# CROSS-CULTURAL COMPARISON OF 

 MASCULINITY-FEMININITY IN PRESCHOOL CHILDRENBy DIXIE KAY MCKINZ IE Bachelor of Science Oklahoma State University Stillwater, Oklahoma

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## INTRODUCTION

## Purpose

The purpose of this research was to investigate the relationship of masculine and feminine'preferences of preschool children to sex, age, and socio-economic status (SES). To accomplish this purpose, a Masculinity-Femininity Test, designed for use with preschool children, was validated and administered to children of middle and lower socioeconomic status.

## Problem

Masculinity-femininity is an integral component of self-concept which enables a person to acquire appropriate values and ideals for the society in which he lives.

According to Kagan (1964) the characteristics that define masculinity and femininity are as follows: physical attributes, overt behaviors, and covert behaviors such as attitudes, motives, and beliefs. These are the characteristics on which a culture bases its evaluation of masculinity and femininity. For example, if most men (or women) behave in a particular way, this behavior is designated as masculine (or feminine).

This designation of masculinity-femininity is not an arbitrary matter, but rather it is the specific behavior of the individuals in
the culture that provides the basis for these judgments. Adults in a culture then label the behavior that is masculine or feminine. Where the socialization of young children is concerned, the behaviors that have already been labeled as masculine or feminine become the expectations which the adults have for the children.

Research in cultural anthropology has shown repeatedly that different cultures have different expectations where masculine and feminine behavior is concerned; these expectations also vary from one age level to the next. Johnson and Leslie (1965) have suggested that there are cultural differences and age differences in masculine and feminine expectations. After astudy of child-rearing practices, they concluded that the social class of a family furnishes for the child the milieu that "shapes his view of the world, his manner of relating to it, and his aspirations concerning the place he will take in it as a child and as an adult." (Johnson and Leslie, 1965, p. 347)

A change in masculinity-femininity, for which there is empirical evidence, is the change that occurs over a period of time. From one generation to the next what is labeled masculine or feminine often changes. An example is that the behavior of a feminine child of today is quite different.from the behavior of a feminine child a generation ago.

Changes that occur over a period of time, i. e., changes in the definition of appropriate sex-role behavior, pose a special problem in the study of the development of masculinity-femininity in early childhood. The judgment of masculinity and femininity is based on the established values of adults in a culture; and yet, in reality, it is the attributes and behaviors of the young children that should serve as
guides for what is to be labeled masculine or feminine.
To the extent that the present research increases our knowledge of variables involved in the development of masculinity-femininity, it should contribute to our understanding of this one aspect of selfconcept. This understanding should, in turn, increase our awareness and acceptance of differences in the masculinity and femininity of children in different SES groups and at different age levels, and should serve as a guide for the expectations on which we base our socialization of young children.

## Procedure

The following steps were involved in the study of masculinityfemininity and its relationship to sex, age, and socio-economic status in preschool children:

1. Literature was reviewed to gain an understanding of the theory of masculinity-femininity as it relates to sex, age, and socio-economic status, and of the research methods which have been used to measure masculinity-femininity in children。
2. A Masculinity-Femininity Test most appropriate for use with preschool children was selected and validated.
3. The Masculinity-Femininity Test was administered to 180 children, boys and girls from middle and lower SES groups ranging in a.ge from three through five years.
4. Data were analyzed and interpreted.
5. Recommendations were made for future study.

## REVIEW OF IITERATURE

This chapter is confined to a review of literature on one area of self-concept, masculinity-femininity, and includes the following: methods by which masculinity-femininity has been measured; and sex, age, and socio-economic differences in sex-role preference.

## Measures of Masculinity-Femininity

## Research Techniques

Research techniques used in studies of the masculinity-femininity of young childxen can be divided into three major categories: (1) observations of free play in which the choice of playmates and the type of activities are interpreted as masculine or feminine, (2) projective techniques in which the children's responses are interpreted as masculine or feminine, and (3) preference tests in which the children make choices between masculine and feminine items.

Obsexvations. Observations of children in free play have provided the data for some studies. Sears (1965) assessed sex-role preference in terms of the amount of time a child spent in sex-typed play areas in nursery school. Koch (1944) studied the "social distance" between boys and girls of preschool age. She assumed that a child who frequently preferred like-sexed playmates was achieving his appropriate sex-role identification.

Projective Techniques. Social expectations may cause a child to express a preference for like-sexed items when, in reality, he may desire the exact opposite. For this reason, projective techniques are used in some studies in order to allow the child freedom to express his covert sex-role preference. The techniques most frequently used with young children are doll play and human figure drawings. Doll play as a projective technique has been used to study the role-playing of children (Sears, 1953; Lynn, 1955). Children's drawing of human figures have also been used as a projective device in order to determine sex-role preference (Weidner and Noller, 1950, 1953). A more widely used projective technique is the "It" Scale (Brown, 1956) in which a neutral human figure is presented to the child. The child then gives his choice of sex-linked items for this "It" figure. His choices are assumed to indicate his own sex-role preference.

Preference Tests. Sex-role preferences are also measured by exposing a child to a choice situation in which masculine and feminine alternatives exist. These alternatives usually consist of choices between sex-linked toys, games, activities, and interests, or pictures representing any of these. In these tests the child's choices are assumed to indicate his sex-role preference. For example, a child who chooses a majority of items associated with the male role is assumed to have acquired a male sex-role preference. (Rabban, 1950; De Lucia, 1963; Rosenberg and Sutton-Smith, 1959; White, 1967.)

## A Methodological Problem

Common to a majority of research studies is the problem of evaluating what is masculine and what is feminine. Two approaches have
been used: (1) The choices of the child are evaluated as masculine or feminine according to adult judgments. (2) The choices of the child are evaluated as masculine or feminine by comparing them to the choices of other children. In the first instance, it is the adults who evaluate the masculinity and femininity of children; and in the latter, it is the children who make this evaluation.

In most studies adult judgments are used to measure the masculinity-femininity of children; however, the validity of this approach is questionable. In any culture, the way little girls behave is "little girl" behavior even though it may not be considered feminine by the adults. The masculine and feminine behavior which is expected of children by adults, may have little relation to the actual behavior of a majority of the children; therefore, the validity of adult judgments in a test of masculinity-femininity is questionable. (Figure 1.)

The "It" Scale (Brown, 1956) depends on adult judgments in the measurement of children's masculinity-femininity. The test consists of cards picturing objects, activities, and children. Each picture has been judged by adults and assigned a masculine or feminine value. From these pictures a child makes choices for the neutral "It" figure, and in so doing, he presumably indicates his own sex-role preference. The child's M-F score is the total of the values which have been assigned to his picture choices; therefore, his masculinity or femininity is determined by adult judgments of what is masculine or feminine.

The masculinity-femininity test (M-F Test) used by White (19.67) compared each child's choice of pictures to the choices of other children. The instrument (adapted from Bennett, 1965) was a picture booklet in which each child indicated the pictures he liked best.


Figure 1. The way little girls behave is
"little girl" behavior.

The choices of all the children in the study were then used to figure an assigned M-F value for each picture. For example, a picture chosen by a majority of boys and by few of the girls, would be weighted heavily as masculine. Each child's M-F score could then be figured as the sum of the assigned scores for the pictures he chose. This method of scoring, as opposed to the scoring for the "It" Scale, provides a measure of masculinity-femininity based on the choices of other children rather than the judgments of adults.

## Sex Differences as Related to

Masculinity-Femininity

Seward (1946) reminded us that from birth a child learns his sexrole from a variety of environmental factors. He commented that "...the individual is trained to his sex-role from the moment of birth when girls are placed in pink, boys in blue bassinets." (Figure 2.)

Sears (1957) stated that both males and females identify first with a feminine model, usually the mother. Mowrer (1953) further stated that because the male must shift from early identification with the mother to identification with the father, the achievement of appropriate sex-identification for boys is more difficult than for girls. However, existing research and literature do not conclusively support this idea.

In psychoanalytic theory, Freud (1946) and Adler (1927) stated that girls encounter greater difficulty in developing their sex-role identification than do boys. They described girls as being resentful and envious of boys because of physical differences and the greater prestige and socio-cultural advantages ascribed to boys.


Figure 2. The judgnent of masculinity and femininity is based on the established values of adults in a culture.

Lynn (1961) described boys as shifting from feminine to masculine identification when they discover that they are in the father's sex category. Although there is a shortage of male models, the culture clearly defines the behavior of the masculine role and punishes deviations from this behavior. The prestige and advantages of being a male further strengthen the boy's masculine sex-role preference.

Brown (1956) gave evidence that supports the above theory. Using the "It" Scale, he found that (a) children of both sexes showed a mixed sex-role preference pattern; (b) some children of both sexes showed an opposite sex-role preference, this tendency also being more frequent and stronger in girls than in boys; and (c) boys showed greater preference for the masculine role than girls showed for the feminine role.

In summarizing the literature about conflicts in sex-role behavior, Brown (1956) stated that girls experience more conflict than boys because of the following factors: (a) insufficient recognition is given for the acquisition of feminine characteristics; (b) an inadequate definition of the female sex-role exists in our culture; (c) girls may adopt aspects of the masculine sex-role without being rejectied; and. (d) many women who serve as feminine models are dissatisfied and confused about their own sex-role. These cultural conflicts make it difficult for girls to accept the feminine sex-role.

Rabban (1950) found a significant difference between the sex-role preferences of boys and girls in two diverse social classes. Boys showed an earlier and clearer awareness of their sex-role than did girls.

Har tup and Zook (1960) studied sex-role preferences of children ranging in age from three through five years. He found that with
increasing age, girls showed less preference for the feminine role and boys showed greater preference for the masculine role. This supports the earlier statements that the development of an appropriate sex-role preference is more complicated for girls than for boys.

## Age Differences as Related to

## Masculinity-Femininity

Existing research on masculinity-femininity suggests that with increased maturity changes occur in sex-role behavior, and that for each age level, different sex-role expectations exist.

McCandless (1961) stated that in our culture adults and older children begin to reward the sex-appropriate behavior of a child at about 18 months of age. Clear differences in play preferences appear by the age of 24 to 30 months.

Koch (1944) observed that children as young as two years of age show a preference for more contacts with children of their own sex. She interpreted this as the beginning of appropriate sex-role preference. Similarly, Benjamin (1932) and Miller (1943) found an increase in awareness of sex-role preferences between the ages of two and three; however, Rabban (1950) found that three-year-old children predominately showed incomplete recognition of sex differences and were unaware of sex-appropriateness of toys when compared to older preschool children. Research generally agrees that after the age of three years, an increase in appropriate sex-role preferences occurs.

Sears (1957) observed that in the dramatic play of the three-yearold, crossing of sex-roles may occur; but that by five years of age, children are more apt to assume roles within their own.sex group.

Borstelmann and Biller (1967) wrote that the important period of sexrole preference is in the third and four th years.

Hartup and Zook (1960) investigated sex-role preferences in preschool children using 161 children (male and female) from the age of three through five. The results, obtained with a modified "It" Scale, were that four-year-old boys and girls showed greater preferences for the same sex than did three-year-old children. With increase in age, boys steadily change toward greater masculine preferences but girls begin to decline in feminine preferences at the age of five. Rabban (1950) and Brown (1957) showed similar findings.

De Lucia (1963) developed "The Toy Preference Test" for measuring the sex-role identification of children from kindergarten to the fourth grade. The results showed that the number of sex-appropriate choices of boys gradually increased through later school years.

## Socio-Economic Status Differences as Related to

Masculinity-Femininity

Research has shown that different cultures have different expectations where masculine and feminine behavior is concerned, and that these expectations produce different sex-role patterns.

Davis (1941) stated that the child learns the expectations of his sex-role in his social class or caste and that sex-role behavior of boys and girls varies greatly from one class to another.

McCandless (1961) observed that lower-class children achieve appropriate sex-identification earlier than middle-class children; and that in both social classes, boys assume their sex-role earlier than girls.

Rabban (1950) gave evidence that between social classes differences exist in children's preference for the appropriate sex-roles. He studied middle-class and lower-class groups of children, and found that boys of both classes are more clearly aware of their appropriate sex-role than are the girls, and that children in the lower-class group are sooner and more clearly aware of their sex-role than are the children in the middle-class group. For the girls, these class differences were greater than for the boys.

Rabban (1950) continued his research with case studies from the two social groups, and from these he suggested causes for differential patterns in the preferences for the appropriate sex-roles.

In the lower-class a clear-cut concept of sex-appropriate behavior is established; a consistent pattern is reenforced early (reward for appropriate and punishment for inappropriate sex-role behavior). The child is restricted and taught to participate in sex-appropriate activities by the same-sexed parent. Peers of his class accept the appropriate sex-behavior early and drastic punishment for deviations occurs, especially for boys.

In the middle-class a masculine model is often absent, and the mother is the major model for both boys and girls. A clear-cut definition of sex-appropriate behavior is less rigid and/or lacking; and parents, especially mothers, are less concerned over early sex-role preferences.

## Implications for the Present Research

Masculinity-femininity is one of the integral components in the development of a good self-concept; therefore, the measurement of
different aspects of masculinity-femininity in preschool children should help in our understanding of how a child becomes masculine or feminine and should contribute to our understanding of the development of self-concept.

Research techniques which have been used to measure the masculinity-femininity of preschool children are observations, projective techniques, and preference tests. Common to a majority of these research studies is the methodological problem of evaluating what is masculine and what is feminine. Two approaches have been used; one uses adult judgments, and the other uses choices of children. In most studies, adult judgments are used; but because sex-role expectations vary, with age, culture, and time, the validity of this evaluation method is questionable. This implies that the use of children's choices to evaluate what is masculine and what is feminine should be the more valid approach; therefore, in the present study the choices of children will be used in the evaluation of masculinity-femininity.

Studies of sex differences suggest that girls have more difficulty in the achievement of an appropriate sex-role than do boys. Because of male prestige and a clearer definition of male sex-role, boys may be more aware of sex-appropriate behavior than girls. This implies that sex differences exist in the acquisition of an appropriate sex-role; and therefore, these differences will be considered in the present research.

The general findings of studies on age differences suggest that with increased maturity, there are changes in sex-role expectations and in sex-role behavior; therefore, age differences in masculinityfemininity will be investigated in this study.

Theories suggest that socio-economic class differences determine different sex-role patterns. The few existing studies have found that lower-c lass children prefer the appropriate sex-role earlier than middle-class children; and in both social classes, boys prefer the appropriate sex-role earlier than girls. Because literature suggests that socio-economic class has an influence upon masculine and feminine behavior, and because so little research has been done in the area, a study of social class differences in masculinity-femininity will be included in the present study.

## CHAPTER III

## METHOD AND PROCEDURE

The purpose of this research was to study the relationship of masculinity-femininity to sex, age, and socio-economic status in early childhood. To achieve this purpose, an instrument was designed to validate the Masculinity-Femininity Test used by White (1967). Her M-F Test was adapted and then administered to 180 preschool children. The sample consisted of boys and girls of three age levels from two SES groups.

In this chapter the subjects who participated in the research are described; the adapted $M-F$ Test is described; the development of the M-F Validation Test is discussed; and recommendations are made for the analysis of the data.

## Subjects

The subjects for this research were 180 preschool children, 90 boys and 90 girls, from lower and middle SES groups. The age range was from 2 years 11 months through 5 years 11 months. The subjects were selected so that there was equal distribution of boys and girls throughout the age range and between the two SES groups.

The socio-economic status of the children was determined by their placement in community programs for young children. The children in attendance at the child development laboratory schools and private
nursery schools were accepted as the middle SES group; and those in attendance at Head Start and other intervention programs were accepted as the lower SES group.

## The Masculinity-Femininity Test

The M-F Test (White, 1967) was adapted for use in this study. The test as used consisted of a 24 -page picture booklet. The pages were colored hi-glass paper, approximately $9^{\prime \prime} x 6^{\prime \prime}$ in size; and on each page three pictures (gummed seals) were arranged, one masculine, one feminine, and one neutral, as arbitrarily chosen by the investigator

## Administration

The experimenter told the child that he was going to make a picture book, one that he could keep. As the first page of pictures was shown to the child, she asked: "Which one of these pictures do you want to keep for your very own?" The child made his choice and was then given a copy of the picture he had selected. (He was given an identical gummed seal mounted on a small colored page.) This procedure was repeated until the child had made a choice from each page of the booklet. A sample score sheet is presented in Appendix B.

## Scoring

Each child's M-F score was based on the masculine or feminine value of each picture he chose. The value of each picture was determined by the specific choices of all the children in the study. For example, a picture chosen by a majority of the boys and by few of the girls, was weighted heavily as masculine. This method of calculating
the assigned scores is illustrated in Figure 3. In the illustration, the horse was chosen by 63 boys and by 23 girls; the butterfly was chosen by 12 boys and 21 girls; and the baby was chosen by 15 boys and 46 girls. The scores assigned to each of these pictures (figured: boys-girls) were $+40,-09$, and -31 , respectively. (In a study in which there are unequal numbers of boys and girls, the assigned scores would be weighted in order to adjust for the difference. See White, 1967.) This method of scoring indicated masculinity-femininity as evaluated by children, rather than by adults. (A11 of the assigned scores for each picture in the $\mathrm{M}-\mathrm{F}$ Test are presented in Appendix A, Table VII. Descriptive data and test scores for individual children are presented in Appendix A, Tables VIII and IX.)

## Reliability and Validity

White (1967) used the Spearman-Brown formula for a split-half correlation to determine the reliability, or internal consistency, of the $M-F$ instrument. A correlation coefficient of +0.936 , significant beyond the .001 level, indicated that the $M-F$ Test was highly reliable。

White accepted the M-F Test as having face validity inasmuch as it was designed to discriminate between the preferences of boys and girls. Specific validation of the M-F Test seemed advisable and was undertaken in the present study.

## The Validation of the Masculinity-Femininity Test

The purpose of the validation is to determine whether the $M-F$ Test is actually measuring masculinity and femininity.


| Boys: | 63 | 12 | 15 |
| :--- | ---: | ---: | ---: |
| Girls: | 23 | 21 | -46 |
| Score: | +40 | -09 | -31 |

Figure 3. The Method of Calculating Assigned Scores for One Page of the $\mathrm{N}_{\mathrm{i}}-\mathrm{F}$ Test

Where children are concerned, the characteristic of masculinity or femininity is usually judged on the basis of behavior and appearance, for example, on the basis of preferred activities, games, toys, playmates, and clothing. This suggests the possibility of validating the M-F Test by determining whether masculinity-femininity as indicated by behavior and appearance, agrees with masculinity-femininity as indicated by the $\mathrm{M}-\mathrm{F}$ Test.

In order to validate the $M-F$ Test in this manner, a picture booklet based on masculine and feminine behavior and appearance (as suggested by clothing, toys, and activities) was constructed. This booklet was then administered to 20 middle-class adults ( 10 men and 10 women) and to 20 middle-class children ( 10 boys and 10 girls). The adults' choices on the validation booklet and the children's choices on the validation booklet and on the M-F Test, provided the data necessary for the validation analyses.

## M-F Validation Test

The test was a booklet containing pictures of clothing, toys, and activities. Each page contained three pictures which were arbitrarily chosen as masculine, feminine, and neutral. The booklet contained 15 pages with pictures of clothing, and 15 pages with pictures of toys and activities. Sample pages from the validation booklet are shown in Figures 4 and 5 .

Administration. The Validation Test was administered to adults by asking them to judge the items they thought to be the most masculine and the most feminine on each page.

The Validation Test was administered to children by asking each


Figure 4. Sample Page of Clothing from $M-F$ Validation Test


Figure 5. Sample Page of Toys from $\mathrm{N}_{2}-\mathrm{F}$ Validation Test
child to play a game of "Let's Pretend" during which the experimenter told a story as the child made his choices. For example, as they looked at the pictures in Figure 4, the experimenter said, "Let's suppose it is time to go out to play. What clothes would you like to wear outside?" As they looked at the pictures in Figure 5, the experimenter said, "Let's suppose you are now outside and here are these toys on the ground. Which one would you like to play with today?"

Scoring. A method of scoring similar to that used in the M-F Test was used for the scoring of the M-F Validation Test. Assigned scores for each picture in the validation booklet were figured for both children and adults.

For the adults the assigned score for each picture was figured by subtracting the number of times the picture was judged feminine from the number of times the picture was judged masculine. In Figure 5, 20 adults judged the truck as the most masculine item, one adult judged the tricycle as the most feminine, and 19 adults judged the buggy as the most feminine. Therefore, scores assigned to each of these pictures were $+20,-01$, and -19 , respectively.

For the children the assigned scores were also figured by the M-F Test method of scoring. In Figure 5, the truck was chosen by eight boys and one girl, the tricycle was chosen by one boy and three girls, and the buggy was chosen by one boy and six girls. Therefore, scores assigned to each of these pictures were $+7,-2$, and -5 , respectively.

In addition to the assigned scores for each picture, an M-F Validation Test score and three $M-F$ scores were figured for each child. Each of these scores was figured as the sum of the assigned scores for
the pictures the child chose．

## Validation＿Analyses

There was extremely high agreement between the two sets of assigned scores，those figured from the adult evaluations and those figured from the children＇s choices on the M－F Validation Test．（See Table I．）Adults and children showed complete agreement on 29 mascu－ 1ine pictures and 29 feminine pictures．One picture（非29）which was feminine according to the children＇s choices was evaluated by the adults as neutral．One picture（ $⿰ ⿰ 三 丨 ⿰ 丨 三 30$ ）which was evaluated by the adults as masculine，was neutral according to the children＇s choices．This step in the validation analysis indicated that adults and children agreed on which pictures were masculine and which were feminine．

The assigned scores based on the children＇s choices were then used to figure a validation score for each of the 20 children partici－ pating in this part of the study．These scores ranged from－192 to +198 ，indicating a range from high feminine to high masculine preferences．（The maximum possible range was from－207 to＋206．）

For the 20 children participating in the validation study，three M－F Test Scores were figured：（1）scores based on the responses of the 20 children，（2）scores based on the responses of the 90 middle SES children，and（3）scores based on the responses of the total group of 180 children．Each of these three sets of scores was used in a comparison of the Validation Test with the M－F Test in order to deter－ mine whether the M－F Test actually was a valid indicator of masculine and feminine preferences．（Scores for the 20 children are presented in Table II．The assigned scores for the individual pictures in the

TABLE I
ASSIGNED SCORES FOR PICTURES
IN THE M-F VALIDATION TEST

| Booklet Page | Scores Figured from Adult Evaluations |  |  | Scores Figured from Children's Choices |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | +16 | -20 | +04 | +06 | -09 | +03 |
| 2 | -20 | 0 | -20 | -10 | +01 | +09 |
| 3 | +19 | -20 | +01 | +07 | -05 | -02 |
| 4 | +19 | +01 | -20 | +07 | +02 | -09 |
| 5 | +03 | -20 | +17 | -01 | -09 | +10 |
| 6 | -20 | +19 | +01 | -09 | +06 | +03 |
| 7 | +19 | -19 | 0 | +06 | -10 | +04 |
| 8 | +06 | -20 | +14 | -02 | -06 | +08 |
| 9 | 0 | +19 | -19 | -02 | +06 | -04 |
| 10 | +19 | +01 | -20 | +07 | +02 | -09 |
| 11 | -02 | -18 | +20 | 0 | -09 | +09 |
| 12 | -20 | +18 | +02 | -09 | +09 | 0 |
| 13 | +20 | -03 | -17 | +10 | -02 | -08 |
| 14 | -20 | 0 | +20 | -07 | +02 | +05 |
| 15 | 0 | +20 | -20 | +02 | +07 | -09 |
| 16 | +17 | -18 | +01 | +05 | -07 | +02 |
| 17 | -20 | 0 | +20 | -06 | +01 | +05 |
| 18 | 0 | +20 | -20 | -04 | +09 | -05 |
| 19 | +20 | 0 | -20 | +07 | -02 | -05 |
| 20 | -04 | -16 | +20 | 0 | -03 | +03 |
| 21 | -16 | +20 | -04 | -05 | +05 | 0 |
| 2.2 | +20 | -01 | -19 | +07 | -02 | -05 |
| 23 | -19 | -01 | +20 | -05 | -02 | +07 |
| 24 | +02 | +18 | -20 | +02 | +06 | -08 |
| 25 | -20 | 0 | +20 | -05 | -04 | +09 |
| 26 | +02 | -20 | +18 | +03 | -09 | +06 |
| 27 | -20 | +20 | 0 | -07 | +07 | 0 |
| 28 | +18 | +02 | -20 | +06 | -01 | -05 |
| 29 | +20 | 0 | -20 | +09 | -05 | -04 |
| 30 | +03 | +16 | -19 | +03 | +02 | -05 |

TABLE II

M-F SCORES OF INDIVIDUAL CHILDREN PARTICIPATING IN THE VALIDATION STUDY
$(\mathrm{N}=20)$

| Sex and Code No. | Age | M-F Scores\% |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A | B | C | D |
| M-1404 | 3:0 | $+116$ | + 7 | $+31$ | + 97 |
| M-1340 | 3:7 | +140 | +27 | + 52 | + 99 |
| M-1405 | 3:8 | +164 | +24 | + 49 | +107 |
| M-1384 | 4:5 | +176 | +27 | +. 76 | +118 |
| M-1385 | $4: 7$ | +198 | +32 | + 68 | +172 |
| M-1387 | 4:7 | +194 | +48 | +140 | +247 |
| M-1389 | 4:7 | +156 | +29 | $+16$ | +103 |
| M-1383 | $4: 7$ | +139 | +26 | $+67$ | + 97 |
| M-1382 | 4:8 | +125 | +25 | - 18 | - 24 |
| M-1388 | $5: 1$ | +176 | +17 | $+21$ | +110 |
| F-1356 | 3:11 | - 60 | -12 | $+11$ | $+43$ |
| F-1378 | 4:4 | -156 | -27 | - 23 | $+36$ |
| F-1377 | $4: 6$ | -163 | -21 | - 54 | - 77 |
| F-1353 | 4:6 | - 54 | +17 | + 68 | +164 |
| F-1287 | 4:7 | -169 | -34 | - 89 | - 94 |
| F-1379 | 4:7 | -170 | -41 | -106 | -135 |
| F-1380 | 4:9 | -173 | -42 | - 144 | -210 |
| F-1285 | 4:10 | -192 | -58 | -146 | -261 |
| F-1310 | 4:11 | -159 | -57 | -123 | -181 |
| F-1381 | $5: 0$ | -138 | -40 | - 58 | $+1$ |

. M M-F Scores based on the following:
A. Responses of 20 children on the Validation Test
B. Responses of 20 children on the M-F Test
C. Responses of 90 middle SES children on the M-F Test
D. Responses of the total group of 180 children on the M-F Test

M-F Test are presented in Appendix A, Table'VII.)

Spearman rank correlations were used in the analysis of the relationship between M-F scores and Validation Test Scores. Correlation coefficients ranged from +0.876 to +0.914 , all of which were significant beyond the . 01 leve1. (See Table III.)

The high correlations between the $M-F$ scores and the Validation Test Scores indicate that the $M-F$ Test is valid. Children's choices on the M-F Test do indicate masculine and feminine preferences comparable to the preferences for clothing, activities, and toys which are frequently the basis for adult judgment of masculinity and femininity in our culture. The $M-F$ Test was accepted as a valid indicator of preschool children's masculine and feminine preferences.

## Recommended Analysis

Age differences and SES differences for boys and girls should be analyzed in order to determine whether trends in the development of masculine and feminine preferences are evident during the preschool years and whether social class differences in these trends exist.

The Mann-Whitney $U$ Test will be used for these analyses.

TABLE III

## RANGES OF M-F SCORES AND CORRELATIONS WITH VALIDATION TEST SCORES <br> ( $\mathrm{N}=20$ )

| Group Basis for M-F Scores | Range of M-F Scores |  | Correlation* with Validation Test Scores |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Actual | Possible | rho | p |
| Validation Group of 20 | - 58 to + 48 | - 73 to + 67 | +0.914 | <. 01 |
| Middle SES Group of 90 | -151 to +140 | -207 to +179 | +0.876 | <. 01 |
| Total Group of 180 | -261 to +275 | -358 to +317 | +0.909 | <. 01 |

## CHAPTER IV

## RESULTS CHAPTER

The purpose of this research was to investigate the relationship of masculine and feminine preferences of preschool children to sex, age, and socio-economic status. To accomplish this purpose, a Masculinity-Femininity Test, designed for use with preschool children, was validated and administered to 180 preschool children, 90 boys and 90 girls, from lower and middle SES groups. The M-F scores were then analyzed in order to determine whether trends in the development of masculine and feminine preferences are evident during the preschool years and whether social class differences in these trends exist. The data for boys and girls were analyzed separately, the Mann-Whitney $U$ Test being used for these analyses.

A composite picture of masculine and feminine preferences by sex, age, and socio-economic status is presented in Table IV. Ranges, median scores, and average ranks are given. The average rank shows the relative position of each group within the sample with the lowest rank indicating the most feminine group and the highest rank indicating the most masculine group. In Figure 6 the relationship between the two social classes by sex and age is presented in a bar graph.

TABLE IV
TEST RESULTS FOR MIDDLE AND LOWER
SES CHILDREN BY SEX AND AGE
( $\mathrm{N}=180$ )

|  | M-F Scores |  |  |
| :--- | :---: | :---: | :---: |
| Sex and <br> Age Group | Range | Median | Average |
| Rank |  |  |  |

Middle SES ( $\mathrm{N}=90$ )
Five-Year-01ds

| Boys | -149 to +275 | +110 | 135.33 |
| :--- | :--- | :--- | ---: |
| Girls | -201 to +68 | -73 | 49.97 |
| ur-Year-01ds |  |  |  |
| Boys | -36 to +247 | +109 | 131.67 |
| Girls | -261 to +164 | -127 | 43.33 |

Three-Year-01ds

| Boys | +51 to +242 | +107 | 139.17 |
| :--- | :--- | ---: | ---: |
| Gir.1s | -208 to +145 | -10 | 73.43 |

Lower SES ( $\mathrm{N}=90$ )
Five-Year-01ds

Boys
Girls
Four-Year-O1ds
Boys
Gir 1s
Three-Year-01ds
Boys
Girls

- 95 to +209
$+59$
114.80
-183 to +40
- 99
43.00


Figure 6. Bar graph showing relative positiona of median $M-F$ Test scores by age and sex for middle and lower SES groups of preschool children.

## Masculine Preferences by Age and SES

The results of the analysis of masculine preferences by age and SES are presented in Table V. There were no significant age differences in the $M-F$ scores for the boys in either the lower or middle $S E S$ groups.

A comparison of the two SES groups indicated that three-year-old middle-class boys (+107) tended to show greater masculine preferences than did the three-year-old lower-class boys $(+59),(z=1.597$; p <.057). The four- and five-year-old boys in the two SES groups showed similar masculine preferences.

## Feminine Preferences by Age and SES

The results of the analysis of feminine preferences by age and SES are presented in Table VI. There were no significant age differences in the $M-F$ scores for the girls in the lower SES group, but age differences were evident for the middle-class girls. The five-year-old girls (-73) tended to show greater feminine preferences than did the three-year-old girls $(-10),(z=1.639, p<.051)$; and the four-yearold girls (-127) showed significantly greater feminine preferences than did the three-year-old girls (10), $(z=2.178 ; p<.015)$.

A comparison of the two SES groups indicated that five-year-old girls in both groups showed similar feminine preferences but differences existed for the four- and three-year-old girls. Among the four-year-olds, the middle-class girls (-127) showed greater feminine preferences than did the lower-class girls ( -57$)_{9}(z=1.556 ;$ $\mathrm{p}<.061$ ) ; and among the three-year-olds, the lower-class girls (-99) showed significantly greater feminine preferences than did the

TABLE V

## MANN-WHITNEY U TEST ANALYSIS OF THE M-F SCORES <br> OF BOYS BY AGE AND SES <br> $$
(\mathrm{N}=90)
$$

| Groups Compared* | Median M-F Scores | $z$ | p |
| :---: | :---: | :---: | :---: |
| 3LB : 4LB | $+59:+88$ | 0.560 | n.s. |
| $3 \mathrm{LB}: 5 \mathrm{LB}$ | + $59:+91$ | 0.477 | n.S. |
| 4 LB : 5 LB | $+88:+91$ | 0.436 | n.s. |
| 3 MB : 4 MB | +107:+109 | 0.187 | n.s. |
| 3 MB : 5MB | +107:+110 | 0.228 | n.s. |
| 4 MB : 5 MB | +109: +110 | 0.435 | n.s. |
| 3 LB : 3MB | + $59:+107$ | 1.597 | $<.057$ |
| 4LB : 4MB | + $88:+109$ | 1.182 | <. 119 |
| 5LB : 5MB | + $91:+110$ | 1.473 | <. 127 |

*Each group is designated by age, SES, and sex. 3LB: 4LB indicates that three-year-old lower SES boys are compared to four-year-old lower SES boys.

TABLE VI

$$
\begin{gathered}
\text { MANN-WHITNEY U TEST ANALYSIS OF THE M-F SCORES } \\
\text { OF GIRLS BY A.GE AND SES } \\
(\mathbb{N}:=90)
\end{gathered}
$$

| Groups Compared* | Median M-F Scores | $z$ | p |
| :---: | :---: | :---: | :---: |
| 3LG : 4LG | - 99 : - 57 | 0.976 | \& .166 |
| 3LG: 5LG | - 99 : - 71 | 0.872 | \& 1.92 |
| 4LG: 5LG | - 57 : - 71 | 0.290 | n.s. |
| 3MG : 4MG | - $10:-127$ | 2.178 | \&. 015 |
| 3MG : 5MG | - 10: - 73 | 1.639 | $\leqslant .051$ |
| 4MG : 5MG | -127: - 73 | 1.099 | <. 138 |
| 3LG : 3MG | - 99 : - 10 | 2.511 | . 006 |
| 4LG : 4MG | - $57:-127$ | 1.556 | <.061 |
| 5LG : 5MG | - $71:-73$ | 0.311 | n.s. |

[^0]```
middle-class girls \((-10),(z=2.511 ; p<.006)\).
```


## Trends in Masculine and Feminine Preferences

In Figure 6, page 30, the bar graph showing relative positions of median $M-F$ scores for middle and lower SES groups reveals the following trends:

1. The middle-class boys show no apparent change in masculine preferences during the three years represented in this study.
2. The lower-class boys showed an increase in masculine preferences between the ages of three and four, but from this point on their preferences remain essentially the same.
3. The middle-class girls showed a change from low feminine preferences at age three to marked feminine preferences at age four, and then a change to a moderate position at age five.
4. The lower-class girls showed a change from a position of marked feminine preferences at age three to fewer feminine: preferences at age four with no apparent change from this point on.
5. The preferences of the boys in the two SES groups become similar at age four, but for the girls the similarity of preferences does not occur until age five.
6. With the exception of the middle-class girls, the preferences of boys and girls in both SES groups become relatively stable by age four

## Summary

Analysis of the data collected in this research revealed the following:

1. There were no significant age differences in the $M-F$ scores for the boys in either the lower or middle SES group. A comparison of the two SES groups of boys indicated that the three-year-old middleclass boys tended to show significantly greater masculine preferences than did the three-year-old lower-class boys. The four- and five-yearold boys in the two SES groups showed similar masculine preferences.
2. There were no significant age differences in the $M-F$ scores for the girls in the lower SES group, but there were age differences for the girls in the middle SES group. In this group the four- and five-year-olds showed greater feminine preferences than did the three-year-olds. A comparison of the two SES groups indicated that feminine preferences were similar for the five-year-old girls in both groups but not for the three- and four-year-old girls. The middle-class girls showed a change from low feminine preferences at age three to marked feminine preferences at age four; and the lower-class girls showed a change which is the reverse of this. (See Figure 7.)


Figure 7. By the way, how do you tell the boys from the girls?

## CHAPTER V

## SUMMARY AND IMPLICATIONS

The purpose of this research was to investigate the relationship of masculine and feminine preferences of preschool children to sex, age, and socio-economic status (SES). To accomplish this purpose, a Masculinity-Femininity Test, designed for use with preschool children, was validated and administered to children of middle and lower socioeconomic status.

The children were 90 boys and 90 girls ranging in age from 2 years 11 months through 5 years 11 months. The children in attendance at the child development laboratory schools and private nursery schools were accepted as the middle SES group; and those in attendance at Head Start and other intervention programs were accepted as the lower SES group.

In the test chosen to measure masculinity and femininity in the present study, the evaluation of what is masculine and what is feminine was based on choices made by the children themselves. The $M-F$ Test consisted of a booklet in which each child indicated the pictures he liked best. The choices of all the children in the study were then used to figure an assigned $M-F$ value for each picture. (For example, a picture chosen by a majority of boys and by few of the girls, would be weighted heavily as masculine.) Each child's M-F score could then be figured as the sum of the assigned scores for the pictures he chose.

These scores were then analyzed for age differences and SES
differences to determine whether trends in the development of masculine and feminine preferences are evident during the preschool years and whether social class differences in these trends exist.

Analysis of the data collected in this research revealed the following: (1) There were no significant age differences in the $M-F$ scores for the boys in either the lower or middle SES group. A comparison of the two SES groups of boys indicated that the three-yearold middle-class boys tended to show greater masculine preferences than did the three-year-old lower-class boys. The four- and five-year-old boys in the two SES groups showed similar masculine preferences. (2) There were no significant age differences in the M-F scores for the girls in the lower SES group, but there were age differences for the girls in the middle SES group. In this group the four- and five-year-olds showed greater feminine preferences than did the three-yearolds. A comparison of the two SES groups indicated that feminine preferences were similar for the five-year-old girls in both groups but not for the three- and four-year-old girls. The middle-class girls showed a change from low feminine preferences at age three to marked feminine preferences at age four; and the lower-class girls showed a change which is the reverse of this.

## Implications

If one can assume that a child who shows masculine (feminine) preference has identified with the masculine (feminine) role, then the results of this study have the following implication: The achievement of sex-role identification is more difficult for girls than for boys, especially for middle-class girls.

Because age differences and sex differences were found to exist in both SES groups, the following questions, suggesting possible reasons for these differences, are raised: (1) In the middle-class, is it possible that expectations for boys are consistent throughout the preschool years, while for girls, the feminine expectations are not enforced until the age of four? : (2) In the lower-class, is it possible that the younger child is more sheltered, with the result that the younger girls are more feminine and the younger boys are less masculine; but that by the age of four with greater independence the gir 1 s become less feminine and the boys become more masculine? If either of these are true, then it would be assumed that differences between children in the middle- and lower-class would be accounted for by cultural expectations in these two SES groups.

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APPENDIX A

## TABLE VII

ASSIGNED SCORES FOR INDIVIDUAL PICTURES IN THE M-F TEST

|  | Assigned Scores Figured from Responses of |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Booklet } \\ \text { Page } \end{gathered}$ | Validation Group$(\mathrm{N}=20)$ |  |  | Lower SES Group$(\mathbb{N}=90)$ |  |  | Middle SES Group$(\mathrm{N}=90)$ |  |  | Total Group ( $\mathrm{N}=180$ ) |  |  |
| 1 | +02 | 0 | -02 | +18 | -23 | +05 | +20 | -17 | -03 | +38 | -41 | +03 |
| 2 | -02 | -01 | +03 | -01 | $+04$ | -03 | -03 | +04 | -01 | -04 | +08 | -04 |
| 3 | +04 | +01 | -05 | +05 | +02 | -07 | +05 | +04 | -09 | +10 | +06 | - 16 |
| 4 | +01 | -01 | 0 | +05 | +02 | -07 | +07 | 0 | -07 | +11 | +03 | -14 |
| 5 | -01 | -02 | +03 | +01 | -09 | +08 | +02 | -14 | +12 | +05 | -24 | +19 |
| 6 | 0 | -01 | +01 | +05 | -02 | -03 | -04 | +03 | +01 | 0 | +01 | -01 |
| 7 | 0 | +01 | -01 | +03 | +02 | -05 | +01 | +01 | -02 | +03 | -07 | +04 |
| 8 | +01 | -02 | +01 | 0 | +01 | -01 | 0 | 0 | - 0 | 0 | +01 | -01 |
| 9 | 0 | +05 | -05 | +01 | +11 | -12 | $+05$ | +10 | -15 | -05 | +28 | -23 |
| 10 | +02 | +02 | -04 | +07 | +05 | -12 | $+10$ | +06 | -16 | +17 | +11 | -28 |
| 11 | +03 | -06 | +03 | +05 | -03 | -02 | +01 | -12 | +11 | +06 | -15 | +09 |
| 12 | 0 | 0 | 0 | +06 | -02 | -04 | +02 | -08 | +06 | +08 | -10 | +02 |
| 13 | +04 | -05 | +01 | +07 | -09 | +02 | +05 | -08 | +03 | +14 | -24 | +10 |
| 14 | +01. | -01 | 0 | -02 | +01 | +01 | -04 | +05 | -01 | -05 | +05 | 0 |
| 15 | +01 | +03 | -04 | -04 | +03 | +01 | -09 | +09 | 0 | -12 | -02 | +14 |
| 16 | +05 | -01 | -04 | +01 | +07 | -08 | +11 | +03 | - 14 | +12 | +13 | -25 |
| 17 | +03 | -01 | -02 | -01 | +05 | -04 | +01 | 0 | -01 | 0 | +05 | -05 |
| 18 | -01 | +01 | 0 | -03 | +06 | -03 | -02 | +03 | -01 | -16 | +09 | +07 |
| 19 | +03 | -03 | 0 | +04 | +01 | -05 | 0 | +02 | -02 | +04 | +02 | -06 |
| 20 | -01 | +02 | -01 | +05 | +02 | -07 | +04 | +05 | -09 | +05 | +07 | -12 |
| 21 | +05 | +02 | -07 | -05 | +10 | -05 | -01 | +10 | -09. | -09 | +20 | -11 |
| 22 | +06 | -01 | -05 | +22 | -06 | -16 | +18 | -03 | -15 | +40 | -09 | -31 |
| 23 | +01 | -03 | +02 | +05 | -01 | -04 | $+10$ | -12 | +02 | +15 | -13 | -02 |
| 24 | -06 | +05 | +01 | +01 | +07 | -08 | -15 | +11 | +04 | -14 | +17 | -03 |

## TABLE VIII

## DESCRIPTIVE DATA AND DERIVED M-F SCORES <br> FOR INDIVIDUAL CHILDREN IN <br> THE MIDDLE SES GROUP

| Sex and Code No. |  | M-F Scores |  | Sex and Code No. | Age | M-F Scores |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Age | $\begin{gathered} \text { Middle SES } \\ \text { Group } \\ (\mathrm{N}=90) \end{gathered}$ | $\begin{aligned} & \text { Total } \\ & \text { Group } \\ & (\mathrm{N}=180) \end{aligned}$ |  |  | $\begin{gathered} \text { Middle SES } \\ \text { Group } \\ (\mathrm{N}=90) \end{gathered}$ | $\begin{gathered} \text { Total } \\ \text { Group } \\ (N=180) \end{gathered}$ |
| M-1404 | 3:0 | + 31 | + 97 | F-1408 | 2:11 | - 46 | - 76 |
| M-1392 | 3:1 | + 55 | + 91 | F-1398 | 2:11 | + 59 | +145 |
| M-1501 | 3:3 | + 49 | +130 | F-1400 | 3:2 | - 9 | $+45$ |
| M-1393 | 3:4 | + 48 | +128 | F-1484 | 3:3 | + 41 | + 86 |
| M-1391 | 3:4 | +100 | +242 | F-1397 | 3:3 | $+34$ | $+50$ |
| M-1390 | 3:5 | + 23 | +67 | F-1399 | 3:5 |  | + 17 |
| M-1500 | 3:6 | + 29 | + 84 | F-1483 | 3:5 | - 5 | - 10 |
| M-1499 | 3:6 | + 52 | +123 | F-1482 | -3:7 | - 53 | -87 |
| M-1395 | 3:7 | - 1 | + 51 | F-1481 | 3:8 | - 10 | + 39 |
| M-1340 | 3:7 | + 52 | + 99 | F-1480 | 3:8 | - 26 | - 80 |
| M-1358 | 3:8 | $+47$ | +133 | F-1479 | 3:9 | -120 | -208 |
| M-1405 | 3:8 | $+49$ | +107 | F-1357 | 3:10 | - 60 | - 44 |
| M-1394 | 3:8 | $+81$ | +206 | F-1396 | 3:10 | - 7 | - 23 |
| M-1376 | 3:9 | + 39 | + 99 | F-1478 | 3:10 | - 59 | - 88 |
| M-1418 | 3:11 | + 68 | +160 | F-1356 | 3:11 | + 11 | + 43 |
| M-1362 | 4:2 | $+43$ | +150 | F-1367 | 4:1 | + 5 | + 18 |
| M-1361 | 4:2 | - 46 | - 36 | F-1370 | 4:1 | - 20 | - 55 |
| M-1374 | 4:3 | + 47 | +126 | F-1365 | 4:3 | + 39 | + 75 |
| M-1372 | 4:3 | + 35 | + 82 | F-1339 | 4:4 | -125 | -232 |
| M-1375 | 4:3 | + 55 | + 19 | F-1378 | 4:4 | - 23 | + 36 |
| M-1373 | 4:5 | + 41 | +109 | F-1349 | $4: 4$ | - 72 | -127 |
| M-1384 | 4:5 | + 76 | +118 | F-1369 | 4:5 | -127 | -194 |
| M-1386 | 4:5 | + 60 | +108 | F-1363 | 4:6 | -151 | -222 |
| M-1350 | 4:5 | $+47$ | +109 | F-1353 | 4:6 | + 68 | +164 |
| M-1352 | 4:6 | +107 | +225 | F-1377 | 4:6 | - 54 | - 77 |
| M-1387 | 4:7 | +140 | +247 | F-1287 | 4:7 | - 89 | - 94 |
| M-1385 | 4:7 | + 68 | +172 | F-1379 | 4:7 | -106 | -135 |
| M-1389 | 4:7 | + 16 | +103 | F-1380 | 4:9 | -144 | -210 |
| M-1383 | 4:7 | + 67 | +94 | F-1285 | 4:10 | -146 | -261 |
| M-1382 | 4:8 | - 18 | - 24 | F-1310 | 4:11 | -123 | -181 |
| M-1388 | 5:1 | + 21 | +110 | F-1381 | 5:0 | - 58 | $+1$ |
| M-1514 | 5;4 | +108 | +230 | F-1498 | 5:0 | - 71 | -119 |
| M-1513 | 5:4 | + 41 | + 84 | F-1497 | 5:1 | - 6 | + 11 |
| M-1512 | 5:5 | + 15 | + 89 | F-1496 | 5:2 | - 62 | -106 |
| M-1511 | 5:5 | +135 | +275 | F-1495 | 5:3 | + 6 | + 68 |
| M-1510 | 5:5 | - 83 | -149 | F-1494 | 5:3 | -108 | -161 |
| M-1509 | 5:7 | + 60 | $+76$ | F-1493 | 5:4 | - 70 | -157 |
| M-1508 | 5:7 | + 24 | + 68 | F-1492 | 5:5 | -109 | -121 |
| M-849 | 5:7 | +87 | +215 | F-1491 | 5:5 | - 1 | + 28 |
| M-1507 | 5:8 | + 86 | +204 | F-1490 | 5:6 | - 26 | - 53 |
| M-1506. | 5:9 | - 33 | + 8 | F-1489 | 5:7 | - 71 | -147 |
| M-1505 | 5:9 | +109 | +258 | F-1488 | 5:7 | - 21 | + 37 |
| M-1504 | 5:10 | - 2 | + 79 | F-1487 | 5:9 | $+6$ | + 25 |
| M-1503 | 5:10 | + 51 | +163 | F-1486 | 5:10 | - 51 | - 73 |
| M-1502 | 5:11 | + 78 | +215 | F-1485 | 5:11 | -121 | -201 |

## TABLE IX

## DESCRIPTIVE DATA AND DERIVED M-F SCORES FOR INDIVIDUAL CHILDREN IN THE LOWER SES GROUP

| Sex and Code No. |  | M-F Scores |  | Sex and Code No. | Age | M-F Scores |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Age | $\begin{gathered} \text { Lower SES } \\ \text { Group } \\ (\mathrm{N}=90) \end{gathered}$ | $\begin{gathered} \text { Total } \\ \text { Group } \\ (N=180) \end{gathered}$ |  |  | $\begin{gathered} \text { Lower SES } \\ \text { Group } \\ (\mathrm{N}=90) \end{gathered}$ | $\begin{gathered} \text { Total } \\ \text { Group } \\ (\mathbb{N}=180) \end{gathered}$ |
| M-1410 | 3:1 | - 2 | $+38$ | F-1520 | 3:2 | +18 | - 19 |
| M-1544 | 3;2 | + 66 | +124 | F-1454 | 3:2 | - 16 | - 41 |
| M-1543 | 3:4 | + 39 | + 52 | F-1453 | 3:2 | + 27 | + 40 |
| M-1542 | 3:4 | + 98 | +164 | F-1519 | 3:2 | - 71 | -183 |
| M-1420 | 3:5 | + 69 | +200 | F-1518 | 3:2 | - 99 | -114 |
| M-1430 | 3:6 | + 10 | - 5 | F-1466 | 3:4 | - 65 | -129 |
| M-1541 | 3:6 | + 45 | + 52 | F-1456 | 3:5 | - 28 | - 38 |
| M-1432 | 3:8 | + 15 | + 64 | F-1445 | 3:6 | - 58 | - 99 |
| M-1426 | 3:8 | + 33 | + 36 | F-1517 | 3:6 | -129 | -181 |
| M-15.40 | 3:9 | + 67 | +209 | F-1444 | 3:8 | - 22 | - 83 |
| M-1414 | 3:9 | - 57 | - 95 | F-1443 | 3:9 | + 6 | - 29 |
| M-1427 | 3:10 | + 28 | + 59 | F-1465 | 3:9 | - 57 | - 99 |
| M-1424 | 3:11 | + 43 | +120 | F-1477 | 3:10 | - 27 | - 40 |
| M-1429 | 3:11 | +108 | +189 | F-1516 | 3:11 | - 48 | - 99 |
| M-1436 | 3:11 | + 14 | - 9 | F-1515 | 3:11 | - 99 | -114 |
| M-1406 | 4:2 | + 14 | + 85 | F-1442 | 4:0 | + 32 | + 71 |
| M-1435 | 4:2 | + 32 | +106 | F-1446 | 4:0 | - 34 | - 86 |
| M-1421 | 4:3 | + 79 | +107 | F-1525 | $4: 1$ | - 68 | -114 |
| M-1431 | 4:3 | - 1 | - 20 | F-1524 | 4:3 | - 9 | - 48 |
| M-1433 | 4:4 | $+30$ | + 64 | F-1448 | 4:3 | - 55 | - 57 |
| M-1547 | 4:5 | - 37 | - 51 | F-1445 | 4:3 | - 20 | - 72 |
| M-1546 | 4:6 | + 37 | + 75 | F-1407 | 4:3 | - 75 | -157 |
| M-1422 | 4:6 | + 78 | +124 | F-1457 | 4:4 | + 10 | + 44 |
| M-1545 | 4:7 | + 17 | + 68 | F-1470 | 4:7 | - 29 | - 56 |
| M-1428 | 4:7 | $+50$ | + 88 | F-1523 | 4:7 | - 80 | -128 |
| M-1430 | 4:8 | $+41$ | +131 | F-1521 | 4:8 | + 35 | $+16$ |
| M-1402 | 4:8 | + 79 | +186 | F-1467 | 4:8 | - 51 | -107 |
| M-1409 | 4:11 | + 35 | + 48 | F-1447 | $4: 9$ | + 44 | + 58 |
| M-1425 | 4:11 | + 55 | + 67 | F-1471 | 4:10 | - 83 | -114 |
| M-1434 | 4:11 | +116 | +202 | F-1452 | 4:10 | - 6 | + 57 |
| M-1521 | 5:0 | $+50$ | $+83$ | F-1538 | 5:0 | - 68 | - 87 |
| M-1558 | 5:0 | - 25 | - 44 | F-1459 | 5:0 | -103 | -216 |
| M-1557 | 5:0 | $+73$ | +165 | F-1537 | 5:1 | - 11 | + 13 |
| M-1556 | 5:0 | + 22 | + 89 | F-1536 | 5:1 | + 37 | + 99 |
| M-1555 | 5:1 | + 41 | + 45 | F-1535 | 5:1 | - 15 | + 29 |
| M-1554 | 5:1 | + 66 | +162 | F-1534 | 5:3 | - 18 | - 40 |
| M-1553 | 5:1 | + 7 | - 13 | F-1533 | 5:3 | - 29 | - 71 |
| M-1552 | 5:1 | - 9 | + 61 | F-1532 | 5:4 | + 17 | + 20 |
| M-1551 | 5:4 | - 79 | - 93 | F-1531 | 5:4 | + 5 | - 65 |
| M-1550 | 5:5 | + 98 | +188 | F-1530 | 5:5 | - 80 | -108 |
| M-1549 | 5:6 | + 58 | +144 | F-1529 | 5:6 | - 98 | -212 |
| M-1182 | 5:8 | $+41$ | +100 | F-1528 | 5:6 | - 34 | - 81 |
| M-1081 | 5:8 | + 41 | + 91 | F-1527 | 5:8 | - 8 | + 51 |
| M-1082 | 5:8 | +115 | +238 | F-1526 | 5:8 | - 64 | -148 |
| M-1548 | 5:10 | $+83$ | +132 | F-1539 | 5:10 | - 22 | - 72 |

## APPENDIX B

MASCULINITY-FEMINITY TEST FOR PRESCHOOL CHILDREN


VITA

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Master of Science

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[^0]:    ${ }^{2 s}$ Each group is designated by age, SES, and sex. 3LG: 4LG indicates that three-year-old lower SES girls are compared to four-year-ald lower SES girls.

