

OVERT AND COVERT MASCULINITY AND
FEMININITY AND TRAIT ANXIETY

Thesis for the Degree of Ph. D.
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Karen Grover Duffy
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ABSTRACT

OVERT AND COVERT MASCULINITY AND FEMININITY AND TRAIT ANXIETY

By

Karen Grover Duffy

Undergraduate psychology students (male N=167, female N=346) volunteered to participate in a creativity study which was really a measure of masculinity and femininity. This large group received the Trait Evaluation Index (Bruce and Nelson, 1968) as a measure of overt masculinity and femininity. Ss were sorted into "same" (own-sex score equaled opposite-sex score), "inappropriate" (opposite-sex score was higher than own-sex score), and "appropriate" groups (own-sex score was higher than opposite-sex score). A smaller sample of 109 males and 116 females volunteered to return for a second session during which covert (TAT) measures of masculinity and femininity and trait anxiety (State Trait Anxiety Inventory, Spielberger, Gorsuch, Lushene, 1968) were collected. The study attempted to support Vroegh's (1968) finding that masculinity and femininity vary along separate continua. The study also predicted that overt and covert measures of masculinity and femininity would differ and that Ss who were appropriate on both overt and covert

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measures and Ss who were inappropriate on the overt measure but who became appropriate on the covert measure would exhibit lowest trait anxiety. These hypotheses were not supported. The findings were discussed in terms of the limitations of the tests employed and in terms of the femininity bias in the sample.

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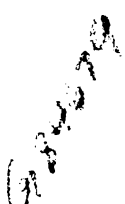
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INTRODUCTION

The terms "masculinity" and "femininity" have been used in the psychological literature for a considerable time. Three areas of emphases have emerged in the masculinity and femininity literature. One deals with defining, describing, and measuring these constructs. Mischel (1966), for example, operationally defines femininity as those behaviors for which females are most rewarded and masculinity as those behaviors for which males are most rewarded. Others, for example Silverman (1972), use traits to define the two constructs. Feminine implies subjectivity, intuition, passivity, tender-mindedness, sensitivity, receptivity, emotionalism, and conservatism. Masculine implies objectivity, activity, tough-mindedness, rationality, emotional control, and confidence. Other psychologists have left the terms undefined but tested them through interests or temperaments. Some of the scales which do this are described below. Briefly they are the Minnesota Multiphasic Personality Inventory (Hathaway and McKinley, 1951), The Adjective Checklist (Gough and Heilbrun, 1957), The Omnibus Personality Inventory (OPI Research Program, 1959), The Guilford-Zimmerman Temperament Survey (Sheridan, 1949-1955), and The California Psychological Inventory, (Gough, 1956-1957). From this myriad of confusing definitions Rosenberg and Sutton-Smith (1972, p. 3) in their

recent book conclude that "Whatever psychological masculinity-femininity is, therefore, it represents extremely diversified phenomena, best viewed as a loose cluster of imprecisely defined behavioral constructs."

A second and major group of writings is concerned with how masculinity and femininity develop. Generally, the work in this area is highly theoretical. Psychoanalytic theorists, Freud (1925, 1949) for example, believe that in order for children to develop masculinity or femininity, they must be exposed to both parents. The Oedipal and Electra complexes, for instance, do not develop or become resolved without the presence of both parents. On the other hand, learning theorists such as Bandura and Walters (1963) and Mowrer (1950) attempt to incorporate the development of these two characteristics into larger theories of identification which suggest that the same-sex parent is most important. A summary of these and other theories are discussed by Rosenberg and Sutton-Smith (1972). Specific studies in the area of development of masculinity and femininity do not alleviate the confusion. Kagan and Moss (1962) and Escalona and Heider (1959) carried out comprehensive longitudinal studies. More specific studies, however, can be cited as examples. Carlson (1963) found that girls only are similar to both parents on many traits. Jourard (1957) found that boys and girls are not similar to either parent, and Gray and Klaus (1956) found that girls are more like their mothers than boys are like their fathers.

The evidence is equally perplexing regarding the stability of gender-role identity over a lifetime. Kelly (1955) reported that there seems to be a general increase in masculinity for men and women with age whereas Terman and Miles (1933) found an increase in femininity with age. An excellent review of this and related research is given in Maccoby (1966).

A final set of studies in the masculinity-femininity literature is concerned with relating the two constructs to third variables. Some of the literature on anxiety as a third variable is described below. Other variables relating to masculinity and femininity are sensitivity to people (Goodenough, 1957), homosexuality (Fustel et al, 1971), and body build (Darden, 1972). These studies are not summarized in any one volume.

Because of the confusing nature of these studies and because "all men are infected with male chauvinism...(and) assume that women play subordinate roles and are less human (Wittman, 1970)," many feminists are ready to scrap the terms masculinity and femininity. This is not practical because true hormonal and genetic differences do exist between males and females (Money, 1963 and Hampson, 1965). Secondly, dropping the terms is not necessary because feminists are objecting to the cultural evaluation of the terms rather than the terms themselves. As Kate Millett (1970, p. 343) states, "Divorced from their usual justification in an assumed biological congruity, masculine and

feminine stand out as terms of praise and blame, authority and servitude, high and low, master and slave." A better understanding of the terms "masculinity" and "femininity" might not only help clarify the confusion in the literature but also reduce cultural evaluation of the terms. The present study is an attempt to better understand "masculinity" and "femininity".

Specifically, the present study explored masculinity and femininity in relation to three unique ideas. One of these ideas is that masculinity and femininity are separate dimensions, or, in other words, a person could be both masculine and feminine at the same time. The second idea is that there may well be two types of masculinity and femininity and that the two, taken together, give a better idea of a person's sex-role status than either can separately. That is, there may be covert or as yet unexplored aspects of masculinity and femininity as well as overt masculinity and femininity. Finally, the third and most complex idea is that an S's masculine and feminine status may indeed be related to other variables but in more complex ways than has been suggested in the previous literature. In some cases, overt scores might prove more relevant to a third variable than covert scores. Similarly, just the opposite might be true, or a summing of overt and covert scores might be still more accurate.

Masculinity and/or Femininity

Nearly all previous studies of masculinity and femininity have made an assumption which may be incorrect. Researchers, especially the developers of the scales mentioned above, have assumed that males are basically masculine and that females are basically feminine and that there is little overlap between the two populations. The researchers seldom examined the possibility that females possess masculine features and that males possess feminine features. In other words, masculinity and femininity have been assumed to vary along the same bipolar continuum. "Feminine" traits are those which are left over from not being masculine and vice versa. Femininity, then, has been defined in terms of masculinity and masculinity in terms of femininity, a circular definition.

It is also possible that masculinity and femininity are two discrete variables and thus do not belong on the same continuum. Instead of one bipolar continuum of masculine-feminine, a better arrangement might be low masculine-high masculine and low feminine-high feminine. In this manner femininity is not defined in terms of masculinity, and masculinity is not defined in terms of femininity. One person could be considered to vary along both continua and be both masculine and feminine rather than, for example, high masculine and "by definition" low feminine.

Only two recent studies have dealt with the two

constructs as varying along separate continua. A recent study by Alper (1973) examined this issue indirectly in a study of achievement motivation. She developed a scale to measure masculine as well as feminine achievement orientation in females and had moderate success with her scale.

A more complete study by Vroegh (1968), following up a previous study (Vroegh et al, 1967), points out that past psychological studies of femininity and masculinity have been incorrect in assuming that masculinity and femininity vary along the same continuum. Vroegh had teachers rank-order male children on masculinity and female children on femininity. From these orderings she had the teachers rerate the most- and least-masculine males and the most- and least-feminine females on 16 personality characteristics. These variables were factor analyzed and yielded several major factors: introversion-extraversion, competence, and social adjustment. Basically she found differences in degree of sex-role orientation.

Most-masculine males were judged more extraverted and competent while least-masculine males were judged the opposite. Most-feminine females were judged as more socially adjusted and introverted while least-feminine females were judged the opposite. From this she concluded that "A coefficient of congruence (Harman, 1960) indicated that there was little relationship between the constructs of masculinity and femininity. Masculinity and femininity were not

found to be opposites on a bipolar continuum" (p. 1254).

A problem with the study, however, was that teachers were aware of the masculinity or femininity scores they had assigned when they made the personality ratings. It may be that their personality ratings were made in terms of these scores rather than in terms of the Ss' underlying personalities.

The primary purpose of the present study, then, was to examine Vroegh's findings that masculinity and femininity are two different dimensions. If this assumption is true, it should be possible to identify Ss who are both masculine and feminine in varying degrees. The next step was to find a psychological scale that would yield separate measures for masculinity and femininity. Different psychological scales were selected for examination. They included the sex-role orientation scales from the Omnibus Personality Inventory (CPI Research Program, 1959), The Minnesota Multiphasic Personality Inventory (Hathaway and McKinley, 1951), and the Guilford-Zimmerman Temperament Survey (Sheridan, 1949-1955). None of these scales was satisfactory.

Some of these scales, (the CPI for example) measured femininity and assumed that low scores were indications of masculinity. On other scales, such as the Guilford-Zimmerman, masculinity was measured and low scores were indications of femininity. Only one scale yields both masculinity and femininity scores. This was the Trait Evaluation Index (TEI)

by Martin and Nelson (1968). The scale was developed by giving two separate populations of males and females 375 items and finding those items which yielded not only significant differences between means for males and females but which were also significant in both samples. Thirty-three items survived this analysis and comprise both the masculine and feminine scales. The test, although it yields the two separate measures, does not place masculinity and femininity on two separate continua but simply divides the one continuum of masculine-feminine into two parts. In other words, an S could not score high on both masculinity and femininity but he could score low on both. His score on one would partially depend on his score on the other. This test, then, is not the most desirable test because of this but was used here because it was the only test which would yield two separate scores.

Overt and Covert Masculinity and Femininity

Aside from the idea that masculinity and femininity may be two discrete or nonoverlapping constructs, it may also be true that there is more than one type of masculinity and more than one type of femininity. For example there may be manifest or overt masculinity or femininity; the masculinity and femininity that other people can see and can readily label as masculinity or femininity. (This seems to be what the scales described above attempt to measure through interests or temperament.)

There may also be covert or latent masculinity and femininity. The term covert is imprecisely defined here because, at this point, it is not clear exactly what it means. Covert might mean that drives or motivations which are feminine or masculine are being examined. (Here the TAT will be used as the covert measure; it has been used before precisely to measure drives and motives, Atkinson, 1958). Covert also implies that hidden or extra features which could only be gleaned from self report are being measured whereas overt means that another person might just as easily have made the report. It is not the primary purpose of the study, however, to determine the nature of covert masculinity and femininity but rather to determine whether it exists at all and whether it contributes new information above and beyond that gained from knowledge of overt masculinity and femininity.

Psychologists have recognized the first case, i.e. overt masculinity and femininity, and this may be one reason for the conflicting results found in many of the studies of masculinity and femininity. The area of achievement motivation can be cited as one instance of this. Horner (1969), although she did not test this assumption directly, implies that high-fear-of-success women are more feminine than low-fear-of-success women. The same women who fear competition and aggressiveness (so-called masculine behaviors) are more feminine than low-fear-of-success women. The women who fear competition and aggression as a means to achieving success

are those women who would not be and who are not competitive; they are overtly feminine women. In Horner's own words "the girl equates intellectual achievement with loss of femininity" (p. 38). In a different study by Parker (1971), just the opposite was found. Low-fear-of-success females rated themselves as more feminine than high-fear-of-success females. Here self ratings of femininity were used; it may be that this was a more covert or fantasized (rather than real or manifest) measure. This difference in use of overt versus covert kinds of femininity might itself account for the complete opposition of the two results.

As mentioned above, however, the present study attempted to determine whether overt and covert masculinity and femininity exist at all, and, if they do, are they mirror images of each other or do they differ? If they are mirror images, then an overtly high-masculine low-feminine female would score similarly on the covert measure. If both overt and covert measures differ, however, this same woman might, for instance, score high on femininity and low on masculinity on the covert measure. The two measures, then, might complement each other to give a more complete picture of the person. The second purpose of the present study was to find out the relationship between overt and covert masculinity and femininity.

The Trait Evaluation Index (TEI) yielded overt masculinity and femininity scores. No measure previously available, however, would yield two separate covert measures. A

projective scale for sexual imagery was developed by Barclay, (1965, 1969, and 1970). This scale was rescored by five independent female judges for female sexual imagery, and, from this rescoring, a scale was devised for use in scoring feminine sexual imagery. The two scoring scales, masculine and feminine, used sexual imagery to explore covert masculinity and femininity.

At this point it is well to note the possible shortcomings of using sexuality to measure gender-role identity. Sexuality may or may not be related to covert masculinity and femininity. On the other hand, it may very well be related but be only one of a cluster of other variables related to masculinity or femininity. The present study will be the beginning of an exploration into this. In any event sexual fantasies were selected for use here because sex differences in fantasies (which imply the possibility of gender-role differences) have already been found to exist in the area of human sexuality. Barclay (1973) has found differences between male and female fantasies. And psychoanalytic theory (Freud, 1953) has attributed male (elongated) and female (pouch-like) characteristics to various dream or fantasy symbols.

The present study was an attempt to standardize the sexual fantasy scales as a measure of covert masculinity and femininity as well as to explore the relationship between overt and covert masculinity and femininity. Instead of assuming that overt and covert masculinity and

femininity are the same, the present study predicted that differences would exist. Since fantasies are sometimes used to compensate for shortcomings, it was predicted that those persons who were inappropriately typed on the overt measure might become more appropriate on the covert measure. Persons already appropriately typed on the overt measures would not have to compensate for any inappropriateness on the covert measure. They would remain appropriate on the covert measure.

Relationship of Overt and Covert Measures to a Third Variable

The above discussion mentioned that in the present study the relationship between overt and covert masculinity and femininity would be explored. The two measures could possibly be identical. A male S who is low-masculine and high-feminine overtly might very well be low-masculine and high-feminine covertly. In this case no new information about him is gathered. The only advantage of the use of the covert measure would be that S would be less likely to know that he was being examined for masculinity and femininity and therefore be more likely to give responses indicative of his true masculinity or femininity. (Bieliauskos, Miranda, and Lansky, 1968, have examined response bias in other masculinity-femininity scales and have found this to be a substantial problem.) There is a possibility that the two measures, overt and covert, do not present identical pictures of a person, though. If this is true, perhaps

both will have to be explored in future studies to get a more complete and global picture of an S until it is discovered which, overt or covert, is more relevant to examine in relation to the other variable under study.

The third purpose of the present study was to preliminarily explore the relationship of the two measures, overt and covert, with a third variable and to explore whether or not the two measures are more complexly related to this third variable than previously thought. The third variable here was trait (everyday) anxiety as measured by the State-Trait Anxiety Inventory (Spielberger, Gorsuch, and Lushene, 1966). This particular variable was selected because it has been successfully explored previously and a simple relationship has been found between it and masculinity and femininity. Terman and Miles (1936, p. 448) found that males expressed more "hardihood" and "fearlessness" than females. Cosentino and Heilbrun (1964) found a significant negative relationship between masculinity-femininity as measured by the Adjective Check List (Gough and Heilbrun, 1957) and anxiety. Gall (1969), using the Taylor Manifest Anxiety Scale (Taylor, 1953) and the masculinity-femininity scale from the Omnibus Personality Inventory (OPI Research, (1959), found that females and feminine persons are more likely to admit to higher levels of anxiety than males or masculine persons. Finally Louis (1971) used eight to ten year old girls to investigate their psychosexual development with Corman's (1971) picture completion test. A minor

finding of the study was that although most of the Ss were quite feminine, a small percentage of the girls was quite masculine in orientation. Those girls who were more masculine than their feminine counterparts showed an internal conflict over their deviation, condemned their masculinity, and had feelings of guilt about their deviation (all of which seem to be indications of anxiety).

This is a rather simple picture. Females and feminine persons are generally more anxious than males or masculine persons when both sexes are used as Ss. When females only are Ss, deviant or masculine females are even more anxious than their typically feminine counterparts. A look at the effects of covert masculinity and femininity might complicate the picture, however, especially as indicated by the Louis study where the measure of masculinity and femininity seems to be more covert.

In the present study, Ss were assigned to three groups on the basis of their overt masculinity and femininity scores. The "same" group consisted of males and females whose masculine and feminine scores were within a few points of each other. The "inappropriate" group consisted of Ss whose own-sex scores were lower than their opposite-sex scores. For the "appropriate" group, the Ss' own-sex scores were appropriately higher than their opposite-sex scores. It was predicted that those Ss who were "same" or "inappropriate" on the covert or fantasized measure would indicate higher trait anxiety than those Ss who remained

appropriate or who become more appropriate across overt and covert measures. The reason for these predictions is that fantasies, in general, often provide the individual with some relief or some compensation for his shortcomings. If, in their fantasies, inappropriate Ss become appropriate, they might feel some relief from anxiety about their inappropriateness on the overt measure.

Summary of Purposes

The major purpose of the present study was to explore masculinity and femininity as two separate constructs. Specifically one purpose of the present study was to examine further the possibility that the two terms represent independent dimensions, and, that because of this, a person could show characteristics of both. A second purpose of the study was to determine whether or not two types of masculinity and femininity exist, overt and covert, and to determine the nature of the relationship between them. Finally, the third purpose of the study was to explore the relationship of overt and covert masculinity and femininity to a third variable, trait anxiety.

Hypotheses

- I. Proportion of Ss in sample. As mentioned above, these hypotheses were made on the assumption that most Ss in the sample would appear appropriate on the overt measure.

- A. Subjects whose own-sex scores on the overt measure were higher than their opposite-sex scores would represent the largest portion of the sample (appropriate group).
- B. Subjects whose own-sex scores on the overt measure were equal to their opposite-sex scores would represent a small portion of the sample (same group).
- C. Subjects whose own-sex scores on the overt measure were lower than their opposite-sex scores would represent a small portion of the sample (inappropriate group).

II. Relation of overt to covert measures of masculinity and femininity. These hypotheses, as mentioned above, are based on the assumption that covert measures reveal new or unique information about S above and beyond the overt measure.

- A.. Subjects whose overt scores fell in the "appropriate" group would also have covert scores which would place them in the "appropriate" group.
- B. Subjects whose overt scores fell in the "same" group would have covert scores which would place them in the "appropriate" group.
- C. Subjects whose overt scores fell in the "inappropriate" group would have covert

scores which would place them in the "appropriate" group.

III. Relationship of Trait Anxiety to overt and covert masculinity and femininity. The following hypotheses, as discussed above, were made because fantasies which are appropriate would provide some day to day relief from anxiety over overt inappropriateness.

- A. Subjects who had "appropriate" scores on the overt measure would have lowest trait anxiety because they would also have "appropriate" measures on the covert measure.
- B. Subjects who had "same" or "inappropriate" scores on the overt measure but who had "appropriate" scores on the covert measure would have low trait anxiety, because they have compensated for inappropriateness in their fantasies.
- C. Subjects who had "same" or "inappropriate" scores on the overt measure and who maintained these scores on the covert measure would have high trait anxiety, because they have not compensated for the inappropriateness in their fantasies.

METHOD

Experimenters

Experimenters were one male and one female undergraduate psychology students who shared the experimental responsibilities equally (to avoid the possibility of modeling effects) and who received a grade and credit for their participation. Experimenters were told as were the Ss that this was a test of creativity in order for them to remain naive as to the real purpose of the experiment.

Subjects

The original sample consisted of 167 male and 346 female volunteer introductory psychology students from Michigan State University who received credit toward their final grade in return for their participation. The original pool of 513 Ss was asked to volunteer to be in a creativity experiment by taking the Trait Evaluation Index immediately following their introductory psychology classes. After the TEI was scored, selected Ss were phoned about a week later and asked to be in a creative writing experiment.

These 225 volunteer Ss were run in four groups of approximately 55 (half male and half female) Ss each. Each of the four groups received one possible order of picture presentation. Each group of 55 consisted of about a third

each of same, inappropriate, and appropriate Ss, half of which were male and the other half female. Same Ss were those whose masculine and feminine scores were within three points of each other. Inappropriate Ss were those whose opposite-sex scores were at least four or more points higher than their own-sex score. Appropriate Ss were those whose own-sex scores were at least four or more points higher than opposite-sex scores.

Test Materials

Trait Evaluation Index: The Trait Evaluation Index (Bruce and Nelson, 1967), which measures 22 specific traits as well as 4 general traits of which masculine orientation and feminine orientation are two, was used to obtain the overt measures of masculinity and femininity. The whole index was administered but only those 33 items relevant to masculinity and those 33 items relevant to femininity were scored by the same two judges who scored the TAT. The test was scored by using the key that accompanies the Tester's Manual. A sample of the whole index (including the answer sheet since the mode of response is rather unique) with the relevant items marked is found in Appendices B and C respectively.

State-Trait Anxiety Inventory: The Trait Scale of the State-Trait Anxiety Inventory (Spielberger, Gorsuch, and Lushene, 1966) was used to measure anxiety proneness or trait anxiety. The scale consists of 20 questions to which S answers on a four point scale to indicate how frequently the statement is descriptive of him. (One is "never"; four is "almost always".) The scoring range for the test, then, is 20 to 80. The scale was scored by a third person who used the score key which accompanies the Tester's Manual. A sample of the whole inventory is found in Appendix D.

Thematic Apperception Test (TAT): Four TAT (Murray, 1943) pictures (2 original and 2 modified) were arranged in booklet form and were used to obtain measures of covert masculinity and femininity. One original TAT picture (13 MF or the bed) had obvious sexual overtones; in it a male figure stands over a nude female who is in bed. The second picture, also from the original TAT (12 BG), was a picture of a rowboat pulled up on woodsy shore; no people were in the picture. The two modified pictures (Barclay, 1965, 1969 and 1970) consisted of a male dominant picture (the male figure was of obviously higher status than the female) and the female dominant picture (the female was of obviously higher status than the male). Each picture served as a control for the remaining pictures for either amount of masculinity-femininity, sex, dominance, or presence of people in one way or another. Each picture was accompanied by an

outline for S to follow if he wished when writing his story.
(See Appendices E to I.)

In order to control for order of presentation of pictures, four of the possible 24 orders of presentation (two orders forward and in reverse) were used. The two orders (forward) were as follows: order one was male dominant, boat, female dominant, and bed and order two was boat, male dominant, bed, and female dominant.

The Ss' stories were scored on a five point scale for male sexuality and a separate five point scale for female sexuality. The male sexuality scores were obtained by using a scale devised by Barclay (1965, 1969, and 1970), which follows the recommendations of Atkinson (1958). From this scale another scale was derived to measure female sexuality. Five female independent judges rearranged the scale by Barclay so that a score of five represented those items which high high sexual content for them and a score of one had the lowest sexual content for them. Items on which four of the five judges came to consensus were moved to the appropriate category. These scales measured masculinity and femininity through qualitative differences in sexual imagery. (See Appendices J and K.)

The two experimenters scored the stories separately and assigned them both a masculine score and a feminine score. Scores were compared and, for those few stories (approximately 25%) where the scores were discrepant, the judges collaborated and decided upon the best score so that

100% agreement was eventually reached.

The persons who completed the scoring of the above scales did not know what any of the scales actually measured. Neither did the scorers know who or of what sex any of the Ss were since each type of scale was scored separately and since each S was assigned an identification number.

Procedure

The large pool of Ss completed the TEI. Selected Ss were asked to return for further experimentation and were told that this was a creative writing experiment. The State-Trait Anxiety Inventory was distributed in the guise of a creative personality index, and the instructions were read. Both State and Trait scales were administered but only the Trait scale was later scored. When all Ss had finished, the anxiety scale was collected and the TAT booklets were distributed as a test of creative writing. Subjects were allowed to work at their own pace, and, when each one finished, he received two credits toward his final grade. The specific instructions read to the Ss can be found in Appendix A.

RESULTS

Masculinity and/or Femininity

According to TEI scores, the 513 Ss fell into three groups: same (S), inappropriate (I), and appropriate (A). Same Ss were Ss whose masculinity and femininity scores fell within three points of each other. Inappropriate Ss were those whose opposite-sex scores were at least four or more points higher than their own-sex score, i. e., low feminine-high masculine females and high feminine-low masculine males. Appropriate Ss were those whose own-sex scores were at least four or more points higher than their opposite-sex scores, i. e., high feminine-low masculine females and low feminine-high masculine males. The result-numbers and percentages of the total Ss for each of these groups are listed in Table 1.

Table 1

Number and percent of male and female Ss in original sample falling into S, I, A groups on TEI scores.

		<u>MALES</u>		<u>FEMALES</u>		<u>TOTAL</u>	
		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
<u>GROUPS</u>	S	38	23	63	18	101	19
	I	89	53	32	9	121	24
	A	40	24	251	73	291	57
TOTAL		167	100	346	100	513	100

A chi-square was performed on this frequency data and was significant ($\chi^2=140.76$, $df=2$, $p<.001$). The largest number of females were appropriately typed or high feminine-low masculine ($N=251$). The other two groups, same and inappropriate females were substantially smaller, with the same group ($N=63$) being about twice the size of the inappropriate group ($N=32$). For males, the largest group was the inappropriate group ($N=89$). The other two groups, same and appropriate groups were approximately the same size with N 's of 38 and 40 respectively.

Because of the large number of especially feminine males in the sample, a Kuder-Richardson reliability check was performed on both the masculine and feminine orientation scales. Reliability for both scales was .71. These figures, however, may be relatively inflated because of the large number of

items in both scales.

TAT Standardization

From the sample of 513 Ss, a smaller sample (N=225) was selected for use in collecting the TAT-anxiety data. These Ss were phoned and asked to volunteer to participate in a creativity experiment. Ss were phoned until enough Ss had volunteered to fill all groups. The numbers and percentages from the original sample are given in Table 2, p.26.

This table shows that for some groups, for example, the male-same group, nearly all original Ss participated in the TAT-anxiety portion of the study. For other groups, especially the female-appropriate group, a much smaller portion of the original sample participated.

In the next table (Table 3) the means and standard deviations for masculinity and femininity on the TEI are given for the reduced sample. This table is found on p.27.

Table 2

Number and percentage of male and female Ss falling into S, I, A groups on TEI scores in TAT-anxiety sample.*

	<u>MALES</u>			<u>FEMALES</u>			<u>TOTAL</u>		
	N	Original N	% of Orig- nal N	N	Original N	% of Orig- nal N	N	Original N	% of Orig- nal N
S	32	38	84	44	63	70	76	101	75
I	43	89	48	26	32	81	69	121	57
A	34	40	85	46	251	10	80	291	27
TOTAL	109	167	65	116	346	34	225	513	44

* Percentages are always given in terms of the total from the original sample from the same cell in Table 1.

Table 3

TEI masculinity and femininity means and standard deviations for male and female Ss used to standardize TAT pictures.

SUBJECTS					
		<u>FEMALES (N=116)</u>		<u>MALES (N=109)</u>	
GROUPS		<u>MASCULINITY</u>	<u>FEMININITY</u>	<u>MASCULINITY</u>	<u>FEMININITY</u>
	S	$\bar{X}=11.2$ $\sigma=2.3$ N=44.	$\bar{X}=10.6$ $\sigma=2.3$ N=44.	$\bar{X}=10.8$ $\sigma=1.8$ N=32.	$\bar{X}=10.6$ $\sigma=1.4$ N=32.
	I	$\bar{X}=14.1$ $\sigma=4.1$ N=26.	$\bar{X}=8.4$ $\sigma=2.9$ N=26.	$\bar{X}=9.9$ $\sigma=5.6$ N=43.	$\bar{X}=13.9$ $\sigma=6.3$ N=43.
	A	$\bar{X}=5.2$ $\sigma=4.8$ N=46.	$\bar{X}=17.8$ $\sigma=3.8$ N=46.	$\bar{X}=12.3$ $\sigma=5.5$ N=34.	$\bar{X}=9.9$ $\sigma=5.7$ N=34.

Table 4

TAT masculinity and femininity means and standard deviations for male and female Ss used to standardize TAT pictures.

SUBJECTS					
		<u>FEMALES (N=116)</u>		<u>MALES (N=109)</u>	
		<u>MASCULINITY</u>	<u>FEMININITY</u>	<u>MASCULINITY</u>	<u>FEMININITY</u>
GROUPS	S	$\bar{X}= 8.3$ $\sigma= 2.4$ N=44.	$\bar{X}= 9.6$ $\sigma= 2.8$ N=44.	$\bar{X}= 8.2$ $\sigma= 2.0$ N=32.	$\bar{X}= 8.9$ $\sigma= 2.5$ N=32.
	I	$X= 8.0$ $\sigma= 2.9$ N=26.	$X= 8.7$ $\sigma= 3.1$ N=26.	$X= 8.4$ $\sigma= 1.8$ N=43.	$X= 9.6$ $\sigma= 2.4$ N=43.
	A	$\bar{X}= 8.2$ $\sigma= 2.7$ N=46.	$\bar{X}= 9.0$ $\sigma= 3.5$ N=46.	$\bar{X}= 8.4$ $\sigma= 2.2$ N=34.	$\bar{X}= 9.3$ $\sigma= 2.5$ N=34.

The masculine and feminine TAT scores were analyzed in a 2 by 2 by 2 by 4 multivariate analysis of variance for S sex, order of presentation, type of picture and direction of presentation (forward or reverse). The only significant effect was type of picture ($p < .01$). This was as expected due to the presupposed eliciting nature of the pictures. The bed picture (high sexual content or picture 13 MF in the Murray series) pulled the most imagery. The female dominant picture (Barclay series) was second or moderately high in eliciting sexual stories. The boat picture (12 BG in the

Murray series) and the male dominant picture (Barclay series) were equally low. Table 5 (p. 30) indicates the particular total of sexual-imagery for each picture.

Relation Between Overt and Covert Measures

Because there were no order or direction effects of presentation, the sample, using the TEI scores, could be further reduced to produce a better differentiation of the same, inappropriate and appropriate groups from each other. However, because it was desirable to maintain a minimum N of ten in each of the groups, the criteria differ by group and by S sex.

For females, the same group was reduced to those Ss whose femininity scores came within one point of their masculinity scores. The inappropriate group consisted of those Ss whose femininity score was at least seven points less than their masculinity score which, in turn, had to be at least 14. The appropriate group was reduced to females whose masculinity score was at least 14 points less than their femininity score which, in turn, had to exceed 20.

For males, the same group was reduced to those Ss whose two scores fell within one point of each other. The inappropriate group was made up of Ss whose masculinity score was at least seven points less than their femininity score which, in turn, had to be at least 18. The appropriate group of males was now made up of those Ss whose femininity score was at least 10 points below their masculinity score which,

Table 5

Mean score for each TAT picture. Masculinity (M), Femininity (F)
and total (T) scores are given for each order.

<u>BOAT</u>				<u>BED</u>				<u>MALE DEFICIENT</u>				<u>FEMALE DEFICIENT</u>			
F	N	T		F	M	T		F	M	T		F	M	T	
Order 1 Forward	1.9	1.7	1.8	4.1	3.35	3.73		1.8	1.5	1.65		2.5	1.95	2.23	
Order 1 Reverse	1.65	1.45	1.55	4.0	3.5	3.75		1.95	1.65	1.8		2.45	1.9	2.18	
Order 2 Forward	1.3	1.3	1.3	3.15	3.35	3.25		1.6	1.45	1.53		2.3	2.2	2.25	
Order 2 Reverse	1.4	1.3	1.35	3.55	3.4	3.48		1.3	1.25	1.28		2.0	1.95	1.98	
TOTAL	1.56	1.44	1.5	3.7	3.4	3.55		1.66	1.46	1.56		2.61	2.0	2.31	

in turn, had to be at least 16.

Table 6 presents the new means and standard deviations for TEI masculinity and femininity for the sample produced by this second reduction.

Table 6

TEI masculinity and femininity means and standard deviations for male and female Ss using criteria for maximum differentiation.

SUBJECTS					
		<u>FEMALES (N=51)</u>		<u>MALES (N=49)</u>	
		<u>MASCULINITY</u>	<u>FEMININITY</u>	<u>MASCULINITY</u>	<u>FEMININITY</u>
GROUPS	S	$\bar{X}=10.7$ $\sigma=1.9$ N=18.	$\bar{X}=10.7$ $\sigma=1.6$ N=18.	$\bar{X}=10.5$ $\sigma=1.5$ N=19.	$\bar{X}=10.5$ $\sigma=1.3$ N=19.
	I	$\bar{X}=17.1$ $\sigma=1.7$ N=16.	$\bar{X}=7.2$ $\sigma=1.7$ N=16.	$\bar{X}=3.8$ $\sigma=2.5$ N=16.	$\bar{X}=19.9$ $\sigma=1.9$ N=16.
	A	$\bar{X}=3.7$ $\sigma=1.7$ N=17.	$\bar{X}=21.4$ $\sigma=2.9$ N=17.	$\bar{X}=18.0$ $\sigma=1.5$ N=14.	$\bar{X}=4.3$ $\sigma=2.1$ N=14.

Table 3, when compared with the data here, indicates that the new sample better differentiates the S, I, and A groups for the analyses which follow. The same groups, for example, now exhibit identical rather than slightly discrepant means for masculinity and femininity. The appropriate and inappropriate groups exhibit a larger point spread between masculinity and femininity scores.

Table 7 presents the same information for this new sample using TAT masculinity and femininity rather than TEI masculinity and femininity.

Table 7

TAT masculinity and femininity means and standard deviations for male and female Ss using TEI criteria for maximum differentiation.

SUBJECTS					
GROUPS	<u>FEMALES (N=51)</u>		<u>MALES (N=49)</u>		
	<u>MASCULINITY</u>	<u>FEMININITY</u>	<u>MASCULINITY</u>	<u>FEMININITY</u>	
	S	$\bar{X} = 7.9$ $\sigma = 2.4$ N=18.	$\bar{X} = 9.4$ $\sigma = 3.1$ N=18.	$\bar{X} = 8.5$ $\sigma = 2.0$ N=19.	$\bar{X} = 9.4$ $\sigma = 2.3$ N=19.
	I	$\bar{X} = 7.4$ $\sigma = 2.9$ N=16.	$\bar{X} = 8.1$ $\sigma = 3.5$ N=16.	$\bar{X} = 8.0$ $\sigma = 1.5$ N=16.	$\bar{X} = 9.6$ $\sigma = 2.5$ N=16.
	A	$\bar{X} = 8.0$ $\sigma = 2.6$ N=17.	$\bar{X} = 8.9$ $\sigma = 2.9$ N=17.	$\bar{X} = 8.3$ $\sigma = 2.2$ N=14.	$\bar{X} = 8.7$ $\sigma = 2.6$ N=14.

The two tables seem to indicate that the TEI discriminates between groups and between masculinity and femininity but that the TAT does not. A picture by picture Pearson-product-moment correlation was performed on the TAT and TEI masculinity and femininity scores. (Picture by picture analysis was performed because the different pictures pulled different amounts of sexual imagery, and it was sexual

imagery which was being used to measure masculinity and femininity.) The results, combining male and female Ss, of this analysis are given in Table 8 on page 34.

In summary, this table shows that masculinity correlated negatively with femininity on the TEI ($-.87$); the TEI seemed to measure or at least discriminate between what it purported to measure. For the TAT, picture by picture correlations as well as the overall correlations showed that covert masculinity correlated positively with covert femininity. For example, when summed across pictures, total TAT masculinity correlated with total TAT femininity $.80$. There was no correlation at all between TAT masculinity or femininity and TEI masculinity and femininity.

It was predicted that with regard to the various TEI or overt groups (same, inappropriate, and appropriate) most Ss in the inappropriate and same groups would become more appropriate on the covert or TAT measures. It was also predicted that appropriate Ss would stay appropriate. On the covert measure, in order for an S to fall in the same group, his total masculinity and femininity scores had to be identical. Ss whose own-sex scores were at least one or more points higher than their opposite-sex scores were placed in the appropriate group. Ss whose own-sex scores were one or more points lower than their opposite-sex scores were considered inappropriate on the covert measure.

Table 8

Correlations between TEI Masculinity (M) and Femininity (F) and IAT picture by picture as well as total Masculinity (M) and Femininity (F).*

	1	2	3	4	5	6	7	8	9	10	11	12
TEI M (1)	1.00											
TEI F (2)	-.87	1.00										
PIC I F (3)	.16	-.19	1.00									
PIC I M (4)	.14	-.15	.82	1.00								
PIC II F (5)	.03	.02	-.03	-.01	1.00							
PIC II M (6)	-.05	.13	-.13	-.10	.79	1.00						
PIC III F (7)	-.03	.00	.14	.24	.19	.12	1.00					
PIC III M (8)	.01	-.01	.18	.35	.17	.16	.86	1.00				
PIC IV F (9)	.05	-.04	-.02	-.06	.27	.22	.09	.02	1.00			
PIC IV M (10)	.10	-.10	-.04	-.05	.12	.17	.05	.06	.83	1.00		
TOT TEI F (11)	.07	-.07	.37	.35	.71	.51	.60	.52	.61	.41	1.00	
TOT TEI M (12)	.06	-.02	.27	.41	.58	.69	.51	.62	.44	.49	.80	1.00

*PICTURE I = BOAT, PICTURE II = BED, PICTURE III = MALE DOMINANT, PICTURE IV = FEMALE DOMINANT

Table 9 presents the number of Ss who did or did not crossover in groups from the overt to covert measure.

Table 9

Number of Ss in various
overt and covert groups.

COVERT OR LAT MEASURE					
		S	I	A	TOTAL
OVERT OR LAT MEASURE	S	9	14	14	37
	I	8	16	8	32
	A	<u>12</u>	<u>7</u>	<u>10</u>	<u>29</u>
	TOTAL	29	37	32	98

A chi-square was performed on these frequencies and was significant ($\chi^2=19.5$, $df=f$, $p<.001$). More inappropriate Ss stayed inappropriate than expected, but also more of this group of Ss became appropriate than expected. Similarly more appropriate Ss became inappropriate or same than expected.

These results do not support the hypotheses that in moving from overt to covert measures Ss would in general become more appropriate or remain appropriate if they already were appropriate. In other words, Ss did not cross over as

predicted from overt to covert measures. Rather, significant numbers of Ss moved from group to group on the overt to covert measure but in no particular pattern.

Overt-Covert Measures and Anxiety

It was predicted that those Ss who did not become more appropriate from overt to covert measures would indicate higher levels of trait anxiety than those who became or remained appropriate.

Subjects were divided into the pertinent groups, but for some groups the number was too small for reliable statistical analysis. Therefore, several groups were collapsed; same and inappropriate groups were both labeled inappropriate on the overt measure. These two large groups, appropriate and inappropriate (which now included the same group), were divided into two subgroups, each depending on covert scores. The appropriate group was divided into those Ss who remained appropriate on the covert measure and those who became inappropriate on the covert measure. The inappropriate group was divided into a group who became appropriate on the covert measure and a group who stayed inappropriate on the covert measure.

Multiple T-tests showed no significant differences in level of anxiety for any of these four groups. Therefore, the predictions concerning overt and covert masculinity and femininity and anxiety were not upheld.

Because the data were readily available, other T-test

analyses were performed to see whether Gall's (1969) results were supported. Gall found that females and feminine persons exhibited higher levels of anxiety than males or masculine persons. Ss were sorted into high anxious (scores of 45 to 80 or scores at least one-half S.D. above the mean) and low anxious groups (scores of 20 to 35 or scores at least one-half S.D. below the mean). The moderately high anxious (scores of 36 to 44) group was eliminated. (The mean for the sample was 40.89 and the S.D. was 10.63.) No significant differences existed between high and low anxious Ss for either FEI (overt) or EAF (covert) masculinity and femininity scores. Gall's results were not replicated.

A final 2 by 3 analysis of variance was performed on the anxiety scores for the male and female same, inappropriate and appropriate groups to determine whether sex or degree of appropriateness affected anxiety level. No significant differences between any of the means existed for the sample of 225 Ss used in the last few analyses.

DISCUSSION

Masculinity and/or Femininity:

Are they different?: Because the masculinity and femininity scores on the TEI were partially dependent on each other (Ss could score low on both but not high on both), the correlation of $-.87$ between the two cannot be used as support for a two dimensional approach to masculinity and femininity.

The TAT masculinity and femininity scores correlated $.80$. An indication of independence between the two scores as support for a two dimensional system would have been zero correlation. This high positive correlation is slightly better evidence of the two dimensional system, though, than a high negative correlation in that a high negative correlation is more soundly indicative of one bipolar dimension. Once again the correlation is rather meaningless anyway because the two scales, although it was hoped they would contrast masculinity and femininity, remained highly similar to one another. The reason for this is probably the result of deriving the femininity scale from the masculinity scale.

In summary, little evidence of two continua of masculinity and femininity was found to support Vroegh's (1968) research. Because of the nature of the two tests used here, this lack of support does not necessarily mean that the

development of other scales will not provide support for Vroegh's research in the future.

Similarly the failure of the TAT to discriminate between masculinity and femininity should not signal the end of research explorations which attempt to develop more subtle measures of masculinity and femininity which would eliminate the response biases that Bieliauskos et al (1968) have demonstrated. Perhaps a completely different test such as sentence completion is the answer. The TAT might be an appropriate test but new scoring systems taking masculinity-femininity into account are needed. Aggressive motivation might also indicate degree of masculinity and femininity. Aggression, however, was not used in this way in the present study because only quantitative differences are measurable at this point. Males should show more aggression than females, but the nature of the aggressive motive might differ in men and women. Further exploration, however, is needed to demonstrate qualitative differences in the way masculine and feminine people handle aggression. For instance, masculine people might be characterized by active (physical and direct) aggression and feminine people passive (verbal or displaced) aggression. This study was a preliminary examination of scales such as these which are hopefully similar to the type Bieliauskos et al recommend.

Femininity bias in sample: A comment on masculinity and femininity in this particular sample should be made. (Keep in mind that the average introductory psychology class

at Michigan State University from which this sample was drawn may not parallel other introductory psychology classes at other schools from which samples for psychological research are drawn.) In this particular sample, a significant χ^2 ($p < .001$) was found in the large sample used to collect the TEI data (Table 1).

Closer scrutiny shows that the very largest portion of the females were appropriately typed; they were high feminine-low masculine. The other two groups of females (same and inappropriate) were much smaller in size with the combined total of both groups (18% and 9% respectively) being less than half the size of the appropriate group (73%). Similarly the size of the inappropriate group (9%) was half the size of the same group (18%). If the same group can be labeled as being less inappropriate than the inappropriate group (after all the same group is at least as feminine as it is masculine), then these data seem sensible. Size of group for female Ss increases from least to most appropriate.

For the males this is anything but the case. The largest group was the inappropriate group, the high feminine-low masculine males. The remaining groups, the same and appropriate groups, were much smaller and about the same size as one another (23% and 24% respectively).

This finding implies that in this sample, the males are much more feminine than the females are masculine. (Terman and Miles, 1933, also found this to be true.) It might be that college males who volunteer or who study psychology are

more feminine than college males who do not volunteer or who study natural sciences. (Females and feminine persons seem to volunteer more. Here the ratio of males to females was 1 to 2.) Or it might be that college males in general are more feminine than noncollege males. (The normative data for the TEI is not sufficient evidence of this, but it does show that college males do not score as high on the masculine orientation scale as do industrial males, pp. 29-31. A better indication of this would be college versus industrial males on feminine orientation, but this information is not cited.)

In either case, if generalizations from the Michigan State sample can be made, other researchers in psychology, but especially in the area of sex or sex-role differences, should be careful about selecting their samples or drawing their inferences from their samples when college students are used. These Ss, especially males and volunteers, may be more feminine than their nonvolunteer noncollege counterparts in the rest of society.

On being Masculine, Feminine or both: A final point which is related to the so-called femininity bias found in these males is the fact that the sexes may be and are sometimes forced to be similar in contemporary society. The males in this sample were found to be more feminine than the females were masculine. It was implied above that these males might also be more feminine than other males in the population. It might also be true that the females in this

sample, even though they look quite feminine here, are more masculine than other females in the population. (Unfortunately the T&I Tester's Manual does not make the same comparison for industrial versus college females on feminine orientation as it does for industrial and college males on masculine orientation.)

If this merging of the sexes is a product of education or merely the result of the selectivity process, one can not help but wonder if it is desirable to have the sexes appear alike. Currently unisex clothes and hairdos and equalitarian life styles are the vogue. As Rosenberg and Sutton-Smith (1972, p. 4) remark, one might conclude that "sex as a form of status seems to be disappearing and that individual differences in personality are taking its place as terms of reference for human characteristics."

One wonders if this is a productive idea. Alan Watts (1963) in talking about "The Woman in Man" makes some interesting remarks on the issue. Watts implies that men (and Eleanor Maccoby in another article in the same volume would add "masculine" females to this) have "academic" or computational intelligence and that women (and feminine persons) have "social" or empathic intelligence. Both of these are valued in our society, but, at present, the possession of one sometimes seems to interfere with possession of the other, i.e. it is difficult for a person to acquire high levels of both. It seems that a person must not only be as masculine as he or she is feminine but also be high on

both dimensions to reap the best of both possible worlds. But who are these high feminine-high masculine people likely to be? How would they deal with the criticisms of others who declare them to be homosexual, deviant, or whatever else they might be called? Watts answers this, too, "The person who has no reason to doubt his masculine potency, can really afford feminine graciousness" (p. 84), and presumably he would add a hardy vice versa to this had he been describing women.

Relation of Overt to Covert Measures

Is there a relationship? The correlational results (Table 8) indicated that masculinity and femininity on the TEI were negatively related. This correlation might be unrealistically high, though, because most of the groups were purposely set up to contrast masculinity and femininity and because of the shortcomings of the TEI in that it does not really measure the two constructs as varying along separate continua.

On the TAT masculinity and femininity were positively related. This finding is questionable, too, and is probably mostly a function of the fact that the femininity scale was derived from the masculinity scale and therefore remained highly similar to it.

Predictions were made that overt and covert masculinity and femininity would not be related. Table 8 shows that there were no relationships as predicted but this finding

should be taken lightly in view of the shortcomings of both tests and in view of the fact that sexuality was used as the measure of covert masculinity and femininity.

Finally, the results of the sample crossovers (Table 9) indicated that various Ss may or may not become more appropriate from overt to covert measures as predicted. Again, the shortcomings of both tests must be recalled here.

Picture differences: The bed picture (13 MF) was expected to generate the most sexual imagery, which it did (see Table 5). The boat picture (12 BG) was considered to be neutral because it did not contain any people-related cues. There were no people present in the picture, and no people apparently means no sex to college students. The two pictures which should have generated equal and moderate amounts of sexual imagery did not do so.

The female dominant picture elicited moderate amounts of sexual imagery. The male dominant picture generated lower scores. One explanation of this might be that males are seen as highly dominant persons as a matter of fact or as a matter of their competency. No sexual imagery is found here because males are expected to dominate. Females may not be seen as dominant or high status persons because of merit but rather because they used sexuality to achieve status. This is an interesting and relevant speculation in terms of the complaints voiced by the contemporary feminists.

Overt-Covert Measures and Anxiety

Present finding: No support was found for the predictions concerning crossover from overt to covert masculinity and femininity and anxiety. It was predicted that inappropriate Ss who became more appropriate in their fantasies would exhibit lower trait anxiety than those inappropriate Ss who did not become more appropriate in their fantasies. These findings, too, are not highly interpretable due to the confounding nature of the tests used.

Gall's (1968) Study: Gall used the Omnibus Personality Index (OPI Research Program, 1959) to measure masculinity-femininity (a bipolar scale) and the Manifest Anxiety Scale (Taylor, 1953) to measure anxiety. She found that females and feminine persons exhibited or at least admitted to higher levels of anxiety than males or masculine persons. These results were not replicated. However, two major differences between the two studies exist. One difference was in the type of scales used. Gall administered the Manifest Anxiety Scale and the present research used the Trait Anxiety Index. It might be that these are two different types of anxiety. There was also a difference between the sex-role orientation scales. The present scales measured masculinity and femininity on two separate continua and the Omnibus Personality Inventory measures masculinity and femininity on the same continuum. This could have contributed to the difference in findings between the two studies.

A second major difference was that in the Gall study masculinity-femininity was the independent measure and anxiety the dependent measure. In the present study anxiety was the independent variable, and masculinity and femininity were the dependent variables. This, too, could account for the difference in findings.

Conclusions

The present study attempted to replicate Vroege's (1968) finding that masculinity and femininity vary along two separate continua. Little support was found for this contention but this may have been due to the nature of the two tests (TEI or overt and TAT or covert) used.

An interesting by-product of this attempt at replication was the finding that the males used in this sample were much more feminine than the females were masculine. This supported Terman and Miles (1933) contention that college samples may not be representative of the general population.

The relationship between overt and covert masculinity and femininity was not clear either. In the present study the true nature of this relationship was difficult to assess because of the two tests used. Because of this difficulty, the relationship between overt and covert masculinity and femininity to trait anxiety was also confounded. No relationship existed, but this, too, might have been a result of the possible inadequacy of the two measures. In any event, a separate analysis of anxiety

scores showed that the study did not support Gall's (1969) finding that females and feminine persons exhibit higher levels of anxiety than males or masculine persons.

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APPENDIX

APPENDIX A

INSTRUCTIONS READ TO Ss
IN TEI-ANXIETY PROCEDURE

INSTRUCTIONS

Experimenter I

This is one of a number of ongoing creativity experiments at Michigan State University. This particular experiment is concerned with sorting out degrees of creative people regarding their creative writing ability. First we would like you to take a questionnaire (The Self-Evaluation Questionnaire) which is purported to be able to discriminate between creative and non-creative people. Then we would like you to write some stories. We will pass out the self-evaluation questionnaire first. Please do not begin until we have gone over the instructions with you.

(PASS OUT QUESTIONNAIRES)

You should now have the booklet in front of you. Put your name and sex on the top of each page.

(PAUSE)

Is everyone ready to proceed? Please read the instructions carefully. If you have any questions, raise your hand and one of us will assist you. Be sure to start with question one as both sides of the questionnaire look very similar. When you are finished, please sit quietly until everyone is finished. At that time we will collect the test booklets, and everyone will be able to proceed in unison to the creative writing part of the experiment.

Experimenter 2

(COLLECT SELF-EVALUATION QUESTIONNAIRES)

We will now pass out the creative writing test. Please do not begin until we have gone over the instructions with you.

(PASS OUT WRITING BOOKLETS TO EVERYONE)

You should now have your test booklet in front of you. In the space provided at the top of the front page (do not fill out the rest of the pages), please write your name and sex right now, but wait for the rest of the instructions to be read before you proceed.

(PAUSE)

Is everyone ready to proceed? Please read the instructions with me. There are four different pictures about which we would like you to write stories. Be sure to write your stories in the sequence in which they are requested. That is, do not skip around from page to page. If you do not finish your story, that is all right. In order for you to get the best possible response, look at each picture for 10 to 20 seconds. Try to see what is taking place, then use the page following to write a story about it. We have provided questions to guide your responses but feel free to write whatever you wish even if it does not follow the order or concept implied by them. The stories should be continuous wholes rather than answers to questions. It has been

found that the best stories are written by people who relax, let themselves go, and write whatever comes to their heads even though some aspects of the story might not make too much sense at the time. Naturally, there are no right or wrong answers. When you are finished, turn in your story booklet and present your credit card to us. You may begin.

APPENDIX B

THE TRAIT EVALUATION INDEX WITH
ITEMS RELEVANT TO MASCULINIFY (M)
AND FEMININIFY (F) SO INDICATED

TRAIT EVALUATION INDEX

Directions

There are 125 groups of traits on the following pages. Each group contains three descriptive words. Here is an example:

- A Restrained
- B Unexcited
- C Gifted

Your task is to indicate which trait you consider to be **MOST** descriptive of you, and which one, within the group of three, is **LEAST** descriptive. There are no right or wrong answers. Choose words that describe you **as you are now** rather than those that may describe how you would like to be.

Mark your answers on the separate answer sheet. Make no marks in this booklet. Below is an example of proper marking of the answer sheet. In this case the individual indicated that **Gifted** is most descriptive of him, and that **Unexcited** is least descriptive.

	M	L
A		
B		~~.....~~
C	~~.....~~	

Mark between the dotted lines under M for **MOST** and under L for **LEAST**. In each item you will have one **MOST** answer, one **LEAST** answer, and one blank. Make your marks heavy and dark. If you wish to change an answer, be sure to erase completely. Work quickly and carefully.

Mo = MOST

LE = LEAST

Mo LE

Mo LE

Mo LE

- | | | |
|--|---|--|
| 1. A Educated <i>M F</i>
B Honorable
C Warm-hearted <i>F M</i> | 15. A Competent
B Approachable
C Achieving | 29. A Polished <i>M F</i>
B Exact
C Compliant |
| 2. A Friendly
B Trustworthy
C Considerate | 16. A Unbiased
B Flexible
C Insightful | 30. A Untiring
B Obliging
C Smooth-spoken <i>M F</i> |
| 3. A Eloquent
B Easy-going
C Proper | 17. A Relentless
B Charitable
C Jovial | 31. A Helpful
B Earnest
C Communicative |
| 4. A Obliging
B Cautious
C Analytical <i>M F</i> | 18. A Polished
B Exact
C Compliant | 32. A Versatile
B Willing
C Kind |
| 5. A Capable
B Sportsmanlike
C Respectable | 19. A Responsive
B Patient
C Hopeful | 33. A Wholesome
B Prompt-acting
C Inquisitive |
| 6. A Cool-headed
B Impartial
C Courageous | 20. A Tasteful
B Reputable
C Straightforward | 34. A Jubilant
B Brilliant <i>M F</i>
C Unconforming |
| 7. A Opportunistic
B Frank
C Systematic | 21. A Likeable
B Honest
C Accurate | 35. A Conversational
B Sane
C Genuine |
| 8. A Ethical
B Conversable
C Self-assured <i>M F</i> | 22. A Learned <i>M F</i>
B Willing
C Hard-working | 36. A Articulate
B Pleasant
C Agreeable |
| 9. A Self-reliant
B Reasonable
C Verbally-expressive | 23. A Willing
B Active
C Unprejudiced | 37. A Intellectual
B Self-sufficient
C Spirited |
| 10. A Alert
B Conscientious
C Motivated | 24. A Natural
B Punctual
C Happy | 38. A Cordial
B Merry
C Success-seeking |
| 11. A Truthful
B Tolerant
C Well-mannered | 25. A Forthright
B Good-natured
C Inquiring | 39. A Witty
B Satisfied
C Methodical |
| 12. A Tidy
B Joyous
C Obedient | 26. A Careful
B Talented
C Self-directing | 40. A Resourceful
B Teachable
C Compassionate <i>F M</i> |
| 13. A Friendly
B Trustworthy
C Considerate | 27. A Persevering
B Bright
C Courteous | 41. A Outgoing <i>F M</i>
B Determined
C Fair-minded |
| 14. A Tender-hearted
B Unswerving
C Unconventional | 28. A Ambitious
B Honest
C Happy | 42. A Open-minded
B Self-reliant
C Verbally-expressive |

43. A Adaptable
B Polite
C Dependable
44. A Intelligent
B Stable
C Sincere
45. A Jubilant
B Brilliant
C Unconforming
46. A Independent
B Good-humored
C Companionable
47. A Eager
B Benevolent
C Daring
48. A Even-tempered
B Competitive
C Individualistic
49. A Fluent
B Sharp-witted
C Studious
50. A Evaluative
B Accomplished
C Self-controlled
51. A Sensible
B Ambitious
C Quick
52. A Lively *F M*
B Cultivated
C Optimistic
53. A Assertive
B Refined
C Bold
54. A Reliable
B Mature
C Good-natured
55. A Precise
B Orderly
C Incorruptible
56. A Conscientious
B Sociable
C Reasonable *M F*
57. A Candid
B Alterable
C Scrutinizing
58. A Well-organized
B Insightful
C Unafraid
59. A Meditative
B Shrewd *M F*
C Talkative *F M*
60. A Persistent
B Plain-spoken
C Changeable
61. A Evaluative
B Accomplished
C Self-controlled
62. A Just
B Open-minded
C Enterprising *M F*
63. A Self-trusting
B Receptive *F M*
C Wise
64. A Correct
B Neat
C Humane *F M*
65. A Soft-hearted
B Meticulous
C Sedate
66. A Genial
B Smart
C Rational
67. A Sympathetic
B Able
C Bright
68. A Versatile
B Pleasant
C Self-coordinating
69. A Self-regulated
B Tolerant *F M*
C Wise *M F*
70. A Soft-hearted
B Self-interested
C Fortune-seeking
71. A Responsible
B Friendly
C Polite
72. A Agreeable
B Sane
C Confident
73. Unfaltering
B Proper
C Studious
74. A Witty
B Compliant
C Methodical
75. A Shrewd *M F*
B Meditative
C Tender-hearted
76. A Likeable
B Warm-hearted
C Motivated
77. A Genial *F M*
B Smart
C Rational *M F*
78. A Learned *M F*
B Neat
C Unafraid
79. A Self-trusting
B Honest
C Unbiased
80. A Mature
B Stable
C Reliable
81. A Trustworthy
B Adaptable
C Good-natured
82. A Contented
B Calm
C Energetic
83. A Smooth-spoken
B Obliging
C Unswerving
84. A Enterprising
B Honorable
C Accurate

Mo LE

Mo LE

Mo LE

85. A Respectable
B Rational *M F*
C Persevering

86. A Self-reliant
B Punctual
C Courteous *F M*

87. A Conversational
B Receptive
C Hopeful

88. A Easy-going
B Reflective
C Incorruptible

89. A Inquiring
B Correct
C Intellectual

90. A Independent
B Earnest
C Self-assured

91. A Cool-headed
B Driving
C Firm-minded

92. A Calm
B Orderly
C Satisfied

93. A Contented
B Calm
C Energetic

94. A Cultivated
B Wholesome *F M*
C Self-directing

95. A Self-sufficient
B Careful
C Inquisitive

96. A Proper
B Impartial
C Precise

97. A Fair-minded
B Cheerful
C Ethical

98. A Sociable
B Poised
C Decent

99. A Determined
B Patient
C Well-organized

100. A Relentless
B Systematic
C Frank

101. A Individualistic
B Willing
C Reputable

102. A Eloquent
B Exact
C Polished

103. A Self-sufficient *M F*
B Lively
C Cordial

104. A Alterable
B Watchful
C Eager

105. A Enthusiastic
B Respectful
C Courageous

106. A Sportsmanlike
B Quick
C Self-reliant

107. A Obliging
B Cautious
C Persistent

108. A Competent
B Decent
C Poised

109. A Sociable
B Poised
C Decent

110. A Individualistic
B Wholesome
C Careful

111. A Accomplished
B Articulate
C Well-mannered

112. A Fluent
B Energetic
C Tidy

113. A Straightforward
B Kind
C Willing

114. A Respectful
B Reflective
C Enthusiastic

115. A Well-behaved
B Humane
C Unprejudiced

116. A Moral
B Responsive
C Agreeable

117. A Just
B Alert
C Resourceful *M F*

118. A Watchful
B Firm-minded
C Driving

119. A Composed
B Aspiring
C Moral

120. A Cheerful
B Perceptive
C Confident

121. A Communicative
B Smart *M F*
C Approachable *F M*

122. A Agreeable
B Level-headed *M F*
C Well-behaved

123. A Outgoing *F M*
B Level-headed *M F*
C Flexible

124. A Active
B Good-natured
C Tasteful

125. A Respectful
B Reflective
C Enthusiastic

تعمیراتی

ANSWER SHEET TO TRAIT EVALUATION INDEX

NAME last first SEX STUDENT NUMBER

ADDRESS PHONE NUMBER(S)

1A	M	L	17A	M	L	33A	M	L	49A	M	L	65A	M	L	81A	M	L	97A	M	L	113A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
2A	M	L	18A	M	L	34A	M	L	50A	M	L	66A	M	L	82A	M	L	98A	M	L	114A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
3A	M	L	19A	M	L	35A	M	L	51A	M	L	67A	M	L	83A	M	L	99A	M	L	115A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
4A	M	L	20A	M	L	36A	M	L	52A	M	L	68A	M	L	84A	M	L	100A	M	L	116A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
5A	M	L	21A	M	L	37A	M	L	53A	M	L	69A	M	L	85A	M	L	101A	M	L	117A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
6A	M	L	22A	M	L	38A	M	L	54A	M	L	70A	M	L	86A	M	L	102A	M	L	118A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
7A	M	L	23A	M	L	39A	M	L	55A	M	L	71A	M	L	87A	M	L	103A	M	L	119A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
8A	M	L	24A	M	L	40A	M	L	56A	M	L	72A	M	L	88A	M	L	104A	M	L	120A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
9A	M	L	25A	M	L	41A	M	L	57A	M	L	73A	M	L	89A	M	L	105A	M	L	121A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
0A	M	L	26A	M	L	42A	M	L	58A	M	L	74A	M	L	90A	M	L	106A	M	L	122A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
11A	M	L	27A	M	L	43A	M	L	59A	M	L	75A	M	L	91A	M	L	107A	M	L	123A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
12A	M	L	28A	M	L	44A	M	L	60A	M	L	76A	M	L	92A	M	L	108A	M	L	124A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
13A	M	L	29A	M	L	45A	M	L	61A	M	L	77A	M	L	93A	M	L	109A	M	L	125A	M	L
B			B			B			B			B			B			B			B		
C			C			C			C			C			C			C			C		
14A	M	L	30A	M	L	46A	M	L	62A	M	L	78A	M	L	94A	M	L	110A	M	L			
B			B			B			B			B			B			B					
C			C			C			C			C			C			C					
5A	M	L	31A	M	L	47A	M	L	63A	M	L	79A	M	L	95A	M	L	111A	M	L			
B			B			B			B			B			B			B					
C			C			C			C			C			C			C					
6A	M	L	32A	M	L	48A	M	L	64A	M	L	80A	M	L	96A	M	L	112A	M	L			
B			B			B			B			B			B			B					

sam

mef

APPENDIX D

STATE-TRAIT ANXIETY SCALE WITH
STATE ITEMS NUMBER 1 THROUGH 20
AND TRAIT ITEMS 21 THROUGH 40

SELF-EVALUATION QUESTIONNAIRE

Developed by C. D. Spielberger, R. L. Gorsuch and R. Lushene

STAI FORM X-1

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *feel* right now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	①	②	③	④
2. I feel secure	①	②	③	④
3. I am tense	①	②	③	④
4. I am regretful	①	②	③	④
5. I feel at ease	①	②	③	④
6. I feel upset	①	②	③	④
7. I am presently worrying over possible misfortunes	①	②	③	④
8. I feel rested	①	②	③	④
9. I feel anxious	①	②	③	④
10. I feel comfortable	①	②	③	④
11. I feel self-confident	①	②	③	④
12. I feel nervous	①	②	③	④
13. I am jittery	①	②	③	④
14. I feel "high strung"	①	②	③	④
15. I am relaxed	①	②	③	④
16. I feel content	①	②	③	④
17. I am worried	①	②	③	④
18. I feel over-excited and rattled	①	②	③	④
19. I feel joyful	①	②	③	④
20. I feel pleasant	①	②	③	④



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SELF-EVALUATION QUESTIONNAIRE

STAI FORM X-2

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21. I feel pleasant	①	②	③	④
22. I tire quickly	①	②	③	④
23. I feel like crying	①	②	③	④
24. I wish I could be as happy as others seem to be	①	②	③	④
25. I am losing out on things because I can't make up my mind soon enough	①	②	③	④
26. I feel rested	①	②	③	④
27. I am "calm, cool, and collected"	①	②	③	④
28. I feel that difficulties are piling up so that I cannot overcome them	①	②	③	④
29. I worry too much over something that really doesn't matter	①	②	③	④
30. I am happy	①	②	③	④
31. I am inclined to take things hard	①	②	③	④
32. I lack self-confidence	①	②	③	④
33. I feel secure	①	②	③	④
34. I try to avoid facing a crisis or difficulty	①	②	③	④
35. I feel blue	①	②	③	④
36. I am content	①	②	③	④
37. Some unimportant thought runs through my mind and bothers me	①	②	③	④
38. I take disappointments so keenly that I can't put them out of my mind	①	②	③	④
39. I am a steady person	①	②	③	④
40. I become tense and upset when I think about my present concerns	①	②	③	④

APPENDIX E

VOLUNTARY OUTLINE FOR S TO
FOLLOW IN WRITING TAT STORIES

NAME _____ SEX _____

What is happening? Who are the persons?

What has lead up to the situation? That is, what has happened in the past?

What is being thought? What is wanted? By whom?

what will happen? what will be done?

APPENDIX F

ROWBOAT PICTURE ON 12 BG
FROM ORIGINAL TAT

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was not obtained from the copyright holder.)

APPENDIX G

BED PICTURE OR 13 MF
FROM ORIGINAL TAT

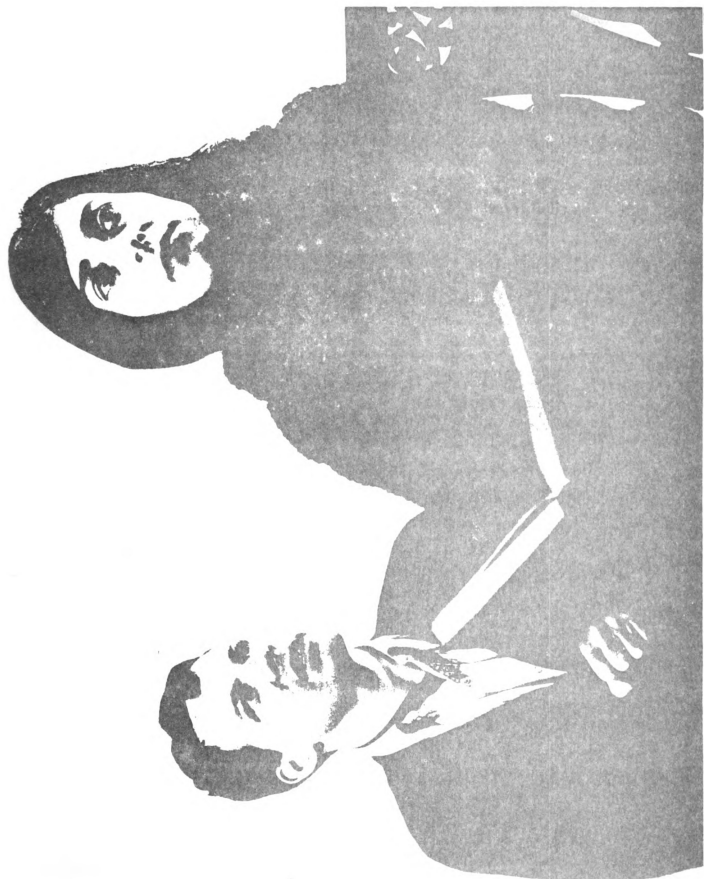
(Permission to include this picture in the dissertation
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APPENDIX H
MALE DOMINANT PICTURE -
MODIFIED TAT



APPENDIX I

FEMALE DOMINANT PICTURE -
MODIFIED RAT



APPENDIX J

SCALE FOR TAT OR
COVERT FEMININITY

SCORING MANUAL FOR FEMININITY ON TAT

GIVE A SCORE OF

1 to no sexual references:

boy and girl

working on assignment

2 to the following references:

gone out a few times
studying together in library
good friends
good time together
hawking
fond of
platonic

fascinated by
keeping an eye on
study date
dependent
check
looks at legs
digs her looks
untrue to

interested in
blind date
going out
bird dogging
young love
looking at
pictures of
nudes

3 to the following references:

get along well
admired
a relationship
going together
girl friend
boy friend
couple
run around with
physical contact like
husband
wife
crush on
flirt
honey
win love of
simple love references
sit on a lap

make a pass
date
affection wanted
dig someone
make play for
something physi-
cal
going parking
lovers' lane
invited up to
room
suitor
ogle
adores
reads sex into
everything
they are in
love
magnificent
attraction
much too friendly

a flame
pinch
ask her out
courting
alone in
library
stepping out
on
he wants her
needs
broad
horney
sex appeal
foulplay
sex-life
unfaithful
hustle

4 to the following references:

necking	heavy petting	proposal of
petting	direct desires such	marriage
serious	as	topless
marriage	desires physical	lustful
fall in love	contact	hot date
fiance	wants loving	passion
kiss	free love	abortion
going to be married	intimate	get pregnant
engaged	relationship	have to get
wedding	sexually aggres-	married
pinned	sive	birth control
bride	reference to bed	pregnancy
aroused	sexual outlet	rape
	dirty old man	Don Juan
	sex hungry	whore
	advanced love	
	references	
	to make sexual	
	demands	

5 to the following references:

elope	orgasm	nymphomaniac
sexual affairs	balling	screw
erection	make love to	fuck
sleeping together	intercourse	to score
prostitution	mistress	have an affair
seduce	lovers	get laid
debauch	strong love	nymph
	references	

Give a story one score from this scale. Count wishes the same as deed itself. Score one category higher for multiple (3 or more) references from a single category. Multiple references from 2 or more categories are given the higher score.

APPENDIX K
SCALE FOR TAT OR
COVERT MASCULINITY

SCORING MANUAL FOR MASCULINITY ON TAT

GIVE A SCORE OF

1 to no sexual reference:

boy and girl working on assignment

2 to the following references:

get along well	going together	run around with
gone out a few times	keeping an eye on	physical contact
studying together in	desires	like
the library	girl friends	husband
good friends	boy friends	wife
good time together	study date	blind date
hawking	couple	going out
admired	dependent	bird dogging
fond of	check	crush on
platonic	looks at legs	young love
fascinated by	digs her looks	flirt
a relationship	interested in	couple

3 to the following references:

honey	something physical	wedding
win the love of	fiance	bride
necking	kiss	adores
petting	going parking	reads sex into
simple love	lovers' lane	everything
references	looking at pic-	they are in love
serious	tures of nudes	magnificent
marriage	going to be	attraction
sit on a lap	married	much too
make a pass	invite up to a	friendly
date	room	a flame
fall in love	engaged	pinch
affection wanted	suitor	asking her out
dig someone	untrue to	courting
make play for	ogle	
	pinned	

4 to the following references:

aroused	sexual outlet	broad
heavy petting	dirty old man	horney
alone in library	sex hungry	proposition
or lab	needs	to flame
stepping out on	advanced love	sex-appeal
direct desires such	references	foulplay
as	to make sexual	sex-life
he wants her	demands	passion
desires physical	proposal or	unfaithful
contact	marriage	hustle
wants loving	elope	erection
free love	topless	
intimate relation-	lustful	
ship	sexual affairs	
sexually aggressive	hot date	
reference to bed		

5 to the following references:

sleeping together	pregnancy	nymphomaniac
abortion	balling	screw
prostitution	make love to	fuck
seduce	rape	whore
debauch	Don Juan	to score
get pregnant	intercourse	have an affair
have to get	mistress	get laid
married	lovers	nymph
birth control	strong lover	
orgasm	references	

Give a story one score from this scale. Count wishes the same as deed itself. Score one category higher for multiple (3 or more) references from a single category. Multiple references from 2 or more categories are given the higher score.

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