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SEX-ROLE PREFERENCES IN PRESCHOOL CHILDREN
FROM FIVE SUBCULTURES OF THE
UNITED STATES

by

Asha K. Joshi

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
DOCTOR OF PHILOSOPHY

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1969
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>4</td>
</tr>
<tr>
<td>Controversial Findings and Issues</td>
<td>6</td>
</tr>
<tr>
<td>Sex-Role Development and Sociological Perspective</td>
<td>12</td>
</tr>
<tr>
<td>The Rationale</td>
<td>13</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>14</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>15</td>
</tr>
<tr>
<td><strong>REVIEW OF LITERATURE</strong></td>
<td></td>
</tr>
<tr>
<td>Origin of the Problem</td>
<td>17</td>
</tr>
<tr>
<td>Sociological Pressures Associated with Sex-Role Development</td>
<td>20</td>
</tr>
<tr>
<td>Intercultural Variations in Sex-Role Patterns</td>
<td>25</td>
</tr>
<tr>
<td>Theories of Sex-Role Development</td>
<td>26</td>
</tr>
<tr>
<td>Role learning through modeling</td>
<td>26</td>
</tr>
<tr>
<td>Role learning through interaction</td>
<td>30</td>
</tr>
<tr>
<td>Role-learning through cognitive concept development</td>
<td>34</td>
</tr>
<tr>
<td>Research Findings on Sex-Role Development and Behavior</td>
<td>36</td>
</tr>
<tr>
<td>Parent-child relationship and its influence on sex-role behavior</td>
<td>54</td>
</tr>
<tr>
<td>Sex of the sibling and sex-role development</td>
<td>59</td>
</tr>
<tr>
<td>Birth order and sex-role development</td>
<td>60</td>
</tr>
<tr>
<td>Personality traits associated with sex-typing</td>
<td>62</td>
</tr>
<tr>
<td>Social class as related to sex-role behavior</td>
<td>64</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Research on the IT Scale</td>
<td>66</td>
</tr>
<tr>
<td>Summary</td>
<td>68</td>
</tr>
<tr>
<td><strong>METHOD AND PROCEDURE</strong></td>
<td>69</td>
</tr>
<tr>
<td>Research Design</td>
<td>69</td>
</tr>
<tr>
<td>Subjects</td>
<td>69</td>
</tr>
<tr>
<td>Instruments</td>
<td>70</td>
</tr>
<tr>
<td>PPVT</td>
<td>70</td>
</tr>
<tr>
<td>ITSC</td>
<td>74</td>
</tr>
<tr>
<td>Scoring</td>
<td>75</td>
</tr>
<tr>
<td>Procedure</td>
<td>75</td>
</tr>
<tr>
<td>Scoring</td>
<td>85</td>
</tr>
<tr>
<td>Statistical Analysis</td>
<td>85</td>
</tr>
<tr>
<td><strong>RESULTS</strong></td>
<td>87</td>
</tr>
<tr>
<td>Differences Between the Performances of the Sexes on the ITSC</td>
<td>87</td>
</tr>
<tr>
<td>Differences in Performances of Children from the Five Subcultures</td>
<td>102</td>
</tr>
<tr>
<td>Sex-Role Preference and the Sex of Siblings</td>
<td>110</td>
</tr>
<tr>
<td>Internal Consistency of the ITSC</td>
<td>117</td>
</tr>
<tr>
<td>Children's Responses about the Sex of the IT Figure</td>
<td>117</td>
</tr>
<tr>
<td><strong>DISCUSSION</strong></td>
<td>120</td>
</tr>
<tr>
<td>Sex-Role Preferences of Boys and Girls</td>
<td>120</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Sex-Role Preferences of Boys and Girls from Different Subcultures</td>
<td>125</td>
</tr>
<tr>
<td>Sex-Role Preference and the Sex of Next Older and/or Next Younger Sibling</td>
<td>126</td>
</tr>
<tr>
<td>Subpart 2a</td>
<td>127</td>
</tr>
<tr>
<td>Subpart 2b</td>
<td>129</td>
</tr>
<tr>
<td>Subpart 3</td>
<td>129</td>
</tr>
<tr>
<td>Subpart 4</td>
<td>130</td>
</tr>
<tr>
<td>Internal Consistency of the ITSC</td>
<td>132</td>
</tr>
<tr>
<td>Theoretical Implications</td>
<td>134</td>
</tr>
<tr>
<td>Implications for Parents</td>
<td>138</td>
</tr>
<tr>
<td>Implications for Future Research</td>
<td>141</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>145</td>
</tr>
<tr>
<td>LITERATURE CITED</td>
<td>148</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td>163</td>
</tr>
<tr>
<td>APPENDIX A.1</td>
<td>164</td>
</tr>
<tr>
<td>APPENDIX A.2</td>
<td>166</td>
</tr>
<tr>
<td>APPENDIX A.3</td>
<td>168</td>
</tr>
<tr>
<td>APPENDIX B.1</td>
<td>173</td>
</tr>
<tr>
<td>APPENDIX B.2</td>
<td>175</td>
</tr>
</tbody>
</table>
INTRODUCTION

The actions, interactions and behavior patterns of members of human societies are governed by more complex phenomena than are those of members of other animal groups. For purposes such as fostering better societal functioning and provision of standards of conduct for the members, a society usually divides itself into subgroups. Such subdividing also serves to satisfy certain basic individual needs of most members. Two bases for such subdivision are age and sex. Linton states:

... the division and ascription of statuses with relation to sex seems to be basic in all social systems. All societies prescribe different attitudes and activities to men and women. (Linton, 1936, p. 116)

The recognition of differences among age groups and between sex groups tends to imply recognition of different needs, different levels of learning and maturity and requirements of different standards by which to live. Evidence for this implication may be seen in the usual ascription of roles and statuses of members of different age and sex groups. By belonging to their own appropriate groups, individuals may derive not only personal security and recognition but also standards for their own behavior. Thus they may be helped to fit well into the society and gain the approval of other members, which in general is an important factor contributing to the mental health of both younger and older human beings. The group provides the family with a set of conditions to which to
conform and the family, in turn, generally socializes its young ones according to these conditions.

As the child grows up conforming to these standards and being continually reinforced for them, a repertory of behaviors is developed in him. An example of such behavioral tendencies is the greater overt dependency in females as opposed to the greater overt aggression in males in the culture of the United States of America (Kagan, 1964).

The primary concern of the present research is the effect of social-cultural factors on sex-role preference. It is possible that as a child grows up, he learns to prefer the role of one of the sexes. The causes for a child preferring one sex-role in contrast with the other remain undetermined in spite of several research efforts and theoretical formulations (Kagan, 1964; Brown, 1956; Lynn, 1962; Johnson, 1963).

One of the assumptions in research in this area has been that preference of a parent's role necessarily means identification with that parent (Brown, 1956; DeLucia, 1963; Rosenberg and Sutton-Smith, 1960). There is a reasonable amount of doubt about the possibility of a child preferring the opposite-sex parent's role while identifying with and adopting the role of the same sex parent. On the other hand, it is not impossible that a child prefers and identifies with the same-sex parent.

of a parent's role and identification with him are different facets of
the problem of sex-role development in a child's life. The results of
the above studies give rise to hypotheses concerning cause and effect
in this area. Sex-role development apparently depends upon the child's
relationship with his parents. The variables considered to be important
in the parent-child relationship are parental nurturance level, parents'
own masculinity-femininity level and the reinforcement parents provide
for the child whenever "appropriate" behavior is exhibited by the child.
It seems plausible that such parental variables influence a child's
learning of sex-role behavior since parents are usually the first people
a child observes and with whom he interacts. The beginning of sex-role
behavior occurs very early in life (Emmerich, 1959; Hartup and Zook, 1960;
Hartup, 1962; Sears, Maccoby and Levin, 1957; and Seward, 1954).
Further, parents are also the first people who represent the culture of
their society (or that of the narrower cultural subgroup) to the child.
Since cultures of different societies and subcultures within societies
vary from each other, it is quite possible that sex-role expectations,
being a part of the culture, also vary among societies and among subcul-
tures.

The child should, then, learn the sex-role behavior appropriate to
his immediate subculture. The way children of one subculture differ from
those of another in their sex-role behavior should be a very interesting
problem to investigate and also very useful in terms of providing
children with optimum opportunities to enhance the healthy development
of sex-role behavior and identity.
Definition of Terms

Researchers and theorists in the area of sex role behavior have defined the object of their concern through reference to a wide variety of aspects of the topic. Most of their definitions are more or less similar except that some of them have provided more detailed definitions than have others.

Sears has defined (Brown, 1956) "sex-role identification" as the behavior associated with one sex or the other that the individual introjects and acquires as his own. He defines "sex-role preference" as being that behavior associated with one sex or the other which the individual would like to adopt or which the individual sees as being more desirable or preferred behavior.

Brown (1956) defines the term "identification" without differentiating sex-role identification from any other kind of identification. According to him, sex-role preference and sex-role identification are appropriately defined by Sears. He himself defines "identification" as a process involving a child's learning to think, feel, act and become like parental figures and other significant persons in his life. Lynn, besides defining sex-role preference and sex-role identification, also defines sex-role adoption (1962), an additional concept that Brown (1956) and Sears (Brown, 1956) had not defined. His definition of "sex-role preference" includes the desire to adopt behavior associated with one sex or the other, or the perception of such behavior as more preferable or desirable. Lynn defines "sex-role identification" as the internalization of the role considered appropriate to a given sex and to the unconscious
characteristics of that role. Lynn also defines "parental identification" as the internalization of personality characteristics of one's own parent and the unconscious characteristics similar to that parent. "Sex-role adoption" is actual adoption of behavior traits of one sex or the other, not simply the wish to do so (Lynn, 1962).

Kagan has defined sex-role "identification" as the belief that some of the attributes of the model belong to the self. He also defines "sex-role identity" as being the degree to which one regards oneself as masculine or feminine. Another concept defined by Kagan (1964) and not defined by any of the others mentioned above is "sex-typed behavior". It is the pattern of behavior that the society considers appropriate for a particular sex or the behavior that matches the sex-role standard of the society (Kagan, 1964).

For the purposes of the present study, Lynn's (1962) and Kagan's (1964) definitions are considered suitable. The two of them together cover almost all of the aspects of sex-role development.

"Sex-role preference" is an aspiration while "sex-role identification", "sex-role adoption" and "parental identification" are processes employed to fulfill the aspiration. "Sex-typed behavior" and "sex-role identity" are outcomes of the processes of "sex-role adoption" and "sex-role identification" respectively.

These concepts seem to be adequate to serve the purposes of the present investigation. They are simply and clearly defined.
Controversial Findings and Issues

One of the approaches in research has been to study the child directly by using techniques like observations of doll play and different kinds of interview sessions involving various tasks. Researchers who have utilized such data-gathering techniques report contrasting findings in the area of sex-role learning and development. Brown (1957) found that as children develop, large and significant changes occur in the sex-role behavior of boys and of girls and that the changes observed in the two groups differ in kind, suggesting the existence of definite, relatively dichotomous sex-role patterns. He also noted that boys show a significantly greater preference for the masculine role than girls do for the feminine role. Boys who had sisters and no brothers scored somewhat more feminine than boys having brothers and no sisters. Boys who had both brothers and sisters were also more feminine in their responses than boys who had only brothers. No significant differences were found relative to this variable among girls.

Later, two more studies done by Brown (1957, 1958) and studies by Hall (1960), Handy (1954), Hartup and Zook (1960), Hogan (1957) and Lowe (1957) also showed that boys expressed a much stronger preference for the masculine role than girls did for the feminine role. The majority of boys but only a minority of girls expressed sex-appropriate preferences.

Recently, Lefkowitz has reported contradictory results (1962). When confronted with a direct choice, girls have about as much preference for the feminine role as boys do for the masculine role (Lefkowitz, 1962).
Brown (1962), in agreement with Lefkowitz (1962), concludes that more research is needed to settle this question and give a more definite explanation.

Another approach has been to study parent personality in terms of their own sex-typed behavior. A father and a mother, beside being parents, are also a male and a female human being and hence have personal masculine and feminine orientations. They represent to the child the nature of masculine and feminine orientations in that particular culture (Sears, Maccoby and Levin, 1957; Kagan, 1964). The child incorporates his own masculine-feminine orientations by observing and interacting with his parents. According to Brown, a person's being male or female "biologically" depends on genetic or biological processes but his being male or female "socially" and "psychologically" depends on learning, environmental factors and experiential development.

The inference is that sex-role behavior is essentially learned. A study by Ferguson (1941) emphasizes the importance of childhood experiences in the development of sex-role behavior. He found that childhood learning experiences were crucial determinants of adult masculinity patterns among college students. According to Sears, Maccoby and Levin (1957) and Kagan (1964), if a child perceives himself as similar to his same sex parent, he tends to identify with that parent and thus adopts his sex-appropriate behavior just as he adopts some of the more obvious attitudes of the same sex parent. If this is true, then, parental masculinity or femininity should certainly be considered an important and
crucial factor in the sex-role development of the child. A study by Heilbrun (1965a) supports the modeling theory of sex-role learning.

A very different train of thought has been pursued by some other researchers who also think parental masculinity and femininity are important but for very different reasons. This viewpoint is based on Parsons' theoretical formulations (1955, 1958) wherein identification is conceptualized as encompassing the behavior a child learns in the context of a social role with a parent (i.e., the internalization of a reciprocal role relationship). Accordingly the learned behaviors need not be those typical of the adult but rather are those elicited and reinforced systematically in the course of a child's interactions with an adult. It is interesting to note at this point that Parsons regards the essence of masculinity and femininity to be a difference between instrumental and expressive orientations.

Johnson (1963) has recently proposed that a crucial factor in learning the masculine sex-role for males and the feminine sex-role for females is identification with the father. The child is presumed to make a series of successive identifications. Both boys and girls make an initial non-sex-typed identification with the mother. Identification with the father, within which framework the father forms differential role relationships with the son and with the daughter, provides the basis for sex-role learning in children of both sexes. According to Johnson (1963) girls receive expressive behavior from both father and mother while boys are treated with expressive behavior from the mother and instrumental behavior from the father. Thus, girls' interactions
with the parents reinforce expressive behavior from childhood through adulthood while boys are reinforced for expressive behavior toward females and instrumental behavior toward males.

Lynn (1962) has hypothesized about differential learning patterns of boys and girls, and further, about their developing differential personality traits because of specific learning patterns followed by each sex. His hypothetical framework is as follows:

1. Females will tend to demonstrate greater need for affiliation than males.
2. Females tend to be more dependent than males on the external context of the situation.
3. Females will tend to be more receptive to the standards of others than males. (Lynn, 1962, p. 281).

According to Lynn (1962), the above personality traits are developed by girls because of their learning patterns, which involve mainly imitation, under conditions of warm personal interaction. He has some hypotheses about boys' personality development too:

1. Males tend to surpass females in the problem solving skill.
2. Males tend to be more concerned with internalized standards than females. (Lynn, 1962, p. 281).

Boys develop the two above mentioned personality traits because of their using the following trend in learning anything new: first, define the goal, second, restructure the field, and third, abstract principles.
Lynn proposes that the different learning patterns used by girls and by boys lead them to develop different personality traits.

Another issue in the area of sex role behavior development of children is that of the availability of the father, both for observations by the child which is of importance to modeling theory supporters (Kagan, 1964; Sears, Maccoby and Levin, 1957) and for interactions with the child which is stressed by Parsons (1955, 1958) and Johnson (1963). It was supposed that the father's being away at work may act as a hindrance in the son's learning sex-appropriate sex-role behavior. This hypothesis is based on the modeling theory of sex-role learning, in which the relative absence of the father means the absence of a masculine model for the son (Lynn and Sawrey, 1959; Mussen and Distler, 1959). However, the modeling theory has not been empirically modified as yet. Lynn (1959) hypothesized that girls identify with their mothers but boys identify with a cultural male stereotype rather than with their own fathers. However, there are some research studies which provide evidence of boys' identifying with their own fathers in spite of the fathers being absent from the home most of the time (Heilbrun, 1965a, b; Brodbeck, 1954; Goodenough, 1957; Bronfenbrenner, 1961; Osgood, 1957; Helper, 1955; Gray, 1959; Sopchak, 1952).

Apart from parental availability and parental sex-role behavior (as models for sex-role behavior as well as reinforcers through interaction in a social context), other factors in the parent-child relationship also influence the sex-role development of a child. It is implied by researchers (Heilbrun, 1964a, b; Mussen and Distler, 1959; Mussen and
Rutherford, 1963; Lefkowitz, 1962; Heilbrun and Orr, 1966) that the degree of appropriateness of sex-role development in the child occurs in direct relationship to the level of nurturance provided in the parent-child relationship. The warm, understanding, nurturant attitude of the parent makes it easier for the child to identify with and adopt the behavior of the same sex parent.

Another point of issue in this area is the pattern of parental reinforcement as a factor influencing the sex-role behavior of a growing child. Some studies have indicated a difference in the way boys and girls are treated by adults (Sears, Maccoby and Levin, 1957; Kohn, 1959; Kagan, 1964). Following this lead, it is theorized that girls are expected to retain their dependency and to develop conformity and passivity while boys are expected to be independent, aggressive and competent (Beller and Turner, 1964; Crutchfield, 1955; Hovland and Janis, 1959; Kagan and Moss, 1962; Lindzey and Goldberg, 1953; McCandless, Bilous and Bennett, 1961; Stanford, et al., 1943; Sears, et al., 1953; Siegel, et al., 1959).

There may also be an interaction between nurturance and reinforcement as two factors influencing the sex-role behavior of a child. It is possible that the reinforcement of a nurturant model may be longer lasting regardless of the kind of reinforcement it is, because of the nurturance involved in the situation.

Further, learning theory emphasizes the contrasting effectiveness of positive and negative reinforcements. (Miller and Dollard, 1941; Mowrer, 1950 (a)) which may have implications in the area of sex-role learning. Rewarded learning may enhance development of sex-role behavior more than
punished inappropriate learning or punished lack of learning. This does not seem impossible when considering findings that boys are consistently told not to be a "sissy" rather than what to be and that boys also know the masculine and feminine distinction by the age of three (Brown, 1957; Hartup and Zook, 1960). The awareness of the distinctions between masculine and feminine behavior in boys is also accompanied by anxiety (Gray, 1957).

Sex-Role Development in Sociological Perspective

Behaviorally, the meaning of the sex-role is decided by the particular society in which the child is born. It is believed that the process starts soon after the newborn arrives. Seward states, "The individual is trained to sex-role from the moment of birth when girls are placed in pink, boys in blue bassinets." (Seward, 1946, p. 153). In some societies, the child role may take precedence over the sex role for a while after birth. Societies vary as to how strongly and at what stages of life the belongingness to one group or other (based on the classification of sex) is emphasized. Once the child has been ascribed the status of male or female he starts to incorporate the roles and behavior patterns which go with the status. The standards which define the role in detail emerge from the culture of the society at large, in a broad range of permissible behavioral possibilities. The family's subculture narrows and specifies standards of conduct a little further and each family's particular culture specifies them in such fine detail that even a child finds it possible to follow them.
Hence, the way an individual acts and reacts is determined by his place in society and by the training he has received in anticipation of that place. Linton suggests:

It follows that the behavior must be studied not simply in the total culture of his society but also in relation to the particular cultural demands his society makes upon him because of his particular place in it. Thus, all societies expect different behavior from men and from women. (Linton, 1945, p. 263)

The Rationale

Children of one subculture differ from those of another in a systematic fashion with respect to sex-role preference. This conclusion is based on the findings of a number of different crosscultural studies (Rabban, 1950; Hartley, 1959; Lefkowitz, 1962; Hall and Keith, 1964; Minuchin, 1965). The findings of these studies are inconsistent with respect to certain factors but quite consistent with respect to others. If children from different cultures and subcultures do vary in their sex-role behavior, we may assume that other factors in the various cultural environments also vary even though the research has not identified these factors conclusively. These other variables may be the ones that contribute to the development of sex-role behavior among children. On the basis of the available research, it might be hypothesized that the following variables are those which differ among the subcultures and cultures:
(1) Parental masculinity and femininity.

(2) Parents' availability to children as models for observations.

(3) Parents' availability for interactions with the child.

(4) The kinds of reinforcement methods parents use with the child.

(5) Nurturance level in the parents' behavior with and responses to the child.

If adequate research confirms that the cultures and subcultures do not differ on the above variables, then they must differ on something else which contributes to the development of the sex-role behavior of children and which has not been revealed by research so far.

On the other hand, if the subcultures are found to differ on the above variables, then the relative importance of each of the variables could be studied and also the optimum conditions under which they contribute maximally to the sex-role development of children.

A society can make efforts to provide an optimum environment for any kind of development (through parents, teachers, schools and other agencies) only if it is aware of the components that make up the particular kind of optimum environment.

The present study is a most basic and initial step in this direction.

Statement of the Problem

The present study aims at exploring the sex-role preference of young children from several different subcultures of the United States to discover differences which may exist between subcultures in the area of sex-role behavior development.
"Sex-role preference" refers to the desire to adopt behavior associated with one sex or the other, or the perception of such behavior as more preferable or desirable.

The subjects are boys and girls (4 to 6 years of age) who represent five subcultures of the United States: white middle class, white lower class, Black middle class, Black lower class and American Indians from Tama, Iowa.

**Socioeconomic Status**  The lower socioeconomic status for this study is represented by families eligible for a headstart program and also from other families from an equivalent income and residential area whose children attend a headstart-type program or a day-care center (e.g., the Forest Hill Day Care Center in Des Moines and the Title I program in Tama, U. Iowa). The middle class socioeconomic status is represented by groups of children whose parents are professionals. On the whole they are children of university staff and faculty members as well as staff members of one of the veteran's hospitals.

**Subculture**  The term "subculture" is an equivalent of the term "reference group" as used by several theorists in Sociology (T. M. Newcomb, 1950; Mazafer, Sherif, 1948; Merton and Kitt, 1950; Hyman). Newcomb defines a reference group as, "...one in which a person is recognized by others as belonging. ..." (Newcomb, 1950; p. 225).

According to Kelley, there are two main functions a reference group performs: (1) "Setting and enforcing standards for the person"; and (2) "Serving as or being a standard or comparison point against which a person can evaluate himself and others." (Kelley, 1952).
Hypotheses

1. There is no difference in the sex-role preference scores* of boys and girls of 4 to 6 years of age.

2. There is no difference in the sex-role preference scores* of boys from different subcultures.

3. There is no difference in the sex-role preference scores* of girls from different subcultures.

4. There is no relationship between the sex-role preference score* of a child and the sex of the next older and/or next younger sibling.

5. There is no relationship among performances on the four different parts of the It Scale for Young Children.

*Sex-role preference is operationally defined by the score the subject obtained on the It Scale for Young Children.
REVIEW OF LITERATURE

Origin of the Problem

Historically, human beings have been known as gregarious animals and hence individuals in different geographical locations form different societies. To live together as a group and to maintain some degree of harmony requires some sort of organization and administration within the society. An aspect of this organization is classification of human beings on the basis of sex (Parsons, 1942). Very early in life, in most societies, an individual is made aware of his belonging to one of the two sex groups (Linton, 1936, Parsons, 1942). Ralph Linton states:

The structure of even the simplest primary society such as a primitive village is by no means simple or homogeneous. The individuals who compose such a society are classified and organized in several different ways simultaneously. Each of these systems has its own functions as regards relating the individual to the culture and he occupies a place within each of them. Thus every member of the society has a place in the age-sex system and also in the prestige series. (Linton, 1952, p. 263).

According to Linton (1952), the place a certain individual occupies in a particular system as a particular time in his "status". His "role" is the sum total of culture patterns associated with a particular status. It includes the attitudes, values and behaviors ascribed by the society to any and all persons occupying this status. Linton emphasized the content of a role:
It can even be extended to include the legitimate expectations of such persons with respect to the behavior toward them of persons in other statuses within the system. (Linton, 1952, p. 264).

Linton (1952) further clarifies the relationship between a status and a role. Every status is related to some particular role but the two are never the same thing for any one individual. The individual's statuses are ascribed to him on the basis of his age, sex, his birth or marriage in a particular family unit, his ordinal position and so forth. His roles are dependent on and based on his statuses. This is true of both the current statuses and anticipated ones.

Insofar as it represents overt behavior, a role is the dynamic aspect of a status: what the individual has to do in order to validate his status and his occupation of it. (Linton, 1952, p. 264).

Parsons (1942) has also paid attention to age and sex as the bases of statuses and roles. His emphasis is more on the adult behavior rather than that of young children.

Once statuses and roles are formulated and defined in a society, there are pressures toward following the rules. An individual should follow the roles associated with his current status at a given time (Linton, 1952). As a young boy matures, he is likely to find increasing familial, peer and general societal pressures to identify with his father and thus to learn to think, feel and act like a member of his sex (Brown, 1958; Mussen, 1961). In other words, the process means the
adoption of sex-appropriate motivational patterns, personality characteristics and overt masculine behavior as well as masculine interests. A number of findings from the Thematic Apperception Test, ratings and sociometric variables supported Mussen's hypothesis of the young boy's facing a lot of pressure to conform to the prescribed masculine role (Mussen, 1961). The evidence demonstrated that the strong identification with the male role is manifested in the adoption of coherent set or patterns of sex-role behaviors rather than in the acquisition of a few isolated sex-appropriate characteristics (Mussen, 1961). A study by Bloomer (1964) was done to examine methods that children of both sexes would use to solve problems they see arising from (a) normal life situations with some pressure and (b) in situations requiring primitive survival. It was found that boys chose highly decisive and more tense characters under survival stress than under normal conditions. For the primitive survival conditions, girls' identification figures were significantly less romantic than for normal conditions (Bloomer, 1964). Bloomer's subjects were middle class boys and girls from grades 4 through 6 in the school system of a midwestern city with a population of 350,000.

Lawrence K. Frank (1958) suggested that current changes in women's social roles are likely to lead to feelings of anxiety, inadequacy and hostility in men because of a lack of synchronization in role change on their part. Several others (Brown, 1958a; Cava and Raush, 1952; Gray, 1957; Gray and Klaus, 1956; Hacker, 1957; Hamburger, 1953; Tuddenham, 1951, 1952) have noticed evidence of socialization and adjustment difficulties from male role demands at the adult and adolescent levels. The
fact that more boys than girls have been referred to child guidance clinics in recent years points to the markedly greater failure of boys in social functioning as compared with girls (Gilbert, 1957; Ullman, 1957; Department of Mental Hygiene, 1955, 1956; Public Health Service Publication, 1956). There have been more boys than girls rated as delinquents (Schwartz, 1949) and there are more underachievers among boys than girls (Gowan, 1955).

Hartley (1960) accepts a social role as including all the personal qualities, behavioral characteristics, interests, attitudes, abilities and skills which one is expected to have because one occupies a certain status or position. She points to the problem of a status or role being an outcome of the society's culture alone and thus at times being completely unrelated to an individual's native endowments (Hartley, 1960). The role of being a human male is the one associated with greatest pressure, according to Hartley (1959).

Socialization Pressures Associated with Sex-Role Development

The demands of boy's conforming to the social notion of masculinity come much earlier and are enforced with more intense emphasis than similar attitudes with respect to girls. Several studies of preschool children have revealed that boys are aware of what is expected of them because they are boys and hence they restrict their interests and activities to what is suitably masculine in kindergarten (Brown, 1956, 1957; Fauls and Smith, 1956; Gilbert, 1957; Rabban, 1950) while girls move gradually in the direction of femininity taking about five more years
(Brown, 1956, 1957). Hartley's interpretation (1959) based on these findings is that more stringent demands are placed on boys at an age when they are least able to understand the meaning of the demands and also that these demands are frequently enforced harshly. To make things more difficult, the desired behavior is rarely defined positively. The child is told what not to be, but hardly ever what to be. Hartley (1959) hypothesizes that this circumstance creates more anxiety in boys than in girls.

The sex-role learning dilemma that boys face is further intensified by the fact that fathers are characteristically relatively less available at home as either behavior models or interacting masculine agents. The relative absence of the father means that much male behavior is learned, if at all, by trial and error and indirection (Lynn, 1962). One outcome of this kind of learning is much greater resemblance of girls to their mothers than that of boys to their fathers (Beier and Ratzeburg, 1953; Gray, 1959; Lazowick, 1955; Roff, 1950; Schoeppe, 1953). There have also been some studies showing that relations between fathers and sons are not as good as those between mothers and daughters (Meltzer, 1941, 1943; Nimkoff, 1942). It is assumed that identification is influenced by the quality of relationship between the child and his model (Mowrer, 1950; Symonds, 1946). A poor relationship with the father diminishes the son's chances to learn appropriate sex-role behavior easily and naturally by using the father as a model (Cava and Raush, 1952; Payne and Mussen, 1956). Boys with difficulties in sex-role behaviors often report their fathers as punishing agents and their mothers as protectors (Emmerich, 1959, 1959).
Hartley (1959) points out another factor that may add to the boy's anxiety. With all the emphasis on developing masculine behavior and leaving behind every trace of feminine behavior, the young boy is faced with women as models and interacting agents for most of his day (because of the father's being away and there being female teachers in preschool as well as elementary school programs). Hartup, Moore and Sager (1963) found in their study that when boys were individually permitted to play with a selection of attractive feminine toys and unattractive neutral (neither feminine nor masculine) toys, most of the boys avoided feminine toys, spending their time with the unattractive dilapidated ones. Also, the avoidance of feminine toys was stronger when an adult was present in the situation than when the adult was absent (Hartup, Moore and Sager, 1963; Kobasigava, Arkaki and Awaguni, 1966). In addition, when a boy observed a same sex peer playing with a feminine toy, his avoidance of the feminine toy was reduced (Kobasigava, 1966). While similar trends appear for the girls in the research findings, the avoidance aspect of their sex-role learning is less pervasive. DeLucia (1960) and Spencer (1963) found that when mild verbal punishment was administered to children upon making inappropriate choices on a toy preference test, the appropriateness of subsequent choices was increased. It was concluded that avoidance of opposite sex behavior or sex-role appears to be an important part of sex-role learning, particularly in a boy's life. The finding that avoidance may be less important among girls' sex-role learning is in agreement with everyday observation. American culture is considerably more lenient with girls (Kagan, 1964). They may wear trousers, be
tomboys and enter into masculine games and activities without strong cultural disapproval (DeLucia, 1960; Spencer, 1963).

Nash (1965) has published an article called, "The Father in Contemporary Culture and Psychological Literature". In this article, he pays attention to the common assumption generally made by sociologists and psychologists about child rearing practices of western industrial society. To many, the child rearing practices of the American society appear to be definitely matricentric. There is also a relative lack of studies about the father's role. If the matricentric characteristic of the American society is accepted as existing, the implication may be drawn that the boy and the girl face different qualities of environments influencing their sex-role development. It has been suggested (Hetherington, 1966; Lynn and Sawrey, 1959) that relative neglect of the father may have distorted the understanding of the dynamics of development of children and adversely affected the rearing of the males. Nash (1965) suggests some hypotheses as to why this might be so. First, the father is the sole wage earner and thus he leaves all of the child rearing responsibility to the mother. Second, social scientists have uncritically adopted this cultural philosophy of child care, assuming that is is both the only and the most desirable pattern of child care. Nash also refers to the results of clinical studies and studies of delinquents to emphasize that the relationship of a child with the father is important for healthy social development (1965). Psychosexual difficulties, such as homosexuality, apparently result from a child's identifying with the parent of opposite sex (Brown, 1958b). If this is
the case, a mother-centered system is peculiarly unsuited to the needs of the boy. While he is under constant pressure to act as a male (Hartley, 1959), he is really predominantly with women, from whom he is likely to acquire only a feminine pattern. The girl, on the other hand, is confronted with a different set of difficulties. She is treated with permissiveness about her becoming feminine (DeLucia, 1960; Spencer, 1963). There is no hurry for her to adopt the appropriate sex-role behavior. There is less pressure on her, as compared with that on the boy, toward the task of sex-role learning. Further, the American culture is heavily masculine oriented, with men being accorded more privileges than women (Bennett and Cohen, 1959). This is true of many cultures wherein women are pressured into developing nurturance, obedience and responsibility, while men are encouraged to achieve and be self reliant (Barry, Bacon and Child, 1957). Research findings indicating that the feminine orientation of young girls is less strong than the masculine orientation of young boys may be utilized as bases for the implication that children learn very early in life the importance of the masculine role from the point of view of greater social and personal advantages.

Brown (1958) recognizes that gradually there is more and more flexibility shown in the American culture about the sex-role patterns. He states:
There are definite signs that a convergence of the two sex-roles is gradually taking place in our society. This cultural trend is evident in the increasing overlap between things and activities formerly considered "exclusively masculine" or "exclusively feminine." A major effect of this emerging cultural pattern is widespread inter-family variability in the sex-roles of the family members. (Brown, 1958(a), p. 241).

He also believes, on the basis of his research, that educational experiences and professional opportunities are more nearly equal for the sexes today and that modes of stress change tremendously, with styles for men changing as rapidly as do those of women. It also has been discovered that over the past years girls have shown increasing interest in active, outdoor, team type sport (Rosenberg and Sutton-Smith, 1959).

It is possible that these cultural changes in the roles of the sexes may influence the sex-role development of the young generation of today (Hartley, 1960; Spencer, 1967). Hartley (1960) suggests after considerable speculation that any such effects on the children's sex-role development will be minimal because the child does not see the occurring changes but only sees the sex-role patterns as they exist at a given point in time.

Intercultural Variations in Sex-Role Patterns

Kobasigava (1959) attempted a direct cross cultural comparison of children's sex-role development. The IT Scale (with considerable modification for cultural differences) was administered to a group of Okinawan children. Results indicated dichotomous sex-role patterns similar to those in the United States. On the basis of these findings there is reason to suspect that sex-role patterns and their outcomes may vary
between cultures (Mead, 1937); Whiting and Child, 1953) and sex-role
development is one of the aspects of the socialization of the child.
Malinowski (1927) found evidence against the Freudian assumption that
the oedipus complex was universal. There are some findings about the
personality variations between cultures also: e.g., McDougal's acquisi-
tive instinct and the instinct of pugnacity are found to be absent in
some other societies (Mead, 1937).

Theories of Sex-Role Development

Different researchers and social scientists have developed some
tentative theories about how sex-role development takes place. Their
approaches can be grouped as follows: (a) role learning through follow-
ing a model, (b) role learning through interaction with those who have
acquired roles already, e.g., parents, and (c) role learning as an
aspect of cognitive concept development.

Role learning through modeling

This theory is related to concepts of social learning. A child
learns to respond as his same sex parent does through the process of
imitation (Miller and Dollard, 1941). This kind of learning behavior
has been called either matched dependent behavior or copying. According
to Miller and Dollard (1941) and Kagan (1958), initially, the imitative
act is accidental (occurs by chance) and can be reinforced only if some
drive is reduced by reproducing the response. This view emphasizes
direct reward from the social environment (such as praise or expression
of affection) as strengthening a person's tendency to imitate a model.
Mowrer utilizes the term developmental identification and defines it as imitating and reproducing the behavior of a model in order to reproduce "bits of the beloved and longed for parent" (1950, p. 615). Thus, in his view, most imitation of a model is the result of a desire to reproduce behavioral responses which have acquired secondary reward value through association with a nurturant and affectionate model. It is the self rewarding aspect of certain imitative acts that Mowrer (1950) emphasizes as opposed to Miller and Dollard's (1941) emphasis on direct reward from the social environment.

Lynn (1962) also discusses secondary reward value and its role in the sex-role identification of children, particularly girls. Through learning the appropriate identification, each sex acquires a different method of learning which is later applied to all kinds of learning in general.

In learning the mother identification lesson, the little girl acquires a learning method which primarily involves (a) a personal relationship and (b) imitation rather than restructuring the field and abstracting principles. In solving the masculine role identification problem, the boy acquires a learning method which primarily involves (a) finding the goal; (b) restructuring the field and (c) abstracting principles. (Lynn, 1962, p. 281).

Sanford's (1959) concept of identification is similar except for the motive behind it. He states:
The individual may be observed to respond to the behavior of other people or objects by initiating the same behavior in himself. . . . the individual strives to behave in a way that is exactly like that of an object. (Sanford, 1955, p. 109).

The motive of such imitative behavior was a threat to a person's self esteem. By limiting the term identification to those imitative behavioral sequences in which the motivation for the act was anxiety over self esteem, two points are emphasized by Sanford: (a) mere similarity between the overt behavior of a subject and the model is not necessarily a measure of identification, and (b) the motive for the imitative behavior is one of the defining characteristics of an identificatory response.

Sanford (1955) also includes the importance of the reward from the environment:

A child learns which of his actions please and which displease his parents, which win him love and which disapproval . . . . (Sanford, 1955, p. 117).

Lynn (1959) has extended the concept of identification by hypothesizing that the daughter tends to identify with the specific attributes of the mother while the son, in the relative absence of the father or a male parental model, tends to use broad cultural stereotypes of masculinity as a model for his behavioral learning.

Stoke (1950) has proposed that greater amount of time spent by the daughter in interactions with her mother as compared to that spent by the
son with his father makes the learning of specific behavioral attributes of the same sex parental model more likely by the daughter.

Sears, Maccoby and Levin's (1957) modeling theory serves as a basis for predicting that sex-typed behaviors observed in the repertoires of the parents and modeled after by children represent an important basis for appropriate sex-role behavior for the children (Kagan, 1964) because of the child's wanting to reproduce "bits of the beloved and longed for parent" (Mowrer, 1950a).

Kagan (1958) defines identification very simply as a belief that some of the attributes of a model (parents, siblings, relatives, peers and so on) belong to the self. Moreover, if a child is identified with a model, he will behave, to an extent as if events that occur to the model are occurring to him (the child). The establishment of an optimally strong identification requires three prerequisite conditions:

(a) The model must be perceived as nurturant to the child.

(b) The model must be perceived as being in command of the desired goals, especially power, love from others, and task competence in areas the child regards as important.

(c) The child must perceive—before the identification belief begins its growth—some objective basis of similarity in external attributes or psychological properties between himself and the model. (Kagan, 1964, p. 147).

Accordingly, the child's motivation to develop an identification with a model is based on his desire to command the attractive goals possessed by the model. The child presumes that possessing some of the overt
characteristics of the model, he also might incorporate his model's psychological properties. One of the important consequences of a child's wish to behave like the same sex parent is that after the parent's behavior has been successfully reproduced by the child, the latter perceives an increased overt similarity between himself and the parent. He then, also presumes an increased overt similarity and thus the identification becomes stronger (Kagan, 1964).

Role learning through interaction

Maccoby (1959), Mussen and Distler (1959) and Parsons (1955) have paid attention to a different theoretical structure called the "Power Theory of Identification". This theory proposes that the child identifies with a parent who is both an effective reinforcer and an effective punisher. In other words, the child is believed to identify most readily with a parent who is a powerful figure.

Parsons (1955, 1958) has described the role theory in detail. He explains sex-role development in further detail too. First, identification is considered as encompassing the behaviors a child learns in the context of a social role with a parent (i.e., the internalization of a reciprocal role relationship). Accordingly, the learned behaviors need not be those typical of the adult but, rather, are those systematically elicited and reinforced in the course of a child's interaction with the adult. The child makes a series of successive identifications, first with the mother, then with the same sex parent and then with other adults of the same sex and with peers. The first identification (both the son's and the daughter's identifying with the mother) is not sex-role
identification. Later identifications with other adults and with peers, however, are examples of sex-role identification. After the initial identification with the mother, it is really the father who initiates in boys and girls the development of different behavior patterns, namely, masculine and feminine. The father does so by forming differential role relationships with the son and with the daughter.

Secondly, Parsons regards the basic difference between masculinity and femininity to be a matter of a difference between instrumental and an expressive orientation. The feminine-expressive role is distinguished by an orientation of giving rewarding responses in order to receive such responses. The instrumental orientation, in contrast, is defined as goal-directed behavior with the goals transcending the immediate interactional situation. Since the interaction is viewed as primarily a means to an end, the instrumental role player cannot be primarily oriented to the immediate emotional responses of others toward him. Rather than trying to elicit positive responses from others, as the expressive person does, instrumental role playing requires an ability to tolerate the hostility which it very likely will elicit.

Further, it is the father alone who is capable of engaging in both expressive and instrumental behavior. As a son, he has received emotional and expressive responses from his mother and goal-oriented instrumental responses from his father. He thus learns to be expressive in his behavior while he interacts with his daughter and instrumental while he interacts with his son. The mother, on the other hand, received emotional responses from both her mother and father while she was in the
role of a daughter. She never had to confront an interactional situation wherein the other party had an instrumental orientation. She thus learned to assume an emotional attitude and expressive orientation toward children of both sexes. Hence, as boys and girls grow up, only boys learn the instrumental orientation through their interactions with their fathers, so that they can deal effectively with the non-familial as well as the familial environment (the male role includes going out of the home for wage earning). Boys thus retain the capacity to respond in either an expressive manner or an instrumental manner depending upon the situation, whereas girls develop the skill to respond only in an expressive and emotional manner (Parsons, 1955, 1958).

Johnson (1963), obviously in agreement with Parsons, proposes that the crucial factor in learning the masculine sex-role for males and the feminine sex-role for females is identification with the father. Johnson explains the process:

The expressive role player is oriented toward the relationship among actors within a system. He is primarily oriented to the attitudes and feelings of those actors toward himself and toward each other... by being solicitous, appealing and "understanding", a woman seeks to get a pleasurable response by giving pleasure. (Johnson, 1963, p. 320-321).

It seems appropriate theoretically that expressiveness is a direct sensitivity and responsiveness to the attitudes and reactions of others and that it is learned through reciprocal interactions with an expressive
partner in a relatively permissive context of mutual gratification. The instrumental role player's orientation involves "a disciplined pursuit of goals that transcend the interactional situation". He is disposed to view the interaction as a means to an end. He must resist pressures to become emotionally involved in the immediate situation itself (Johnson, 1963, p. 321).

The instrumental orientation is opposite to the expressive one and thus it seems unlikely that the former orientation can be developed in a love-oriented or a "pleasing" context (Johnson, 1963). When a male child becomes too dependent on parental love, he cannot function adequately and aggressively in his peer relations even though his parents expect it of him (Green, 1946). Bronfenbrenner's (1961) exploratory study of four hundred tenth grade students supported the hypothesis that love-oriented socialization techniques may foster the internalization of adult standards and the development of socialized behavior but they may also have the effect of undermining capacities for initiative and independence, particularly in boys. Johnson (1963) thus proposes that an instrumental orientation will have to be inculcated by one who bases his demands not on love, but on objective punishment or deprivation.

Studies by Sears, Maccoby and Levin (1957), Miller and Swanson (1960) support the above assumption. They report that love-oriented techniques seem to produce guilt while physical punishment, threats and withdrawal of tangible privileges are likely to produce outward aggression in the child. According to Johnson (1963), male socialization requires a "push" into instrumentality which female socialization does not. The initial
identification with the mother is based on "fear of loss of love" for both boys and girls but this is not true of sex-role identification. The mechanism of internalization for the boy is "fear of overt punishment" and a desire for "respect" while for the girl it is "love-reciprocity" that develops mature expressiveness. It is a positive motivation to get love by giving love (the defining attribute of femininity) rather than the negative aspect of "fear of loss of love".

**Role learning through cognitive concept development**

Strauss (1956) has an entirely different viewpoint from the modeling or the interactional theory. He defines the idea of a "system of roles" as a network involving classes of persons, acts and privileges. Insofar as there is agreement among role players on what classes of acts go with what classes of persons, there are smoothly functioning relationships among them. When there is a misunderstanding about classes of persons which accompany categories of persons, role relationships are disturbed. In other words, a "system of roles" can be called a conceptual system wherein the classes or concepts are defined in terms of various reciprocal relationships. Oranges and lemons are classes included in citrates, which in turn are fruits; so that apples and oranges are related by definition.

Strauss (1956) claims that the modeling and reinforcement theories of role learning miss an important point. Many role relationships are extremely abstract (for example: those that exist between white and Black or between a wife and a husband). The relationships are made manifest through concrete visible acts but their abstractness or often their impersonality is made clear when one tries to explain them to
children or when representatives of these classes of persons plead before courts of law. Strauss states:

To place so much reliance on direct interpersonal learning of roles both underestimates the conceptual character of roles and understresses the interpretive character of direct perception. (Strauss, 1956, p. 212).

Even those role relationships that seem very concrete and visible, e.g., those between a teacher and a pupil, are abstract in that much of their meaning is not visible to the youngster and only gradually will he discover the fuller extent of this set of relationships. Newcomb's (1950) remark in connection with language development is relevant to the problem of role learning as a part of concept development. He recognizes that the process of role learning is greatly influenced and facilitated by the development of language.

Strauss (1956) believes that concepts do not remain static after the prelingual years but rather that they undergo constant change.

Hypothetically, one could imagine that while formation of a given concept X may be prerequisite to others, formation of the others might leave concept X unchanged. This does not happen as there is propulsive and interacting character to naming and renaming. As new classifications are formed, old ones change, become revised and qualified so that little remains of the initial or early meanings of concepts. (Strauss, 1932, p. 285).
As one reaches adulthood, his concepts reach a peak in appropriateness, scope and completeness through constant modification. They also are, from an adult's point of view, more knowledgeable and less erroneous. This circumstance implies that the child's initial concepts or graspings of roles are not only deficient but also are deficient in ways not necessarily accidental. If his conceptualization is erroneous, it nevertheless has its own organization (Strauss, 1955).

It is interesting to note the congruence between Piaget's formulations (Maier, 1965) that concepts develop by age 10 or 12 and Brown's (1957) research finding on sex-role preference (third and fourth grade children make many more appropriate choices for their sex-role as compared to younger children, particularly preschool-age children). The findings seem to support the view presented by Strauss.

Research Findings on Sex-Role Development and Behavior

To understand children's sex-role development, toys and their preferences have been a useful medium. There are some tests based on toy preference such as Brown's IT Scale (1956), DeLucia's Toy Preference Test (1963) and the game checklist by Rosenberg and Sutton-Smith (1959, 1960). Certain toys are considered masculine and certain others feminine in these devices and a child's preference for toys reveals his sex-role development at a particular point in time. Benjamin (1932), Brown (1956), DeLucia (1960) and Rabban (1950) found that toys such as doll, buggy, dishes, beads and a purse are classified as feminine while a dump truck, carpentry tools, a gun and an erector set are classified as masculine. Knives, boats, planes, trucks and cement mixers are
regarded by school children as masculine; dolls, cribs, dishes and nurses' equipment are regarded by school children as feminine (Foster, 1930; Rosenberg and Sutton-Smith, 1960; Vance and McCall, 1934). Walker (1964) and Rosenberg and Sutton-Smith (1959) found that distinctly masculine games, according to choices of preschool and school age children, include football, soldiers, bows and arrows and cops and robbers. Feminine games are jumping ropes, red rover, doll play and follow-the-leader.

On the IT Scale, boys show an increasing preference for sex-appropriate games as they advance in age. As early as three years of age, boys are aware of some of the activities and objects that their culture regards as masculine. Among girls, preferences are more variable as late as nine or ten years of age (Brown, 1957). Many girls between ages three and ten show a strong preference for masculine games, whereas it is unusual to find boys of the same age group who prefer feminine activities. Thus five-year old boys show a clearer preference for masculine toys than do five-year-old girls for feminine toys (Brown, 1957; Hartup and Zook, 1960).

This difference in toy preference is accompanied by a relatively greater frequency of girls' stating a desire to be a boy or wanting to be a daddy rather than a mommy when they grow up (Brown, 1957). Bennett and Cohen (1959) explain the situation by stating that since the culture assigns greater freedom, power and value to the male role, and thus automatically devalues the female role, the typical woman feels or rather regards herself as less adequate and more fearful than most men.
Very much like toys, certain personality characteristics are also associated with feminine and masculine roles in the U.S. culture. The correlated trio of variables like dependency, passivity and conformity is considered feminine while aggression and independence are considered to be masculine (Kagan, 1964). Many studies have reported greater dependency, conformity and social passivity for females than for males at all ages (Beller and Turner, 1964; Crutchfield, 1955; Hovland and Janis, 1959; Kagan and Moss, 1962; Sanford, 1943; Sears, 1953, McCandless, Bilous and Bennett, 1961; Lindzey and Goldberg, 1953; and Siegel, et al., 1959).

Nurturant and affiliative behaviors are also generally regarded as being more appropriate for females than for males (Goodenough, 1957; Hildreth, 1945; Honzik, 1951; Lansky, et al., 1961; Terman and Miles, 1936; Whitehouse, 1949; and Winker, 1949). These were investigations of overt behavior and story telling responses which revealed more frequent occurrence of affiliative and nurturant behavior among girls than among boys.

According to Bennett and Cohen (1955), Jenkins and Russell (1958) and Parsons (1955), there are certain covert attributes associated with maleness and femaleness in the American culture. The female should have the ability to gratify a love object, the ability to arouse sexual desire in a man, the desire to be a wife and mother, the correlated desire to give nurturance to one's child and a love object, and the capacity for emotion. The male should have the ability to gratify a love object, should have a pragmatic attitude, should be able to suppress fear, and
should have the capacity to control emotion in times of stress. Results obtained from clinical studies of adults (Bieber, et al., 1962) and from self ratings by adults (Bennett and Cohen, 1959) agree with the above statements.

Although the given list of masculine and feminine covert attributes may look unrealistic to adults, data on children indicate, in spite of the adult assumption that sex-role standards are changing at a rapid rate, that children continue to believe that aggression, dominace and independence are more appropriate for males and that passivity, nurturance and affect are more appropriate for females (Parsons, 1948; Hartley, 1960). Women also see themselves as more nurturant than men (Bennett and Cohen, 1959) and hence, adults and children are in agreement on this point. In Kagan's words:

The circle is complete with both children and adults expecting and receiving more dependence, passivity and nurturance from females and more aggression from males. (Kagan, 1964, p. 140).

Some other sets of sex-typed responses include the development of skill and interest in gross motor and mechanical tasks for boys (Kagan and Moss, 1962; Tyler, 1947) and an interest in clothes, dolls and babies for girls (Honzik, 1951; Tyler, 1947).

During the adolescent and early adult years, some refined derivatives of these sex-typed patterns are added to sex-role standards (Kagan, 1964). For females, these include submissiveness with males, inhibition of overt
signs of sexual desire and cultivation of domestic skills (Douvan and Kaye, 1957; Harris, 1959). For males, independence, interpersonal dominance with men and women, initiation of sexual behavior, sexual competence and conquests and acquisition of money and power are critical sex-typed requirements (Bennett and Cohen, 1959; Child, Potter and Levin, 1946; Douvan and Kaye, 1957; Harris, 1959; Jenkins and Russell, 1958; Kagan and Moss, 1962; Tuddenham, 1951; Walters, Pearce and Dahms, 1957).

Kagan and Jackson's data (1963) support a different view that in the "normal" family of today, roles of husband and wife are more likely to be analogous than they are to be differentiated. This thought is also expressed by Brown (1958) who attributes this coming together of the male and female roles to the cultural change within the American society.

Heilbrun (1964b) tried to explore Erickson's theory of ego-identity (Maier, 1965) by relating a masculinity femininity measure to perceive social role consistency (which is one criterion of identity). Male adolescents whose behaviors tended to conform to cultural stereotypes of masculinity showed higher "role consistency" than did less masculine males. This finding was consistent with the hypothesis that social reward for conformity should strengthen interpersonal habits whereas social punishment for non-conformity should have a weakening effect and thus reduce role consistency. In the same study it was found that females who were either high or low feminine were more consistent than girls who were only moderately feminine. Combining elements of both the traditional
feminine and "modern" masculine roles was considered contributory to lower role consistency for the latter group.

In childhood, rigid demands are made of boys to demonstrate dominance, skill, strength and daring (Kagan and Moss, 1962). A boy must deny his need for being comforted and shown concern and he must not cry when he is lonely or abused. He must face up to aggression even when he is badly frightened. He must accept every invitation to participate in every activity even though he is the least skilled of the group. Such persistent courage is not easy to muster up and each failure signifies to the boy that he is inadequate in his masculinity in that he cannot come up to the cultural expectations.

A girl slips easily from a dependent child to a dependent adult because she is not held to the same standard of emotional self control as is a boy nor is she penalized for avoiding challenge. She must inhibit physical aggressiveness, however, and pay attention to deportment and the proportion of time she spends playing exclusively with boys.

Brown (1958) is concerned about the age at which the child becomes aware of the essential meanings of "masculine" and "feminine". According to him this age seems to be (in the case of approximately two-thirds to three-fourths of the children) about three years. Seward (1946) and Gessell (1925) also think children can make this basic distinction by age three. Evidence suggests that sex-role differentiation is a gradual process probably beginning in the second year and becoming definitely established by three years of age (Sears, Maccoby and Levin, 1957; Seward, 1946).
During the fifth year most children make a clear distinction between the more obvious biological cues of maleness and femaleness and the psychological cues of masculinity and femininity (Brown, 1956, 1957; Fauls and Smith, 1956; Lowe, 1957; Rabban, 1950). As in the other aspects of psychological development, there are also individual differences in the way children perceive differences between masculinity and femininity. Brown (1958) concludes that preschool children become fully aware of the fact that basically the world is divided into two groups, male and female, and depending upon belongingness in one group or the other, behavior patterns are expected and behavior is to be guided accordingly.

So much for awareness of differences between the sexes. Actual sex-appropriate behavior and the beginning of its development have been explored by some researchers. It has been found that by age three, most children are beginning to develop sex-appropriate roles (Emmerich, 1959; Hartup and Zook, 1960; Hartup, Moore, and Sager, 1962). By nursery school age both boys and girls tend to imitate and to identify with the like-sex parent more frequently than they do with the opposite sex parent.

Strength of affiliation and identification also have been given some research attention. Rosenthal (1962) has concluded, after a review of various lines of evidence, that identification with same sex family members is stronger in females than in males. Brown (1956), DeLucia (1963) and Rabban (1950) have found that boys tend to be ahead of girls in sex-role development. This finding seems to be in contrast with
Rosenthal's (1962) statement of strong identification of females, rather than males, to their like-sex parent. From three years onward, boys are more clearly aware of their sex-role than girls. Young boys were found to choose masculine items (on preference tests) more frequently and consistently than females of the same age chose feminine items (Brown, 1957; Hartup and Zook, 1960). This acceleration in sex-role learning continues throughout the elementary school years, with boys becoming progressively more masculine each year.

It has been concluded that the process of sex-role learning is more complex for girls. The pattern they follow in their sex-role development explains the situation to an extent. They appear to reach their peak of femininity at approximately five years of age and then proceed to maintain this level, or even decrease in femininity, during the early elementary years (Brown, 1956, 1957; DeLucia, 1963; Hartup and Zook, 1960).

Pauline Sears, et al. (1951) found in their study of doll play that girls chose the mother doll significantly more frequently than boys chose the masculine doll. But the boys chose the father doll more than the girls did. Generally, it is assumed that antecedent conditions of warmth are related to the preference for a parent's role (Sears, 1953). It was found, in support of the above assumption, that boys take up the mother's role most strongly under conditions of her being much higher in warmth than the father. She also was higher in sex-permissiveness, in restriction of the boy's activities out of the home and in being critical in her evaluations of her spouse (Sears, et al., 1953).
Parsons (1947) and Gorer (1948) formulated the theory that girls acquire their sex roles earlier and more readily than do boys. Brown (1956) discusses this proposal as being in contrast with his findings. He found that 20 of his 68 female subjects showed marked preference for femininity. The others were, in varying degrees, removed from clear-cut feminine preference. On the other hand, a clear-cut majority of boys revealed a decided preference for the masculine role. There is a large and significant difference between the number of boys showing preference for masculinity and the number of girls showing preference for femininity. Brown wonders if realizing a difference between sex-role preference and sex-role identification may explain the situation more clearly. Girls may be identified with feminine models but may still prefer masculine items while boys are "compulsively masculine" (Parsons, 1947; Gorer, 1948) thus showing exaggerated tendencies in the direction of masculine items. Being well identified and secure, rather than being confused, may allow the girls to choose more masculine items than boys would dare to choose feminine items (Brown, 1956). Several other studies and their results (Brown, 1957; Hall, 1960; Handy, 1954; Hartup and Zook, 1960; Hogan, 1957; Lowe, 1957) support the finding that boys express a much stronger preference for the masculine role than girls do for the feminine role. The cause underlying this circumstance may be the compulsiveness the boys feel toward being masculine (Brown, 1956).

Lansky and McKay (1963) report that a number of researchers have questioned the results of the above six studies on methodological
grounds, claiming that the IT figure of the IT Scale appears to be seen as a male figure rather than neuter by most of the children. Lansky (Lansky and McKay, 1963) tested this methodological point by hiding the IT figure card in an envelope and then administering the test according to standard directions. His hypothesis was that boys have greater preference for the masculine role than girls do for the feminine role. The data confirmed the hypothesis but did not support the view that the IT figure is seen as male by most children of this age. Lefkowitz (1962) reported the contrasting finding that upon being given a choice, girls preferred the feminine role as much as boys did the masculine role. He also felt that the majority of school boys and girls see the IT figure as masculine, in spite of nonsignificant results in that direction. Brown (1962) and Lefkowitz (1962) agree that only more research will clarify whether the problem is one of methodological origin or of differential preference of own sex-role among girls and boys.

Heilbrun (1965, a) carried out a study to test the extent of similarity between children and their same-sex parents. The hypotheses of the study were:

(a) Same-sex parent similarity is greater for females than for males.

(b) Personal adjustment is positively related to the son's similarity to his father but is negatively related to the daughter's similarity to her mother. (Heilbrun, 1965, a; p. 186).

The rationale behind the first hypothesis was that females who have mothers as a more available model and as a culturally reinforced model
should show greater differential similarity with their mothers than sons should with their less-available father-models. Results revealed that the difference in similarity scores between well-adjusted males and well-adjusted females is significant ($t=2.31, p < .05$), and that the males showed greater differentiation than did females. In the same well-adjusted groups, the females showed no difference in their similarity to their mothers and to their fathers. On the other hand, the mean similarity scores for the maladjusted group showed opposing patterns for male and for female subjects. Whereas adjusted males described themselves as more similar to their fathers, maladjusted males tended to endorse behavior more like that of their mothers. The sex of child-by-adjustment interaction for similarity scores is reliable ($t=2.33, p < .05$), but it is clear that the large shift for males is primarily responsible. The difference in similarity scores for the two male adjustment levels alone is highly significant ($t=2.71, p < .01$), whereas the between level comparison for females is clearly non-significant ($t=.50, p < .60$).

Heilbrun (1965a) summarized his findings by stating that the female has a greater same-sex identification (parental identification) than the male but has less of a differential with respect to between-parent identification. In an earlier study, Crook (1937) found that the girl may be more similar to her father than the boy to his mother.

In another study, Heilbrun (1965b) tried to study the modeling hypothesis directly. He predicted that sex-role distinctions between males and females would be maximal given an identification with a high masculine father. Heilbrun (1965b) has also considered the interactional
theory proposed by Parsons (1955, 1958) and strongly supported by Johnson (1963), but he hypothesized that the modeling theory would be sufficient to account for sex-role development even granting the validity of Parsons' basic assumptions and principles (of greater sex-role differentiation for the father and instrumental-expressive qualities as the essence of masculinity-femininity). The results were based upon the behavioral self-descriptions of 279 normal college students. Of the behaviors distinguishing males and females identified with each parent type, the following percentages were judged to be appropriately sex-typed: (1) high masculine father - 88 percent, (2) high feminine mother - 58 percent, (3) low feminine mother - 47 percent and (4) low masculine father - 45 percent.

Heilbrun states that his hypothesis is supported. However, it is difficult to determine whether the responsible factor was the modeling or was the interactional process working in the development of the subjects. It could be due to the instrumentality of the high masculine father that the highest percentage of the appropriately sex-typed subjects were identified with him. It is possible that rewarding interaction with the father also brings about a certain degree of affiliation and identification with him in the case of both boys and girls.

Sears, Maccoby and Levin (1957) point to the parent-child dependency relationship as a major requisite to parental identification. This relationship also serves to motivate role practice through which the child comes to adopt the attributes of the parent model. Sears, Maccoby
and Levin also believe that females are more dependent than males after the age of five. Until then, there may not be much difference between the dependency relationship of the two sexes with their parents (Sears, Maccoby and Levin, 1957). From these data, Heilbrun (1965b) assumes that among college students, females ought to be more dependent than males. In his 1964 study, Heilbrun had asked college subjects to judge if their fathers or mothers were more "autonomous" or more "deferent" (two indications of dependency). He found that 70 percent of the mothers were judged to be more deferent than the fathers and 67 percent of the fathers were judged to be more autonomous than the mothers. In a different study Heilbrun (1964) had asked college students to rate their parents for degree of nurturance and found that females attributed far greater nurturance to their parents than did males. Thus parental nurturance conducive to child dependency is manifested more toward girls than toward boys. This supports the hypothesis of the instrumental father's differentiating his behavior for the children of different sexes.

Because the father is more nurturant to the girls than he is to the boys, girls tend to attribute greater combined nurturance to their parents than do boys (p > .001). In Mussen and Rutherford's study (1963), there was no evidence that high masculinity of fathers, femininity of mothers, and parental self-acceptance or encouragement of their sons' participation in masculine activities had any significant effect on the boy's masculinization. On the other hand, a warm mother-daughter relationship affected the girl's femininization. Also, the mothers of
highly feminine girls, when compared with mothers of low feminine girls, were found to be significantly more accepting of themselves but neither more feminine nor more encouraging of femininity about the daughter's participation in feminine activities. It also was found that the fathers of the highly feminine girls, when compared with the fathers of low feminine girls, tended to be more masculine in their own interests and orientations, which further supports the concept that it is the instrumental father who helps most in developing sex-appropriate behavior of girls.

Johnson (1963) presents empirical evidence in support of the hypothesis that the father differentiates his role toward his opposite-sexed children whereas the mother does not. Brodbeck (1954) used a sample of 10 to 14 year old children in rural Illinois community to investigate the influence of each of the parents on the moral standards of their boys and girls. The father has a greater influence on the conscience of his son than of his father. Thus, mother's influence is not sex-typed at all throughout the adolescent years. She seems to have equal amounts of influence on both boys and girls. Goodenough (1957) found that fathers are much more concerned about appropriate sex typing in their children as compared to the mothers. The fathers were also actively and personally involved in the sex typing of the children while the mothers are aware of sex typing but did not actively implement it.

Pauline Sears (1951) reports an unexpected finding from her doll-play study of aggression. She found that preschool boys showed most aggression toward the father doll while the girls depicted the father
doll as receiving the least aggression of any of the other dolls. The finding supports the idea that the father is more controlling, punishing and demanding of boys than of girls and hence has more aggression shown toward him by boys than by girls. The study showed no difference in the amount of aggression shown by boys and by girls toward the mother doll. Bronfenbrenner (1961) studied 200 adolescents to explore the development of "leadership" and "responsibility". He reports about sex differences in parental behavior:

. . . generally speaking it is the father who is especially to treat children of the two sexes differently . . . girls receive more affection, attention and praise than boys--especially from their fathers--whereas boys are subjected to greater pressure and discipline, again mainly from their fathers. (Bronfenbrenner, 1961, p. 249).

Tasch (1952) and Aberle and Neagle (1952) report evidence that fathers are more concerned about developing performance-relevant characteristics in their sons and that they are much less concerned about and more appreciative of their daughters. Sears, Maccoby and Levin state that "a good many mothers did not have very strong attitudes about differentiating the roles of boys and girls", (1957, p. 406) and that there are "surprisingly few dimensions on which the sexes were treated differently" by the mothers.

Johnson (1963) used five potency words from Osgood's semantic differential (Osgood and Tannebaum, 1957) as a crude measure of instrumental-expressive dimension, assuming that low potency ratings are
indicative of a more expressive role. Males' self ratings were significantly higher than females' self ratings on the potency words. Both males and females rated their mothers much lower than their fathers on the potency factors. While there was no difference between male and female ratings of their mothers on the potency factor, the males rated their fathers as higher on this factor than females did. Johnson (1963) interprets these findings to mean that males and females perceive their mothers to be equally expressive toward them while the females perceive their fathers to be more expressive toward themselves than males perceive them to be. Osgood (1957) also states, in his summary of studies using the semantic differential, that normal men identify more with their fathers than with their mothers and more with both parents than do neurotic men, and that they also see their father as nearer the ideal. Normal women identify as much with their fathers as with their mothers. The distinction between normal and neurotic women with respect to parental identification was not found to be clear.

Helper (1955) found that a high degree of self-concept modeling after the father is associated with high adjustment in the boys, while in the girls' group, a high degree of self-concept modeling is not associated with adjustment. Gray (1959) studied children from fifth through eighth grade and she concludes:

Boys who perceive themselves as more like their fathers than their mothers are perceived more favorably by their peers. With girls, to the extent that relationship exists, it is in the direction of girls who see themselves as more like their mothers being seen less favorably by their peers. (Gray, 1959, p. 104).
Sopchak (1952) asked college students to respond to the MMPI (Minnesota Multiphasic Personality Inventory) as themselves, as they thought their mothers would respond and as they thought their fathers would respond. He found that it was both men's and women's failure to identify with the father rather than their failure to identify with the mother which was associated with trends toward abnormality. The relation between abnormality in women and lack of identification with the father is strongest with respect to the M-F Scale (The masculinity-femininity scale) on the MMPI. Sopchak states:

Women who possess tendencies toward abnormality show a lack of identification with the fathers which is significant at the .01 level in the case of the masculinity scale only . . . . This finding is difficult to interpret since it indicates that MASCULINE WOMEN IDENTIFY LESS WITH THEIR FATHERS THAN FEMININE WOMEN. (Sopchak, 1952, p. 164).

The finding that feminine women identify more with their fathers than do masculine women is exactly opposite to the modeling hypothesis. It supports the interactional hypothesis in that fathers are capable of fostering femininity in their daughters if their daughters identify with them, but if daughters do not identify with their fathers, their sex-role development may be inappropriate. Winch (1951), in a sociological study of college males and females through using questionnaires, found that attachment to the mother in males was related to slow courtship progress but attachment to the fathers in females was not so related. In a later study, Winch (1951) refined his measure of
attachment and found that women who were most closely attached to their fathers tended, on the average, to be most advanced in their courtship progress.

In her dissertation study, Johnson (1955) ranked 200 seniors in a women's college in the South on an instrumental-expressive scale based on their responses to a series of role conflict situations. On the basis of another questionnaire given to the same group concerning the attitudes of their parents toward them (subjects were "only" girls from broken homes) it was found that more girls had fathers rather than mothers who would be disturbed "at the thought of their growing up and living away from home". This relation reaches statistical significance when restricted to those cases in which both parents are described as "strongly" or almost "equally" doting. A marked (nonsignificant) trend also was found in the case of expressive girls to be more likely than instrumental girls to answer "father" in response to the question, "Which parent do you feel is most closely attached to you?"

Johnson (1963) also studied sophomores from homes rated either "extremely instrumental" or "extremely expressive". The expressive women described their fathers as very attentive and protective in their behavior toward them whereas the instrumental women tended to describe their fathers as "distant", "critical" and "cold". Mussen and Distler (1959) used young children for their subjects and the IT Scale for Young Children was their instrument. They found that the high and low masculine groups were not significantly different on any of the variables related to their mothers but were significantly different on
variables related to their fathers. The fathers of high masculinity boys were also depicted as high on "nurturance" and "punishment" by the boys during doll play sessions. This finding is in line with the basic principles of the "power" theory of identification, wherein the interacting agent has to be both nurturant and powerful.

**Parent-child relationship and its influence on sex-role behavior**

Heilbrun (1962) found maladjusted college males to be significantly less father-identified than adjusted males. He found the maladjusted females to be more identified with the mothers but he concluded that the finding was not reliable. Another study by Heilbrun (1964b) consisted of the subjects' rating their parents' masculinity-femininity on fifteen behavioral characteristics (based on the Edwards Personal Preference Schedule) to find the model attributes of the parents. To get the degree of nurturance, parent-child interaction scales were specially developed for the study. The eight modes of nurturance on the scale were:

1. Affection I (Degree of nurturance felt for the S).
2. Affection II (Degree of nurturance physically expressed to the S).
3. Approval of S and his behavior.
4. Sharing of personal feelings and experiences.
5. Concrete giving to S (material gifts, money, etc.)
6. Encouragement of S meeting responsibilities and pursuing personal interests.
7. Trust placed in S.
8. Sense of security felt by S in relation with parents.
To measure role consistency, a method identical to Block's (1961) was used. Twenty self descriptive adjectives were presented in a set order to the S and he was requested to rank them from most to least descriptive of himself in interpersonal situations.

The social value-social behavior consistency score was derived from two measures. To obtain these measures, first, the Edwards Personal Preference Schedule (EPPS) was administered under standard conditions. Secondly, after having taken the EPPS, the subjects were asked to rate each of the measured traits on the EPPS on a nine point scale, from highly socially undesirable to highly socially desirable.

The findings suggested both importance of the parental model attributes and of the nurturance variables in behavior consistency, but the relations were often curvilinear and tended to differ with respect to the sex of the child and to the trait measured.

Heilbrun and Fromme (1965) studied "Parental Identification of Late Adolescents". It was found that adjusted males identify with more masculine father models but this changes to a greater identification with less masculine fathers as more seriously maladjusted subjects are considered. Well adjusted female adolescents identify most with low-feminine mothers but maladjusted female adolescents did not show the opposite and hence the pattern is not supported.

Behavioral self descriptions of 279 college students supported the prediction that sex-role distinctions between males and females are maximal in the case of identification with a high masculine father (Heilbrun, 1965b).
In a study of the subject's similarity to his same sex parent (Heilbrun, 1965a), 139 male and 141 female volunteers from undergraduate classes (of which 73 males and 74 females were applicants for personal adjustment counseling at the university counseling center) participated as subjects. A 300-item adjective checklist (Gough and Heilbrun, 1965) under self-descriptive instructions was administered to the subjects. Their adjective endorsements were scored for fifteen Murray-type needs (e.g., dominance, aggression, abasement, etc.) on previously validated scales. Next, in statement form, the subject was given summary behavior descriptions for the fifteen needs and asked to judge whether behaviors included in each description were more characteristic of his father or his mother. The subject's fifteen personality scores and the parental judgements were used jointly to provide an index of parent-child similarity. It was found that the female has a greater same-sex parental identification than the male but has less of a differential-between-parent identification.

Mowrer (1950b) and Sears (1957) believe that a nurturant relationship between a parent and a child is a factor enhancing and facilitating identification. Barry, Bacon and Child's research (1957) revealed that in addition to the American culture, there are several other cultures in which the general orientation is predominately masculine. The women in these cultures are pressured toward nurturance, obedience and responsibility. Kagan (1956) and Kagan and Lemkin (1960) found that children perceive their mothers as being more nurturant than their fathers. In
contrast the fathers are viewed as more punitive, dominant, fear arousing and competent than the mothers.

However, boys and girls seem to view the situation differently. For boys, the father's nurturance and to a lesser degree, his punitiveness appear to be of major importance (Mussen and Distler, 1959; Mussen and Rutherford, 1963). The more interaction a boy has with a powerful male figure, the greater will be his chances of assimilation of the masculine role. If a father is absent from the home for a considerable length of time, the boy's sex-role learning is disrupted (Lynn and Sawrey, 1959; Hetherington, 1965). Very little has been revealed by research about the relation between the sex-typing behavior of a boy and his perception of his own mother. There is some evidence that maternal dominance disrupts the formation of a boy's appropriate sex-role preferences and produces a lower father-son similarity (Hetherington, 1965).

Heilbrun and Orr (1966) found in a study of maternal child-rearing history, that college males who rated their mothers as "rejecting" were less stable and less positive in their levels of aspiration in a discrimination task and less stable in their betting on a gambling task than subjects rating their mothers as "accepting". Mussen and Rutherford (1963) found no evidence of relationship between the boy's masculinization and factors such as high masculinity of father, high femininity of mother, parental self-acceptance, or encouragement of the son's participation in masculine activities. Lefkowitz (1962) found that boys' sex-role learning is facilitated by nurturance in mothers. Young boys who strongly identify with the male role perceive their fathers as more
rewarding and nurturant than do their weakly identified peers (Mussen and Distler, 1961). Lefkowitz (1962) also found that boys inappropriate in their sex-role preference more often drew a picture of an opposite-sex figure as their first response to Draw-A-Man Test, than non-deviant (in sex-role preference) children did. Pauline Sears and others (1953) studied role-playing behavior of children and found that delayed role playing occurs in children whose homes appear to be lacking in warmth and high in restriction of activities which may bother the parents.

Girls' sex-role learning also is dependent on a warm and gratifying relationship with the mother (Mussen and Rutherford, 1963). Girls also behave in a more feminine manner if their mothers possess a considerable degree of self-confidence and if their fathers encourage their participation in feminine activities. Interestingly, maternal encouragement of a girl's participation in feminine activities was unrelated to femininity in girls (Mussen and Rutherford, 1963). Also, fathers of highly feminine girls tend to be more masculine in their own interests and orientations.

Frye, South and Vagus (1965) found that children tend to have orientations similar to those of parents (in terms of "self" and "other" orientations) except for the case of the extremely self-oriented parent. In the American culture, although the mother's orientations are expected to have a greater influence on young children's orientations, the fathers, except for self-oriented fathers, have a positive influence too. A positive relationship also was found to exist between the mother's and the father's orientations. Centers and Centers (1963) conducted an
interview survey to find out if Riesman's "inner-directed" and "other-directed" social character types perpetuate their traits in their offsprings. The subjects were 649 adults. One of the interesting findings that is relevant in terms of parent-child relationship was that the "other-directed" persons favored permissiveness in child rearing.

Sex of the sibling and sex-role development

Helen Koch (1956) found that when the age difference between siblings was over four years, those from the opposite-sex pairs tended to be gauged higher on exhibitionism than those from the same-sex pairs. In addition, the latter were higher on popularity than the former and children with a brother received higher ratings in competitiveness and leadership than children with a sister.

Boys also are found to be higher on "uncooperativeness" with peers and "tendency to tease girls" than girls are (Koch, 1956). Foster (1930) and Koch (1956) found girls to be higher on jealousy than boys. Koch (1956) found girls to be consistently scored as more friendly, gregarious, popular, better leaders and less reactive to defeat when the sibling age difference was less than two years. Boys were more revengeful than girls when the sibling spacing was less than two years.

Fauls and Smith (1956) and Rosenberg and Sutton-Smith (1964) found that additional male and female models in the family, e.g., siblings, modify sex-role learning of a child. Children with older, like sex siblings acquire appropriate sex-role learning (Fauls and Smith, 1956).
Boys with sisters, particularly older sisters, tend to be more feminine in their behavior (Brown, 1956; Koch, 1956).

Bauer and Ehrlich (1956) found the mental health of a child to be related to the sex of his siblings. Females from opposite sex sibships were reported to be the most impaired psychiatrically (Bauer and Ehrlich, 1966; Koch, 1956). For both sexes the mixed sex sibships had the most negative outcomes at the conclusion of therapy, although the differences were small. Control analysis revealed that sex is not independently related to any given measures of psychiatric impairment or outcome, nor is there a sex bias in the direction of high or low impairment when sibship type is controlled.

**Birth order and sex-role development**

Certain relationships have been found between birth order and some personality traits that also can be called sex-linked characteristics. Schacter (1959) found greater affiliative behavior among first borns (affiliation is considered a feminine trait by Kagan, 1964; Edwards, 1959; Goodenough, 1957; Hildreth, 1945; Honzik, 1951; Lansky, et al., 1961; Terman and Miles, 1936; Whitehouse, 1949 and Winker, 1949). Altus (1959) found that first borns in a family of two children were better adjusted but this was not the case when they belonged to larger families (3 to 13 children). First borns were also found to be superior in verbal aptitude (Altus, 1955). This is incongruent with Lasko's finding (1954) that the first child received greater verbal stimulation and accelerated attempts in activity from the parents at the preschool level. However, in the same study, the parents were found to baby,
protect and be more solicitous of the second child and the first child received less parental warmth and more parental control.

Dimond and Munz (1967) found that later borns are more socially adept than first borns. Among 1300 World War II soldiers, last borns from families of 10 to 13 were better adjusted than last borns from smaller families (2 to 9 children). The middle child from a family of three was adjusted best of all children born in an intermediate position, i.e., between the first and the last.

Emmerich (1959) used a sample of "only" children in a nursery school to test the hypothesis that the child would be more likely to identify with attitudes associated with the same sex parent's sex role. The hypothesis was confirmed for boys but not for girls. Heilbrun (1955a) found the opposite with his sample. Boys who were "only" children were more strongly identified with their mothers than boys who had siblings. Oldest girls were more highly identified with their mothers than middle and youngest children.

Sutton-Smith and Rosenberg (1964) have criticized most of the ordinal position studies on the ground that there has not always been control for other intervening variables such as family size, etc. In their own study, they investigated the effect of ordinal position on sex-role identification in a sample of 253 college students (20 years of age) from two child families. Their results and some comparisons with the findings of some of the previous studies lead them to conclude that anxiety is greater at six years of age in first borns, at ten years among those who have inappropriate sex-role characteristics and at twenty
years, among those who have higher femininity scores. Thus ordinal position seems to be important at age six, but the sex of the sibling is more important between ages ten and twenty. It is after six years of age that peers become very important to the child and identification shifts toward them and away from the parents. Thus the effect of siblings, if they can be considered peers, on the child's sex-role development is greatest between ages ten and twenty.

**Personality traits associated with sex-typing**

Personality traits are another variable that may be related to sex-role learning. Impulsivity in elementary school has been found to be related to sex-role learning (Sutton-Smith and Rosenberg, 1960). Inappropriate sex-typing in boys also was related to immaturity (Sutton-Smith and Rosenberg, 1961). The results of a study done by Lefkowitz (1962) indicated a positive relation between adequacy of sex-roles and IQ scores. A more recent study by Anastasiow (1965) has shown that boys with adequate sex-roles learn faster in verbal conditioning situations and also show superior achievement on reading tests when compared with boys with poor sex-role development. Kagan (1964) taught second and third grade children two nonsense syllables, one a substitute for the word "masculine" and the other for the word "feminine". After the nonsense syllables were taught, the children were asked to apply the more appropriate nonsense syllable to items in school (e.g., blackboard, desk). Both boys and girls more frequently classified these items as feminine rather than masculine. It is possible that boys view their
school environment as more inconsistent with their sex-role than do girls. Such a perception could influence the boys' early learning patterns in school. Dreyer and Haupt (1966) obtained self evaluations of competence from 32 kindergarten children. "Level of aspiration" and "impulse control" were the two measures obtained along with teacher ratings and maternal behavior data. The children with more autonomous evaluations manifested more achievement and independence as well as affiliative behavior. The less-autonomous-evaluation group was associated with over control of impulse and less stable levels of inspiration. The latter group also had mothers who exercised the most control over the child.

Adults also have been used in some studies as subjects for research in the area of relation of personality variables to sex-role learning. Irvine's subjects were 102 freshman and sophomore students at Stanford University (1957). These 52 males and 50 females were individuals of high intelligence, Caucasians with religious affiliations mainly Protestant, and tended to come from families of high socioeconomic status. Males scored higher than females on variables of authoritarianism and hostility. There was no difference between the sexes on manifest anxiety. This finding is in agreement with those of Taylor (1956) and Stotsky (1955). Goodstein, Crites and Heilbrun (1963) studied college students using the MMPI to obtain both a general measure of adjustment as well as modes of adjustment. The subjects were 7500 in number and came from three different universities. An attempt was made to find any existing relation between adjustment and either achievement in college.
or scholastic aptitude. Results indicate that personality contributes to college achievement in a general rather than a specific manner. According to Kagan and Moss (1962), expressions of aggression, competitiveness, dependency or sexuality is determined, in part, by a person's assessment of congruence of behavior with traditional sex-role standards. When subjects, followed from birth through adulthood, were periodically asked to indicate their sex-role preferences, a relatively stable relation emerged between their choices at ages six to ten and their subsequent choices as adults. The boys' sex-role preferences at preschool ages were highly predictive of their subsequent adult interests.

These results offer strong support to the popular notion that aspects of adult personality begin to take form during early childhood. (Kagan and Moss, 1962, p. 266).

Social class as related to sex-role behavior

Social class does determine a family's cultural patterns to an extent and hence it is possible that it may have an effect on the different attributes a child acquires through living in the family environment. Sex-role development may be one of these attributes. The difference in the sex-role learning of children from different social classes may arise because of the different kinds of treatments received by them. It has been found by some researchers that children from middle class families are treated with less permissiveness and more restriction than children
from working classes (Davis and Havighurst, 1948; Havighurst and Davis, 1955; Sears, Maccoby and Levin, 1957).

Contradictory results were revealed by Maccoby and Gibb's study (popularly called the Boston study as Davis and Havighurst's study is called the Chicago study), done in 1954. They found that middle class parents were more permissive than working class parents. Klatskin's (1952) research supports the Boston study findings. He also stated that the lower class parents allowing greater freedom of movement to their children was a reflection of their "rejection" rather than of their "permissiveness". Bronfenbrenner's (1958) report on "Socialization and Social Class through Space and Time" covers an evaluation of a twenty-five year period. He concludes that from 1930 to the end of World War II, working class mothers were uniformly more permissive than those of the middle class. Since the end of World War II, he says, there has been consistent change reported in the attitudes of middle class mothers in the direction of the practices advocated by U.S. Children's Bureau bulletins. Over the entire period of twenty-five years, parent-child relationships in the middle class are consistently reported as more acceptant and equalitarian while those in the working class are oriented toward maintaining order. Finally, Bronfenbrenner states that in the past two years there have been indications that the gap between the social class may be narrowing.

Besides general patterns in child rearing, there is some research done specifically on the sex-role learning of middle class and of lower class children. Hall and Keith (1964) and Rabban (1950) found children
in working class homes to be earlier and more clearly aware of the sex-role patterns than were children in middle class homes. Hartley (1959) found that for boys, the taboos against effeminate behavior are strong in lower socioeconomic status families. Lefkowitz (1962) reported data that failed to support the difference in social classes in terms of the children's sex-role learning. Minuchin (1965) approached the problem by using the "modern" and "traditional" home and school backgrounds and their relation to sex-role learning in children. She found that unequivocal commitment to one's own sex role, sex-typed play, aggression in boys and family orientations in girls were more consistently characteristic of children from "traditional" backgrounds. Girls from "modern" home and school environments departed most from conventional expectations.

Research on the IT Scale

The instruments so far developed and used to measure aspects of sex-role learning are: (a) the IT Scale by Daniel G. Brown, 1956, (b) the Toy Preference Test by Lenore DeLucia, 1963, and (c) a game checklist by Rosenberg and Sutton-Smith, 1960. In each of these tests, sex-typing is measured by the number of appropriate choices a child makes from toys, toy-pictures or games.

Several investigators (Brown, 1956, 1957; Lowe, 1957; Handy, 1954; Hall, 1960; Hartup and Zook, 1960; Hogan, 1957) found that boys, when administered the IT Scale, more frequently and consistently preferred the masculine role than girls preferred the feminine role. Lefkowitz
(1962) reported that both girls and boys prefer their appropriate sexroles equally when confronted with a choice.

Kohlberg and Zigler (1961) asked children whether they thought "IT" was a boy or a girl. Almost all the boys and half the girls reported "it" to be a boy. When the usually prescribed instructions of administration were modified to refer to "IT" as "her" instead of "it", girls made significantly more feminine choices. On the other hand, when "IT" was referred to as "him" instead of "it", no changes occurred in the boys' responses. Lansky and McKay (1963) concealed the "IT" figure in an envelope, thus keeping it out of the child's sight, and found that more boys thought the concealed figure to be feminine than girls thought it to be masculine. This finding brought about the suspicion that the cause for most children's thinking the "IT" figure was masculine may be the strong influence of the American culture's being predominately masculine.

Dolgan (1965) modified the IT Scale to be used in classroom situations for grades 2 through 6. Duryea (1967) used this version with two first-grade classes. Class A was administered the group version (modified by Dolgan in 1965) following the administration of the standard version and class B was administered the paper-and-pencil group version only. In the modification, Dolgan has all the card pictures on one sheet of paper each in a booklet, and in the provided space beside the picture on each page the child is supposed to indicate his preference by marking with a pencil. In this way the test can be administered to a whole class at one time without having to take the time to administer
it individually. The results of Duryea's study (1967) showed that the difference between boys' and girls' means was significant. Also, boys showed greater consistency between scores for the two administrations than did girls. For boys, $r=.66, p < .01$ while for girls, $r=.39, p < .10$.

Summary

Sex-role development is a relatively new area that has been given some research attention in the last fifteen to twenty years. There are very few instruments to measure the sex-role development variables. This may be the cause of some of the seemingly contradictory findings which may not seem so later when more and better instruments have been developed and their adequacy confirmed by rigorous research studies.

There is some indication of age and sex trends and of differences between social classes in sex-role development. Among parent-child relationship factors, reinforcement patterns, affiliative and nurturant attitudes in the parents and their own sex-role behavior seem to be important in terms of the child's sex-role development. The child's own ordinal position and the number and sex of siblings may also have some bearing on his sex-role learning and development. Research so far has not been able to provide any definitive conclusions for any of these areas.
METHOD AND PROCEDURE

Research Design

The aim of this research is to compare the children of different subcultures of the United States on the variable of their sex-role preferences. The IT Scale by Daniel Brown (1956) was utilized as the instrument for obtaining data concerning sex-role preferences.

The design includes testing children from five different subcultures: Black middle class; white middle class; Black lower class; white lower class; and American Indians (Mesquaki tribe) from the Tama Indian settlement in Icwa. The children (177) are between chronological ages of 4-0 and 6-0 years and include both males (106) and females (71). Any child declared as emotionally disturbed or mentally retarded by the agency contacted was not included in the study. Also the Peabody Picture Vocabulary Test was used to exclude any child who might not have had enough language ability to be able to follow instructions.

To facilitate the statistical treatment of data, an attempt was made to obtain within each subgroup a sample of not less than ten subjects, insofar as was possible.

Analysis of variance and a correlation analysis were employed for the statistical treatment of the data.

Subjects

The total number of subjects was 177, divided as follows among five different subcultures of the United States:
(1) Children attending the Russell Nursery School (Tuskegee Institute, Alabama): BLACK MIDDLE CLASS GROUP (17 boys; 14 girls).

(2) Children from Des Moines, Ames and Boone Headstarts as well as children from the Forest Hill Day Care Center (Des Moines): BLACK LOWER CLASS GROUP (34 boys; 15 girls).

(3) Children from the Child Development Department Laboratory Nursery School (Iowa State University): WHITE MIDDLE CLASS GROUP (22 boys; 17 girls).

(4) Children from Des Moines, Ames and Boone Headstart groups: WHITE LOWER CLASS GROUP (27 boys; 19 girls).

(5) Children of the Mesquaki Indians of Tama, Iowa: AMERICAN INDIAN GROUP (6 boys; 6 girls).

The children in all the groups ranged between 4-0 years and 6-0 years. The population in each group was comprised of all of the children in the class or the playgroup, excluding those who were termed as mentally retarded, slow learners or emotionally disturbed by their teachers or by agency records.

**Instruments**

**PPVT (Peabody Picture Vocabulary Test)** This test consists of pictures that are line drawings in black ink. There are four pictures of familiar objects in four separate blocks on each page. Examples of the illustrations of these pictures are given in Figures 1 and 2. The investigator instructs the child to point on each page to the picture most closely related to the word spoken aloud by the investigator. The
Figure 1. Peabody Picture Vocabulary Test.
Plate 27: the word to be said aloud by the investigator is "peeking".
Figure 2. Peabody Picture Vocabulary Test. Plate 28: the word to be said aloud by the investigator is "kite".
results are expressable in (a) mental ages, (b) I.Q.'s, and (c) percentiles by age groups.

The PPVT manual (1955) states alternate form reliabilities ranging from .67 at the 6-year level to .84 at the 17 and 18 year levels with standard errors of measurement from 6.00 to 8.61 I.Q. points. The review by Howard B. Lyman in the Sixth Mental Measurement Yearbook (Buros, 1966) includes the following statement:

Also cited are alternate form reliabilities of .83, .87, and .97 with handicapped and retarded groups; however, these cover such a range in ages as to seem spurious. The .97 reliability coefficient was based on 20 cerebral palsied children ranging in ages 7-1 to 16-2 years. (Lyman, 1966, p. 821).

There is no test-retest reliability reported in the manual. A test-retest reliability coefficient of .88 after one year is reported by a recent study (Moed, Wight and James, 1963) which was done with 29 physically disabled children. According to another reviewer (Buros, 1966), "Both coefficients of equivalence and temporal stability appear, therefore, to be adequate for such as a short test" (Piers, 1966, p. 821).

According to Lyman (Buros, 1965), most of the validity coefficients reported in the manual are "spurious" because of the great range in ages except for one study with 150 seventh-grade children. The researchers (Tempero and Ivanoff, 1960) of this particular study reported correlations of .58 between the Form B of PPVT and the CTMM (California Test of Mental Maturity) and .61 between Form B of PPVT and HNTMA (Henmon-Nelson Test
of Mental Ability) Lloyd M. Dunn, although quoting several comparison studies about congruent validity, realizes that "correlating the PPVT with other intelligence studies probably has limited utility" (Buros, 1965). Piers (Buros, 1965) agrees with the above statement as she believes that such correlations may be misleading when done with small samples and restricted I.Q. ranges, and when it is not clear if the comparison studies use mental ages or the I.Q.'s. Piers states further:

On the other hand, it is essential--certainly until more evidence for predictive validity is in--that users know what a PPVT score means. . . . So far from studies reported in the manual and others published since, correlations with Stanford-Binet mental ages seem to be on the order of .70's and low .80's. With WISC I.Q.'s, they seem to be in high .70's and low .80's. Correlations with three group intelligence tests are reported to be in the .60's, but the PPVT does not seem to agree as highly with achievement scores as some of the group tests, although as would be expected, correlations are higher with reading or language than with other areas. (Piers, 1966, pp. 822-823).

**ITSC (The IT Scale for Children)**

The ITSC consists of a series of small cards (3" x 4"), each presenting one or more line drawings in black ink. There are 12 sets of picture cards. Some sets have eight pictures each, e.g., Set 2 and Set 3. In these sets four of the cards are thought to represent masculine oriented toys while the remaining four represent feminine oriented toys.

The majority of the 12 sets of cards are comprised of two paired cards each: one card depicting masculine-type objects or activities; the
other, feminine-type objects and activities. A description of the objects and activities depicted on the cards of some of these sets can be found in Figure 3. Examples of the pictures within the sets are given in Figures 4, 5, 6, and 7.

**Scoring**

Score values are assigned subtest preferences as follows: no score value is assigned to the illustration printed in Set 1. In Sets 2 and 3, the child is directed to indicate which four of the eight pictured objects "IT" would prefer to play with. Each masculine toy preference is assigned a score value of one, each feminine toy preference a score value of zero. Thus the total score for Set 2 and Set 3 each ranges between zero and four.

The values assigned to Sets 4 through 11 are determined as follows: a masculine activity or article preference is assigned a score value of eight; a feminine preference, zero. The range of the total score for the combination of all paired pictures in Sets 4 through 11 is from 0 to 64.

In Set 12, the available responses are assigned the following score values: response a, value 0; b, 4; c, 8; and d, 12.

The total score is obtained by adding all the different scores for the subparts of the ITSC for each child.

**Procedure**

Directors of Headstart programs, day care centers, Title 1 Programs and regular nursery schools were contacted, through the auspices of the Department of Child Development, Iowa State University, Ames, Iowa, as sources from which to obtain the sample of children. This initial
Set 1: A stick figure drawing of a child IT.

Set 2: A set of eight pictures of toys on separate cards. Four of these eight card pictures are ones that girls usually play with while the other four are commonly used more by boys.

Set 3: Another set of eight pictures of toys wherein the toys are different but the arrangement is identical to Set 2, i.e., four are masculine toys and four are feminine.

<table>
<thead>
<tr>
<th>Set 2</th>
<th>Set 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Necklace</td>
<td>a. Cradle</td>
</tr>
<tr>
<td>b. Tractor</td>
<td>b. Racer</td>
</tr>
<tr>
<td>c. Doll</td>
<td>c. Dishes</td>
</tr>
<tr>
<td>d. Dump truck</td>
<td>d. Earthmover</td>
</tr>
<tr>
<td>e. Train engine</td>
<td>e. Soldiers</td>
</tr>
<tr>
<td>f. Purse</td>
<td>f. Doll buggy</td>
</tr>
<tr>
<td>g. Gun (rifle)</td>
<td>g. Pocket knife</td>
</tr>
<tr>
<td>h. High chair</td>
<td>h. Baby bath</td>
</tr>
</tbody>
</table>

Sets 4 through 11: Sets of paired pictures, "feminine" and the other "masculine".

Set 4: Indian princess - Indian chief
Set 5: Trousers and shirt - Dress
Set 6: Sewing materials - Airplane parts
Set 7: Cosmetic articles - Shaving articles
Set 8: Mechanical tools - Household objects
Set 9: Men's shoes - Women's shoes
Set 10: Girls playing - Boys playing
Set 11: Building tools - Baking articles

Figure 3. Description of Objects and Activities Depicted in the IT Scale for Children.
Set 12: Four child figures as follows:

a. Girl dressed as a girl
b. Boy dressed as a girl
c. Girl dressed as a boy
d. Boy dressed as a boy
Figure 4. Set 2 of the It Scale for Children
Figure 4. (Continued)
Figure 5. Set 2 of the It Scale for Children
Figure 6. Set 8 of the It Scale for Children
Figure 6. (Continued) Set 9 of the IT Scale for Children.
Figure 7. Set 12 of the It Scale for Children
contacting was done either through the telephone or by personally contacting someone who worked in the agency. After getting an appointment, the investigator and her major professor visited the personnel in charge. The visit consisted of showing the two tests (the ITSC and the PPVT) and explaining about the purpose as well as the actual administration of the tests to the agency authorities. It was demonstrated clearly as to what would be asked of the children during the data collection and what the procedure would be. The authorities were also given a one page dittoed description of the total research design which included the purpose, the instruments to be used, the subjects and the procedure involved in the present investigation (Appendix A).

The investigator tested the children in their schools or play centers. A couple of days were spent by the investigator in the children's play room (prior to the testing) as a student teacher, in order to get acquainted with the children and to enable the children to feel relatively comfortable "playing a game" alone with a stranger. During these visiting days, the children as a group were told that the visitor was there to play a game with each of the children in a quiet room and that all the children would have their turns, one by one.

Each child was tested in a quiet area which was slightly removed from the rest of the children. Privacy was insured by allowing no one else in the room and by shutting the doors to avoid the noise of people passing by in the hallways. In some of the Headstart programs and day care centers, where no separate room was available, a screen was placed in a corner of the larger playroom to separate a smaller area for
testing. The child was tested when other children were not using the playroom, e.g., when they were playing outdoors.

The room was furnished with no more than a small table and three small chairs, proportioned to the child's size (actually borrowed from his own playroom). Arrangements were made so that toys on the shelves and pictures on the walls would not distract the child (they were either removed or the child was seated with his back toward them).

The investigator brought the child into the room to "play the new game" only when the child agreed to come to play and did not have any objections against playing the game. The child was seated on one of the small chairs and the investigator sat across the table and in front of the child. A little bit of informal conversation was carried on to put the child at his ease as the investigator wrote the child's name and age on the record sheet.

The testing began by administering the PPVT for the purpose of screening out those children who had not advanced enough in their language development (or were mentally retarded) to understand the instructions given and the questions and tasks presented by the investigator. It also helped to exclude the children with very short attention spans and those who were very restless and thus could not complete the test.

The ITSC was given soon after the PPVT was complete. By then, the child's initial nervousness and discomfort were sufficiently reduced so as not to interfere with further testing. After the PPVT's achievement oriented presentation, the ITSC seemed to come as a game. The child did
not have to pick the "picture of the spoken word" out of four pictures (which implies one of the four is the right one) but just had to say which toys IT might like to play with.

Since the drawing of the ITSC IT figure has been criticized for representing a figure more masculine than neuter, it was not used. Instead, the investigator pointed to the third chair by the table and said to the child:

Let us pretend there is another child here in this room, sitting right here in this chair. The name of this child is "IT". Now, I will show you pictures of some toys and other things and you tell me which ones IT would like to play with.

Most children understood these directions. A few four year old children seemed not to be sure of what "pretending" meant. The explanation was offered that when they played house and became mommy, daddy and baby, they were pretending to be mommy, daddy and baby. This seemed to be enough to clarify the situation. The instructions about the third chair and IT being in one of the chairs were then repeated to the child before the pictures were presented to him/her.

After the administration of the ITSC was complete, the child was brought back into the playroom.

It took between 15 to 25 minutes to administer both the PPVT and the ITSC. The PPVT took a little longer for older children (ages between 5-0 and 6-0 years) and also for those children who were a little
more talkative than others (they spontaneously began to relate their own experiences with the objects of the different pictures).

The children seemed to enjoy their experience with the It Scale very much as is evidenced by the fact that most of them requested to be allowed to come in and "play the game again".

**Scoring**

After statistical consultations, it was decided a small change in the scoring method could make for greater convenience in computation, without affecting the interpretation of the scores. Hence, the scoring method for Sets 4 through 11 was not the same as the one used in the standard administration of the ITSC. Instead of assigning a score value of 8 for each masculine card for each of the eight pairs, a score value of 1 was assigned to the masculine card in each pair. The score value for the feminine cards of the pairs remained the same as in the standard procedure, namely 0. Thus, in the scoring of the Sets 4 through 11, for the purpose of the present investigation, the range of the scores changed in the case of the eight pairs. The scores now ranged from 0 to 8 for all the eight pairs rather than ranging from 0 to 64, as was the case in the standard scoring procedure. No changes were made in the scoring of the rest of the sets, namely Sets 2, 3 and 12.

Data were recorded by marking on record sheets simultaneously as the test was administered. The record sheets are in Appendix A.3.

**Statistical Analysis**

An analysis of variance for the total population of 177 children was computed to determine the differences among the subcultures.
A correlational analysis also was planned so that relationships between variables could be clarified in terms of high or low and positive or negative correlations.

There were several personal and family background variables analyzed. The personal variables were sex, chronological age, the PPVT mental age, and ordinal position. The family variables were parents' marital status, the number of adult males and females in the family, number of siblings, and the sex of next older and/or next younger sibling. The rest of the variables used in the correlational analysis were the total score, subpart scores and individual cards of the ITSC.

The analysis of variance and a correlational analysis were computed also for the separate groups of boys and girls so that the performances of the sexes on the It Scale could be compared over all the subcultures as well as within each subcultures.
RESULTS

The main concern of this research has been sex-role preference as determined by the It Scale scores and the relationship of the It Scale scores with other factors in the children's personal and family backgrounds.

The distribution of the subjects in the five subcultural groups is as follows: Group 1: 31 Black middle class (14 girls and 17 boys); Group 2: 49 Black lower class (15 girls, 34 boys); Group 3: 39 white middle class (17 girls, 22 boys); Group 4: 46 white lower class (19 girls, 27 boys); and Group 5: 12 Tama Indians (6 girls, 6 boys).

Differences Between the Performances of the Sexes on the ITSC

The ITSC (It Scale) mean of the total score for 71 girls in the five groups is 10.07 while the mean of the total score for 105 boys is 18.51. The t test value obtained by the test of significance for mean difference is 8.61 with 175 degrees of freedom (Appendix B). Thus the hypothesis that there is no difference between boys' and girls' sex-role preferences among children of 4 to 6 years of age, is rejected.

The rejection of this hypothesis is further supported by several significant correlations (Table 1). A correlation of 0.56 was found to exist between the total ITSC also were related to sex. All of the correlations are significant beyond the .001 level.

Table 2 includes the correlations among the four subparts for boys and girls, and the means and variances reflecting the significant r values reported in Table 1. It can be seen that the correlations for boys are higher than those for girls except in the cases of correlations
Table 1. Correlations between the sex of the child and total and subpart scores of the ITSC pooled within subcultures.

<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Correlation (r value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total ITSC score X Sex</td>
<td>.56***</td>
</tr>
<tr>
<td>Score of Subpart 2a X Sex</td>
<td>.48***</td>
</tr>
<tr>
<td>Score of Subpart 2b X Sex</td>
<td>.35***</td>
</tr>
<tr>
<td>Score of Subpart 3 X Sex</td>
<td>.64***</td>
</tr>
<tr>
<td>Score of Subpart 4 X Sex</td>
<td>.40***</td>
</tr>
</tbody>
</table>

The degrees of freedom presented for the correlations presented in Table 1 are 170. Since differences among subcultures are controlled for by obtaining correlations corrected for subculture differences, a correlation of .20 is significant at the .01 level.

***p > .001

between Subparts 2b and 3 (.35) and Subparts 3 and 4 (.37). This would mean that the girls' performance is more highly correlated on all of the other combinations of subparts. Thus boys have greater correlation in performance on more subparts of the ITSC than girls in this particular sample of the five subcultures of the United States.

An inspection of Table 2 reveals that the means for boys are higher than those for girls, indicating that boys obtained higher scores than girls on the four subparts of the ITSC.

The boys' variances also are larger than those of the girls. The boys, then, deviate more from their mean of performance than do girls.
Table 2. Correlations, means and variances for the four Subparts of the ITSC by sex

<table>
<thead>
<tr>
<th>ITSC Subpart Scores(^a)</th>
<th>Boys (above diagonal)</th>
<th>Means</th>
<th>Variances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
<td>III</td>
</tr>
<tr>
<td>I</td>
<td>.61</td>
<td>.29</td>
<td>.35</td>
</tr>
<tr>
<td>II</td>
<td>.56</td>
<td>.35</td>
<td>.18</td>
</tr>
<tr>
<td>Girls (below diagonal)</td>
<td>III</td>
<td>.12</td>
<td>.40</td>
</tr>
<tr>
<td>IV</td>
<td>.05</td>
<td>.07</td>
<td>.47</td>
</tr>
</tbody>
</table>

\(^a\) (Subpart 2a-8 individual toy pictures out of which 4 are masculine and 4 feminine).
II (Subpart 2b-8 individual toy pictures out of which 4 are masculine and 4 feminine).
III (Subpart 3 -8 pairs out of each of which one card is masculine and the other feminine).
IV (Subpart 4 -4 pictures of 4 children on 4 cards, each child is dressed in a different way).
The correlations, means and variances are given in Table 2 to explain the larger correlations in Table 1. The correlations show that boys are more consistent over a greater number of subparts than girls. The means show that the boys are more masculine than the girls according to the scores of the test. The variances reveal the larger range of deviations from the means in the case of boys as compared to girls.

To look at the differences between boys and girls, in terms of performances on the ITSC subparts, the correlations between mean scores of the individual cards of each subpart are presented for boys and girls in Tables 3 through 6. The means, variances, r values and t values also are included in these tables. The r's and the values associated with them reflect sex-differences in responses to the individual cards. For tables 3 through 6, the information analogous to that presented in Tables 1 and 2 are combined so that the last two columns deal with sex differences in responses.

The boys' and girls' performances on the 8 cards of the first subpart (2a) of the ITSC are presented in Table 3.

Girls' means are higher than those of the boys on Cards 1, 3, 6 and 8. Boys' means are higher than those of the girls on Cards 2, 4, 5 and 7.

Mean scores for boys and girls on the cards of Subpart 2a are presented in Figure 8. The feminine or masculine natures of the cards
Table 3. Correlations among the cards of Subpart 2a by sex and analysis of mean responses for each sex

<table>
<thead>
<tr>
<th>Correlations among the cards</th>
<th>Comparisons between the sexes</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>X G</th>
<th>X B</th>
<th>S^2G</th>
<th>S^2B</th>
<th>r value</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys (above diagonal)</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>g</td>
<td>.68</td>
<td>.37</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>24</td>
<td>17</td>
<td>-17</td>
<td>-62</td>
<td>-25</td>
<td>-44</td>
<td>01</td>
<td>.68</td>
<td>-.31</td>
<td>4.26**</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>2</td>
<td>19</td>
<td>10</td>
<td>19</td>
<td>-26</td>
<td>-55</td>
<td>-30</td>
<td>-42</td>
<td>.62</td>
<td>.23</td>
<td>.19</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>3</td>
<td>15</td>
<td>27</td>
<td>-21</td>
<td>-45</td>
<td>-24</td>
<td>-54</td>
<td>-30</td>
<td>.72</td>
<td>.21</td>
<td>.25</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>4</td>
<td>-11</td>
<td>22</td>
<td>38</td>
<td>09</td>
<td>-45</td>
<td>-26</td>
<td>-66</td>
<td>.49</td>
<td>.25</td>
<td>.17</td>
</tr>
<tr>
<td>Girls (below diagonal)</td>
<td></td>
<td>5</td>
<td>-60</td>
<td>-36</td>
<td>29</td>
<td>09</td>
<td>18</td>
<td>18</td>
<td>-09</td>
<td>.32</td>
<td>.22</td>
<td>.28</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>6</td>
<td>-30</td>
<td>-54</td>
<td>-47</td>
<td>-40</td>
<td>18</td>
<td>14</td>
<td>28</td>
<td>.34</td>
<td>.22</td>
<td>.18</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>7</td>
<td>-22</td>
<td>-43</td>
<td>-64</td>
<td>-53</td>
<td>18</td>
<td>31</td>
<td>26</td>
<td>.37</td>
<td>.22</td>
<td>.24</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>8</td>
<td>-08</td>
<td>-35</td>
<td>-37</td>
<td>-64</td>
<td>-17</td>
<td>23</td>
<td>33</td>
<td>.46</td>
<td>.18</td>
<td>.15</td>
</tr>
</tbody>
</table>

** p < .01 = an r value of .20 at least.
*p < .05 = an r value of .15 at least.

Card 1 (necklace)
Card 2 (tractor)
Card 3 (doll)
Card 4 (dump-truck)
Card 5 (train engine)
Card 6 (purse)
Card 7 (gun)
Card 8 (high chair)
Figure 8. Means for boys and girls on cards of Subpart 2a of the ITSC
is indicated below each card to clarify that girls, in fact, score higher on feminine cards and boys score higher on masculine cards, as far as this sample of 4 to 6 year old children is concerned.

Table 4 consists of the correlations among the 8 cards of Subpart 2b for boys and girls.

Girls' means are higher than those of the boys on Cards 1, 3, 6 and 8 while the boys' means are higher than those of the girls on Cards 2, 4, 5 and 7.

The variances show greater differences among the boys than among the girls (Table 4).

Mean scores for boys and girls performances on Subpart 2b are presented in Figure 9.

Interpretation of Table 5 clarifies that the means for boys are higher on all the pairs of Subpart 3 than those for girls. In other words, the boys picked the masculine card of the pair more often than the girls and the girls picked the feminine card of the pairs more often than the boys. The girls' means are nearer zero for Pairs 2 and 6 of Subpart 3. The boys' means are all above .50 and the highest means are close to 1.0 are for Pairs 2, 3 and 7 of Subpart 3. The range of the scores was from 0 to 1 in terms of most feminine to most masculine.

The scores of children on Subpart 3 are explained in Figure 10 in terms of both the differences between responses of the sexes and the differences between the attractiveness of the feminine and masculine cards, on an average. If the cards were responded to differently by the sexes, then the score points in Figure 10 would lie near the line
<table>
<thead>
<tr>
<th>Correlations among the cards of Subpart 2b by sex and analysis of mean responses of each sex</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys (above diagonal)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td><strong>Girls (below diagonal)</strong></td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of .20 at least.**  
*p < .05 = an r value of .15 at least.*  
Card 1 (cradle)  
Card 2 (racer)  
Card 3 (dishes)  
Card 4 (earthmover)  
Card 5 (soldiers)  
Card 6 (doll buggy)  
Card 7 (pocket knife)  
Card 8 (baby bath)
Figure 9. Means for boys and girls on cards of Subpart 2b of the ITSC
Table 5. Correlations among the cards of Subpart 3 (the pairs) by sex, and analysis of mean responses of each sex

<table>
<thead>
<tr>
<th>Boys (above diagonal)</th>
<th>Comparison between sexes</th>
<th>Comparison between sexes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>28 31 10 06 08 11 10</td>
<td>.35 .63 .24 .24 .28</td>
</tr>
<tr>
<td>2</td>
<td>-03 25 09 20 36 10 33</td>
<td>.13 .73 .12 .21 .58</td>
</tr>
<tr>
<td>3</td>
<td>15 02 26 27 19 12 20</td>
<td>.56 .84 .25 .14 .31</td>
</tr>
<tr>
<td>4</td>
<td>19 10 37 14 11 07 12</td>
<td>.32 .61 .23 .20 .28</td>
</tr>
<tr>
<td>5</td>
<td>16 20 04 15 38 04 34</td>
<td>.30 .74 .22 .21 .44</td>
</tr>
<tr>
<td>6</td>
<td>43 35 17 12 25 05 19</td>
<td>.08 .64 .08 .21 .56</td>
</tr>
<tr>
<td>7</td>
<td>00 13 18 35 04 06 -04</td>
<td>.41 .56 .25 .25 .15</td>
</tr>
<tr>
<td>8</td>
<td>11 27 18 15 28 31 02</td>
<td>.25 .60 .20 .24 .36</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of .20 at least.  
*p < .05 = an r value of at least .15.

Masculine card  
Pair 1 Indian chief  
Pair 2 trousers and shirt  
Pair 3 airplane parts  
Pair 4 shaving articles  
Pair 5 mechanical tools  
Pair 6 men's shoes  
Pair 7 boys playing  
Pair 8 building tools

Feminine card  
Indian princess  
dress  
sewing materials  
cosmetic articles  
household objects  
woman's shoes  
girls playing  
baking articles
Figure 10. Means for boys and girls on the 8 pairs of Subpart 3 of the ITSC.
labeled "A". Since all of the cards were scored "1" for the masculine card and "0" for the feminine card, it is apparent that all cards are discriminating in the appropriate direction, as all points lie above line "A". If the male figure picture was as attractive, on the average, as the female figure picture, then the score points would lie near line "B". Since the score points appear to deviate substantially from line "B", it may be concluded that in Pair 3, the male card was more attractive than the female card, and in Pairs 6 and 8, the female cards were more attractive than the male cards.

Table 6 includes scores for the cards in Subpart 4 which reveal the pattern of performances of boys and girls on Subpart 4 of the ITSC. Girls' means are higher on Cards a, b, and c while the boys' mean on Card d is higher than that of the girls. The higher mean for boys on Card d would indicate more boys picking Card d than any other card. In other words, more boys preferred the "boy dressed as a boy". Also, more boys preferred Card d than girls did. Girls preferred Card a more than the boys and also more than any other card. On Cards b and c of Subpart 4, the pattern is different. The girls seemed to pick, as a group, either the most feminine child (Card a) or one of the two confused children (Cards b and c). A smaller number of girls picked the most masculine child as compared to the number of boys who picked the most feminine child. A larger number of boys picked their sex-
<table>
<thead>
<tr>
<th>Correlations among scores</th>
<th>Comparisons between the sexes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys (above diagonal)</td>
<td></td>
</tr>
<tr>
<td>Card a</td>
<td>Card b</td>
</tr>
<tr>
<td>Card a</td>
<td>-18</td>
</tr>
<tr>
<td>Card b</td>
<td>-41</td>
</tr>
<tr>
<td>Card c</td>
<td>-54</td>
</tr>
<tr>
<td>Card d</td>
<td>-34</td>
</tr>
</tbody>
</table>

** p < .01 = an r value of .20 at least.  
* p < .05 = an r value of .15 at least.

Card a (girl dressed as a girl)  
Card b (boy dressed as a girl)  
Card c (girl dressed as a boy)  
Card d (boy dressed as a boy)
appropriate card (Card d, mean .53) than girls selected their sex-appropriate card (Card a, mean .46). The boys, as a group, tended to select either the sex-appropriate card (Card d) or the exact opposite (Card a) while the girls had a tendency to pick either the sex-appropriate card (Card a) or one of the two confused child figures (Cards b and c).

To see correlations between sex and the ITSC in greater detail, correlations were obtained between the ITSC cards individually and the variable sex. These correlations are presented in Table 7. In Subpart 2a, Cards 1 (necklace), 3 (doll) and 8 (high chair) are negatively related to the male sex (.31 for Card 1; .16 for Card 3; -.31 for Card 8). Card 4 (dump truck), Card 5 (train engine) and Card 7 (gun) relate positively to the male sex (.31 for Card 4; .28 for Card 5; .18 for Card 7).

In Subpart 2b, Card 1 (cradle) and Card 8 (baby bath) relate negatively to the male sex (-.20 for Card 1; and -.19 for Card 8). Cards 2 (racer), 4 (earth mover), and 5 (soldiers) relate positively to the male sex (.22 for Card 2, .23 for Card 4, .15 for Card 5).

In Subpart 4, Card a (girl dressed as a girl) is negatively related to the male sex (-.28) and Card d (boy dressed as a boy) is positively related to the male sex (.27).

The information in the first 7 tables, in terms of significant correlations supporting the differences in boys and girls in the area of sex-role preference, make it necessary to reject the first hypothesis that there is no difference between boys' and girls' sex-role preferences among children of 4-0 to 6-0 years of age.
Table 7. Significant correlations between sex and the ITSC cards

<table>
<thead>
<tr>
<th>ITSC Cards</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subpart 2a</td>
<td></td>
</tr>
<tr>
<td>Sex X Card 1</td>
<td>-.31**</td>
</tr>
<tr>
<td>Sex X Card 3</td>
<td>-.16*</td>
</tr>
<tr>
<td>Sex X Card 4</td>
<td>.31**</td>
</tr>
<tr>
<td>Sex X Card 5</td>
<td>.28**</td>
</tr>
<tr>
<td>Sex X Card 7</td>
<td>.18*</td>
</tr>
<tr>
<td>Sex X Card 8</td>
<td>-.31**</td>
</tr>
<tr>
<td>Subpart 2b</td>
<td></td>
</tr>
<tr>
<td>Sex X Card 1</td>
<td>-.20**</td>
</tr>
<tr>
<td>Sex X Card 2</td>
<td>.22**</td>
</tr>
<tr>
<td>Sex X Card 4</td>
<td>.23**</td>
</tr>
<tr>
<td>Sex X Card 5</td>
<td>.15*</td>
</tr>
<tr>
<td>Sex X Card 8</td>
<td>-.19*</td>
</tr>
<tr>
<td>Subpart 3</td>
<td></td>
</tr>
<tr>
<td>Sex X Pair 1</td>
<td>.28**</td>
</tr>
<tr>
<td>Sex X Pair 2</td>
<td>.58**</td>
</tr>
<tr>
<td>Sex X Pair 3</td>
<td>.31**</td>
</tr>
<tr>
<td>Sex X Pair 4</td>
<td>.28**</td>
</tr>
<tr>
<td>Sex X Pair 5</td>
<td>.44**</td>
</tr>
<tr>
<td>Sex X Pair 6</td>
<td>.55**</td>
</tr>
<tr>
<td>Sex X Pair 7</td>
<td>.15*</td>
</tr>
<tr>
<td>Sex X Pair 8</td>
<td>.36**</td>
</tr>
<tr>
<td>Subpart 4</td>
<td></td>
</tr>
<tr>
<td>Sex X Card a</td>
<td>-.28**</td>
</tr>
<tr>
<td>Sex X Card d</td>
<td>.41**</td>
</tr>
<tr>
<td>Sex X Response: &quot;IT is a male&quot;</td>
<td>.25**</td>
</tr>
</tbody>
</table>

** p < .01 = an r value of at least .20.
* p < .05 = an r value of at least .15.
Differences in Performances of Children from the Five-Subcultures

The F ratios are presented in Table 8. These ratios reveal the differences among the five subcultures in terms of the characteristics of the subculture included in the data. The subcultures have been found to differ on certain characteristics: PPVT mental age in months; number of siblings; next older sibling being female; next younger sibling being a female; subject being an "only" child; parents being married; parents being divorced; and the number of adult males in the family.

The differences between the subcultures and the direction of these differences are shown in Table 9 wherein the means for the five groups are presented for each of the personal and family background factors having a significant F ratio.

It can be seen in Table 9 that the children from Group 3 are higher in their PPVT mental ages than children in all the other groups.

Children in Groups 2, 4 and 5 have greater number of siblings than children in Groups 1 and 3. More subjects in Group 5 had a sister for the next older sibling while the smallest number of subjects in Group 1 had the next older sibling as a sister. More subjects in Groups 3, 4 and 5 had a brother for the next younger sibling than did subjects in groups 1 and 2. The number of subjects who were "only" children was the largest in Group 1 while Group 5 had no "only" children.

More subjects from Groups 1 and 3 had non-broken (the parents married and not separated) compared to the subjects in Groups 2 and 4. Groups 5 (mean .75) stands somewhere between Groups 1 and 3 (means .90
and .92 respectively) on the one hand and Groups 2 and 4 (means .49 and .52 respectively) on the other hand.

Table 3. F ratios indicating significant differences among subculture on designated variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Significant F Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPVT mental age in months</td>
<td>20.00**</td>
</tr>
<tr>
<td>No. of siblings</td>
<td>8.33**</td>
</tr>
<tr>
<td>Next older sibling female</td>
<td>2.91*</td>
</tr>
<tr>
<td>Next younger sibling female</td>
<td>3.25*</td>
</tr>
<tr>
<td>Subject an &quot;only&quot; child</td>
<td>2.90*</td>
</tr>
<tr>
<td>Parents married</td>
<td>8.94**</td>
</tr>
<tr>
<td>Parents divorced</td>
<td>5.16**</td>
</tr>
<tr>
<td>No. of adult males in the family</td>
<td>6.04**</td>
</tr>
</tbody>
</table>

**F values are significant at the .01 level (for p < .01 = an F value of at least 3.44) with df 4 and 172.
*F values are significant at the .05 level (for p < .05 = an F value of at least 2.43) with df 4 and 172.

The subjects from Groups 1, 3 and 5 had more adults in their families as compared to the subjects in Groups 2 and 4.

The F ratios in Table 8 and the means in Table 9 for the subgroups are for all the children together. Table 10 consists of the F ratios for boys and girls separately for the same variables as in Tables 8 and 9.
Table 9. Group means for the significant F ratios indicating differences among subcultures on designated variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPVT mental age (in months)</td>
<td>48.90</td>
<td>47.92</td>
<td>64.51</td>
<td>43.93</td>
<td>44.08</td>
</tr>
<tr>
<td>Number of siblings</td>
<td>1.39</td>
<td>2.73</td>
<td>1.72</td>
<td>3.22</td>
<td>4.33</td>
</tr>
<tr>
<td>Next older sibling female</td>
<td>0.13</td>
<td>0.35</td>
<td>0.21</td>
<td>0.30</td>
<td>0.58</td>
</tr>
<tr>
<td>Next younger sibling male</td>
<td>0.13</td>
<td>0.14</td>
<td>0.36</td>
<td>0.37</td>
<td>0.42</td>
</tr>
<tr>
<td>Subject an &quot;only&quot; child</td>
<td>0.29</td>
<td>0.12</td>
<td>0.10</td>
<td>0.07</td>
<td>0.00</td>
</tr>
<tr>
<td>Parents married</td>
<td>0.90</td>
<td>0.49</td>
<td>0.92</td>
<td>0.52</td>
<td>0.75</td>
</tr>
<tr>
<td>Parents divorced</td>
<td>0.06</td>
<td>0.35</td>
<td>0.05</td>
<td>0.33</td>
<td>0.17</td>
</tr>
<tr>
<td>Number of adult males in the family</td>
<td>0.87</td>
<td>0.63</td>
<td>1.05</td>
<td>0.72</td>
<td>1.08</td>
</tr>
</tbody>
</table>

a Group 1 (black middle class).
Group 2 (black lower class).
Group 3 (white middle class).
Group 4 (white lower class).
Group 5 (Tama Indians, Mesquaki tribe).

Table 11 includes the means for boys and girls in each of the subgroups to correspond with the F ratios in Table 10.

The means in Table 11 indicate which groups are different from the others making the F value large enough to be significant. Both boys and girls in Group 3 have much higher means for PPVT mental age than children in all the other groups. The boys in Group 3 have a slightly higher mean than that of girls.
The F ratio for subjects being an "only" child was significant in the case of girls (2.66) and the means in Table 11 reveal that for girls, Group 1 had the largest number of "only" children (mean .36) as compared to the other groups while Groups 2 and 5 had no "only" children at all (mean .00 for both Groups 2 and 5).

Table 10. The F ratios, calculated separately for boys and girls, indicating differences among subcultures on designated variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>F Ratios</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Girls</td>
<td></td>
<td>Boys</td>
</tr>
<tr>
<td>PPVT mental age (in months)</td>
<td>9.08**</td>
<td></td>
<td>11.88**</td>
</tr>
<tr>
<td>Number of siblings</td>
<td>5.91**</td>
<td></td>
<td>3.83**</td>
</tr>
<tr>
<td>Next older sibling female</td>
<td>2.41</td>
<td></td>
<td>1.99</td>
</tr>
<tr>
<td>Next younger sibling female</td>
<td>0.52</td>
<td></td>
<td>0.78</td>
</tr>
<tr>
<td>Subject &quot;only&quot; child</td>
<td>2.66*</td>
<td></td>
<td>1.46</td>
</tr>
<tr>
<td>Parents married</td>
<td>1.62</td>
<td></td>
<td>4.91**</td>
</tr>
<tr>
<td>Parents divorced</td>
<td>1.51</td>
<td></td>
<td>4.37</td>
</tr>
<tr>
<td>Number of adult males in the family</td>
<td>2.87*</td>
<td></td>
<td>5.04**</td>
</tr>
</tbody>
</table>

**F values are significant at the .01 level (for p < .01 = an F value of at least 3.62) for girls, with df 4 and 66.
*F values are significant at the .05 level (for p < .05 = an F value of at least 2.51) for girls, df 4 and 66.
**F values are significant at the .01 level (for p < .01 = an F value of at least 3.51) for boys, with df 4 and 105.
*F values are significant at the .05 level (for p < .05 = an F value of at least 2.46) for boys, with df 4 and 105.
Table 11. Group means of boys and girls for the F ratios indicating significant differences among subcultures on designated variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Girls Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPVT mental age</td>
<td>46.00</td>
<td>48.07</td>
<td>63.18</td>
<td>44.68</td>
<td>39.17</td>
<td>51.29</td>
<td>47.85</td>
<td>65.55</td>
<td>43.41</td>
<td>49.00</td>
</tr>
<tr>
<td>Number of siblings</td>
<td>0.86</td>
<td>3.13</td>
<td>1.71</td>
<td>2.74</td>
<td>4.83</td>
<td>1.82</td>
<td>2.56</td>
<td>1.73</td>
<td>3.56</td>
<td>3.83</td>
</tr>
<tr>
<td>Next older sibling female</td>
<td>0.07</td>
<td>0.40</td>
<td>0.35</td>
<td>0.21</td>
<td>0.67</td>
<td>0.18</td>
<td>0.32</td>
<td>0.09</td>
<td>0.37</td>
<td>0.50</td>
</tr>
<tr>
<td>Next younger sibling female</td>
<td>0.14</td>
<td>0.33</td>
<td>0.18</td>
<td>0.26</td>
<td>0.33</td>
<td>0.12</td>
<td>0.29</td>
<td>0.14</td>
<td>0.22</td>
<td>0.17</td>
</tr>
<tr>
<td>Subject &quot;only&quot; child</td>
<td>0.36</td>
<td>0.00</td>
<td>0.12</td>
<td>0.11</td>
<td>0.00</td>
<td>0.24</td>
<td>0.18</td>
<td>0.09</td>
<td>0.04</td>
<td>0.00</td>
</tr>
<tr>
<td>Parents married</td>
<td>0.93</td>
<td>0.67</td>
<td>0.88</td>
<td>0.53</td>
<td>0.83</td>
<td>0.88</td>
<td>0.41</td>
<td>0.95</td>
<td>0.56</td>
<td>0.67</td>
</tr>
<tr>
<td>Parents divorced</td>
<td>0.07</td>
<td>0.27</td>
<td>0.12</td>
<td>0.32</td>
<td>0.00</td>
<td>0.06</td>
<td>0.38</td>
<td>0.00</td>
<td>0.33</td>
<td>0.33</td>
</tr>
<tr>
<td>Number of adult males in the family</td>
<td>0.93</td>
<td>0.67</td>
<td>0.12</td>
<td>0.68</td>
<td>1.00</td>
<td>0.82</td>
<td>0.62</td>
<td>1.00</td>
<td>0.74</td>
<td>1.17</td>
</tr>
</tbody>
</table>

a Group 1 (black middle class).  
Group 2 (black lower class).  
Group 3 (white middle class).  
Group 4 (white lower class).  
Group 5 (Tama Indians, Mesquaki tribe).
The factor of the subject's parents being married and living together was not significant for girls (1.62) but was significant for boys (4.91) at the .01 level. In the case of girls, Group 1 (mean .93), Group 3 (mean .88) and Group 5 (mean .83) had much larger means than those of the other two groups (Group 2 mean .67 and Group 4 mean .53). The boys in Groups 1 (mean .88) and 3 (mean .95) had means much larger than the means of the other three groups (Group 2 mean .41, Group 4 mean .41, Group 4 mean .56 and Group 5 mean .67). Only the boys' F ratio was significant for parents being divorced and the data in Table 11 reveal that Groups 2, 4 and 5 had larger numbers of boys whose parents were divorced as compared to Groups 1 and 3.

The girls' F ratio was significant at the .05 level while the boys' F ratio was significant at the .01 level for the number of adult males in the family. It is indicated in Table 11 that among girls, subjects from Groups 1, 3 and 5 had the largest number of adult males in their families, while among boys, Groups 3 and 5 had larger means than the other three groups, for the number of adult males in the family.

Beside the subjects' personal and family background factors, some of the cards of the ITSC also had significant F ratios indicating that performance of children differed among at least some of the subcultures on these particular cards of the ITSC.

Table 12 includes the cards with the significant F values and the levels of significance. Card 7 of Subpart 2a had an F value of 3.42, significant at the .05 level. In Table 13, the means for the five groups on Card 7 of Subpart 2a can be compared. Group 3 has the highest mean of
all and Group 4 has the lowest mean. It can be concluded that more subjects in Group 3 tended to pick Card 7, Subpart 2a, than all the other groups while less subjects in Group 4 picked it as compared to all the other groups.

Table 12. F ratios indicating significant differences among performances of children from different subcultures, on the individual cards in the ITSC

<table>
<thead>
<tr>
<th>Individual Cards on the ITSC</th>
<th>F Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Card 7, Subpart 2a</td>
<td>3.42*</td>
</tr>
<tr>
<td>Card 1, Subpart 2b</td>
<td>2.52*</td>
</tr>
</tbody>
</table>

*F values are significant at the .05 level (for p < .05 = an F value of at least 2.43) with df 4 and 172.

Table 13. Group means for the significant F ratios indicating differences among performances of children from different subcultures on individual cards in the ITSC

<table>
<thead>
<tr>
<th>Individual Cards on the ITSC</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Card 7, Subpart 2a</td>
<td>0.48</td>
<td>0.45</td>
<td>0.69</td>
<td>0.30</td>
<td>0.42</td>
</tr>
<tr>
<td>Card 1, Subpart 2b</td>
<td>0.45</td>
<td>0.59</td>
<td>0.33</td>
<td>0.61</td>
<td>0.33</td>
</tr>
</tbody>
</table>

aGroup 1 (black middle class).
Group 2 (black lower class).
Group 3 (white middle class).
Group 4 (white lower class).
Group 5 (Tama Indians, Mesquaki tribe).
Card 1, Subpart 2b was another card that had an F ratio of 2.52 significant at the .05 level. In Table 13, it can be seen that Groups 2 and 4 have the higher means while Groups 3 and 5 have the lower means. More subjects from Groups 2 and 4 picked Card 1, Subpart 2b than any other group and the least number of subjects from Group 3 and 5 picked this particular card.

The F ratios for the above two cards were also calculated separately for boys and girls. In the separate analysis, as shown in Table 14, the F ratio for Card 7, Subpart 2a was not significant either for boys or for girls. Card 1, Subpart 2b had an F ratio of 3.15 for boys significant at the .05 level. The means for boys in Table 15 reveal that boys from Group 4 picked this card most of all while the boys in Group 3 picked it least of all.

The total ITSC score was not significant in either the combined analysis for boys and girls or in the separate analysis for each sex. The subjects from the different subcultures then, did not differ in their total scores on the ITSC. The F ratios obtained by the separate analysis for boys and girls are presented in Table 14 and the corresponding means are in Table 15.

The F ratios and group means presented in Table 8 through 15 reveal that boys and girls from different subcultures differ on several personal and family variables as well as 2 cards of the ITSC. Since there are no significant F ratios for any of the other ITSC cards, or subpart scores or the total score of the ITSC, the hypothesis that there is no difference in the sex-role preference scores of boys from the five subcultures...
and the hypothesis that there is no difference in the sex-role preference scores of girls from the five subcultures, cannot be rejected.

Table 14. F ratios calculated separately for boys and girls indicating significant differences among performances on individual cards

<table>
<thead>
<tr>
<th>Individual Cards on the ITSC</th>
<th>F Ratios</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Card 7, Subpart 2a</td>
<td>2.00</td>
<td>2.22</td>
<td></td>
</tr>
<tr>
<td>Card 1, Subpart 2b</td>
<td>1.00</td>
<td>3.15</td>
<td></td>
</tr>
</tbody>
</table>

**F values are significant at the .01 level (for p < .01 = an F value of at least 3.62) for girls with df 4 and 56.**

*F values are significant at the .05 level (for p < .05 = an F value of at least 2.51) for girls, with df 4 and 66.

**F values are significant at the .01 level (for p < .01 = an F value of at least 3.51) for boys, with df 4 and 105.

*F values are significant at the .05 level (for p < .05 = an F value of at least 2.46) for boys, with df 4 and 105.

Sex-Role Preference and the Sex of Siblings

In Table 15, correlations between the subjects' total ITSC score and the sex of his next younger and/or next older sibling are presented. None of the r values is significant, therefore, the null hypothesis that there is no relationship between the sex-role preference of a child and the sex of the next older and/or next younger sibling, is not rejected. The sex of the immediately younger and immediately older sibling is found to have no relationship with sex-role preference of a subject, as measured by the ITSC.

Although the total score does not reveal any significant relationship between performance on the ITSC and the sex of the next older
Table 15. The group means for the significant F ratios for boys and girls indicating differences among performances on the individual ITSC cards, and the total ITSC score

<table>
<thead>
<tr>
<th>Individual Cards and the total ITSC score</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Girls&lt;sup&gt;a&lt;/sup&gt; Group 4</th>
<th>Group 5</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Boys&lt;sup&gt;a&lt;/sup&gt; Group 4</th>
<th>Group 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Card 7, Subpart 2a</td>
<td>0.29</td>
<td>0.27</td>
<td>0.65</td>
<td>0.26</td>
<td>0.33</td>
<td>0.65</td>
<td>0.53</td>
<td>0.73</td>
<td>0.33</td>
<td>0.50</td>
</tr>
<tr>
<td>Card 1, Subpart 2b</td>
<td>0.64</td>
<td>0.80</td>
<td>0.47</td>
<td>0.58</td>
<td>0.50</td>
<td>0.29</td>
<td>0.50</td>
<td>0.23</td>
<td>0.63</td>
<td>0.42</td>
</tr>
<tr>
<td>The total ITSC score</td>
<td>10.00</td>
<td>8.93</td>
<td>9.41</td>
<td>11.79</td>
<td>9.50</td>
<td>18.65</td>
<td>18.71</td>
<td>19.32</td>
<td>17.33</td>
<td>19.33</td>
</tr>
</tbody>
</table>

<sup>a</sup>Group 1 (black middle class). Group 2 (black lower class). Group 3 (white middle class). Group 4 (white lower class). Group 5 (Tama Indians, Mesquaki tribe).
and/or next younger sibling it is possible that there may be some significant relationships between the individual cards of the ITSC and the sex of the next older and/or next younger sibling. Table 17 includes the significant correlations between the cards of different subparts and the sex of the next older and/or next younger sibling as well as the number of siblings a subject has.

As far as Subpart 2a is concerned, Card 1 is negatively related to the number of siblings a subject has (-.17). Subjects who picked this card had a smaller number of siblings than those who did not pick it. Card 1 (necklace) also was negatively related to the next older sibling being male (-.16). Card 3 (doll) and Card 4 (dump truck) are positively related to the next older sibling being male (.26, 3 and .21 respectively). Card 2 (tractor) and Card 4 (dump truck) are negatively related to the next older sibling being female (-.19 and -.17 respectively). Card 7 (gun) and Card 8 (high chair) positively correlate with the next older sibling being female (.21 and .18 respectively).

In the case of Subpart 2b, Card 3 (dishes) was the only one with a significant correlation. It was negatively correlated to the next older sibling being female (-.19).

From Subpart 3, only Pair 3 (building tools for the masculine card and baking tools for the feminine card) had a significant correlation with the next younger sibling being female. Subjects with a younger sister tended to pick the feminine card of this pair.
In Subpart 4, Card c (girl dressed as a boy) had a significant negative correlation (-.18) with the next younger sibling being male while it had a positive correlation (.19) with the next older sibling being female.

Table 16. Correlations between the subject's total ITSC score and the sex of his next younger and/or next older sibling

<table>
<thead>
<tr>
<th>Variables</th>
<th>Correlations</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td></td>
</tr>
<tr>
<td>ITSC scores X Next older</td>
<td>-.10</td>
<td>-.04</td>
<td></td>
</tr>
<tr>
<td>sibling male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITSC score X Next younger</td>
<td>-.16*</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>sibling male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITSC score X Next older</td>
<td>.02</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>sibling female</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITSC score X Next younger</td>
<td>.02</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>sibling female</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p < .01 = an r value of at least .20.  
*p < .05 = an r value of at least .15.

To find out if the significant correlations stand for both boys and girls, separate correlations between the ITSC cards and the sex of the next older and/or next younger sibling were obtained for boys and girls separately. These are presented in Table 18. In Subpart 2a, Card 1 is significantly correlated with number of siblings only for boys (-.10 for girls and .19 for boys). Card 1 (necklace) is related with the next older sibling being a male for boys and girls, but while for girls it is a negative correlation (-.16), for boys it is a positive correlation (.19). Card 4 (dump truck) has a positive correlation with
Table 17. Significant correlations between the number of the subject's siblings and the sex of the next older and/or next younger sibling

<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subpart 2a</strong></td>
<td></td>
</tr>
<tr>
<td>Number of siblings X Card 1</td>
<td>-.17*</td>
</tr>
<tr>
<td>Next older sibling male X Card 1</td>
<td>-.18*</td>
</tr>
<tr>
<td>Next older sibling male X Card 3</td>
<td>.26**</td>
</tr>
<tr>
<td>Next older sibling male X Card 4</td>
<td>.21**</td>
</tr>
<tr>
<td><strong>Subpart 4</strong></td>
<td></td>
</tr>
<tr>
<td>Next older sibling male X Card c</td>
<td>-.18*</td>
</tr>
<tr>
<td><strong>Subpart 2a</strong></td>
<td></td>
</tr>
<tr>
<td>Next older sibling female X Card 2</td>
<td>-.19*</td>
</tr>
<tr>
<td>Next older sibling female X Card 4</td>
<td>-.17*</td>
</tr>
<tr>
<td>Next older sibling female X Card 7</td>
<td>.20**</td>
</tr>
<tr>
<td>Next older sibling female X Card 8</td>
<td>.18*</td>
</tr>
<tr>
<td><strong>Subpart 2b</strong></td>
<td></td>
</tr>
<tr>
<td>Next older sibling female X Card 3</td>
<td>-.19*</td>
</tr>
<tr>
<td><strong>Subpart 4</strong></td>
<td></td>
</tr>
<tr>
<td>Next older sibling female X Card c</td>
<td>.19*</td>
</tr>
<tr>
<td><strong>Subpart 3</strong></td>
<td></td>
</tr>
<tr>
<td>Next younger sibling female X Pair 8</td>
<td>-.17*</td>
</tr>
</tbody>
</table>

*<p < .01 = an r value of at least .20.
**p < .05 = an r value of at least .15.

The next older sibling being a male, for both boys and girls (for girls, .17 and for boys .19). Card 3 (doll) still has a positive significant correlation with the next older sibling being male, for boys but not for girls (for girls .12 and for boys .40). Cards 2 (tractor) and 4 (dump
truck) both show negative correlations with the next older sibling being a female but these correlations are significant only in case of girls (Card 2, girls' -.35 and boys' -.10; Card 4, girls' -.25 and boys' .09).

Card 8 (high chair) significantly and positively relates to the next older sibling being a female in the cases of both boys and girls (for girls, .17 and for boys, .19).

Table 18. Significant correlations between the ITSC cards and the number of siblings as well as the sex of the next older and/or next younger sibling, for both boys and girls

<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Girls r</th>
<th>Boys r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subpart 2a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of siblings X Card 1</td>
<td>-.10</td>
<td>.19**</td>
</tr>
<tr>
<td>Next older sibling male X Card 1</td>
<td>-.16*</td>
<td>.19*</td>
</tr>
<tr>
<td>Next older sibling male X Card 3</td>
<td>.12</td>
<td>.40**</td>
</tr>
<tr>
<td>Next older sibling male X Card 4</td>
<td>.17*</td>
<td>.19*</td>
</tr>
<tr>
<td>Subpart 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next older sibling male X Card 8</td>
<td>-.20**</td>
<td>-.14</td>
</tr>
<tr>
<td>Subpart 2a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next older sibling female X Card 2</td>
<td>-.35**</td>
<td>-.10</td>
</tr>
<tr>
<td>Next older sibling female X Card 4</td>
<td>-.26**</td>
<td>-.09</td>
</tr>
<tr>
<td>Next older sibling female X Card 7</td>
<td>.21**</td>
<td>.23**</td>
</tr>
<tr>
<td>Next older sibling female X Card 8</td>
<td>.17*</td>
<td>.19*</td>
</tr>
<tr>
<td>Subpart 2b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next older sibling female X Card 3</td>
<td>-.08</td>
<td>.29**</td>
</tr>
<tr>
<td>Subpart 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next older sibling female X Card c</td>
<td>-.01</td>
<td>-.10</td>
</tr>
<tr>
<td>Subpart 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next older sibling female X Pair 8</td>
<td>-.09</td>
<td>-.20**</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of at least .20.
*p < .05 = an r value of at least .15.
In Subpart 2b, Card 3 (dishes) has a significant positive correlation with the next older sibling being female, only for the boys. The girls have a negative correlation for this card with the next older sibling being female (-.08). The boys' correlation (.29) would mean that boys with older sisters had a strong tendency to pick this particular card.

In Subpart 3, Pair 8 (building tools for the masculine card and baking articles for the feminine card) no longer has a significant correlation for girls but it is still significant for boys (girls' -.08 and boys' -.20).

In Subpart 4, Card c is negatively related to the next older sibling being male both in the case of boys and of girls (-.21 for girls and for boys -.14). It is clear that the correlation for the girls is significant while the one for boys is not. Card c (the girl dressed as a boy) shows negative correlations with the next older being female but the correlations are no more significant in the separate analysis for boys and girls (for girls -.01 and for boys -.1006).

The hypothesis stating that there is no relationship between the sex-role preference scores of a child and the sex of the next older and/or next younger sibling, is not rejected because the total ITSC score does not have any significant correlations with the sex of either the next older or the next younger sibling of the subject. The relationships between the scores for cards and subparts with the sex of the next older and/or next younger sibling are examined for more detailed information about these relationships.
Internal Consistency of the ITSC

Table 2 provides information in connection with the hypothesis that there is no relationship among performance on the four different parts of the ITSC. It is indicated that boys have both larger correlations and on a larger number of the subparts of the ITSC than do girls, in this particular sample of the five subcultures. It is clear that even though the girls have smaller correlations than those of the boys, as a group, all of the girls' correlations are significant at the .01 level and hence it can be concluded that the test is internally consistent.

Children's Responses about the Sex of the IT Figure

Tables 19 and 20 consist of correlations between the responses of children about the sex of IT and their own sex. It is indicated by the data in Table 20 that both boys and girls had a tendency to attribute the same sex to IT as their own. Many of these correlations (correlations for total ITSC score, the subpart scores and the individual cards of the ITSC) are significant either at .01 or .05 level.

Several factors in the subjects' personal and family backgrounds were found to be mutually related. These correlations are presented in Tables 21 through 28 (Appendix B.2). Since these correlations do not have any bearing on the five hypotheses of the present investigation, they are not discussed here.
Table 19. Significant correlations between the cards and the responses to the question, "What do you think IT is, a girl or a boy?"

<table>
<thead>
<tr>
<th>ITSC Cards and Scores</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;IT&quot; girl or boy X Card 1 Subpart 2a</td>
<td>-.16*</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Card 3 Subpart 2a</td>
<td>-.18*</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Score for Subpart 2a</td>
<td>.24**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Card 3 Subpart 2b</td>
<td>-.21**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Card 7 Subpart 2b</td>
<td>.16*</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Score for Subpart 2b</td>
<td>.23**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Pair 1</td>
<td>.17*</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Pair 2</td>
<td>.31**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Pair 3</td>
<td>.25**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Pair 4</td>
<td>.21**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Pair 5</td>
<td>.25**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Pair 6</td>
<td>.42**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Pair 3</td>
<td>.18*</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Score for Pairs</td>
<td>-.42**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Subpart 4a</td>
<td>-.24**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Subpart 4d</td>
<td>.42**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Score for Subpart 4</td>
<td>.35**</td>
</tr>
<tr>
<td>&quot;IT&quot; girl or boy X Total Score for ITSC</td>
<td>.43**</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of at least .20.
*p < .05 = an r value of at least .15.
Table 20. Significant correlations between the ITSC cards and the responses to the question, "What do you think IT is, a girl or a boy?"

<table>
<thead>
<tr>
<th>ITSC Cards and Scores</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT is a male X Card 1, 2a</td>
<td>.06</td>
<td>-.15*</td>
</tr>
<tr>
<td>IT is a male X Card 3, 2a</td>
<td>-.21**</td>
<td>-.12</td>
</tr>
<tr>
<td>IT is a male X Card 4, 2a</td>
<td>-.16*</td>
<td>.20**</td>
</tr>
<tr>
<td>IT is a male X Card 8, 2a</td>
<td>.20*</td>
<td>-.06</td>
</tr>
<tr>
<td>IT is a male X Score 2b</td>
<td>-.04</td>
<td>.26**</td>
</tr>
<tr>
<td>IT is a male X Card 3, 2b</td>
<td>-.24**</td>
<td>-.17*</td>
</tr>
<tr>
<td>IT is a male X Card 4, 2b</td>
<td>-.01</td>
<td>.18*</td>
</tr>
<tr>
<td>IT is a male X Card 7, 2b</td>
<td>.26**</td>
<td>.09</td>
</tr>
<tr>
<td>IT is a male X Score 2b</td>
<td>.15*</td>
<td>.23**</td>
</tr>
<tr>
<td>IT is a male X Pair 1, 3</td>
<td>.06</td>
<td>.15*</td>
</tr>
<tr>
<td>IT is a male X Pair 2</td>
<td>.15*</td>
<td>.23**</td>
</tr>
<tr>
<td>IT is a male X Pair 3</td>
<td>.23**</td>
<td>.14</td>
</tr>
<tr>
<td>IT is a male X Pair 4</td>
<td>.35**</td>
<td>.04</td>
</tr>
<tr>
<td>IT is a male X Pair 5</td>
<td>.21**</td>
<td>.13</td>
</tr>
<tr>
<td>IT is a male X Pair 6</td>
<td>.36**</td>
<td>.33**</td>
</tr>
<tr>
<td>IT is a male X Pair 7</td>
<td>-.00</td>
<td>.15*</td>
</tr>
<tr>
<td>IT is a male X Pair 8</td>
<td>.18*</td>
<td>.05</td>
</tr>
<tr>
<td>IT is a male X Score Subpart 3</td>
<td>.36**</td>
<td>.32**</td>
</tr>
<tr>
<td>IT is a male X Card a, 4</td>
<td>.23**</td>
<td>-.19*</td>
</tr>
<tr>
<td>IT is a male X Card c, 4</td>
<td>-.08</td>
<td>.20**</td>
</tr>
<tr>
<td>IT is a male X Card d, 4</td>
<td>.42**</td>
<td>.37**</td>
</tr>
<tr>
<td>IT is a male X Score Subpart 4</td>
<td>.31**</td>
<td>.32**</td>
</tr>
<tr>
<td>IT is a male X Total Score ITSC</td>
<td>.38**</td>
<td>.38**</td>
</tr>
</tbody>
</table>

**p < .01 = \text{an } r \text{ value of at least } .20.

*p < .05 = \text{an } r \text{ value of at least } .15.
DISCUSSION

Sex Role Preferences of Boys and Girls

The results section states that the mean of the total ITSC scores for boys and girls differ significantly (girls, 10.07; boys, 18.51; t value, 8.97, p > .01), indicating that boys and girls are different in their sex-role preferences as measured by the ITSC. The scores also reveal that boys' preference is more masculine than girls and girls are more feminine in their preference than boys, regardless of their belonging in their particular subculture.

Data from Table 2 tend to refute the hypothesis that there is no difference between boys' and girls' sex-role preferences among children of 4 to 6 years of age. Boys are more consistent over the subparts of the ITSC than girls for this particular sample of 4 to 6 year old children. Boys show higher correlations for a larger number of combinations of the subparts (Table 2). This finding seems to be in line with the results of some of the previous research, which indicate that a girl in American culture, as compared to a boy, is treated with permissiveness about her becoming feminine. Hence the feminine orientation of a young girl is less strong than the masculine orientation of a young boy (DeLucia, 1960; Spencer, 1963).

Related information about scores of boys and girls on the eight pairs of the Subpart 3 of the ITSC (Table 5) support the rejection of the hypothesis concerning differences in sex-role preferences of boys and girls. Figure 10 drawn from this information, reveals that in Pair 3
(sewing materials for the feminine card and the airplane parts for the masculine card), the male card is more attractive to children than the female card. It is possible that the greater attraction for the male card in this pair is caused by the airplane parts being more of a "toy" as compared to the making of a handkerchief. The child gets to play with the airplane after he has assembled the parts together but a handkerchief is a utility article, not a toy. Even if the handkerchief is considered as a fashionable accompaniment of the feminine attire, it is possible that a 4 year old girl is not as fashion conscious yet as she is interested in the toys. The sewing articles do not seem comparable to the airplane parts as far as the play value of these articles is concerned and to a child, the play value may be the most important aspect of any article. It is not impossible that more children (probably more girls) might find the use of the sewing articles more attractive if the product turns out to be as exciting as the airplane (a soft toy such as a doll). The preference of the masculine card as compared to the feminine card in this pair can be interpreted as the greater preference of the masculine trait by both boys and girls only if it can be established that in American culture a handkerchief is as attractive to a child as a toy.

The feminine cards in Pair 6 (women's shoes for the feminine card and men's shoes for the masculine card) and Pair 8 (baking articles for the feminine card and building tools for the masculine card) were more attractive to children than the masculine cards of these two pairs. It
is possible to think that the outcome of the baking activity (the delicious cookies) is more attractive than the outcome of the building tools. However, it is difficult to suggest why children select women's shoes as compared to men's shoes. It may be that the children are more used to finding women's heeled shoes in the nursery school's dress-up articles. Also the heeled shoes make a better playful tick-tock racket than men's shoes. It is not impossible that the young boys tend to pick women's shoes upon being given a choice because they lack a masculine model around the home and school while girls have a feminine model available most of the time.

The possibility of boys' picking a feminine card because of not having had enough time with a masculine model is supported by the conclusions of previous research (Hartley, 1959).

On Subpart 4, more boys picked Card a (girl dressed as a girl) than girls picked Card d (boy dressed as a boy). As can be seen in Table 5, 13 percent of girls picked Card d while 20 percent of boys picked Card a. Although this difference is not significant, the direction of the difference may support Hartley's finding (1959) that due to lack of masculine models boys may have a harder time in the process of developing appropriate sex-role behavior.

It is interesting to note that although boys show confusion in terms of their appropriate sex-role, when the total scores of the four subparts are considered (Table 2) boys are more consistent than girls in their high masculinity scores on the ITSC. It has been found in several studies of preschool children (Brown, 1956; 1957; Fauls and Smith, 1956; Gilbert,
1957; Rabban, 1950) that boys are more aware than girls about what is expected of them by the culture.

The causes for greater awareness of cultural sex-role expectations on the part of boys are suggested in several previous research studies. One of the strong reasons seems to be that more stringent demands are placed on boys as compared to girls (Hartley, 1959). Also, such pressure creates greater anxiety in boys (Hartley, 1959) and the dilemma of having to learn the appropriate male role with only feminine models being available further intensifies the difficulty (Lynn, 1962). An outcome of such kind of learning is much greater resemblance of girls to their mothers as compared to boys to their fathers (Beier and Ratzberg, 1953; Gray, 1959; Lazowick, 1955; Roff, 1950; Scoeppe, 1953). What may add to the adversity of the situation is that boys also are found to have poorer relationships with their fathers as compared to the relationships girls have with their mothers (Meltzer, 1941; 1943; Nimkoff, 1942). It is assumed that the quality of relationship with the model affects the identification of the child and hence also may influence his sex-role development (Mowrer, 1940; Symonds, 1946).

With all these difficulties, anxiety and pressure, it is not too hard for the boys to be confused enough to pick the feminine card from some of the masculine-feminine pairs (as they did on Pairs 6 and 8 of Subpart 3). This is not to mention that the cause of a particular card being attractive to children may lie in the content or the picture-presentation of the card, i.e., apart from the sex-role connotations of the object or the activity pictured in the card. Even if, in fact, it
were the feminine aspects of a card that were attractive to a boy, it seems understandable that in spite of being consistent over the scores of the four subparts, occasionally the boys pick a feminine card. Such instability of preference does not seem out of the way in the light of all the pressures, anxieties and uncertainties a boy has to face, in the American culture, in connection with his sex-role learning.

The uncertainty that boys may feel about their appropriate sex-role has been detected in some other research studies also, in which the children were given an opportunity to play with toys. The two variables, (a) the attractiveness of a toy and (b) the sex-role orientation of the toy, were presented to children in a particular combination. Hartup, Moore and Sager (1963) found that upon being permitted to play individually with a selection of attractive feminine toys and unattractive neutral toys, most of the boys avoided the feminine toys, spending their time with the unattractive neutral ones. The avoidance of feminine toys was less when an adult was not present in the situation (Hartup, Moore and Sager, 1963; Kobasigava, Arkaki and Awaguni, 1966). Further when a boy observed a same-sex peer playing with a feminine toy, his avoidance of the feminine toy was reduced (Kobasigava, 1966). In the case of girls, the avoidance aspect was not as strong as that among boys. Hence in the present study the uncertainty among boys about their appropriate sex-role supports the findings of previous research (Hartup, Moore and Sager, 1963; Kobasigava, Arkaki and Awaguni, 1966; Kobasigava, 1966).

The boys may feel uncertain about their sex-role behavior because of the father's not being available in the home. As to why this
situation arises in the American family environment, is due to the
culture of the American society, to a large extent. Some researchers
and theorists have discussed the underlying causes in the cultural
patterns of the American society that may give rise to the situation of
greater uncertainty in the boys as compared to the girls (Nash, 1965;
Lynn and Sawrey, 1959; Hetherington, 1966; Brown, 1958; DeLucia, 1960;
Spencer, 1963).

From the results of the present investigation, it is hard to say
what children perceive in terms of sex-roles and what changes occurring
in the American culture affect this perception. It is possible to say
that the boys and girls in this sample of five American subcultures,
differ from each other in the same direction of traditional "masculine"
and "feminine". In conclusion, it would seem as though there were some
factors causing boys and girls to develop masculine and feminine
preferences at the preschool age level.

Sex-Role Preferences of Boys and Girls From Different Subcultures

Since the total ITSC score means among the five subcultures, do
not differ either for boys or for girls, the two hypotheses stating
that: (1) there is no difference in the sex-role preference scores of
boys among the subcultures; and (2) there is no difference in the sex-
role preference scores of girls among the subcultures, cannot be rejected.
The significant F ratios for boys and girls together in a group as well
as the F ratios for boys and girls separately in two groups are presented
in Tables 8 through 15. Previous research tends to support these
hypotheses. Hall and Keith (1964) and Rabban (1950) found that children
from working class homes are earlier and more clearly aware of sex-role patterns than are children from middle class homes. The taboos against effeminate behavior also have been found to be stronger in the lower socioeconomic families (Hartley, 1959). Lefkowitz's data (1962) did not support these findings but instead, like the present study, indicated that there were no differences based on social class level.

A different approach by Minuchin (1965), about the problem of differences in sex-role development varying among groups, revealed that the home and school environments "modern" or "traditional" tended to affect the sex-role learning of children, particularly in the case of girls. It is quite possible that lower class families are more traditional, in some of the groups, than are middle class families and hence in some of the studies (Hall and Keith, 1964; Rabban, 1950), the differences turned out to be significant. The actual factor responsible for the difference may still have been the one of a "traditional" or a "modern" attitude within the family. The "modern" home probably allows more flexibility in sex-role development, as the roles of the two sexes are moving toward a convergence in the modern nuclear family (Brown, 1958). The "modernness" or "traditionality" of a home may depend on the rural or urban, or the city or small town residence of the family to an extent, beside being affected by the social class level.

Sex-Role Preference and the Sex of Next Older and/or Next Younger Sibling

The hypothesis stating that there is no relationship between the sex-role preference of a child and the sex of the next older and/or
next younger sibling was not rejected. The sex of the next older and/or next younger sibling is not related to the sex-role preference of the subjects as far as the present data are concerned (Table 16).

The data in Table 17 indicate that certain individual cards correlate significantly with the sex of the next older and/or next younger siblings. To understand the situation better, a look at Table 18 is necessary because the same correlations as in Table 17 are presented in Table 18 separately for boys and girls. The discussion of these correlations between the sex of siblings and the individual cards now follows for each subpart of the ITSC.

Subpart 2a

Boys with an older brother picked Card 3 (doll) and Card 4 (dump truck) significantly more frequently while girls with an older brother picked Card 4 (dump truck) more frequently than any other card.

Card 3 (doll) pictures a feminine item and it is surprising that boys with older brothers preferred it more than all the other cards of Subpart 2a. The other card for which there is a positive relationship for boys having an older brother is Card 4 (dump truck) but the preference for this card was significant only at the .05 level while the preference for Card 3 (doll) was significant at the .01 level. Although the "doll" is a feminine item in the ITSC, it may be that young boys take it as merely something that children can play with rather than as something definitely feminine. Or, a doll can also be seen as a baby only (neuter in terms of sex) rather than as a male or
a female baby. But this particular doll has a dress on and hence this possibility seems less likely.

Among girls with older brothers, there is no significant preference for the doll (Card 3) but instead, there is a preference for the dump truck (Card 4), significant at the .05 level. It may even be true that the effect of the next older sibling's being a male is stronger for girls than for boys, possibly because of either one or both of the following reasons: (1) girls are more sensitive to the preference of an older sibling than are boys; and (2) an opposite-sex sibling exerts greater influence on sex-role preference than a same-sex sibling.

This seems to hold true for Card 1 (necklace) also. While girls with older brothers have a negative correlation for the necklace (Card 1) at the .05 level (they tended not to pick it), the boys with older brothers tended to pick it (they had a positive significant correlation for Card 1 significant at the .05 level).

When the next older sibling was a female, girls and boys both tended not to pick Card 2 (tractor) and Card 4 (dump truck) but this negative correlation was significant only in the case of girls. Since both the above cards are of masculine orientation in the ITSC, it seems logical that girls with older sisters did not pick these cards. However, the findings about the boys do not go along with this pattern (not picking the feminine card) but instead they show a much greater tendency to pick the feminine card than girls with older brothers.

Card 7 (gun) has a positive significant correlation for both boys and girls with older sisters at the .01 level. This card is masculine
in orientation and again it is hard to understand why both boys and girls with older sisters would tend to prefer it.

Card 8 (high chair) is preferred by both boys and girls with older sisters. It may mean that the older sister's preference had something to do with the children's preferring Card 8. On the other hand, a high chair may not seem either masculine or feminine to children and may seem only a baby article that both boys and girls use. Hence, it may seem neuter to children in terms of sex-role preference. Since many of the children are between ages 4 and 5, and many are youngest children in the family, they may still identify with being a baby rather than being a male or a female child (because being the youngest, they may still be the "baby" of the family).

Subpart 2b

Card 3 (dishes) is the only one for which the score for boys with older sisters show a positive correlation significant at the .01 level. It is a surprise that the girls' correlation is negative and is not significant even at the .05 level. It is possible, as suggested before, that the opposite-sex sibling has a greater influence on the sex-role preference of a child as compared to the same-sex sibling.

Subpart 3

Only one pair, i.e., Pair 8, has a correlation significant at the .05 level in the case of boys with a younger sister. These boys prefer baking articles, it may again be the influence of the opposite-sex sibling.
Subpart 4

Card c (girl dressed as a boy) is the only one that had a significant negative correlation in the case of girls with older brothers. Scores for boys with older brothers also have a negative correlation but they are not significant.

Subpart 4 consists of four child figures, one pictured on four cards. Each of these figures may be considered a combination of the biological and cultural sex combined in different degrees. The following may clarify the combinations:

(a) girl dressed as a girl — both biologically and culturally feminine
(b) boy dressed as a girl — biologically masculine and culturally feminine
(c) girl dressed as a boy — biologically feminine and culturally masculine
(d) boy dressed as a boy — both biologically and culturally masculine

Card c is the combination of being biologically feminine and culturally masculine. It is the girls who have a definite tendency to avoid this particular card as shown by the correlations (Table 18). This may be a good sign in terms of sex-role development that the girls do not prefer cultural masculinity. However, they also do not prefer cultural femininity. It may be that they are unsure about what to prefer but know what to avoid. It is also possible that the sex-role development in the American culture involves a two-stage process: (1) avoiding the opposite-sex role, and (2) adopting the role of the own sex members. This seems congruent with the developmental trend among preadolescents, who find it necessary to avoid and despise the peers of the opposite sex.
In the findings of this study, only the girls show this pattern. Boys show the same trend of not preferring the biologically feminine and the culturally masculine combination. This may very well have come about as an effect of facing only the feminine model for a large part of the day, which has been concluded and suggested by many previous research studies (Roff, 1950; Schoeppe, 1953; Beier and Ratzberg, 1953; Lazowick, 1955; Brown, 1958; Gray, 1959; Hartley, 1959; Lynn and Sawrey, 1959; Lynn, 1962; Nash, 1965; Hetherington, 1966).

Further, "femininity" to a young child of either sex may mean dependency and submissiveness. These elements are common in a feminine role as well as in a child role in the American culture. As a girl stops being a child, she has to carry on being submissive and dependent. When a boy moves toward the adult role, he has to change over to a different set of characteristics that belong in the masculine role (e.g., independence, dominance, aggressiveness). This seems very much like a parallel to the ideas of Kagan (1964) and Lynn (1962), wherein the boy has to make a non-sex-role, mother-identification to the secondary, sex-role, father-identification. The girl, on the other hand, just needs to continue her identification with the mother and hence move in the same direction as before. If this, in fact, is true then it is not surprising to find both young boys and girls avoiding cultural masculinity in the data of the present study. If they are in the child role, which to an extent is an opposite of the masculine role, it is natural that they avoid masculinity in order to guard the already learned aspects of the
child role (similar to the feminine role). It also can be seen as natural that they do not make any attempt to avoid the feminine role.

The avoidance for Card c cannot be because the child figure's biological and cultural sex are incongruent. If that were the case, Card b also should have been avoided for the same reason. In the analysis of the present study, no other card beside Card c had a significant correlation with the sex of the next older and/or next younger sibling.

Further, it is interesting to see that boys and girls with older brothers avoid cultural masculinity significantly frequently. The cause may lie in detesting of a sibling rival who is older and hence more competent than the subject himself.

Internal Consistency of the ITSC

The hypothesis that there is no relationship among performances on the four different parts of the ITSC is rejected on the basis of the information presented in Tables 1 and 2. Consistency in magnitude and direction of correlations among the four subparts (as shown in Table 2) is greater for boys over a larger number of the subpart combinations. All of the r values are significant at or beyond the .001 level for both boys and girls. There is definite consistency for both the sexes, even though the boys' correlations are higher than the girls' correlations. Hence, the internal consistency of the ITSC is supported by this sample of 177 children (106 boys and 71 girls) of 4 to 6 years of age, who were the subjects involved in the present investigation.
The correlations between the ITSC scores (individual cards, the subscores and the total ITSC score) on the one hand and the responses to the question about IT's sex on the other hand are presented in Tables 19 and 20. Most of the cards and subscores have a significant correlation with the response to the sex of IT. The total ITSC score has a positive significant correlation for both boys and girls. Both boys' and girls' responses to the question were sex-appropriate. Girls thought IT was a girl and boys thought IT was a boy. In some of the earlier studies (Kohlberg and Zigler, 1961; Lansky and McKay, 1963) attempts have been made to discover whether or not both boys and girls think IT to be a masculine figure rather than a neuter one. In one research study (Lansky and McKay, 1963), the IT figure was concealed in an envelope and it was found that more boys thought IT to be feminine than girls thought IT to be masculine.

Lansky and McKay's finding (1963) was contradictory to the notion supported by the findings of other research studies that both boys and girls seemed to think IT to be a boy (Brown, 1956, 1957; Hall, 1960; Lowe, 1957; Handy, 1954; Hogan, 1957; Hartup and Zook, 1960). In all of these studies, the subjects saw the IT figure throughout the administration of the scale and hence, the suspicion that IT may seem more masculine to children (regardless of their own sex) than it seems to be neuter, was strengthened.

Kohlberg and Zigler (1961) tried to look into the problem by asking direct questions. In their study, children were shown the IT figure and asked if IT was a boy or a girl. In response to the question about the
sex of the IT figure, almost all of the boys and half of the girls thought IT to be a boy. When the IT figure was referred to as "her" instead of "it", girls made significantly more feminine choices. When the IT figure was referred to as "him" instead of "it" in another trial, no changes occurred in the boys' responses.

In the results of the present study, the same question as that asked by Kohlberg and Zigler was put to all children at the end of the test as an additional item. There were two differences between the situation in the present study and the situation in the Kohlberg and Zigler study (1961); (1) the children in the present investigation never saw the IT figure, and (2) the IT figure was always referred to as "IT", never as "him" or "her".

The results of the present study indicate that boys and girls thought IT to belong to their own sex, upon not seeing the IT figure at all. This finding was significant. A comparison of the results of the present study and those of the other two studies (Kohlberg and Zigler, 1961; Lansky and McKay, 1963) would lead one to suspect that the Illustration of the IT figure is not appropriate for the purpose of the ITSC, as it is not seen as neuter by children. (See illustrations in Appendix A.2.

Theoretical Implications

As mentioned in the introduction, theoretical formulations and research findings lead one to suspect that a child's sex-role development is more likely to be influenced by his immediate culture group (the subculture to which he belongs) rather than the cultural patterns of
the whole society at large. The subculture is the second group in terms of most direct contact with the child, the first one being the family. Some research studies (Rabban, 1950; Hall and Keith, 1964; Hartley, 1959) have indicated differences between social classes in terms of sex-role learning. But Lefkowitz (1962) reports results showing no differences among social classes in terms of sex-role behavior and thus contradicts the results of the above three studies (Rabban, 1950; Hall and Keith, 1964; Hartley, 1959). The present investigation also has derived results supporting Lefkowitz's findings (1962). In this investigation, there are no differences among the five subcultural groups.

It is quite possible that sex-role behavior differs in children from "traditional" and "modern" home and school environments (Minuchin, 1965) rather than between lower and middle class subcultures. The results obtained by Minuchin (1965) indicate that there are differences between children of these two groups as far as sex-role behavior is concerned. "Traditional" environments foster earlier and clearer adoption of appropriate sex-role behavior while the "modern" environments allow for flexibility and deviation from convention. It may well be that the subjects of the other research studies (Rabban, 1950; Hall and Keith, 1964), when they were divided according to social class, also had the bias of being divided by "traditional" and "modern" backgrounds. Later, probably this bias was absent in the group of subjects (that Lefkowitz studied) belonging to different social classes, and hence the differences between the sex-role behaviors of children from different social classes were not supported. The same may have been the case with the
subjects of the present study. Minuchin (1965) does not state if the "modernness" and "traditionality" of her subjects were related to any of the social classes. Since in the other research studies (Rabban, 1950; Hall and Keith, 1964; and the present study), social classes were the only basis for differentiation, it is hard to say if the lower class families, are in fact more "traditional" than the middle class families. At any rate, it is certain that the results of the present study indicate no significant differences at all, between either girls or the boys of the five subcultures involved. The F ratios were far too low to be significant.

It may be a possibility that the subcultures are representative enough of the total societal culture, in whatever cultural patterns (e.g., rules, conventions, mores) they provide for the family and hence there are no differences among the performances of children from the five groups.

It is true that any subculture can allow for variety in cultural patterns for its members only within limits. These limits are defined by the culture of the society at large. A subculture can allow for variations over a range of behavioral patterns that are acceptable by the society's culture as a whole. It is possible that the American culture values masculinity in males and femininity in females to an extent that none of the subcultures can overlook this emphasis in the socialization of its young ones. In other words, the subcultures do a sincere and an earnest job of representing the society's culture to their members. Linton (1936) has stressed that it is important to study an individual
as a member of the smaller group (as opposed to just being a member of the total society) as his status and role in the smaller group is likely to influence his behavior more directly. It seems that in the case of the five subcultures involved in the present study, the smaller subcultural group of a subject does not make any difference in the sex-role preference of the subject. Probably, the five subcultures are congruent with the total culture as far as the sex-role learning is concerned.

It would help children in sex-role learning if an optimum environment is provided for them. Finding out that children from different subcultures do not differ in terms of sex-role development supports the conclusion that the differences existent between subcultures are not responsible for influencing sex-role behavior. In other words, the characteristics over which the subcultures differ are not components of the optimum environment. There are some other factors, which may be common to all five subcultures, that have a direct bearing on the sex-role development in children. A review of the literature in the field suggests the possibility of five such factors: (1) degree of parental masculinity and femininity, (2) parents' availability as models for children, (3) parents' availability for interactions with children, (4) reinforcement methods parents use with the child, and (5) nurturance level of the parents.

It is possible that the above five factors do not differ over the subcultures but instead, they differ only from family to family and they may well contribute to building the optimum environment for appropriate and healthy sex-role development of the children.
Implications for Parents

According to the results of the present investigation and some previous research (Hartley, 1959; Hartup, Moore and Sager, 1963; Kobasigava, Arkaki and Awagunu, 1966; Kobasigava, 1966), preschool children do not seem to be very certain and stable in their sex-role behavior. This is particularly true of boys. In the present study, boys from all the subcultures, while consistent in responses to the sub-parts, were different in their responses to individual cards. It is thus very possible that factors in the family environment rather than the subcultural environment make a direct contribution to sex-role learning. Some researchers support this possibility (Kagan, 1964; Lynn, 1962; Johnson, 1963; Lefkowitz, 1962; Mussen and Distler, 1959; Mussen and Distler, 1960; Mussen and Rutherford, 1963; Payne and Mussen, 1956).

There has been an attempt to see how societal factors influence the roles of the parents and hence have an indirect effect on the sex-role learning of young children. Nash (1965) recognizes that to scientists from many other societies, American child rearing practices appear definitely matricentric. Some of the American researchers also suggest that the relative neglect of the father may have distorted the understanding of dynamics of development of children and adversely affected the rearing of the males (Hetherington, 1966; Lynn and Sawrey, 1959). The possible causes for this may be: (1) the father is the sole wage earner and thus he leaves all of the child rearing responsibility to the mother; (2) the cultural philosophy of child rearing has been accepted
rather uncritically by the American social scientists as the only and the most desirable pattern of child rearing (Nash, 1965).

A healthy relationship of the child with his father is important and the lack of it may contribute psychosocial difficulties such as delinquency (Nash, 1965) and homosexuality (Brown, 1958). The cultural pattern also makes a distinction in the amount of pressure for socialization exerted on the boy and on the girl (DeLucia, 1960; Spencer, 1963). Curiously enough, this distinction is made also in the area of number of privileges accorded to men and women, with men's privileges exceeding those of women's (Bennett and Cohen, 1959).

Greater privileges to men as compared to those accorded to women is a situation found in several cultures other than the American culture (Barry, Bacon and Child, 1957). There is some doubt about whether or not children perceive the total cultural situation as it is perceived by the researchers and scientists. It is possible that if the cultural situation is not perceived by children, it will have less influence on their sex-role development than the situation in the child's own family (i.e., if in the family, the greater pressures and more privileges are directed toward boys as compared to girls). It is believed (Brown, 1958) that the roles of the sexes are not two separate and discrete entities. Masculinity and femininity, in terms of psychosocial behavior and reactions are present in both men and women. The family has a mother and a father whose activities show less demarkation of "masculine" and "feminine" traditional roles. Both father and mother at times do things together and at other times interchange their roles according to the
demands of the circumstances in the current times and the societal situation (Brown, 1958).

Recently, girls have been found to have an increasing interest in activities such as outdoor, team-type and active sports (Rosenberg and Sutton-Smith, 1959). Educational experience and professional opportunities are more nearly equal, also, for the two sexes in the recent years than they were before (Brown, 1958). It is quite possible that such changes in the roles of the sexes have an influence on the child's sex-role development (Hartley, 1960; Spencer, 1967). It has been suggested that young children only see the sex-roles as they are at one point in time rather than recognize the process of occurring changes and hence they may not be influenced much by such cultural changes (Hartley, 1959).

Awareness on the part of the parents about the optimum environment for appropriate sex-role development, would help the children in the expected direction. Appropriate sex-role development would help children further in their peer adjustment through acceptance from others and self-acceptance. Some research suggests that lessening the pressure on boys and providing more time with the father enhances boys' sex-role development. On the other hand, increasing direction and improving guidance for girls in the area of sex-role development may help girls to refrain from lagging behind the boys in this particular area.

Since a child of 4 to 6 years of age spends a larger amount of his time within the home and with the family, parents are the people with the greatest contributions to make toward the enhancement of development
and adjustment of the child at this particular age level. During the preschool years, it seems as though the child is in the process of developing sex-role behavior. His preferences as revealed by this study show that he is not too young for sex-role development as he has already advanced some in that area. On the other hand, he has not achieved complete maturity in the area. He could certainly use lack of obstructions, if not direct help, in moving toward the appropriate sex-role behavior. No one more than a pair of understanding, interested and caring parents can provide this for a young, vulnerable and growing youngster, because he is most directly dependent on his parents.

Implications for Future Research

According to the analysis of data of the present investigation, the five subcultures do not differ in terms of the sex-role development of 4 to 6 year old children. Although this is true for the subjects in the investigation, additional research is needed to either confirm or to refute these findings. Results of the present investigation suggest several additional possibilities for future studies of sex-role development of preschool children:

An intensive study of a group of children and parents could be conducted in which the children are studied in terms of their sex-role behavior while the parents are studied to obtain information on the following variables:
(a) parental nurturance level
(b) parental reinforcement methods
(c) availability of parents as models
(d) availability of parents as interaction agents
(e) parents' own sex-role behavior patterns

A study of subcultures and the "modern" and "traditional" environments as related to social classes might yield fruitful information on the relative importance of these factors. Children from the following groups could be studied in detail for their sex-role development, using more than one measurement device: (1) middle class "traditional", (2) middle class "modern", (3) lower class "traditional", and (4) lower class "modern".

Since the ITSC seems to be a good measure of detecting sex-appropriate sex-role behavior in boys and girls, those children with extreme scores (very appropriate and very inappropriate sex-role responses) on the ITSC could be delineated and their family and subcultural backgrounds studied intensively.

Children with extreme scores on the ITSC (a large enough sample of children on either extreme, i.e., feminine girls, feminine boys, masculine girls and masculine boys) could be given other tests of personality and adjustment to see if appropriate and inappropriate sex-role responses are related to other areas of social adjustment. If so, then it would help to study as to when and in what particular areas the relationship takes a stronger form.
Miriam Johnson's (1963) research attempts in terms of Parsons' theory (1955, 1958) of instrumental and expressive parental orientations seems to be a very replicable research approach. The instrumental and expressive orientations of the parents of children with extreme scores could be studied to see if the pattern of expressive and instrumental orientation is maladjusted in the families of boys and girls with very inappropriate sex-role preferences.

It may clarify the influence of the same-sex and the opposite-sex sibling if the subjects could be divided into the following eight mutually exclusive groups:

1. Boys with older brother
2. Boys with older sister
3. Boys with younger sister
4. Boys with younger brother
5. Girls with older sister
6. Girls with older brother
7. Girls with younger brother
8. Girls with younger sister

Sex-role preferences of children from different cultures can be studied by adapting the ITSC to the environment and conditions in that particular culture. For example, it may be very interesting and enlightening to compare sex-role preferences of children from the different states of India, among which even language, clothing and food habits differ. Children from different castes and religious backgrounds as well
as from rural and urban areas of residence could be compared in terms of
their sex-role preferences. Obtaining such data on children from India
would provide for comparisons between boys and girls in India as well as
between Indian and American girls and Indian and American boys.

One last suggestion in terms of future research seems in order at
this point. The definition of the term "subculture" needs to be more
definitely and clearly defined. It is difficult to determine, after the
experience of the present investigation, if the white or Black middle
class are one subculture or two. The same is true of the white and Black
lower-class groups. With the extensive use of mass media, like television
in the American culture, it might well be that even the lower and middle
classes form one subculture, in terms of the two functions of a
"subculture" or "reference group". It seems quite possible that the
setting of standards for evaluation of self and others, are two functions
performed identically for Black and white, and lower and middle class
groups.
SUMMARY

The purpose of the present investigation was to study sex-role preferences of preschool age boys and girls from U.S. subcultures by the use of the It Scale for Young Children.

Another aim of this investigation was to detect relationships between sex-role preferences and certain personal and family variables.

The five null hypotheses of the study were:

1. There are no differences between boys and girls in terms of their sex-role preferences.
2. There are no differences in the sex-role preferences of boys from the five different subcultures.
3. There are no differences in the sex-role preferences of girls from the five different subcultures.
4. There is no relationship between the sex-role preference of a subject and the sex of his/her next older and/or next younger sibling.
5. There are no relationships among the four different subparts of the ITSC.

The subjects belonged to five different subcultural groups of the United States, which are following:

1. Group 1 - Black middle class (children of professionals, i.e., staff and faculty members of universities and staff members of one of the veteran's hospitals.
(2) Group 2 - Black lower class (children eligible for Headstart programs, and from day care centers that include children of families with the same income levels as those involved in the Headstart programs.

(3) Group 3 - White middle class (children of professionals, mainly children of university staff and faculty members.

(4) Group 4 - White lower class (children from Headstart programs, and from day care centers having the children from the same income levels as the Headstart programs.

(5) Group 5 - Tama Indians, Mesquaki Tribe (children of families at the Indian settlement in Tama, Iowa).

The instruments used to collect data were the ITSC* and the PPVT**. The ITSC was used to obtain sex-role preference scores while the PPVT helped to exclude children who were slow learners and mentally retarded.

The subjects were individually administered the PPVT and the ITSC, in that order, in their own nursery schools or play centers. The duration of the two tests together lasted between 15 and 25 minutes, on an average.

For statistical analysis, a correlational analysis to study relationships between personal and family variables and the sex-role

---

*The It Scale for Young Children (Daniel G. Brown, Psychological Specialists, 1956).

**Peabody Picture Vocabulary Test.
preference scores was computed. To see differences in sex-role preference scores of children from different subcultural groups, the analysis of variance was computed.

The following conclusions are supported by the data involved in this investigation: (1) preschool boys and girls differ from each other in their sex-role preferences, regardless of their belongingness in a particular subculture; (2) preschool boys from the five different subcultures do not differ in their sex-role preferences; (3) preschool girls from different subcultures do not differ in their sex-role preferences; (4) the sex of the next older and/or next younger sibling is not related to the sex-role preference of a preschool child and (5) the IT Scale is an internally consistent device for measurement of sex-role preferences.

This investigation was a first attempt at finding out whether or not the particular culture of a subculture is related to preschool children's sex-role preferences. Since it was found that the subcultures were not different from each other in their relation to sex-role preferences of preschool children, future research attempts can be made in two directions: (a) an attempt to confirm that the subcultures do not really relate to the sex-role preferences of children, and (b) an attempt to detect factors that may relate to (and may have influenced) the sex-role preferences of preschool children. It is quite possible that these variables may belong in the child's personal and family backgrounds.
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For their cooperation and willingness to help, appreciation is also due to the thesis committee members, Dean Helen LeBaron, Dr. Edwin Lewis, Dr. Wilbur Layton, Dr. Ronald Powers and Dr. Leroy Walins.

The understanding, tolerating and encouraging attitude of several preschool teachers, in the agencies where data was collected, is hereby recognized and appreciated.

The warm acceptance and a willing cooperative attitude of the 177 girls and boys, who were the subjects in this investigation, will be cherished as one of the most wonderful memories in the writer's mind.

Last, but not least, the financial assistance provided by the Ford Foundation Fellowship is gratefully acknowledged.
Information sheet (research design) given to the agency authorities.

**AIM**

1. To find differences between Negro, White and Indian children's preferences of toys and other things (work around the house, personal belongings such as shoes, cosmetics, shaving kit, etc.) that are culturally considered as primarily feminine or masculine.

2. To find differences between boys' and girls' choices of these toys among all the subjects as well as within each subgroup of Negro, White and Indian.

3. To find differences between lower and middle class children's choices of these toys.

**EQUIPMENT**

(a) The PPVT (Peabody Picture Vocabulary Test) to see if the vocabulary levels of all the children are more or less as the performance on the other test may be affected by the vocabulary level of the child in terms of how much he understands of what the investigator says to him. (7 to 10 minutes)

(b) The ITSC (It Scale) to see whether the child picks up "masculine" or "feminine" oriented toys out of a group of toys and other things.

**PROCEDURE**

Both tests will be given to each child of the group, individually in a quiet area, where there is little in the surroundings to distract him from the test. The furniture needed will be a small table and two chairs so that the pictures in the test can be presented to the child as he sits in front of the investigator.

**SUBJECTS**

Subjects will be different groups of boys and girls (Negro, White and Indian) ranging from the ages of 4 years to 6 years. These will be normal children (without speech and hearing defects and without a suspicion of being mentally retarded or emotionally disturbed).

**BACKGROUND INFORMATION**

Some demographic data will be needed for each child, such as the number of siblings younger and older than him and their sexes, the child's general health, the family's residence in terms of rural and urban, the parents' occupations and approximate income level, the family's religious preference, etc.
The picture of the IT figure and the Card b and Card d of Subpart 4.
APPENDIX A.3
<table>
<thead>
<tr>
<th>Calculation</th>
<th>DERIVED SCORES</th>
<th>Year</th>
<th>Month</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling item</td>
<td>MENTAL AGE (M.A.)</td>
<td>Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Errors</td>
<td>INTELLIGENCE QUOTIENT (I.Q.)</td>
<td>Born</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw Score</td>
<td>PERCENTILE (%)</td>
<td>Age</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examined: ___________________  Time: ___________________  Code: ___________________
<table>
<thead>
<tr>
<th>Number</th>
<th>Word 1</th>
<th>Number</th>
<th>Word 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>table</td>
<td>51</td>
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<td>bus</td>
<td>52</td>
<td>hive</td>
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<td>3</td>
<td>horse</td>
<td>53</td>
<td>real</td>
</tr>
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<td>4</td>
<td>dog</td>
<td>54</td>
<td>insect</td>
</tr>
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<td>5</td>
<td>shoe</td>
<td>55</td>
<td>sawing</td>
</tr>
<tr>
<td>6</td>
<td>finger</td>
<td>56</td>
<td>weapon</td>
</tr>
<tr>
<td>7</td>
<td>coat</td>
<td>57</td>
<td>bannister</td>
</tr>
<tr>
<td>8</td>
<td>children</td>
<td>58</td>
<td>idol</td>
</tr>
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<td>bell</td>
<td>59</td>
<td>lobe</td>
</tr>
<tr>
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<td>turtle</td>
<td>60</td>
<td>walrus</td>
</tr>
<tr>
<td>11</td>
<td>climbing</td>
<td>61</td>
<td>filin'</td>
</tr>
<tr>
<td>12</td>
<td>lamp</td>
<td>62</td>
<td>shears</td>
</tr>
<tr>
<td>13</td>
<td>sitting</td>
<td>63</td>
<td>horror</td>
</tr>
<tr>
<td>14</td>
<td>jacket</td>
<td>64</td>
<td>chef</td>
</tr>
<tr>
<td>15</td>
<td>pulling</td>
<td>65</td>
<td>harvesting</td>
</tr>
<tr>
<td>16</td>
<td>rings</td>
<td>66</td>
<td>construction</td>
</tr>
<tr>
<td>17</td>
<td>nail</td>
<td>67</td>
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</tr>
<tr>
<td>18</td>
<td>hitting</td>
<td>68</td>
<td>assistance</td>
</tr>
<tr>
<td>19</td>
<td>tire</td>
<td>69</td>
<td>evoking</td>
</tr>
<tr>
<td>20</td>
<td>ladder</td>
<td>70</td>
<td>thoroughbred</td>
</tr>
<tr>
<td>21</td>
<td>snake</td>
<td>71</td>
<td>ass-cable</td>
</tr>
<tr>
<td>22</td>
<td>river</td>
<td>72</td>
<td>ornament</td>
</tr>
<tr>
<td>23</td>
<td>ringing</td>
<td>73</td>
<td>caterer</td>
</tr>
<tr>
<td>24</td>
<td>baking</td>
<td>74</td>
<td>natural</td>
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<td>25</td>
<td>cone</td>
<td>75</td>
<td>dissatisfaction</td>
</tr>
<tr>
<td>26</td>
<td>engineer</td>
<td>76</td>
<td>scholar</td>
</tr>
<tr>
<td>27</td>
<td>pecking</td>
<td>77</td>
<td>oasis</td>
</tr>
<tr>
<td>28</td>
<td>kite</td>
<td>78</td>
<td>soldering</td>
</tr>
<tr>
<td>29</td>
<td>rat</td>
<td>79</td>
<td>astonishment</td>
</tr>
<tr>
<td>30</td>
<td>time</td>
<td>80</td>
<td>tread</td>
</tr>
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<td>31</td>
<td>sail</td>
<td>81</td>
<td>thatched</td>
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<td>32</td>
<td>ambulance</td>
<td>82</td>
<td>jurisprudence</td>
</tr>
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<td>33</td>
<td>trunk</td>
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<td>scaling</td>
</tr>
<tr>
<td>34</td>
<td>sailing</td>
<td>84</td>
<td>arch</td>
</tr>
<tr>
<td>35</td>
<td>hook</td>
<td>85</td>
<td>dwelling</td>
</tr>
<tr>
<td>36</td>
<td>tweezers</td>
<td>86</td>
<td>lubricating</td>
</tr>
<tr>
<td>37</td>
<td>wasp</td>
<td>87</td>
<td>pedestrian</td>
</tr>
<tr>
<td>38</td>
<td>barber</td>
<td>88</td>
<td>valve</td>
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<tr>
<td>39</td>
<td>parasol</td>
<td>89</td>
<td>jubilant</td>
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<td>40</td>
<td>parachute</td>
<td>90</td>
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<td>41</td>
<td>temperature</td>
<td>91</td>
<td>cord</td>
</tr>
<tr>
<td>42</td>
<td>captain</td>
<td>92</td>
<td>ticket</td>
</tr>
<tr>
<td>43</td>
<td>whale</td>
<td>93</td>
<td>coat</td>
</tr>
<tr>
<td>44</td>
<td>cash</td>
<td>94</td>
<td>rodent</td>
</tr>
<tr>
<td>45</td>
<td>balancing</td>
<td>95</td>
<td>confiding</td>
</tr>
<tr>
<td>46</td>
<td>cobweb</td>
<td>96</td>
<td>r-climbing</td>
</tr>
<tr>
<td>47</td>
<td>clicks</td>
<td>97</td>
<td>frisking</td>
</tr>
<tr>
<td>48</td>
<td>argument</td>
<td>98</td>
<td>coat</td>
</tr>
<tr>
<td>49</td>
<td>hydrant</td>
<td>99</td>
<td>barrier</td>
</tr>
<tr>
<td>50</td>
<td>binocular</td>
<td>100</td>
<td>seal</td>
</tr>
</tbody>
</table>
1) Introduction of the child named "HIT".

2) Toy pictures

<table>
<thead>
<tr>
<th>Card no.</th>
<th>Score</th>
<th>(b) Card no.</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3) Card Pictures in Pairs

<table>
<thead>
<tr>
<th>Indians</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothes</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Handkerchief/Airplane</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Face Things</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Tools/Household Objects</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoes</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Children Playing</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Building/Baking/Cooking</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4) The Four Children

<table>
<thead>
<tr>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
</tbody>
</table>

a) The girl dressed as a girl.
b) The boy dressed as a girl.
c) The girl dressed as a boy.d) The boy dressed as a boy.

5) Is "It" a girl or a boy?
(1) CHILD’S NAME
(4) FATHER’S AGE
(7) MOTHER’S AGE

(10) CHILDREN IN THE FAMILY
(a) No.
(b) Sex
(c) Age

(11) Children younger than S

(13) ETHNIC ORIGIN
(14) RELIGION
(15) MARITAL STATUS

(16) NATIONALITY
(17) ANY OTHERS LIVING IN THE HOUSE AND RELATIONSHIP TO THE S.

(18) INCOME OF THE FAMILY
(a) FATHER’S
(b) MOTHER’S
(c) ANY OTHER MEMBER’S

(d) FEDERAL SUPPORT
(e) ANY OTHER KIND OF SUPPORT

(19) TOTAL EXPENSES OF THE FAMILY PER MONTH

(20) FAMILY MEDICAL HISTORY AND GENERAL HEALTH OF MEMBERS

(21) CHILD’S HEALTH PROBLEMS

(22) CHILD’S GENERAL HEALTH

ACCORDING TO (a) Agency records (b) Dr’s OPINION

(23) BEST METHOD OF DISCIPLINE FOR THE S AS REPORTED BY (a) MOTHER (b) TEACHER

(24) FREQUENCY OF NECESSARY USE OF THE ABOVE DISCIPLINING METHOD.

(25) RECOMMENDATIONS MADE FOR THE CHILD BY THE AGENCY
APPENDIX B.1
Calculation of t test of significance for mean difference done for the ITSC total score means for boys and girls.

The following is the formula for calculating the t test for significance of mean difference: (Edwards, 1950, page 94).

\[
t = \frac{(x_1 - x_2) - (m_1 - m_2)}{\sqrt{S_{x1} - x2}}
\]

\[
t = \frac{(18.51 - 10.07) - (m_1 - m_2)}{\sqrt{\frac{42.0104}{107} - \frac{34.6622}{71}}}
\]

\[
t = \frac{8.44}{\sqrt{0.3926 - 0.4882}}
\]

\[
t = \frac{8.44}{0.956}
\]

\[
t = 8.61
\]

According to the t table (Table V, Edwards, 1950, page 361), the null hypothesis \((m_1 = m_2)\) cannot be rejected if a t value, 175 degrees of freedom, turns out to be less than 1.974 for the 5 percent level (i.e., when \(\alpha = .05\)) and less than 2.605 for the 1 percent level (i.e., when \(\alpha = .01\)). The calculations reveal that the t value for the difference between boys' mean of the total ITSC score and the girls' mean of total ITSC score is = 8.61 and hence significant beyond the 1 percent level.
APPENDIX B.2

*Correlations among the subjects' personal and family variables (Tables 21 through 28).*
Table 21. Significant correlations among the subjects' personal and family variables.

<table>
<thead>
<tr>
<th>Related Variables</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPVT Mental age X chronological age</td>
<td>0.35**</td>
<td></td>
</tr>
<tr>
<td>Next older sibling male X sex</td>
<td>0.15*</td>
<td></td>
</tr>
<tr>
<td>PPVT Mental age X subject youngest child in the family</td>
<td>0.17*</td>
<td></td>
</tr>
</tbody>
</table>

**p < .01 = an r value of at least .20.
*p < .05 = an r value of at least .15.

Table 22. Significant correlations among the personal and family variables of boys and girls.

<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPVT Mental age X chronological age</td>
<td>0.43*</td>
<td>0.27*</td>
</tr>
<tr>
<td>Next older sibling male X sex</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PPVT mental age X subject youngest child in the family</td>
<td>0.11</td>
<td>0.11</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of at least .20.
*p < .05 = an r value of at least .15.
Table 23. Significant correlations between chronological age and ITSC cards.

<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subpart 2a</strong></td>
<td></td>
</tr>
<tr>
<td>Chronological age X Card 4</td>
<td>0.23**</td>
</tr>
<tr>
<td>Chronological age X Card 8</td>
<td>-0.25**</td>
</tr>
<tr>
<td><strong>Subpart 2b</strong></td>
<td></td>
</tr>
<tr>
<td>Chronological age X Card 1</td>
<td>-0.16*</td>
</tr>
<tr>
<td>Chronological age X Card 2</td>
<td>-0.16*</td>
</tr>
<tr>
<td>Chronological age X Card 4</td>
<td>-0.18*</td>
</tr>
<tr>
<td>Chronological age X Card 7</td>
<td>0.20**</td>
</tr>
<tr>
<td>Chronological age X Card 8</td>
<td>-0.19*</td>
</tr>
<tr>
<td><strong>Subpart 4</strong></td>
<td></td>
</tr>
<tr>
<td>Chronological age X Card c</td>
<td>-0.16*</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of at least .20.  
*p < .05 = an r value of at least .15.**
<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Girls $r$</th>
<th>Boys $r$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subpart 2a</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronological age X Card 4</td>
<td>0.24**</td>
<td>0.16*</td>
</tr>
<tr>
<td>Chronological age X Card 8</td>
<td>0.32**</td>
<td>0.18*</td>
</tr>
<tr>
<td><strong>Subpart 2b</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronological age X Card 1</td>
<td>0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>Chronological age X Card 2</td>
<td>0.12</td>
<td>0.14</td>
</tr>
<tr>
<td>Chronological age X Card 4</td>
<td>0.06</td>
<td>0.00</td>
</tr>
<tr>
<td>Chronological age X Card 7</td>
<td>0.04</td>
<td>0.06</td>
</tr>
<tr>
<td>Chronological age X Card 8</td>
<td>0.21**</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>Subpart 4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronological age X Card b</td>
<td>0.09</td>
<td>-0.12</td>
</tr>
</tbody>
</table>

**p < .01 = an $r$ value of at least .20.**
*p < .05 = an $r$ value of at least .15.*
Table 25. Significant correlations between the ordinal position of the subject and the ITSC cards.

<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject oldest child X Card 1 Subpart 2a</td>
<td>0.20**</td>
</tr>
<tr>
<td>Subject oldest child X Card 2 Subpart 2b</td>
<td>0.17*</td>
</tr>
<tr>
<td>Subject oldest child X Card 5 Subpart 2b</td>
<td>-0.24**</td>
</tr>
<tr>
<td>Subject oldest child X Pair 5 Subpart 3</td>
<td>-0.17*</td>
</tr>
<tr>
<td>Subject youngest child X Card 3 Subpart 2a</td>
<td>0.17*</td>
</tr>
<tr>
<td>Subject &quot;only&quot; child X &quot;Is IT a girl or boy?&quot;</td>
<td>-0.17*</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of .20 at least.
*p < .05 = an r value of .15 at least.

Table 26. Significant correlations between the ordinal positions and ITSC card preferences of boys and girls.

<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Girls r</th>
<th>Boys r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject oldest child X Card 1, 2a</td>
<td>0.12</td>
<td>0.17*</td>
</tr>
<tr>
<td>Subject oldest child X Card 2, 2b</td>
<td>0.16*</td>
<td>0.27**</td>
</tr>
<tr>
<td>Subject oldest child X Card 5, 2b</td>
<td>-0.21**</td>
<td>-0.23**</td>
</tr>
<tr>
<td>Subject oldest child X Card 5, 3</td>
<td>-0.12</td>
<td>-0.06</td>
</tr>
<tr>
<td>Subject youngest child X Card 3, 2a</td>
<td>0.10</td>
<td>0.08</td>
</tr>
<tr>
<td>Subject &quot;only&quot; child X Subject thinks IT to be a boy.</td>
<td>0.08</td>
<td>0.04</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of at least .20.
*p < .05 = an r value of at least .15.
### Table 27. Significant correlations between the subject's parents' marital status and the ITSC.

<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents married X Pair 3 Subpart 3</td>
<td>-0.15*</td>
</tr>
<tr>
<td>Parents married X &quot;Is IT a girl or boy?&quot;</td>
<td>-0.18*</td>
</tr>
<tr>
<td>Parents divorced X Card 6, Subpart 2a</td>
<td>-0.18*</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of at least .20.  
*p < .05 = an r value of at least .15.

### Table 28. Significant correlations between the parents' marital status and the ITSC cards for both boys and girls.

<table>
<thead>
<tr>
<th>Related Variables</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents married X Pair 3, Subpart 3</td>
<td>-0.04</td>
<td>-0.21**</td>
</tr>
<tr>
<td>Parents married X The subject thinks IT to be boy</td>
<td>-0.22**</td>
<td>-0.12</td>
</tr>
<tr>
<td>Parents divorced X Card 6, Subpart 2a</td>
<td>-0.21**</td>
<td>-0.17*</td>
</tr>
</tbody>
</table>

**p < .01 = an r value of .20 at least.  
*p < .05 = an r value of .15 at least.