effects accounts for only 16 percent of the variance in GPA. It is evident that the variance in GPA must be contingent upon factors other than those in this model.

Due to the fact that this model does not account for a significant portion of the variance, strict statistical assumptions forbid any further evaluation of the Sums of Squares. Both hypotheses for Achievement must be considered as unsupported. There is insufficient evidence
TABLE 5

ANOVA on Achievement: GPA Measure

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<th>MS</th>
<th>F</th>
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<th>r-square</th>
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SD=.482  Mean GPA=2.94

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<td>.94</td>
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</table>
to reject the null hypothesis for a main effect of either Locus of Control or Masculine Sex Role Identity.

However, it is interesting to note that of the 16 percent of the variance accounted for by this model, the single largest portion is attributable to Locus of Control, and the second to Feminine Sex Role Identification. An examination of the data shows that high IE values are associated with high achievement. Regarding Feminine SRI, the data shows that low feminine values are associated with high GPA scores.

Table 6 presents the Sums of Squares for the CPI measure of the achievement variable. Again the $F$ value for the entire model fails to reach significance at $p<.10$. The entire model with its 4 variables and their interaction effects accounts for only 17 percent of the variance in the CPI Achievement Scale.

Strict statistical assumptions give no warrant to evaluate the SS Table further. Both hypotheses must be regarded as unsupported. There is insufficient evidence to support a main effect for either Locus of Control or Masculine SRI.

However, for the purposes of our investigation, it is interesting to note that again, the single largest portion of the variance is attributable to Locus of Control. There is no evidence to suggest that Masculine SRI exerts any notable influence on this achievement measure.
## TABLE 6

ANOVA on Achievement: CPI Achievement Scale

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SD=5.81

Mean Achievement=41.59

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<td>.23</td>
<td>.01</td>
<td>.93</td>
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</tbody>
</table>
SELF DISCLOSURE - Table 7 gives the Sums of Squares for Self Disclosure as measured by the Jourard scale. The $F$ value for the entire model ($F=3.07$) is highly significant at $p<.0006$. The model with its four factors and their interactions accounts for 30 percent of the variance in the Jourard Disclosure measure.

An examination of the SS Table shows that neither hypothesis is supported by the data. The main effect for Repression-Sensitization is in fact, far from significant ($F=.12, p<.72$). However, the main effect for the Feminine SRI approaches significance at $F=.2.95 (p<.08)$.

There are however, two significant main effects and one significant interaction. Biological Sex is clearly the most significant factor at $F=17.54 (p<.0001)$. This result clearly suggests that for the Jourard measure of Self Disclosure, at least, Biological Sex accounts for a far greater proportion of the variance than Masculine and Feminine Sex Role Identification values combined. This finding is completely contrary to the expectation of this study.

Surprisingly, Masculine SRI accounts for the second largest portion of the variance ($F=5.03, p<.027$). An examination of the data shows that among both men and women, the high disclosers tended to be in the high masculine group and the low disclosers in the low
### TABLE 7

ANOVA on Self Disclosure: Jourard Scale

<table>
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<tr>
<th>SOURCE</th>
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<th>MS</th>
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SD=62.72
Mean Disclosure=241.50

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<td>.09</td>
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<td>.49</td>
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masculine group. The difference between high and low Feminine subjects on Self Disclosure is not as great.

Feminine SRI does appear to exert an influence on Self Disclosure, however, in an interaction with Biological Sex and Repression Sensitization ($F=4.33$, $p<.04$). An examination of the data shows that, although among men there is no particular relationship between Feminine SRI and Repression Sensitization as they affect Self Disclosure, among women, low Feminine sensitizers are very likely to be low disclosers, while high feminine sensitizers are likely to be high disclosers.

Table 8 gives the Sums of Squares for Self Disclosure as measured by the Langner Scale. The $F$ value for the entire model ($F=3.85$) is highly significant at $p<.0001$. The model with its four factors and their interactions accounts for 35 percent of the variance in this Self Disclosure measure.

An examination of the SS Table shows that both hypotheses are supported by this data. Main effects for Feminine SRI ($F=5.71$, $p<.018$) and Repression Sensitization ($F=27.52$, $p<.0001$) indicate that both factors exert a significant independent influence on disclosure of symptoms. Another main effect is reported for Biological Sex ($F=10.50$, $p<.001$) and there is a Masculine SRI by Biological Sex interaction ($F=4.06$, $p<.04$).
TABLE 8

ANOVA on Self Disclosure: Langner Scale

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<tr>
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<th>P</th>
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SD=3.55        Mean Disclosure=8.83

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<td>1</td>
<td>.12</td>
<td>.01</td>
<td>.92</td>
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</table>
Although Feminine SRI is associated with symptom admission with high Feminine scores associated with high Disclosure, the association is not particularly strong relative to Biological Sex or Repression-Sensitization. It had been expected that actual sex differences in symptom admission would be accounted for by differences in degree of Feminine Sex Role Identification. This is not the case. Biological Sex continues to account for a larger proportion of the variance than either Masculine SRI or Feminine SRI combined.

Repression-Sensitization, however, emerges as the single most powerful factor affecting symptom admission. For both sexes, over all combinations of sex role characteristics, the data show that repressors tend to be low disclosers and sensitizers tend to be high disclosers.

When the interaction effect between Masculine SRI and Biological Sex is examined, the data indicate that whereas women tend to be high disclosers regardless of strength of Masculine SRI, high masculine men are almost all low disclosers.

From this data it can be seen that the highest disclosers (in terms of symptom admission) would tend to be female sensitizers with high Feminine SRI. The lowest disclosers would tend to be male repressors with low Feminine and high Masculine SRI.
DISCUSSION

The relationship of sex role characteristics to sexually stereotyped behaviors receives neither definitive support nor a noteworthy lack of support in this study. There is evidence that the relationships do exist; however, they do not appear to be as strong as some theorists might suggest.

Regarding the lack of a demonstrated relationship between sex role values and achievement, the fault may lie with the design itself. None of the factors examined here exhibited much of an association with achievement one way or the other. Perhaps if level of intelligence had been controlled for, certain relationships would have emerged, particularly with the GPA measure.

Numerous researchers would attest to the proposition that achievement striving is a very complex motivation. It might be argued that neither measure employed here really "tapped into" achievement striving and that an in vivo, competitive game of some sort may have been more successful.
Grade Point Average is a problematic measure of achievement drive, particularly as far as sex role implications are concerned. As has been acknowledged by many writers, women do not differ from men on this measure; if anything, women on the whole receive higher grades than men. Yet virtually all the powerful, prestigious positions in our society, positions achieved by individuals of great ambition, are occupied by men. The rejoinder that these positions have been closed to women, while it may be largely accurate, effectively blocks further speculation. Horner's research (1969, 1970), which continues to be among the most relevant in this area, suggests that feminine sex role values inhibit women from the "no-holds-barred" unambivalent achievement drive with which men freely identify. It is a persuasive thesis, but the present data provide it no support, because they demonstrate no relationship between sex role values and achievement.

Another problem which arises in exploring the relationship between sex role values and achievement is, as Maccoby and Jacklin (1974) pointed out, that masculine values tend to define what is regarded as achievement in our society. Women may achieve in other areas, for example, social, interpersonal and nurturant relations, but these achievements are not as highly regarded. Furthermore, traditional feminine careers are less highly regarded than traditional masculine careers. The present study may be vulnerable to the charge that it did not take
career choice into account. Thus, when arranging for subjects for this study, the experimenter was informed that she might encounter some difficulty in acquiring male subjects due to the disproportionately high number of female undergraduates in the Introductory Psychology courses. This imbalance was directly attributable to the fact that a large number of first year nursing students were fulfilling their psychology requirements. Thus, many of the women in this study were probably nursing students. What does this likelihood imply for the differential achievement motivation of the experimental population? Many of these women have high grade point averages and apparently scored highly on the CPI achievement scale, yet the fact remains that they are channeling their ambition into an occupation traditionally reserved for women. Some theorists might suggest that simply by virtue of this occupational choice, these women were less achievement oriented than women who, for example, selected a pre-law course of study.

While the tests on Self Disclosure had the merit of achieving statistical significance, they did not establish the preeminence of sex role attitudes over biological sex in determining actual sex differences in behavior. Clearly if one wanted to predict amount of self disclosure, either neutral or related to symptom admission, one's first choice of a predictor variable would not be sex role attitudes. Biological sex, or, in
the case of symptom admission, Repression-Sensitization, would constitute a more prudent choice. Nonetheless, according to this data, once these factors have been accounted for, a knowledge of sex role identification would improve accuracy of prediction.

It is difficult to understand why, particularly in the case of symptom admission, sex role values would not constitute a more decisive influence. The argument for the influence of sex role stereotypes seems very well founded. Why else would women admit to more symptoms. The idea that they are congenitally less healthy and adjusted than men seems untenable. They live longer than men by an average of ten years (Waldron, 1974), and until recently they have been considerably less subjected to the competitive aggressive pressures which many men have faced in their careers. It is these types of pressures which are associated with the Coronary Prone, Type A personality pattern, a pattern which is much more prevalent among men than women (Waldron, 1974). Although more women than men seek hospitalization and therapy, there are probably multiple causes for this phenomenon, and it is not at all clear that this reflects a true difference in level of underlying pathology. Furthermore, certain clinicians might argue that a willingness to seek help is a sign of basic mental health.

Many different authors have proposed that women seek help because they identify with sex role values which
permit them to do so. Yet men who possess these same values are apparently still less willing to admit their vulnerability. This raises the question of whether sex role values can be considered separately from biological sex. It might be proposed that when an individual acts in accordance with a given sex role value, he or she is subject to two, separate types of reinforcement. One type of reinforcement is personal—to act in manner contrary to personal beliefs and values creates a dissonance which is negatively reinforcing. Social standards constitute the second type of reinforcement. Yet social standards may not always accord with personal standards. Thus, for example, a man with high feminine values may receive positive personal but negative social reinforcement for admitting vulnerability or weakness. Therefore, according to this model, a woman with high feminine values would be more likely to disclose anxieties and fears than a man with the same values, because unlike the man who would receive only positive personal reinforcement, the woman would receive both positive personal and social reinforcement. Given the generally high significance of biological sex in this study, it might be speculated that social sanctions are more powerfully reinforcing than personal sanctions.

When Bem first presented her inventory, she evaluated male and female subjects separately; however, in response to criticism from Spence she abandoned this procedure and
adopted a four-group partition for all subjects. The present results raise the question of whether the BSRI may not lose some of its utility with this partitioning formula.

Virtually no reference was made in the RESULTS section to Bem's classificatory schema. Of course, all of these combinations were included in the ANOVAs. However, several ONEWAY ANOVAs were performed on the Achievement and Self Disclosure measures in which sex role values were the only variables considered. In none of these tests did the $F$ ratio reach significance; however, in two of them, the highest and lowest groups were those which would have been predicted by a sex role analysis. Thus, in the ONEWAY ANOVA for GPA ($F=1.8, p<.146$), the highest group was the high Masculine-low Feminine and the lowest group was the high Feminine-low Masculine. In the ONEWAY ANOVA on symptom admission ($F=1.8, p<.15$), the highest group was the low Feminine-high Masculine and the lowest group was the high Feminine-low Masculine. While these findings are interesting, it is evident in the case of symptom admission particularly, that the variance in these scores can be more completely accounted for by other parameters.

In conclusion, one more explanation might be offered for the "relative failure" of this study to find a more significant effect for sex role identification, and that is that the BSRI itself may be partially to blame.

The BSR shares a common ground with other sex role
measures in terms of its construction and content. The BSRI items were factor analyzed by Waters (1977) into three factors: 1) Expressive-affective, 2) Aggressive-dominant, 3) Independent-self sufficient. The feminine items tended to load on the first factor while the masculine items were divided between the second two. These categories are in accord with other theories which have examined general masculine and feminine characteristics (Bakan, 1972; Parsons and Bales, 1955). Finally, in constructing the BSRI, Bem generally followed the model established by McKee and Sherriff (1953).

However, there are several points where both the content and the construction of the BSRI differ from earlier sex role scales. For one thing, Bem selected the initial list herself, and she tried to insure that all the items were positive in value. Thus, due to her own conscious or unconscious biases, Bem may have restricted the selection of sex role characteristics so that important items were excluded. Certainly, earlier researchers have demonstrated that sex role stereotypes include both socially positive and negative items. It seems entirely likely that some of these negative items may possess a considerable power to discriminate masculine from feminine stereotypic sex role identification. Consequently, by omitting these items from the scale, by a priori decision, Bem may have weakened the overall power of her scale.
Finally, in deciding to have an equal number of masculine and feminine characteristics, Bem may have achieved a pleasing symmetry, but her scale may not reflect empirical social realities. McKee and Sherriffs (1953) as well as later researchers (Rosenkrantz et al., 1968) found stereotypic masculine qualities to outnumber stereotypic feminine qualities. Again, this arbitrary decision on Bem's part may have weakened the power of her scale to discriminate sex role differences. It might have been better to have included this masculine-feminine item imbalance in the scale and to have accommodated for it by some manipulation in the scoring.
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APPROVAL SHEET

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The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

10/1/79
Date

Director's Signature