A STUDY OF MASCULINITY-FEMININITY AND ITS RELATION TO INDEPENDENT BEHAVIOR IN PRESCHOOL CHILDREN

By

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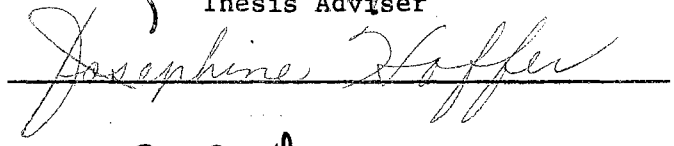

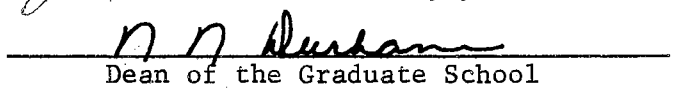

Dean of the Graduate School

To My First Seventeen Cherubs:

Kim, Marc, Craig, Sharon, Mark, Lynn, Ricky, Linda, Mary, Scotty, Sarah, Kirk, Mike, Lisa, Karen, Lee and Gus.

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INTRODUCTION

Purpose

The purpose of this research is to study the relationship of masculinity-femininity to independent behavior in early childhood. To achieve this purpose an instrument for measuring one possible aspect of masculinity-femininity in preschool children was developed and a research game was adapted for the measurement of independent behavior. The relationship between masculinity-femininity and independence was then studied; and the possibility of these two characteristics being related to ability, i.e., to the children's verbal intelligence, was also explored.

Definition

Masculinity-femininity can be described in terms of one's behavior, appearance, and/or preferences. For example, a little girl might be considered a tomboy if she behaves like the boys in her social group, dresses like the boys, and prefers their activities. In the present research masculinity-femininity was determined by the children's preferences, rather than by behavior or appearance. Each child constructed a small picture booklet, and in his choice of pictures he indicated his tendency toward masculinity or femininity.

Independence is an expression of autonomy, i.e., the desire to do something by one's self. Therefore, in the present research, the child who refused help was considered more independent than the child who requested and accepted help.

Problem

In our culture today, people who live up to their potential are people who have good self-concepts. Therefore, since we are responsible for guiding young children to maturity, we should guide them in such a way that they will develop positive feelings about themselves, i.e., good self-concepts. To achieve this goal, we must be cognizant of the factors and relationships which foster security, self-confidence, and appropriate aspirations. These relationships were stated most adequately, yet simply, by Waring (1939), after an exhaustive study of the principles involved in guiding children.

Four key principles are:

1. The adult's affection for the child contributes to his feelings of security and belongingness.
2. The adult's respect for the child builds his feelings of self-respect and ability to achieve.
3. The adult's help contributes to his increased ability through learning.
4. The adult's approval encourages him to develop a set of values through his growing appreciation of his own achievement and progress. (Waring; 1939, p. 24)

The present research is seen as a contribution to our understanding of these principles. Everyday experience with children provides evidence of the truth of these principles, but real understanding of the depth of their meaning requires that one study them in a variety of contexts and see them in relation to one's own experience with children.

Self-concept is complex and defies measurement unless approached from a variety of angles. In the present research, attention will be focused on two factors, sex-role identification and independence, i.e., autonomy, which seem to be of major importance in self-concept development. An understanding of the relationship between these two factors should contribute to our understanding of the early development of self-concept and to our understanding of Waring's guidance principles. In addition, instruments developed for measuring sex-role identification and independence, should be useful in future studies of self-concept and studies of guidance principles. They may, also be of value to educators seeking an understanding of special groups of children.

Procedure

The following steps were involved in the study of masculinity-femininity and its relation to the independent behavior of the preschool child:

1. Literature was reviewed to seek a clearer understanding of self-concept, with particular emphasis on masculinity-femininity and independence as aspects of self-concept.

2. An instrument was developed for the measurement of masculinity-femininity in preschool children.

3. An available instrument for the measurement of independence was revised for use in this study.

4. The Masculinity-Femininity Test, Independence Test, and Peabody Picture Vocabulary Test were administered to thirty-two children of preschool age.

5. Data were analyzed and interpreted.

6. Implications for future use were discussed.

CHAPTER II

REVIEW OF LITERATURE

This chapter is focused on a review of literature related to two particular aspects of self-concept. These are (1) masculinity-femininity or sex-role identification, and (2) independence or autonomy.

Development of Self-Concept

Jersild (1952) believes the self is a composite of thoughts and feelings which constitute a person's awareness of his individual existence, his conception of who and what he is. A person's self is the sum total of all that he can call his. This includes a system of ideas, attitudes, values, and committments.

Brandt (1958) states that the self-concept develops in a social matrix as the individual sees himself in relation to other people and as he perceives other people viewing him.

Hurlock (1964) feels that the child's self-concept includes physical and psychological self-images. The physical includes attractiveness or unattractiveness, and sex-appropriateness or sex-inappropriateness; and the psychological includes thoughts, feelings, and emotions. The child's concept of and feelings about himself are based on what he thinks significant others (parents, peers, siblings, and teachers) think of him.

Masculinity-Femininity

Hurlock (1964) has described identification as a process in which the child attempts to adopt as his own the values, attitudes, motives, and behavior of persons for whom he has a strong admiration or an emotional tie.

Direct observation of young children has suggested that much of a child's learning about his sex-role occurs without any specific teaching from parents. According to Sears (1957) a child at age two begins to display interests and attitudes similar to those of his parents. He acquires their values, and places their demands on both himself and others. He tries out adult behavior in his play with other children. He tries on his parents' clothes, and pretends to have their occupations and responsibilities.

Boys learn what occupations are male and tend to select these occupations in their play. However, a mixed-sex group of three-year-olds, when playing house, may occasionally exhibit a crossing of sex-roles, i.e., a boy may be a nurse or even a grandmother.

In the American culture, the child's first model is almost always a woman, and usually it is the mother. Both boys and girls, according to Sears (1957), first identify with a female. This is quite acceptable for a girl, for she will do well to possess feminine personality characteristics throughout he life. For the boy, however, it poses a problem. He must shift to a masculine identification sometime in his early years, if he is to develop a normally masculine personality. The girl retains her initial identification with the mother, while the boy must under most circumstances shift his to the father.

Experiments using dollplay (Sears, 1957) give evidence that supports the above theory. In this particular research, each child was given two 20-minute sessions of permissive doll play. The test equipment consisted of a five-room open-topped house with miniature furniture, and a family of five dolls. Each child was asked to tell a story about the family and show all the things they did. The experimenter recorded the number of time the child used each of the dolls as the agent of some thematic action and also whether the action was an aggressive one or not. It was believed that in this fantasy situation a child would be free to choose whichever doll he wished, and that the stronger his identification with a father or mother role, the more frequently he would use the father or mother doll as the agent of actions in the play.

Girls used the mother doll more often than the father doll, and the reverse was true for boys. The difference between the boys' and girls' play was large and statistically reliable. Another difference in the boys' and girls' play was in the frequency of use of the mother and father dolls. Girls used the mother doll much more frequently than the father doll, while boys showed only a small difference in frequency of use of the two dolls. Boys are presumed to have identified first with the mother and then to have had pressure to shift to the father, while the girls are presumed to have had much less, or no pressure to shift away from the mother.

Classical Freudian theory suggests that the boy identifies for self-protection and because of fear; the father is so powerful and treatening that the boy, to defend himself and to gain such power, internalizes the father-image. Learning theory suggests that boys

identify with their fathers because they love them, have been rewarded by them, and wish to be like them. Sociological theory combines these two theories, suggesting that children (boys and girls) identify with powerful parents, i.e., with parents who can both reward and punish. (McCandless, 1961; Sears, Maccoby, and Levin, 1957)

Other research in the area of masculinity-femininity has been done by Sutton-Smith and Rosenberg (1960). In their study, a revised form of the Terman Play Inventory was administered to a pilot group of children in the fourth, fifth, and sixth grades, and the results were analyzed for game preferences by sex. The Children's Manifest Anxiety Scale and the revised Play Inventory were then administered to 351 children in the fourth, fifth, and sixth grades. These results were analyzed to determine the game preferences of boys and girls, who scored in the upper and lower quartiles on the Children's Manifest Anxiety Scale.

High anxiety boys, compared with low anxiety boys, showed a marked preference for games typically chosen by girls. However, high anxiety girls, and low anxiety girls were not clearly differentiated in terms of game preferences.

Further interpretation of the game preferences led to the conclusion that game choices of highly anxious boys were not only feminine, they were also immature, and that some of the game choices of highly anxious girls were both masculine and above average in maturity level.

A study by Gray (1959) attempted to investigate certain relationships between perceived similarity to parents and indices of social and personal adjustment. Perceived similarity to parents was assumed to be

one indication of parental identification. A group of children in the fifth through eighth grades participated in the study.

The measures of parental identification were obtained from an inventory on which the child gave a self-report and a report for each of his parents as perceived by him. Two indices of identification were used: (1) the direction of identification toward or away from the same-sex parent, and (2) the distance from both parents as indicated by the differences which the child perceived between himself and his parents.

These indices of identification were studied in relation to social and personal adjustment, and masculinity-femininity. Social and personal adjustment was measured by (1) a sociometric test in which children nominated their classmates in terms of practical intelligence, leadership, friendship, withdrawal, and aggression, and by (2) the Children's Manifest Anxiety Scale. Masculinity-femininity was measured by a rating scale on which each child was ranked by his classmates.

The results indicate that perceived similarity to parents is related to personal and social adjustment. Boys who perceive themselves as more like their fathers than their mothers are perceived more favorably by their peers. The results further indicated that for the younger children, but not for the older children, adjustment was associated with closeness to parents. This was indicated by both the social acceptance indices and the anxiety test.

Independent Behavior

A young child confronts many situations which are difficult or hard for him. These situations are not readily resolved, and not always

successfully met. Educators and psychologists believe that it is important for an individual to respond adequately in a situation involving difficulty or failure. Keister (1937) states that if a child's first attempt to solve a problem is unsuccessful, his subsequent behavior gives a partial picture of his personality and some measure of his emotional adjustment. Some children may ask for help from a nearby adult or child; some may silently move on to another task; some may cry or become extremely angry; and there are some who may pursue the problem determinedly and continue to experience failure, but not give up.

Keister (1937) designed a puzzle box for use in studying children's responses to failure. The puzzle box was shallow and contained ten flat wooden figures, cut-outs of familiar objects. Only when the pieces were placed flat in the box could the lid be closed. In spite of the fact that there were several ways to put the figures in the box, the task was very difficult for young children and did pose a frustrating situation. Among the many responses Keister observed were the children's requests for help, which were indicative of at least a willingness to be dependent.

Griffin (1966) constructed a puzzle box, modeled after Keister's, for use in the measurement of children's independent behavior. The extent to which a child asked for and accepted help was the measure of his dependence. The puzzle box as used by Griffin gave a wide range of scores, thus discriminating between independent and dependent children.

Implications for this Research

The literature indicates that self-concept studies of young children are rare. Reasons for this lack of research include such factors as (1) the need to test each child individually, (2) the need to develop instruments for measuring self-concept, and (3) the difficulty in securing subjects of preschool age.

Self-concept as indicated by sex-role identification seems to be related to social and personal adjustment. This suggests that a test of masculinity-femininity could be used as a measure of at least one aspect of self-concept in the young child.

Independence can be measured in the young child by an adaptation of the Keister puzzle box.

CHAPTER III

METHOD AND PROCEDURE

The purpose of this research was to study the relationship of masculinity-femininity to independent behavior in early childhood and to explore the relationship of verbal intelligence to these two characteristics. To achieve this purpose, preschool children were given a Masculinity-Femininity test, an Independence test, and a Verbal Intelligence test.

This chapter includes the following: (1) a description of the subjects who participated in the research, (2) a discussion of the pilot work involved in the development of the masculinity-femininity (M-F) instrument, (3) a description of the independence instrument and its adaptation, (4) choice of intelligence test, and (5) recommendations for the analysis of the data.

Subjects

The subjects who participated in this research were 32 preschool children, 15 girls and 17 boys. These children were in attendance at the Oklahoma State University Child Development Laboratories. The age range was from three years eleven months to five years four months. No children who participated in the pilot work were included in the final study.

The Measurement of Masculinity-Femininity

Development of the M-F Test

Masculinity-femininity can be described in terms of behavior, appearance, and/or preferences; and of these three possible variables, preferences was selected as the one which could be most easily measured. Choice of pictures was chosen as the method for measuring preferences in the present research, and pilot work was undertaken in order to determine how the pictures should be weighted as masculine and feminine, and how the task should be administered and scored.

Approximately 220 pictures, i.e., gummed seals, selected for possible use in the M-F task, were ranked by 25 adults (12 males and 13 females) on a five-point scale, ranging from most masculine (five points) to most feminine (one point). The M-F score for each picture was then the sum of these 25 rankings.

Using these scores as a basis, the pictures were then mounted on separate pages of construction paper in groups of four, each group ranging from masculine to feminine.

These grouped pictures were then presented to 25 children, who indicated on each page which picture was for a boy and which picture was for a girl. Upon tabulation of the children's responses, it was found that frequently the girls' selections for boys were not the pictures which boys selected for themselves, and vice versa. This suggested the advisability of having the boys select only the pictures most appropriate for boys and having the girls select only the pictures most appropriate for girls.

In order to clarify the children's preferences and to decide upon a scoring technique, the pictures were remounted in groups of three, (one masculine, one feminine and one neutral, randomly arranged) and again presented to ten boys and ten girls. This time each child made selections for his sex only.

Tabulation of the children's responses showed which pictures were preferred by the boys, which were preferred by the girls, and which were neutral. Using this information, the experimenter rearranged the pictures in groups of three for the final instrument, which is described below. The scoring method for the final instrument was suggested by the relationship between the boys' and girls' choices of pictures.

The final M-F Instrument

The final M-F instrument consisted of two 16-page booklets, designated Form-A and Form-B. These two booklets were constructed, rather than one, primarily for convenience of administration during the task. The pages in the booklets were colored construction paper, 8½" by 5½" in size; and on each page there were three pictures (gummed seals), one masculine, one feminine, and one neutral as indicated by the children's choices in the pilot study. Sample pages are pictured in Figures 1 and 2.

In addition, the individual pictures were mounted on small colored pages. These were given to the child, one at a time, as he made his choices.

Administration. The experimenter told the child that he was going to make a picture book for his very own. Then showing him the first page of pictures, she asked, "Which one of these pictures do you want?" The child made his selection and was then given the picture of his choice.

Figure 1. One page of pictures from the Masculinity-Femininity Test For preschool children.

Figure 2. One page of pictures from the Masculinity-Femininity Test for preschool children.

This procedure was repeated until selections had been made from all pages in the two test booklets.

Scoring. Each picture in the test booklets was assigned a score, which was figured from the responses of the 32 children who participated in the study. Because there were more boys (17) than girls (15) in the present study, the scoring of each picture was weighted to correct for this difference. For each picture, the score was the number of times the picture was chosen by boys minus the weighted number of times it was chosen by girls. This weighted score can be represented by the following formula:

$$S_i = \Sigma_i B - \Sigma_i G'$$

S_i = Score for the ith picture

$\Sigma_i B$ = Sum of boys' choices for the ith picture

$\Sigma_i G'$ = Sum of girls' choices for the ith picture, weighted to correct for the difference in number of boys and number of girls.

For example, the scores for the pictures in Figure 1 were: -0.67 for the rooster, +5.60 for the squirrel, and -4.93 for the baby. For the rooster, chosen by five boys and five girls, the weighted score was figured as follows: $5 - 5(1.133) = -0.67$; for the squirrel, chosen by nine boys and three girls, the weighted score was figured as follows: $9 - 3(1.133) = +5.60$; and for the baby, chosen by three boys and seven girls, the weighted score was figured as follows: $3 - 7(1.133) = -4.93$.

This method of scoring eliminated the adult bias, and definitely reflected the masculinity or femininity of each picture from the child's point of view.

The Measurement of Independent Behavior

The puzzle boxes, developed by Griffin (1966) were adapted for use in the measurement of independent behavior. (See Figures 3, 4, 5, 6) Each box contained wooden cut-outs of familiar objects, and only when they were placed flat in the box, could the lid be closed. Each box was approximately one-fourth inch in depth and 9" x 12" in length and width. In spite of the fact that there were several ways to put the wooden cut-outs in the box, the problem was difficult for young children and provided a situation in which they needed help to complete the task.

Pilot work was necessary in order to clarify the administration and method of scoring. Approximately, ten children participated in the pilot work.

Administration. The experimenter showed the demonstration puzzle box to the child, and let him open it. She then explained that all the pieces could be taken out of the box and put back in again. "We will do this one together. You take out a piece and the I'll take out a piece." When all the pieces has been removed, she said, "Now you put in a piece and then I'll put in a piece." When all the pieces had been replaced, the second box was shown to the child. The experimenter explained, "This one you can do by yourself, I'll help you, if you want."

Scoring. The task was scored by counting the number of pieces the child put in the box by himself whether they were correctly placed or not. Any piece that he removed and then put back into the box was again counted. If the child asked for help, the experimenter removed the incorrectly placed pieces, put one piece in correctly, and encouraged the child to continue. If the child did not ask for help, the experimenter offered

Figure 3. Marc is shown how to work the puzzle box.

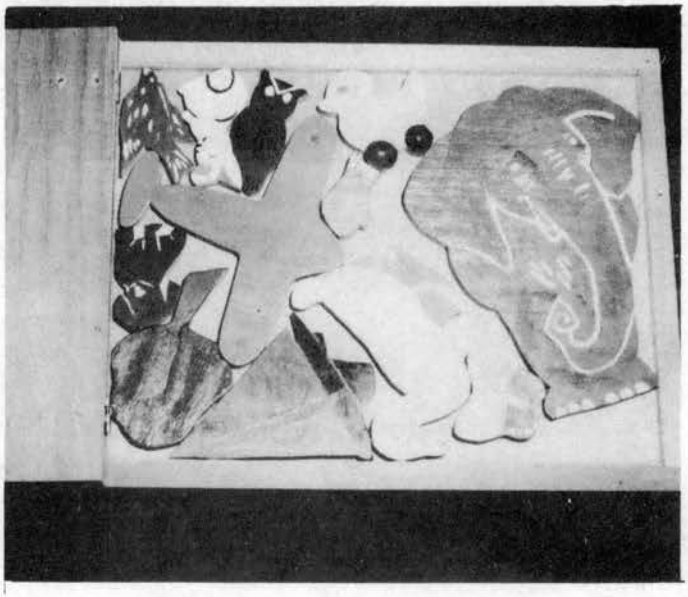

Figure 4. Demonstration puzzle box.

Figure 5. Marc works the puzzle box test alone.

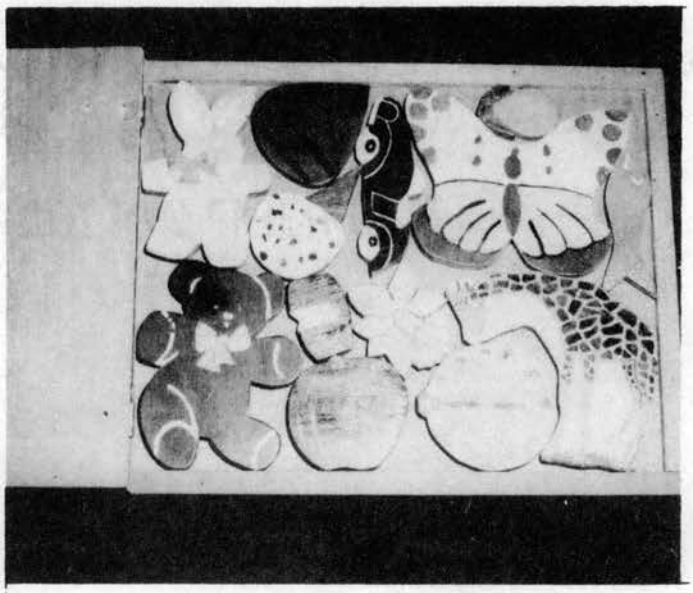

Figure 6. Puzzle Box Independence Test.

to help him after he had placed 20 pieces in the box. The task continued until the child had asked for help five times or had been offered help five times. Each child's score for independence was the number of pieces he put into the box by himself. An independent child, one who requested little or no help, could earn a score as high as 100; while a more dependent child, one who requested help with the task, would earn a much lower score.

The Measurement of Verbal Ability

Since one purpose of this research was to explore the possibility of a relationship between verbal intelligence and the two characteristics, masculinity-femininity and independence, a test for measuring verbal intelligence was needed. For this, the Peabody Picture Vocabulary Test (PPVT) was selected. This test has high interest value for children. The illustrations are clean, bold, line drawings, and the children are not required to talk; their responses are non-oral. No special training is required for administering the test, and it is quickly given and easily scored.

Recommended Analysis

Data analysis will include the following:

1. The validity and reliability of the M-F instrument will be tested.

2. Forms A and B of the M-F instrument will be tested.

3. Data from the three tests (Masculinity-Femininity, Independence, and PPVT) will be analyzed for sex differences.

4. Data from the three tests will be analyzed for relationships among masculinity-femininity, independence, and verbal ability.

CHAPTER IV

RESULTS

The purpose of this research was to study the relationship of masculinity-femininity to independent behavior in early childhood and to explore the relationship of verbal intelligence to these two characteristics. The achieve this purpose, a test for measuring masculinity-femininity was developed and preschool children were tested with this M-F test, a test of independence, and a test of verbal intelligence.

This chapter will include the following data analyses: (1) the validity of the M-F test, (2) the reliability of the M-F test, (3) a comparison of Form-A and Form-B of the M-F test, (4) sex differences in masculinity-femininity, independence, and verbal ability, and (5) a study of the relationships among these three characteristics.

Masculinity-Femininity Test

Validity

The validity of the M-F test depends upon its ability to discriminate between boys and girls. The Mann-Whitney U Test, used in this analysis, indicated that the boys and girls made significantly different choices of pictures, ($U = 1.00$; $p < .002$). The M-F test was accepted as valid.

Reliability

A split-half correlation, using the Spearman-Brown formula, was used to determine the internal consistency of the M-F instrument. Each child's responses to the odd items and to the even items on the test provided the two scores necessary for this analysis. A correlation coefficient of +0.936, significant beyond the .001 level, indicated that the M-F test was highly reliable, i.e., has internal consistency.

Comparison of Form-A and Form-B

The reader will recall that the M-F test was divided into two booklets for convenience in administering. These two booklets, Form-A and Form-B, were compared in order to determine whether an adequate measurement of masculinity-femininity requires the use of the complete test or whether the two short forms of the test give comparable and adequate results.

If Form-A and Form-B are comparable, a high correlation should exist between the children's responses on the two tests. A Spearman rank order correlation coefficient of +0.733 ($p<.001$) indicates that Form-A and Form-B are comparable to the extent that children who ranked high on Form-A also ranked high on Form-B.

Also, if Form-A and Form-B are comparable, the distribution of scores on the two tests should be the same. The medians and ranges of scores for the two tests are presented in Table I. No statistical analysis of these scores was done, but an examiniation of the scores suggests that the two forms are not comparable. For boys, the maximum score obtained on Form-A was 15 points greater than on Form-B, (A = +71.33;

TABLE I

DISTRIBUTION OF SCORES OBTAINED BY BOYS AND GIRLS ON A TEST DESIGNED TO MEASURE MASCULINITY-FEMININITY

(N = 32)

	Median	Range
Boys		
Form-A	+28.43	+ 6.13 to + 71.33
Form-B	+30.14	+ 5.89 to + 56.48
Total	+57.91	+ 20.03 to +101.47
Girls		
Form-A	-21.00	- 53.26 to + 9.58
Form-B	-18.79	- 57.24 to + 26.27
Total	-49.41	-110.50 to + 20.61
Boys and Girls		
Form-A	+ 9.79	- 53.26 to + 71.33
Form-B	+15.10	- 57.24 to + 56.48
Total	+24.52	-110.52 to +101.47

B = +56.48). For girls, the maximum score obtained on Form-B was 17 points greater than on Form-A, (A = +9.58; B = +26.27). These differences in the scores obtained by boys and girls on Form-A and Form-B suggest that the total M-F test should be used in order to obtain an adequate measure of masculinity-femininity.

Sex Differences

The M-F test was designed to discriminate between boys and girls, and statistical analysis verified the fact that it did. (Mann-Whitney) U test, $U = 1.00$; $p<.002$)

The data from the Independence task and the test of verbal ability were analyzed to determine whether there were sex differences in these two areas.

Statistical analysis, using the Mann-Whitney U test, indicated no sex difference in independence, ($U = 124.50$; n.s.). The distribution of independence scores was similar for boys and for girls.

Statistical analysis, using the Mann-Whitney U test, also indicated no sex differences in verbal ability, ($U = 119.50$; n.s.). The distribution of PPVT scores was similar for boys and for girls.

Relationship Between Masculinity-Femininity and Independence

The relationship between masculinity-femininity and independence was analyzed for boys and for girls separately.

For boys, a Spearman rank correlation coefficient of +0.301 was not significant. The more independent boys were not different from the less independent boys in masculinity-femininity rating.

For girls, a Spearman rank correlation coefficient of +0.556 was significant at the .05 level. The more independent girls were the more feminine, and the less independent girls were the less feminine.

Relationship Between Independence and Verbal Ability

The relationship between independence and verbal ability was analyzed for boys and for girls separately. For boys, a Spearman rank correlation coefficient of +0.221 was not significant; for girls, a Spearman rank correlation coefficient of -0.101 was not significant.

The more independent children were not different from the less independent children in verbal ability.

Relationship Between Masculinity-Femininity and Verbal Ability

The relationship between masculinity-femininity and verbal ability was analyzed for boys and for girls separately. For boys, a Spearman rank correlation coefficient of +0.361 was not significant; for girls, a Spearman rank correlation coefficient of +0.238 was not significant.

Children of high verbal ability were not different from children of low verbal ability in masculinity-femininity rating.

CHAPTER V

SUMMARY AND IMPLICATIONS

The purpose of this research was to study the relationship of masculinity-femininity to independent behavior in early childhood. To achieve this purpose an instrument for measuring one possible aspect of masculinity-femininity in preschool children was developed and a research game was adapted for the measurement of independent behavior. The relationship between masculinity-femininity and independence was then studied. The possibility of these two characteristics being related to ability, i.e., to the children's verbal intelligence, was also explored.

The subjects who participated in this research were 32 preschool children, 15 girls and 17 boys. The age range was from three years eleven months to five years four months.

The validity of the M-F test was indicated by its ability to discriminate between boys and girls; and its reliability, internal consistency, was demonstrated statistically. Form-A and Form-B of the test were not comparable in their discriminatory power; and therefore, in order to obtain an adequate measure of masculinity-femininity, both forms should be administered as one test of masculinity-femininity.

No sex differences were apparent in independence or in verbal ability.

An analysis of the relation between masculinity-femininity and independence, indicated that the more independent boys were not different from the less independent boys in masculinity-femininity rating, but that the more independent girls were more feminine than the less independent girls.

Further analysis indicated there was no relationship between verbal ability and independence, nor between verbal ability and masculinity-femininity.

Implications for Future Research

The M-F test developed in the present research is both reliable and valid; and in view of the fact that the method of scoring is based upon the choices of the group of children to which the test is administered, this instrument could be used in the study of various culture groups, e.g., different socio-economic groups.

In the development of a masculinity-femininity test for future research, the pictures used do not have to be exactly the same as those used in the present test. The method of scoring makes it possible to weight each picture accurately on a masculine-feminine continum for the group of children with which it is being used. The use of adults to classify the pictures as masculine and feminine is unnecessary.

The findings of the present study suggest the possibility of a relationship between the clarity of one's self-concept and one's independence and adaptability. For example, some interesting sex differences in independence and masculinity-femininity were indicated. The more independent boys were not different from the less independent boys in masculinity-

femininity rating; however, the more independent girls were the more feminine, and the less independent girls were the less feminine. Beyond this, the literature suggests that young girls have a more clear sex-role identification (feminine) than boys have (masculine), apparently because young children have more association with women than with men. This clarity of sex-role identification may explain the difference in the independence of the less feminine girls and the more feminine girls in the present study. The explanation may be that the more feminine girls have developed good feelings about themselves as a result of being rewarded for feminine behavior, and these good feelings may have provided the basis for the self-confidence that is necessary for independent behavior.

An extension of the present research might well be directed toward a better understanding of the apparent relationship between independent behavior and self-concept.

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APPENDIX A

MASCULINITY-FEMININITY TEST FOR PRESCHOOL CHILDREN

Name _____ Sex M Number 1236 Scores

Form-A: +61.21
Form-B: +33.14
Total: +94.35

Birthdate 1-26-62 Age 4:3 Date 5-12-66

Form A

Page	Pictures	Score
1.	___ ___ ↘	+10.73
2.	___ ↘ ___	+ 2.47
3.	___ ↘ ___	+ 6.60
4.	___ ___ ↘	+5.20
5.	___ ↘ ___	+ 3.20
6.	___ ___ ↘	+ 5.60
7.	___ ___ ↘	- 1.80
8.	___ ↘ ___	+10.87
9.	___ ___ ↘	+ 1.33
10.	___ ___ ↘	- .67
11.	___ ↘ ___	+4.87
12.	___ ___ ↘	+4.60
13.	___ ↘ ___	+4.07
14.	___ ___ ↘	+ 6.60
15.	___ ↘ ___	- 5.93
16.	↘ ___ ___	+3.47

Form B

Page	Pictures	Score
1.	___ ___ ↘	+8.47
2.	___ ↘ ___	+1.20
3.	___ ↘ ___	+1.33
4.	___ ___ ↘	+ .33
5.	___ ↘ ___	+5.60
6.	___ ___ ↘	+8.60
7.	↘ ___ ___	-3.06
8.	___ ↘ ___	+4.73
9.	___ ___ ↘	-5.33
10.	___ ___ ↘	+3.33
11.	___ ↘ ___	+3.94
12.	___ ↘ ___	-6.33
13.	___ ↘ ___	+1.20
14.	___ ___ ↘	- .67
15.	___ ___ ↘	+4.47
16.	___ ↘ ___	+5.33

INDEPENDENCE TEST FOR PRESCHOOL CHILDREN

Name _____ Sex M Number 1236 Score 33

Birthdate 1-26-62 Age 4:3 Date 5-6-66

Requests For Help	Number of Pieces	Asked or Accepted
Beginning	𝍸 𝍸 I	
1st	𝍸 II	
2nd	𝍸 II	
3rd	𝍸 I	
4th	II	

Comments:

APPENDIX B

APPENDIX B, TABLE I

AGES AND RAW SCORES OF INDIVIDUAL CHILDREN PARTICIPATING IN A STUDY OF MASCULINITY-FEMININITY, INDEPENDENCE, AND VERBAL ABILITY

N = 32

Sex and Code No.	Age *	Masculinity and Femininity			Independence	Peabody Picture Vocabulary Test
		Form-A	Form-B	Total		
M-772	3:11	+ 6.13	+47.80	+53.93	17	45
M-709	3:11	+43.81	+14.10	+57.91	46	57
M-490	4:2	+13.27	+35.42	+48.69	37	54
M-773	4:2	+19.35	+28.67	+48.02	19	42
M-777	4:3	+49.53	+44.24	+93.77	36	54
M-1236	4:3	+61.21	+33.14	+94.35	33	57
M- 703	4:5	+28.33	+56.48	+84.81	38	57
M- 711	4:5	+58.01	+16.10	+74.11	55	58
M-1237	4:5	+15.49	+41.68	+57.17	30	57
M- 485	4:10	+52.28	+42.01	+94.29	33	59
M-1244	4:10	+28.43	+13.41	+28.43	34	56
M- 714	5:0	+10.07	+23.12	+ 33.19	23	58
M- 395	5:1	+14.14	+ 5.89	+ 20.03	23	57
M-1238	5:1	+10.01	+41.56	+ 51.57	53	59
M- 402	5:4	+46.61	+28.55	+ 75.16	48	56
M- 775	5:4	+71.33	+30.14	+101.47	23	62
M- 844	5:4	+48.33	+29.16	+ 77.49	59	57
F-1265	4:3	+ 9.58	-11.65	- 2.07	51	49
F-1293	4:3	-12.91	-18.79	-31.70	21	56
F- 681	4:4	+ 6.81	- 8.98	- 2.17	22	55
F-1239	4:4	-16.91	-32.50	-49.41	35	64
F- 682	4:5	- 0.27	+20.88	+20.61	31	61
F- 705	4:5	-25.32	+ .95	-24.37	14	55
F-1264	4:6	- 6.91	+26.27	+19.36	33	45
F- 710	4:7	-53.26	-57.24	-110.50	39	50
F-1294	4:7	-49.58	- 7.17	-56.75	51	48
F- 685	4:8	+ 5.41	+ 9.42	+14.83	25	55
F-1241	5:2	-21.00	-45.64	-66.64	46	60
F- 712	5:3	-45.99	-31.75	-77.74	35	50
F-1240	5:3	-41.99	-23.76	-65.75	33	58
F-1256	5:3	-42.79	-48.32	-91.11	80	60
F- 552	5:4	-28.45	-25.49	-53.94	49	56

*Age expressed in years and months.

VITA

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Master of Science

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