

1976

## Relationships between sex role, empathy and anxiety

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AN ABSTRACT OF THE THESIS OF Charles M. Fantz for the Master of Science in Psychology presented August 3, 1976.

Title: Relationships Between Sex Role, Empathy and Anxiety.

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:

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The relationships between masculinity, femininity, anxiety and empathy were looked at in this study. Specifically of concern was whether "Androgyny" would be less debilitating and restricting than the traditional "Masculine" and "Feminine" roles as measured by anxiety and empathy scores. Volunteers from undergraduate psychology classes, 54 men and 45 women, were administered a test packet containing the Bem Sex Role Inventory, the Hogan Empathy Scale, and the Taylor Manifest Anxiety Scale. Multiple regression analyses and simple correlations were performed by computer on seven variables.

The results did not substantiate any of the hypotheses tested. Unexpected and significant correlations were found such as the negative correlations between masculinity and anxiety scores for men, women, and the total sample. Explanations were offered for the unexpected results, and factors to be taken into account in future research were suggested.

RELATIONSHIPS BETWEEN SEX ROLE,  
EMPATHY AND ANXIETY

by .

Charles M. Fantz

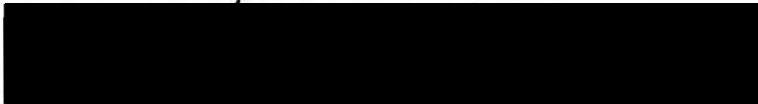
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in  
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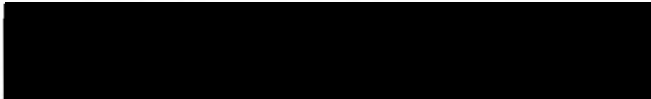
Portland State University  
1976

TO THE OFFICE OF GRADUATE STUDIES AND RESEARCH:

The members of the Committee approve the thesis  
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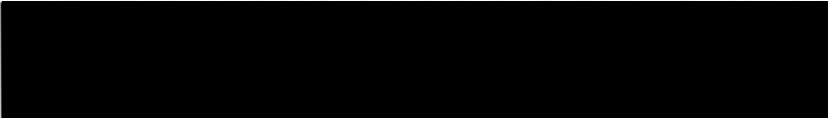
  
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## CHAPTER I

### INTRODUCTION

Recently Sandra Bem, a psychologist at Stanford University, has written about the importance of developing a conception of mental health which is free from culturally imposed definitions of masculinity and femininity (Bem, in press). She believes that defining certain behaviors as appropriate only for women and other behaviors as only appropriate for men is restricting and debilitating for both sexes. This sex-typing of behaviors has led to masculinity being associated with assertiveness and dominance, pragmatism, problem solving and task orientation, and a concern for one's individuality, whereas femininity is associated with emotional sensitivity and concern for the welfare of others, the seeking of harmony between oneself and others, and passivity (Bakan, 1966; Erikson, 1964; Parson & Bales, 1955).

This study looks at the relationships between masculinity, femininity, anxiety and empathy. Specifically of concern is whether "Androgyny", a new sex role, seems to be less debilitating and restricting than the traditional "Masculine" and "Feminine" roles as measured by anxiety and empathy scores.

The sex role categories of Bem which are used in this study are derived from the Bem Sex Role Inventory (Bem, in



press). The categories are: 1) "Masculine" referring to someone scoring high in masculinity and low in femininity, 2) "Feminine" referring to someone scoring high in femininity and low in masculinity, 3) "Androgynous" referring to someone scoring high in both masculinity and femininity, and 4) "Undifferentiated" referring to someone scoring low in both masculinity and femininity. All the masculine-feminine (M-F) scales referred to in the following studies give measures corresponding to Bem's categories of "Feminine" and "Masculine". In traditional M-F scales scoring high in femininity is equivalent to a "Feminine" sex role and scoring high in masculinity is equivalent to a "Masculine" sex role. The reason for this is that traditional M-F scales are structured so that masculinity and femininity are opposite poles on the same dimension and therefore as one moves toward greater femininity one also moves away from masculinity and vice versa. Bem's inventory, however, is constructed so that masculinity and femininity are orthogonal dimensions. This allows for the development of two other possible sex roles: "Androgynous" and "Undifferentiated". No predictions will be made about the latter category.

## CHAPTER II

### REVIEW OF THE LITERATURE AND STATEMENT OF HYPOTHESES

The terms sex-typed and reversed sex-typing will be used in reviewing the studies that follow. Sex-typed refers to men who adopt the "Masculine" role and/or women who adopt the "Feminine" role. Reversed sex-typing occurs when men adopt the "Feminine" role or women adopt the "Masculine" role.

Some evidence has suggested that sex-typing might be correlated in adults with high anxiety. Harford, Willis, and Deabler (1967) took 213 male volunteers participating in a Veterans Administration project, ranging in age from 20 to 60 years. They were primarily from semi-professional occupations. The subjects were given the following battery of tests: the 16PF questionnaire, the GATB, the Allport-Vernon-Lindzey Study of Values, and the Strong Vocational Interest Blank (SVIB) for men. Measures of masculinity-femininity were derived from the SVIB. Using Pearson's  $r$  coefficient, correlations between masculinity-femininity and scales from all the tests were calculated. Among the results was the finding that high masculinity was associated with high anxiety and neuroticism.

Cosentino and Heilbrun (1964) took 85 males and 156

females from an undergraduate class in psychology. They administered an 80-item aggression questionnaire developed by Sears, Gough's Adjective Check List, and the Taylor Manifest Anxiety Scale. Males were classified on the basis of ACL scores as high or low masculine and females were classified as high or low feminine. The Aggression Anxiety and Manifest Anxiety scores were then compared. Using Pearson's  $r$  coefficient, correlations were calculated. The results showed that high femininity in both sexes (low masculine score in males) was correlated with high aggression and manifest anxiety. This suggested that in men reversed sex-typing was associated with anxiety.

Gall (1969) gave a battery of tests and questionnaires to 1217 male and 979 female freshman from the University of California at Berkeley. He took the anxiety and M-F scales from the Omnibus Personality Inventory. The anxiety scale from this is a shortened and highly reliable version of the Taylor Manifest Anxiety Scale (Bendig, 1956). Using a method described by Dahlstrom and Welsh he computed inter-scale correlations with item-overlap covariation partialled out. The results showed that more "Feminine" males and females admit to a higher level of anxiety than their less "Feminine" sex-peers, thus confirming Cosentino and Heilbrun's (1964) results.

Kagan (1964) and Kohlberg (1966) suggested that sex-typed individuals were motivated to keep their behavior con-

sistent with an internalized sex-role standard. Bem (1972, 1974, 1975) and Bem and Lenney (in press) have suggested that this might be done by such individuals keeping a constant vigilance in order to suppress and inhibit any behavior which might be considered inappropriate for their sex. This could explain the high anxiety which some studies have found in sex-typed individuals. Bem hypothesized that "Androgynous" individuals, by definition high in both masculinity and femininity, would have no internalized sex-role standard that they had to live up to and therefore would not have to inhibit cross sex-typed behaviors. This led to the speculation by this investigator that "Androgynous" subjects might have less anxiety than non-androgynous subjects.

Bem and Lenney (in press) studied the amount of discomfort felt in subjects engaging in cross sex-typed activities. At the end of an experiment she had subjects, 24 who were sex-typed, 24 who were "Androgynous", and 24 who were sex-reversed as classified by the Bem Sex Role Inventory (BSRI), engage in 3 sex appropriate, 3 sex inappropriate, and 3 neutral activities. She then had them indicate on a seven point scale how "masculine" (for males) or "feminine" (for females), how "attractive", how "likeable", how "nervous", and how "peculiar" they had felt while performing each activity. After analyzing her data using analysis of variance and planned comparisons she concluded that sex-typed subjects felt significantly worse and had the most discom-

fort after performing cross sex-typed activities than did either the "Androgynous" or sex-reversed subjects. This would agree with the hypothesis about less anxiety for "Androgynous" subjects but has not directly measured it.

From another perspective, one could assume that "Androgynous" subjects would have even higher anxiety scores than either highly "Masculine" or "Feminine" subjects. If the effect of scoring high on both masculinity and femininity were additive then this would be true, i.e., you would expect an "Androgynous" person to be extremely anxious.

The first question then to be investigated was whether masculinity (M) and femininity (F) would best predict anxiety: 1) by an additive process, i.e., the greater the sum of the M and F scores, the greater the anxiety, or 2) by an interaction in their effects on anxiety such that when either M or F was high then the other would significantly effect the anxiety score in a negative direction, but when either one was low the other would have a positive relationship with anxiety. The latter model of prediction would suggest a more complicated prediction formula, i.e.,  $M+F+MF$  (MF is the product of M and F) would be used in predicting anxiety. This latter model if shown to be a better predictor would lend support to the idea that "Androgynous" subjects have less anxiety.

The BSRI and the Taylor Manifest Anxiety Scale were used to test which prediction model would work best.

### Hypothesis 1

For the population examined, a tendency would be shown that as masculinity and femininity scores increased together (an indication of greater androgyny and less sex-typing) anxiety scores would decrease. This would be determined by looking at the effect of an interaction term in predicting anxiety from masculinity and femininity. The interaction term would be the product of the masculinity and femininity scores.

Bem had also suggested that "Androgynous" subjects could respond more appropriately than sex-typed individuals to situations calling for cross sex-typed behaviors, thus giving "Androgynous" individuals more flexibility to act effectively across situations. She found evidence that sex-typed individuals actually do inhibit cross sex-typed behaviors. Bem and Lenney (in press) did an experiment where subjects were told they would perform a variety of activities and be photographed for a study on whether people made judgements about an individual as a function of the kinds of activities the individual was engaged in. The activities were arranged in pairs, and subjects were asked to select the one activity they would prefer to perform while being photographed later on. Of the 30 pairs, 15 had choices which involved different sex-role connotations: 5 had neutral vs. masculine activities. The other 15 pairs had choices within the same category: neutral vs. neutral, etc.

In all sex-role conflict situations the cross sex-typed activity paid more. It was explained that although the experimenters wanted the subjects to select what they most wanted to do, the experimenters were also willing to pay a small amount more for the activities that they had the least number of pictures of, at the present time. Subjects were told that they would be given only one or two minutes, that the experimenters were not interested in performance quality or completion of the task, and that the purpose was just to have them engaged long enough in the activity to take a convincing photograph. They were also assured the later study would be done at another campus so that no one they knew would likely see their pictures. The results showed that sex-typed subjects were significantly more likely to select their own sex's activities and reject the other sex's activities even though these choices cost them money. This led Bem to conclude that traditional sex-role typing produces avoidance of cross sex-typed behaviors.

Bem continued her investigations. In one study (1975) she solicited 54 undergraduates taking Introductory Psychology for an experiment on humor. She presented each subject with the responses of 3 other subjects regarding the funniness-unfunness of cartoons, in a test of conformity. The other subjects' responses were actually on tape and in 46 of the 92 cartoons presented, the responses formed a false consensus (were in the opposite direction on the funniness-

unfunny continuum from norms earlier established). Bem found that both "Feminine" men and women conformed more frequently to the false consensus than did either "Masculine" or "Androgynous" men or women. In a second study she solicited a similar population of 66 undergraduates for an experiment on mood. She had subjects involved in 4 different activities each of which was succeeded by filling out a mood questionnaire. The second activity involved a forced interaction with an 8-week old kitten. The fourth activity was a spontaneous play session where subjects could engage in any activity they chose. The kitten was again present. Through coded observations and mood questionnaire analysis it was found that "Masculine" men played less with the kitten and enjoyed such contact less than either "Androgynous" or "Feminine" men. She concluded that, "Thus, masculine males displayed masculine independence, but not feminine playfulness, and feminine males displayed feminine playfulness, but not masculine independence (p. 642)." For the women in this study the results were mixed. "Androgynous" women were quite responsive to the kitten but "Feminine" women were not, and "Masculine: women were in between. This lack of responsiveness to the kitten by "Feminine" women ran contrary to what was expected. Bem wondered if this indicated a general non-nurturing style for the "Feminine" women or if this result was specific to animals. She conducted another study to find out. In this study (Bem,



Martyna, and Watson - under editorial review) each subject was left alone with a 5-month old baby for 10 minutes having been told that through a one-way mirror observers were watching the infant's reactions to a stranger. The observers were actually measuring the subjects' responsiveness to the baby by time sampling the amount of smiling, talking, holding, kissing, nuzzling or other touching engaged in by the subject toward the infant. This time "Feminine" and "Androgynous" subjects of both sexes, did not differ significantly from one another and both were more nurturant than "Masculine" subjects toward the babies.

These last studies suggested that cross sex-typed behaviors were motivationally problematic for sex-typed individuals. They avoided cross sex-typed behaviors and showed more discomfort when engaged in them. This greatly restricted their behavior and led this investigator to speculate that sex-typed individuals would be less empathic than "Androgynous" individuals.

Empathy as used here means the ability to imagine oneself as being another person and experiencing the world as this other person would, having his or her thoughts, feelings, and perceptions. Mead (1934) who doesn't use the word empathy nevertheless referred to it when he said, "We feel with him and we are able so to feel ourselves into the other because we have, by our own attitude, aroused in ourselves the attitude of the person we are assisting (p. 299)."

Mead referred to this process as "taking the role of the other". He said a person develops self-consciousness by regarding his or herself from the perspective of a person with whom he or she is involved, "It is through taking this role of the other that he is able to come back on himself and so direct his own process of communication (p. 254)."

Dymond (1948) referred to the importance of being able to feel what others are feeling in order to understand one's relationships with others. Cottrell and Dymond (1949) suggested that empathy was basic to effective social interaction. Hogan (1969) referred to empathy as taking the moral point of view which he defined as considering the consequences of one's actions for the welfare of others. Many role theorists (Cottrell, 1971; Goffman, 1959; Kelly, 1955; McDougall, 1908; Mead, 1934; Sarbin & Allen, 1968) have suggested that "taking on the role of the other" facilitates social interaction. Conversely they have implied that the absence of empathic ability hinders the development of interpersonal relationships. Mead suggested that practice at role taking would lead to social sensitivity and would enable one to, "carry on a whole series of different relationships to different people (p. 142)." Cameron (1947) suggested that a socially adept person was one who had learned a wide variety of social roles and could easily shift from one to another. Such a person also could predict the attitudes and responses of others by a process of symbolic role taking

and then could modify his or her behavior on the basis of those predictions.

Since some evidence suggested that sex-typed individuals have a restricted set of behaviors available to them this investigator speculated that this would significantly decrease their ability for "taking the role of the other". In other words, the prediction was made that "Androgynous" subjects would have greater empathic abilities than non-androgynous subjects. The BSRI and the Hogan Empathy Scale were used to test this out.

### Hypothesis 2

For the population examined a tendency would be shown that as masculinity and femininity scores increased together (an indication of greater androgyny and less sex-typing) empathy scores would increase. This would be determined by looking at the effect of an interaction term in predicting empathy from masculinity and femininity. The interaction would be the product of the masculinity and femininity scores.

There have been a couple of studies relating anxiety to empathy. Bergin and Jasper (1969) gave the MMPI, the EPPS, and the Truax Accurate Empathy Scale to 36 fourth-year graduate students in clinical and counseling psychology. They found a negative correlation between empathy and anxiety. In another study Hekmat, Khajavi, and Mehryan (1974) gave 475 undergraduates Eysenck's PEN Inventory and

Hogan's Empathy Scale and found that empathy correlated negatively with neuroticism. Though neuroticism is obviously not the same thing as anxiety, on this inventory neuroticism is composed of three factors: worrisomeness, anxiety and somatic complaints. These two studies suggest a negative relationship between anxiety and empathy but are far from establishing such a relationship. Since measures of empathy and anxiety were being taken, it was decided to look at the relationship between them.

### Hypothesis 3

For the population examined a tendency would be shown that as anxiety scores increased, empathy scores would decrease.

## CHAPTER III

### METHOD

#### Subjects

Student volunteers from four lower division undergraduate psychology classes served as subjects. There were a total of forty-five women and fifty-four men in the study. The mean age of the women was 22.7 years with an age range of 18 to 45 years. The mean age of the men was 22.8 years with an age range of 18 to 50 years.

#### Procedure

All subjects were administered a test packet consisting of the Bem Sex Role Inventory, the Hogan Empathy Scale and the Taylor Manifest Anxiety Scale. The order of the tests in the packet were varied to counterbalance any ordering effects. Each test packet was scored for the following variables: masculinity, femininity, mf (the product of masculinity and femininity), anxiety and empathy. Age and sex were also obtained for each subject. These raw scores were then punched onto computer cards and several multiple regression analyses were performed using the Biomedical Program BMD03R (Multiple Regression With Case Combinations).

Several multiple correlations were performed on the men alone, the women alone, and the total sample. The

first two correlations involved: 1) using the masculinity and femininity scores to predict anxiety, and 2) using the masculinity and femininity scores plus an interaction term consisting of the product of the masculinity and femininity scores to predict anxiety. These two correlations were then compared to see if they were significantly different from one another. The same procedure was then applied to predicting empathy from masculinity and femininity scores with and without the interaction term. After these, ten simple correlations were performed between anxiety and empathy, anxiety and age, empathy and age, femininity and age, masculinity and age, masculinity and femininity, empathy and masculinity, anxiety and masculinity, empathy and femininity, and anxiety and femininity.

#### Information on The Test Instruments

The BSRI (Bem, 1974) is an inventory where masculinity and femininity are treated as two orthogonal dimensions (each representing positive domains of behavior) rather than as two ends of a single dimension. It consists of 20 masculine, 20 feminine, and 20 neutral personality characteristics. Subjects are asked to rate how true a given characteristic is for them on a 7 point scale. Subjects end up with a separate masculinity and femininity score which go together to produce one of four categories: "Masculine" - high masculinity and low femininity, "Feminine" - high femininity

and low masculinity, "Androgynous" - high on both masculinity and femininity, or "Undifferentiated" - low on both masculinity and femininity. Items were classified as masculinity, femininity, or neutral items according to differential desirabilities for men or women of an item as judged by Q-sorts. Judges were 50 female and 50 male undergraduates. The masculinity and femininity scores were found to be empirically independent, average  $r=.03$ . The androgyny difference score was reliable over a four-week interval, average  $r=.93$ .

The Hogan Empathy Scale (1969) is composed of 31 items from the California Psychological Inventory (CPI), 25 items from the Minnesota Multiphasic Personality Inventory (MMPI), and 8 items from various testing forms used at the Institute for Personality Assessment and Research (IPAR) in Berkeley. Hogan using a Q-sort description of the "ideally empathic person" assigned empathy ratings to 211 college men, working engineers and military officers. The composite Q-sort used to make empathy ratings was highly reliable ( $r=.90$ ). The items judged as most characteristic of an empathic person were: 1) is socially perceptive of a wide range of interpersonal cues, and 2) seems to be aware of the impression he makes on others. The items judged most uncharacteristic of an empathic person were: 1) does not vary roles: relates to everyone in the same way, and 2) judges self and others in conventional terms like "popular-

ity", "the correct thing to do", "social pressures", etc. (Hogan, 1975). These characteristics make sense according to the previous discussion on empathy.

The empathy ratings were used to form high and low subgroups and then subjects' responses to a combined pool of 957 items from the CPI, MMPI, and the group of IPAR items were compared. Using the chi-square or Fisher's exact statistic to evaluate differences, 64 items were selected for the final scale. A factor analysis (Greif and Hogan, 1973) suggested three underlying themes: tolerance and considerateness, social self-confidence, and humanistic values. In the samples used during its development the average correlation between the scale and concurrent empathy ratings was .62.

The Manifest Anxiety Scale (Taylor, 1953) consists of 50 items taken from the MMPI. It was developed by giving five clinical psychologists 200 items from the MMPI along with a definition of manifest anxiety derived from Cameron's description of chronic anxiety reactions (Cameron, 1947). Initially 65 items were selected from the 200, where 80% agreement or better had been reached by the clinicians. This was later cut to 50 items. Buss, Wiener, Durkee, and Baer (1955) obtained a correlation of .60 between the MAS and ratings of overall anxiety made by psychologists. Rankin (1963) obtained an internal consistency reliability (K-R 21) of .81. The test-retest reliability after 3 weeks



was found to be .89 (Taylor, 1953).

## CHAPTER IV

### RESULTS AND DISCUSSION

The multiple correlation coefficients and simple correlation coefficients for the men alone, women alone, and the total sample are presented in Table I. The only significant correlation which held for the men and women separately and also for the total sample was between anxiety and masculinity scores. This negative correlation was highest for the men,  $r = -.33145$ , accounting for about 11% of the variance. The masculinity - anxiety correlations in all subjects account for almost all of the combined masculinity and femininity correlations with anxiety, i.e.,  $-.33145$  is most of  $-.3597$  (male subjects). It seems that the femininity scores add little to predicting anxiety, that one can predict almost as well from the masculinity scores alone, as one can from the masculinity and femininity scores together.

To a lesser extent the same can be said for the lack of value of the femininity scores in predicting empathy. One can predict empathy almost as well with the masculinity scores alone, as from the masculinity and femininity scores together. At the same time, neither masculinity scores nor femininity scores seem to be relevant to predicting empathy in males,  $r = -.07457$ ,  $r = .05394$ . Also masculinity and fem-

TABLE I

CORRELATION COEFFICIENTS FOR SPECIFIED  
DEPENDENT AND INDEPENDENT VARIABLES

Dependent variable	Independent variable	Male subjects	Female subjects	Total sample
Anxiety	Masculinity-Femininity	-.3597*	-.2403	-.2985*
Anxiety	Masculinity-Femininity plus interaction term	-.3838*	-.2453	-.3017*
Empathy	Masculinity-Femininity	-.0986	.4072*	.1521
Empathy	Masculinity-Femininity plus interaction term	-.1282	.4073	.1523
Anxiety	Empathy	-.43554***	-.15099	-.32451**
Masculinity	Femininity	.13404	-.03692	-.12690
Anxiety	Age	-.14014	.12641	-.01663
Empathy	Age	.24336*	.13167	.19055
Femininity	Age	.04669	-.06290	-.00143
Masculinity	Age	-.07609	.20951*	.06092
Empathy	Masculinity	-.07457	.36312***	.13710
Empathy	Femininity	.05394	.17073	.04801
Anxiety	Masculinity	-.33145***	-.23429*	-.25211*
Anxiety	Femininity	-.18301	-.04455	-.12652

\*p &lt; .05, \*\*p &lt; .005, \*\*\*p &lt; .001

inity appear to be unrelated.

Age seems to predict empathy in men,  $r = .24336$ , better than any thing else except for anxiety scores. Anxiety and empathy scores are negatively correlated for all subjects and reach statistical significance for the total sample,  $r = -.32451$  accounting for about 11% of the variance, and for men,  $r = -.43554$ . This latter correlation of  $r = -.43554$  was the highest found, and accounts for almost 19% of the variance.

Age seems to have no particular relationship to femininity scores. There also appears to be no relationship between age and masculinity except for women. Women score higher in masculinity with increasing age,  $r = .20951$  which accounts for about 4% of the variance.

In women the highest single predictor of empathy is masculinity,  $r = .36312$  which accounts for about 13% of the variance. Since in women, masculinity is significantly and positively correlated with age,  $r = .2095$ , and significantly and negatively correlated with anxiety,  $r = -.23429$ , it is not surprising that empathy and age are positively correlated and empathy and anxiety are negatively correlated. Although these last two correlations,  $r = .13167$  and  $r = -.15099$ , are not statistically significant, they are in the directions one would expect.

In predicting empathy only one multiple correlation reached statistical significance. Masculinity and feminin-

ity scores positively correlated,  $R = .4072$ , with empathy. Though at first it appeared that when adding the interaction term the correlation was slightly improved,  $R = .4073$ , this correlation failed to reach statistical significance and so could not be relied on as valid. No other multiple correlations regarding empathy reached statistical significance. In looking at the prediction of anxiety, however, the results were more encouraging. For both the total sample and the men alone there were significant and positive correlations between anxiety, and masculinity and femininity with and without the interaction term. For the men, predicting anxiety without the interaction term yielded  $R = -.3597$  whereas with the interaction term  $R = -.3838$ . This difference while in the predicted direction according to hypothesis 1, was unfortunately not significant;  $F_{1,50} = 1.048$ . For the total sample, predicting anxiety without the interaction term  $R = -.2985$ , whereas with the interaction term  $R = -.3017$ . While this difference was in the predicted direction according to Hypothesis 1, it also was not significant;  $F_{1,95} = .119$ .

In an overview, it appears that while some of the correlations were in the predicted directions, none of the hypotheses were substantiated. Where multiple correlations were statistically significant, the differences between correlations which included the interaction term and those which did not, were not statistically significant. Several

of the simple correlations were statistically significant but were sufficiently low as to not be of any predictive value.

For those correlations which were statistically significant, the following explanations are offered. Contrary to the original hypotheses, there was no evidence that masculinity and femininity interact in their effects on anxiety or empathy. Indeed, masculinity scores alone seem to account for most of the correlations found when masculinity and femininity scores were combined to predict anxiety or empathy. Perhaps the reason that the anxiety-masculinity correlations were consistently negative and significant has to do with assertiveness. One of the main characteristics of the masculine role is assertiveness and anxiety is often reduced as one becomes assertive. The masculinity scale is made up of such items as: "Defends own beliefs", "Assertive", "Strong personality", and "Forceful". A person endorsing many masculinity items may thus be saying she or he is assertive and proactive, two words not usually used to describe anxious people.

It may be that "androgynous" persons do not yet have adequate reference groups and institutionalized support systems. Sex-typed individuals are still in the majority and androgyny as a legitimate alternative is quite new. Due to a deficient support system, "androgynous" persons may be anxious. This could explain why anxiety scores were not re-

duced when the interaction term was added (an indication of increased androgyny).

The best predictor of empathy in women is their masculinity scores whereas for men it is their anxiety scores. Perhaps the reason behind this finding in women is that many women want to move out of the traditional feminine role. These women are likely to endorse more masculinity items and to assume new and varied roles. They are thus capable of "taking the role of the other" due to their trying on new roles for themselves. The finding that empathy-anxiety correlations are not statistically significant in women may suggest that many women are willing to tolerate some anxiety in order to try out new roles.

For men, the more anxious they become the less open they would be to new roles for women and other men, and hence themselves. Thus, they would be less capable of "taking the role of the other" or empathy. Therefore, the degree of anxiety would be the best predictor of ability to empathize. The finding that age is second best in predicting empathy in men is probably related to the fact that this is a college sample. It may very well be that older men taking college courses tend to be more open to learning new things and changing roles, and therefore would be less anxious about themselves and others taking on new roles. This would enable them to be more empathic. The relationship of openness to new things, less anxiety and more empathy with

age may not hold for men outside of a college environment. Outside of college, men may become increasingly rigid, anxious and less empathic as they age.

The positive correlation between age and masculinity in women may seem puzzling at first. In view of the fact that this is a college sample, this finding makes more sense. Older women who take college courses may represent a group of women more interested in breaking out of the traditional feminine role than younger college women. They have to make a deliberate decision to cross the bounds of homemaking and childrearing to go to college whereas many younger women may be expected and supported by their families in going to college. Thus, older women may endorse more masculinity items. The relationship of age and masculinity for women outside the university may be quite different; in fact, it may be reversed from that found here due to the fact that older women in general may be more satisfied and secure with the feminine role.

In surveying the results, it appears that the relationships between masculinity, femininity, anxiety, and empathy are more complex than originally hypothesized. It is clear that while this approach lent some support to the original hypotheses, it substantiated none of them.

It may be propitious to study how dissatisfaction with sex role, defensiveness about changing sex roles, and differences in educational-economic backgrounds effect the rela-



tionships reported in this study.

## BIBLIOGRAPHY

- Bakan, D. The duality of human existence. Chicago: Rand McNally, 1966.
- Bem, S. L. Psychology looks at sex roles: Where have all the androgynous people gone? Paper presented at UCLA Symposium on Women, May 1972 and obtainable by writing the author, Department of Psychology, Stanford University: Stanford, California 94305.
- Bem, S. L. The measurement of psychological androgyny. Journal of Consulting and Clinical Psychology, 1974, 42, 155-162.
- Bem, S. L. Sex role adaptability: One consequence of psychological androgyny. Journal of Personality and Social Psychology, 1975, 31, 634-643.
- Bem, S. L. Beyond androgyny: Some presumptuous prescriptions for a liberated sexual identity. In J. Sherman & F. Denmark (Eds.), Psychology of women: Future directions of research. Psychological Dimensions, in press.
- Bem, S. L. & Lenney, E. Sex-typing and the avoidance of cross-sex behavior. Journal of Personality and Social Psychology, in press.
- Bem, S. L., Martyna, W., & Watson, C. Sex-typing and androgyny: Further explorations of the expressive domain. Under editorial review - Sandra Bem. Department of Psychology, Stanford University: Stanford, California 94305.
- Bendig, A. W. The development of a short form of the Manifest Anxiety Scale. Journal of Consulting Psychology, 1956, 20, 384.
- Bergin, A. E. & Jasper, L. G. Correlates of empathy in psychotherapy: A replication. Journal of Abnormal Psychology, 1969, 74, 477-481.
- Buss, A. H., Weiner, M., Durkee, A., & Baer, M. The measurement of anxiety in clinical situations. Journal of Consulting Psychology, 1955, 19, 125-129.
- Cosentino, F. & Heilbrun, A. B. Anxiety correlates of sex-role identity in college students. Psychological Reports, 1964, 14, 729-730.
- Cottrell, L. S., Jr. Covert behavior in interpersonal interaction. Proceedings of the American Philosophical

Society, 1971, 115, 462-469.

Cottrell, L. S. & Dymond, R. The empathic responses: A neglected field for research. Psychiatry, 1949, 12, 355-359.

Dymond, R. A preliminary investigation of the relation of insight and empathy. Journal of Consulting Psychology, 1948, 12, 228-233.

Erikson, E. Inner and outer space: Reflections on womanhood. In R. J. Lifton (Ed.), The woman in America. New York: Houghton-Mifflin, 1964.

Gall, M. D. The relationship between masculinity-femininity and manifest anxiety. Journal of Clinical Psychology, 1969, 25, 294-295.

Goffman, E. The presentation of self in everyday life. New York: Doubleday Anchor, 1959.

Greif, E. R. & Hogan, R. The theory and measurement of empathy. Journal of Counseling Psychology, 1973, 20, 280-284.

Harford, T. C., Willis, C. H., & Deabler, H. L. Personality correlates of masculinity-femininity. Psychological Reports, 1967, 21, 881-884.

Hogan, R. Development of an empathy scale. Journal of Consulting and Clinical Psychology, 1969, 33, 307-316.

Hogan, R. Empathy: A conceptual and psychometric analysis. The Counseling Psychologist, 1975, 5, 14-18.

Hekmat, H., Khajavi, F. & Mehryar, A. Psychoticism, neuroticism and extraversion: The personality determinants of empathy. Journal of Clinical Psychology, 1974, 30, 559-561.

Kagan, J. Acquisition and significance of sex-typing and sex-role identity. In M. L. Hoffman & L. W. Hoffman (Eds.), Review of child development research. Vol. 1, New York: Russell Sage Foundation, 1964.

Kelly, G. The psychology of personal constructs, Vol. 1: A theory of personal constructs. New York: Norton, 1955.

Kohlberg, L. A cognitive-developmental analysis of children's sex-role concepts and attitudes. In E. E. Maccoby (Ed.), The development of sex differences. Stanford, California: Stanford University Press, 1966.

- McDougall, W. An introduction to social psychology. London: Methuen, 1908.
- Mead, G. H. Mind, self and society. Chicago: University of Chicago Press, 1934.
- Parsons, T. & Bales, R. F. Family, socialization and interaction process. New York: Free Press, 1955.
- Rankin, R. J. Nonfunctioning Taylor manifest anxiety scale items. Psychological Reports, 1963, 12, 912.
- Sarbin, T. R. & Allen, V. L. Role theory. In G. Lindzey & E. Aronson (Eds.), The handbook of social psychology, Vol. 1 (2nd ed.). Reading, Massachusetts: Addison-Wesley, 1968.
- Taylor, J. P. A personality scale of manifest anxiety. Journal of Abnormal and Social Psychology, 1953, 48, 285-290.

APPENDIX

PERSONAL TRAITS SURVEY

This survey consists of three inventories which are being given to several psychology classes. Information from these inventories will be used in a study on personality traits. Please do not put your name on this packet!

I have asked for your sex and age. Please give an answer to every trait or characteristic and do not leave any unmarked.

Your sex \_\_\_\_\_ Your age \_\_\_\_\_

Your cooperation is greatly appreciated!

Charles Fantz, Graduate Student  
Psychology Department

## INVENTORY A

## BEM SEX ROLE INVENTORY

In Inventory A you will be shown a large number of personality characteristics. I would like you to use those characteristics in order to describe yourself. That is, I would like you to indicate, on a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristic unmarked.

EXAMPLE: sly

Mark a 1 if it is NEVER OR ALMOST NEVER TRUE that you are sly.

Mark a 2 if it is USUALLY NOT TRUE that you are sly.

Mark a 3 if it is SOMETIMES BUT INFREQUENTLY TRUE that you are sly.

Mark a 4 if it is OCCASIONALLY TRUE that you are sly.

Mark a 5 if it is OFTEN TRUE that you are sly.

Mark a 6 if it is USUALLY TRUE that you are sly.

Mark a 7 if it is ALWAYS TRUE OR ALMOST ALWAYS TRUE that you are sly.

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

Sly	3
Malicious	1

Irresponsible	7
Carefree	5

## INVENTORY A

## DESCRIBE YOURSELF

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

Self reliant	Reliable	Warm
Yielding	Analytical	Solemn
Helpful	Sympathetic	Willing to take a stand
Defends own beliefs	Jealous	Tender
Cheerful	Has leadership abilities	Friendly
Moody	Sensitive to the needs of others	Aggressive
Independent	Truthful	Gullible
Shy	Willing to take risks	Inefficient
Conscientious	Understanding	Acts as a leader
Athletic	Secretive	Childlike
Affectionate	Makes decisions easily	Adaptable
Theatrical	Compassionate	Individualistic
Assertive	Sincere	Does not use harsh language
Flatterable	Self-sufficient	Unsystematic
Happy	Eager to soothe hurt feelings	Competitive
Strong personality	Conceited	Loves children
Loyal	Dominant	Tactful
Unpredictable	Soft-spoken	Ambitious
Forceful	Likable	Gentle
Feminine	Masculine	Conventional



## INVENTORY K

## TAYLOR MANIFEST ANXIETY SCALE

This inventory consists of numbered statements. Read each statement and decide whether it is true as applied to you or false as applied to you.

Mark your answer on the line to the left of each statement. If a statement is TRUE or MOSTLY TRUE as applied to you, indicate this with an X or a checkmark on the line under the column headed T. If a statement is FALSE or USUALLY NOT TRUE as applied to you, indicate so with an X or a checkmark on the line under the column headed F.

Please give an answer to each statement. Make your marks heavy and erase completely any answer you wish to change.

T F

1. I do not tire quickly  
  2. I am troubled by attacks of nausea.  
  3. I believe I am no more nervous than most others.  
  4. I have very few headaches.  
  5. I work under a great deal of tension.  
  6. I cannot keep my mind on one thing.  
  7. I worry over money and business.  
  8. I frequently notice my hand shakes when I try to do something.  
  9. I blush no more often than others.  
  10. I have diarrhea once a month or more.  
  11. I worry quite a bit over possible misfortunes.  
  12. I practically never blush.  
  13. I am often afraid that I am going to blush  
  14. I have nightmares every few nights.

- \_\_\_ 15. My hands and feet are usually warm enough.
- \_\_\_ 16. I sweat very easily even on cool days.
- \_\_\_ 17. Sometimes when embarrassed, I break out in a sweat which annoys me greatly.
- \_\_\_ 18. I hardly ever notice my heart pounding and I am seldom short of breath.
- \_\_\_ 19. I feel hungry almost all the time.
- \_\_\_ 20. I am very seldom troubled by constipation.
- \_\_\_ 21. I have a great deal of stomach trouble.
- \_\_\_ 22. I have had periods in which I lost sleep over worry.
- \_\_\_ 23. My sleep is fitful and disturbed.
- \_\_\_ 24. I dream frequently about things that are best kept to myself.
- \_\_\_ 25. I am easily embarrassed.
- \_\_\_ 26. I am more sensitive than most other people.
- \_\_\_ 27. I frequently find myself worrying about something.
- \_\_\_ 28. I wish I could be as happy as others seem to be.
- \_\_\_ 29. I am usually calm and not easily upset.
- \_\_\_ 30. I cry easily.
- \_\_\_ 31. I feel anxiety about something or someone almost all the time.
- \_\_\_ 32. I am happy most of the time.
- \_\_\_ 33. It makes me nervous to have to wait.
- \_\_\_ 34. I have periods of such great restlessness that I cannot sit long in a chair.
- \_\_\_ 35. Sometimes I become so excited that I find it hard to get to sleep.
- \_\_\_ 36. I have sometimes felt that difficulties were piling up so high that I could not overcome them.

- — 37. I must admit that I have at times been worried beyond reason over something that really did not matter.
- — 38. I have very few fears compared to my friends.
- — 39. I have been afraid of things or people that I know could not hurt me.
- — 40. I certainly feel useless at times.
- — 41. I find it hard to keep my mind on a task or job.
- — 42. I am usually self-conscious.
- — 43. I am inclined to take things hard.
- — 44. I am a high-strung person.
- — 45. Life is a strain for me much of the time.
- — 46. At times I think I am no good at all.
- — 47. I am certainly lacking in self-confidence.
- — 48. I sometimes feel that I am about to go to pieces.
- — 49. I shrink from facing a crisis or difficulty.
- — 50. I am entirely self-confident.

## INVENTORY S

## HOGAN EMPATHY SCALE

This inventory consists of numbered statements. Read each statement and decide whether it is true as applied to you or false as applied to you.

Mark your answer on the line to the left of each statement. If a statement is TRUE or MOSTLY TRUE as applied to you, indicate this with an X or a checkmark on the line under the column headed T. If a statement is FALSE or NOT USUALLY TRUE as applied to you, indicate so with an X or a checkmark on the line under the column headed F.

Please give an answer to each statement. Make your marks heavy and erase completely any answer you wish to change.

T F

- \_\_\_ 1. A person needs to "show off" a little now and then.  
 \_\_\_ 2. I liked "Alice in Wonderland" by Lewis Carroll.  
 \_\_\_ 3. Clever, sarcastic people make me feel very uncomfortable.  
 \_\_\_ 4. I usually take an active part in the entertainment at parties.  
 \_\_\_ 5. I feel sure that there is only one true religion.  
 \_\_\_ 6. I am afraid of deep water.  
 \_\_\_ 7. I must admit I often try to get my own way regardless of what others may want.  
 \_\_\_ 8. I have at one time or another in my life tried my hand at writing poetry.  
 \_\_\_ 9. Most of the arguments or quarrels I get into are over matters of principle.  
 \_\_\_ 10. I would like the job of a foreign correspondent for a newspaper.  
 \_\_\_ 11. People today have forgotten how to feel properly ashamed of themselves.

12. I prefer a shower to a bathtub.
13. I always try to consider the other fellow's feelings before I do something.
14. I usually don't like to talk much unless I am with people I know very well.
15. I can remember "playing sick" to get out of something.
16. I like to keep people guessing what I'm going to do next.
17. Before I do something I try to consider how my friends will react to it.
18. I like to talk before groups of people.
19. When a man is with a woman he is usually thinking about things related to her sex.
20. Only a fool would try to change our American way of life.
21. My parents were always very strict and stern with me.
22. Sometimes I rather enjoy going against the rules and doing things I'm not supposed to.
23. I think I would like to belong to a singing club.
24. I think I am usually a leader in my group.
25. I like to have a place for everything and everything in its place.
26. I don't like to work on a problem unless there is the possibility of coming out with a clear-cut and unambiguous answer.
27. It bothers me when something unexpected interrupts my daily routine.
28. I have a natural talent for influencing people.
29. I don't really care whether people like me or dislike me.
30. The trouble with many people is that they don't take things seriously enough.

- \_\_\_ 31. It is hard for me just to sit still and relax.
- \_\_\_ 32. Once in a while I think of things too bad to talk about.
- \_\_\_ 33. I feel that it is certainly best to keep my mouth shut when I'm in trouble.
- \_\_\_ 34. I am a good mixer.
- \_\_\_ 35. I am an important person.
- \_\_\_ 36. I like poetry.
- \_\_\_ 37. My feelings are not easily hurt.
- \_\_\_ 38. I have met problems so full of possibilities that I have been unable to make up my mind about them.
- \_\_\_ 39. Often I can't understand why I have been so cross and grouchy.
- \_\_\_ 40. What others think of me does not bother me.
- \_\_\_ 41. I would like to be a journalist.
- \_\_\_ 42. I like to talk about sex.
- \_\_\_ 43. My way of doing things is apt to be misunderstood by others.
- \_\_\_ 44. Sometimes without any reason or even when things are going wrong I feel excitedly happy, "on top of the world."
- \_\_\_ 45. I like to be with a crowd who play jokes on one another.
- \_\_\_ 46. My mother and father often made me obey even when I thought that it was unreasonable.
- \_\_\_ 47. I easily become impatient with people.
- \_\_\_ 48. Sometimes I enjoy hurting persons I love.
- \_\_\_ 49. I tend to be interested in several different hobbies rather than to stick to one of them for a long time.
- \_\_\_ 50. I am not easily angered.
- \_\_\_ 51. People have often misunderstood my intentions when

- I was trying to put them right and be helpful.
- — 52. I am usually calm and not easily upset.
- — 53. I would certainly enjoy beating a crook at his own game.
- — 54. I am often so annoyed when someone tries to get ahead of me in a line of people that I speak to him about it.
- — 55. I used to like hopscotch.
- — 56. I have never been made especially nervous over trouble that any members of my family have gotten into.
- — 57. As a rule, I have little difficulty in "putting myself into other people's shoes."
- — 58. I have seen some things so sad that I almost felt like crying.
- — 59. Disobedience to the government is never justified.
- — 60. It is the duty of a citizen to support his country, right or wrong.
- — 61. I am usually rather short-tempered with people who come around and bother me with foolish questions.
- — 62. I have a pretty clear idea of what I would try to impart to my students if I were a teacher.
- — 63. I enjoy the company of strong-willed people.
- — 64. I frequently undertake more than I can accomplish.