

DIFFERENCES IN COLLEGE STUDENTS' PERCEPTIONS AND ATTITUDES
DUE TO THE SEX OF THE STUDENT AND GENDER
INFORMATION ABOUT THE INFANT

A Thesis
Presented to
The Department of Psychology
EMPORIA STATE UNIVERSITY

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Elizabeth Ast
August 1982

Thesis
1982
A

AN ABSTRACT OF THE THESIS OF

Elizabeth Ast _____ for the Master of Science _____
(name of student) (degree)

in Psychology _____ presented on July 30, 1982 _____

Title: Differences In College Students' Perceptions and Attitudes Due to the Sex of the Subject and Gender Information About the Infant

Abstract approved: Cooper B. Holmes

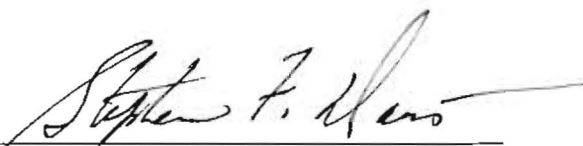
ABSTRACT

This investigation attempted to measure differences in students' perceptions of a child and their attitudes towards play behavior of children due to the sex of the student and gender information given about the child. The subjects were shown a videotape of a child playing by himself then with another child and then asked to complete questionnaires. An adjective scale measure was used to evaluate the students' perceptions and an activity checklist was used to measure the students attitudes towards play behavior.


The results of this study indicated that the students' perceptions of some of the infants' characteristics were affected by the sex of the student. Students selected some activities more often than others depending on their own sex and the gender information about the child or the interaction of both these factors. In general, students felt few activities were inappropriate for children regardless of a child's sex. Male subjects selected a wider range of activities as inappropriate than female subjects. The students' attitudes towards childrens' play behavior were affected to some extent by the distinction of sex.

431044

DATA PROCESSING
OCT 08 1982



Approved for the Major Department



Approved for the Graduate Council

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CHAPTER 1

INTRODUCTION

The general background and theoretical framework of differential treatment of male and female infants is discussed in this chapter. The statement of the problem, statements of the hypotheses and assumptions of the study are included in this chapter. This chapter explains the purpose of this study and the significance of the study. In addition, terms peculiar to the study are specifically defined and the limitations of the study are discussed.

Theoretical Formulation

Benjamin Spock (1976), in explaining his main reason for the third revision of his book, Baby and Child Care, summarized his concern about the differential treatment of young children as a function of gender labels. He said:

This early childhood differentiation begins in a small way the discriminatory sex stereotyping that ends up in women so often getting the humdrum, subordinate, poorly paid jobs in most industries and professions and being treated as the second class sex. (p. xix)

Though sex role acquisition and child rearing practices have long been of interest to some people, due to current social change both areas have received additional attention and concern. It is the belief of the researcher that many individuals, both male and female, may be discouraged from developing certain potentials, displaying certain emotions and developing types of personality traits as well as failing to consider all opportunities in life, due to the emphasis that has always been placed in developing appropriate sex roles.

The majority of research exploring differences in the ways boys and girls are treated as a function of their sex has been done with nursery-school and school-age children. This research has shown that adults interact differently with male versus female children. Differences in adult behavior have been observed in the types of personality characteristics, modes of expression and kinds of play which are encouraged or discouraged by adults due to a child's sex (Bandura, 1965; Sears, Rau and Alpert, 1965; Mischel, 1970). In these situations the adult's behavior (differential treatment of boys and girls based on their sexes) is usually overt and the adult is aware of the differences in his behavior.

Seavey, Katz and Zalk (1975) suggested that differential handling of children in infancy may occur at a more subtle level and probably without the adult's awareness. Evidence has shown that adults behave differently with male and female infants (Thoman, Leiderman and Olson, 1972; Moss, 1967; Lewis, 1972). However, these investigations were conducted within the context of the natural mother-infant environment. Consequently, the separation of maternal expectations of the infants due to their sexes and the masculine and feminine behavioral cues of the infants was rendered impossible.

Several groups of investigators (Seavey, Katz, and Zalk, 1975; Will, Self and Datan, 1976; Condry and Condry, 1976) controlled for the effect of infant behavioral cues by using only one infant as a social stimulus in their studies. A single infant was presented as a male to some subjects and as a female to other subjects in each of these experiments. Condry and Condry reported that the same infant, viewed in the same situation, was perceived as displaying different emotions and degrees of emotional intensity depending on whether the person thought he or she was

viewing a male or female infant. In their studies Will, Self and Datan (1976) and Seavey, Katz and Zalk (1975) the effect of gender information on adult-infant interactions was investigated. These studies reported differences in adult behavior towards an infant due to the perceived sex of the infant. Significant differences were found in toy handling and presentations, physical handling and overall stimulation of infants.

In these investigations, Condry and Condry (1976) and Seavey, Katz and Zalk (1975) used college students as subjects. It has been suggested that a "less educated population would show stronger sex stereotyping behavior in all areas as a function of the gender label used" (Seavey, Katz and Zalk, 1975, p. 108). However, the above mentioned investigations reported differential perceptions and treatment of infants despite their use of relatively "sophisticated," better educated subjects. It was expected to find differences in students' behavior due to gender information about the infant though these differences may be more subtle than differences that might occur with the use of subjects more representative of the general population.

The Problem

Over the years, different issues concerning child rearing practices have assumed greater or lesser importance (Caldwell, 1964). Parents of today seem more concerned and uncertain than ever about how best to raise their children. Sunley (1968) has suggested three reasonable explanations for the increased concern. First, parents often tend to see their children as extensions of their own ambitions; consequently, parents measure their status in society by the achievements of their children. Another reason for the debate and uncertainty about

parenting is that more people are realizing the control parents have over their childrens' environment and the potential power they have in shaping the futures of their children. Finally, Sunley suggests that parents feel a need to find new patterns of living and thinking that will be successful for their families due to the rapid changes in our society.

Among the many changes in our society, we are confronted with the changing nature of sex roles. Few people would deny that women's liberation has had a powerful impact on our society. Lamb (1976) says:

Regardless of the justice of the demands and the more wholesome relationships between the sexes that obtain once equality is achieved, the transition period is stressful for many men. (p. 114)

It seems obvious that both men and women are experiencing considerable stress in this "transition period." Parents who are dealing with such problems have a complex situation in which to work--the family.

Theories about sex role development often stress the importance of early-childhood experiences. There is evidence that sex role acquisition may begin at birth (Rubin, Provenzano and Luria, 1974).

Among the first, if not the first question that parents ask about their newborn is "Is it a boy or a girl?" The question in itself appears simple and natural as there is a desire to know something about this tiny, new addition to the family. However, the motives for asking and the consequences of this question may be quite complex. As Rubin, Provenzano and Luria (1974) point out, knowing that it is a boy or it is a girl:

...may result in the parents' organizing their perceptions of the infant with respect to a wide variety of attributes--ranging from its size to its activity, attractiveness, even its future potential. (p. 512)

One might suspect that such differences in perceptions and expectations due to a child's gender role might occur in other people in the child's environment. These differences might also be reflected in other types of behavior toward children.

Statement of the Problem

Is there a significant difference in the ratings (adjective scale measures) of an infant due to the sex of the college student and gender information about the child?

Is there a significant difference in attitudes about children's play behavior due to the sex of the college student and gender information about the child?

Statement of the Hypotheses (Null Form)

There is no significant difference in the ratings (adjective scale measures) of an infant due to the sex of the college student and gender information about the child.

There is no significant difference in attitudes about children's play behavior due to the sex of the college student and gender information about the child.

Assumptions of the Study

This study was basically designed as an observational and reactive study to determine if differences occur in students' behavior due to the sex of the student and gender information about the child. It was assumed that the use of a videotape of an infant as a social stimulus would control for the effect of "masculine" or "feminine" cues from the infant. This assumption allowed the investigator to separate

the effect of student expectations and perceptions from the infant's cues.

Another assumption of the study was that the use of the adjective rating scale is a valid measure of students' perceptions of infants. In accordance with this assumption is the assumption that the subjects would feel comfortable with a five-point range on the adjective scale. The use of a smaller range was implemented to alleviate any confusion that might have occurred if the students had been asked to make very fine discriminations between the points on the scale.

Another assumption of the study was in reference to the implications of the researcher's findings. If the ratings on the adjective scale measure and attitudes about play behavior measured on the second questionnaire showed significant differences due to the sex of the student and gender information about the child in this study, then these differences may also occur in the natural environment. This assumption would indicate a need for further research.

Purpose of the Study

This study was conducted to determine if significant differences in students' behavior occur due to the sex of the student and gender information about the child. It might be suggested that the use of subjects more representative of the population in general would yield greater differences in the behaviors measured in this investigation. However, if differential treatment of infants due to gender information is a pervasive phenomenon, then it should be demonstrated in students' responses on questionnaires about a child and a child's role.

Both an adjective scale measure and an activity checklist were used in this investigation. The adjective scale measure has been used by other investigators (Rubin, Provenzano and Luria, 1974; Condry and Condry, 1976; and Meyer and Sobieszek, 1972). The activity checklist method was derived from a study by Fagot (1974) which explored toddler behavior and parental reaction. The combination of these two types of measures made it possible to explore adults' perceptions as well as attitudes toward the play behavior of children. The combination also made possible the investigation of relationships that might exist between adults' perceptions and attitudes.

Students were selected as subjects for this investigation. The use of students as subjects was implemented to insure the ready availability and participation of a large number of subjects. It was suspected that more educated people such as a group of college students are likely to behave differently towards male versus female children to a lesser degree than the population in general but that sex stereotyping can be evidenced in their behavior probably in a more subtle but still measurable way. The use of male and female subjects allows the evaluator to measure the effects of the subject's sex and its interaction with gender information about the infant.

The above mentioned studies which used the adjective scale measure presented the child as a male or a female. This investigation has included a third experimental condition in which the child was introduced in the absence of gender information. This experimental condition enabled the investigator to explore the effects that absence of gender information had on students' perceptions of a child and a child's role.

Significance of the Study

The demonstration that students perceive the same infant in the same situation differently due to gender information would support the general notion that people tend to see what they expect to see. Consequently, this study could present important implications concerning research on sex differences. It would strongly suggest that research reporting sex differences could be biased by observers who were aware of the sex of the subjects they observed.

The demonstration that students perceive infants and their roles differently as a function of gender labels could have many implications. There is a growing need to understand the differences between the sexes and to attempt to explain how and why differences occur. Sociologists, anthropologists and persons in the mental health field are among the people who would benefit from an increased understanding of the acquisition of sex role behavior.

It is believed that parents and their children are likely to gain the most when information about sex differences becomes available and understandable. Educators and child care workers could become more effective in their jobs through a greater awareness of this area. It is hoped that this investigation will inspire more research into the area of sex role acquisition in early childhood. Finally, it is likely that this type of research will have a positive effect on child rearing practices.

It is unfortunate that in the process of sex role acquisition individuals may be discouraged from developing their full potentials and fail to consider all opportunities in life due to sex role stereo-

types. Perhaps as a greater awareness in this area develops some of these misfortunes will occur less frequently.

Definitions of Terms

In the area of sex role psychology, there are terms that have varying definitions and which carry with them connotations when they are used by different people. These terms, as they relate to this study, have been defined as they are used in this paper.

Sex Role Stereotypes

"Patterns of behavior that are considered to be culturally appropriate and valued for males and females, reflecting a complex interaction of biology and learning experiences" (Evans and McCandless, 1978, p. 543).

Sex Role

"The pattern of behavior and attitudes considered to characterize each sex" (Schell, 1975, p. 498).

Gender Label

A gender label is a word or set of words cuing a distinction between being male or female. Gender labels are differentiated in every language (Evans and McCandless, 1978, p. 198).

Limitations of the Study

The subjects were drawn from a limited population, that of Emporia, Kansas, and they were required to be students of a small Mid Western University. It is possible that there are regional differences in the behavior of people toward infants. Therefore, the results and conclusions of this study cannot be generalized to the population in general.

This investigation took place in an academic setting. Differences in adult behavior which occurred in this setting may or may not occur in natural settings. If adults' perceptions and attitudes toward a child and a child's role differ on the measures used in this investigation it cannot be generally assumed that these differences would affect their interactions in the natural environment with children.

Another limitation of this study is the range of behaviors measured in the study. The behaviors measured in this study are perceptions and attitudes. It may be possible that other adult behavior may be emitted differentially toward male and female children. Significant differences in adult behaviors measured in this investigation may be of greater or lesser importance to the understanding of sex role acquisition than other behaviors.

Finally, no attempt has been made to predict the consequences of the differences in adult behaviors. It may be possible that the differences found do not have a significant effect on children. If these behaviors do significantly affect children, there is no experimental basis for describing, measuring or explaining these effects. However, this research will hopefully inspire further research which can go beyond the limitations that have been summarized in this section.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The material in this chapter is a review of pertinent literature concerning differential treatment of infants as a function of gender information. Studies about sex differences in early childhood and differences in adult behavior towards young children due to gender labels will be discussed. Some interpretation of sex role acquisition as it occurs in early childhood will also be discussed.

Sex Differences in Early Childhood

Play and Toy Preferences

From casual observation of groups of children as young as two years of age, one would be likely to notice that most girls play differently than most boys (Evans and McCandless, 1978). Boys prefer to play with wheeled toys, big blocks and in general, rougher play equipment. Girls, are often quieter and engage in dress up games and more often play with dolls and other home centered toys. Sex differences in play behavior have been recorded in the literature (Fagot, 1974; Pederson and Bell, 1970 and Goldberg and Lewis, 1969). There appears to be little difference in the size, strength and motor ability of preschool children (Evans and McCandless, 1978). Therefore it seems plausible to suggest that play preferences are influenced more by social learning than by biology.

There have been a number of studies exploring differences in infants' play preferences. In general, they have been conducted as

observations of year-old children and their mothers in a free play situation. The children are provided with a variety of toys and the time spent in each activity or with each toy is recorded. The research has shown that even at this early age, boys and girls appear to have different toy and play preferences.

McCall (1974) presented evidence which examined manipulative and play behaviors of infants from eight to fifteen months of age. His study was a very detailed and thorough investigation of infants' selection preferences in toys, length of playtime and attention. Conclusions of this study pointed to no consistent sex differences in the nature of play behavior, toy selection of infants' responses toward their parents at eight to eleven months of age. However, he did report at thirteen to fifteen months of age, males played more actively with mechanical and manipulative toys and girls more frequently played with stuffed animals and cuddly toys.

In his study of fifteen-month old infants and their mothers, Bronson (1971), found that girls spent more time near their mothers than did boys. They also spent more time playing with a stuffed toy dog than did the boys. Goldberg and Lewis (1969) reported that at thirteen months of age, girls spent more time near, vocalizing to and touching their mothers than did boys. They also observed that more vigorous playing, such as toy banging, was done by boys than by girls and girls seemed to be more interested in toys that had faces than were boys. Goldberg and Lewis suggested that the interest in 'facedness' they found might occur as a result of girls having greater social interest than boys.

However, the hypothesis suggested by Goldberg and Lewis concerning 'facedness' is not consistent with later findings. Jacklin, Maccoby and Dick (1973), found that in their study of thirteen and fourteen month-olds, boys and girls spent equal amounts of time playing with stuffed animals. Furthermore, they reported that boys spent more time playing with robots, which also had faces, than did girls. Kaminski (1973) reported interesting findings in her study of year-olds and their mothers. She found that boys played with dolls more often than did girls in a laboratory setting. Since the mothers reported that the girls had more dolls at home than did the boys, she suggested that the boys were attracted to the novelty of the dolls. In their studies, Goldberg and Lewis (1969) and Jacklin et al. (1973), reported no sex differences in toy preference due to 'manipulatibility' or 'tactile quality'.

In the above studies, 'tactile quality', 'facedness' nor 'manipulatibility' seemed to be consistently related to sex differences in infants' toy preferences. However, though these studies did not find manipulatability as a factor in itself, important, they do report boys as being interested in manipulating non-toys such as floor tiles, electrical outlets and door knobs more so than girls. Maccoby and Jacklin (1974) stated,

...the choice of more clearly masculine and feminine toys that may be discerned from age two onward is likely to be related to sex differences in toy preference at an earlier age. (p. 278)

However, what toy qualities differentially attract boy or girl infants are now known or understood.

Etaugh, Collins, and Gerson (1975), in their study of two-year-olds, reported that girls more often painted, 'helped their teachers, looked at

books and listened to stories than boys in a nursery school setting.

Boys were observed to hammer and play with transportation toys more than girls. Researchers have indicated that play and toy preferences become obvious by the end of the second year of life (Wesley and Wesley, 1977).

One similarity in the findings that cannot be overlooked is that infant girls seem to be more attentive to their mothers in a free play situation than are infant boys. In their study, Brooks and Lewis (1974) found no differences due to sex for thirteen-month-old opposite sex twins in play preferences. But they did report that girls spent more time looking at and in proximity of their mothers than did boys. This is consistent with earlier findings of both Goldberg and Lewis (1969) and Bronson (1971). In light of this preference for their mothers by girls in a free play situation, it would seem beneficial to also include fathers in observations of free play situations. Those researchers who have commented on the absence of fathers in infant research seem to agree that it is a misfortunate loss. However, fathers are still often excused from studies due to their more limited availability to participate.

Toy preference could be influenced by parental purchasing behavior. Rheingold and Cook (1975), undertook an investigation of the types of toys and furnishings found in children's rooms. They recorded the complete inventories of 48 girls and 48 boys under the age of six, each having his or her own room. They reported that boys had more vehicles, sports equipment, toy animals, machines, fauna, educational art materials and military toys. Girls had more dolls, doll houses and domestic toys. Girls rooms were more often decorated in flowers, lace, fringe and ruffles, whereas boys' rooms were more often decorated in

animal motifs. They noted that girls were provided with more home-centered objects and boys were provided with objects that encouraged out of the house activities.

Rheingold and Cook felt that such differences in inventories provided evidence of differences in parental behavior as a function of their children's sexes. They suggested that parents who provide their children with sex-appropriate toys and furnishings probably also behave differently in other ways toward their children as a function of sex.

Fein, Johnson, Kosson, Storcks and Wasserman (1975) included taking inventories in the homes of twenty-month-old infants as a part of their study of infant play behavior. They reported that girls had a considerable amount of "boy-toys" available to them but that boys had very few "girl-toys" available to them. This study supported the findings of Rheingold and Cook (1975) as well as indicating that boys may be restricted more by their parents in relationship to playing with sex inappropriate toys than are girls.

Sex Role Expectations and Behavior

An interesting finding concerning sex role expectations has to do with fear. There appears to be a greater fear and unwillingness to accept sex inappropriate behavior from males than from females (Maccoby and Jacklin, 1974). The boy who behaves inappropriately may be called a 'sissy' whereas the girl who behaves inappropriately is often called a 'tomboy'. Research has shown a greater tolerance for 'tomboys' than for 'sissys'. In general, the term 'sissy' has a more negative connotation than the term 'tomboy', which often has a somewhat positive, cute connotation. Parents have reported more concern over their sons'

masculinity than concern over their daughters' femininity (Sears, Maccoby and Levine, 1957).

Sex role expectations may also be seen as having an effect on attachment behavior. Ban and Lewis (1974) investigated 'attachment' behavior of one-year-olds by observing them in play situations with each parent separately for fifteen minutes. They reported that the infants, both male and female, spent nearly twice as much time near their mothers as near their fathers. Female infants spent equal amounts of time looking at their fathers and mothers. However, male infants spent twice as much time looking at their fathers as looking at their mothers. Overall, the infants seemed to associate touching and closeness with their mothers and distance and looking with their fathers.

Ban and Lewis (1974) have suggested that attachment behavior undergoes a transformation as children grow older. Two modes of attachment behavior have been described; proximal, involving touching and maintaining proximity, and distal, involving looking and vocalizing. Researchers have found that proximal behavior decreases during the first to second year of life, while distal behavior increases (Lewis and Ban, 1971; Rheingold and Eckerman, 1970). During the third year of life, further increases in distal behavior and decreases in proximal attachment behavior have reported (Maccoby and Feldman, 1972).

This transformation of attachment behavior in early childhood has been studied by Lewis and Weinraub (1973). They note that the transformation from proximal to distal attachment behavior for male infants occurs in relation to both their fathers and their mothers. However, female infants do not show transformation of attachment behaviors towards their mothers to the degree they do to their fathers.

Consequently, Lewis and Weinraub suggest that "...females, unlike males in our society, are relatively free to express proximal behaviors towards other females" (p. 180).

The above findings indicate that males must give up their proximal behavior towards both sexes early in their lives. However, females appear to be allowed to maintain female-female proximal behavior. General knowledge seems to indicate that female-female proximal behavior is in fact permitted to be maintained throughout life in our society (i.e., women dancing together, kissing and touching each other).

It is unclear at what age children become consciously aware of sex role differences. However, Fagot (1974), reported that sex-linked toy preferences seemed fairly well established in the two-year-olds she studied. In this investigation, she also observed children's moods during play sessions. She reported no sex differences in mood and that overall, children were rated as cheerful ten times more often than as angry or sad. It was suggested that these two-year-olds appeared to be equally happy, perhaps unaware of unaffected by sex-role differences others observed in the quality of their play. Researchers have suggested that while two-year-olds seem satisfied with their sex roles, females in particular do not remain satisfied for very long. Later in childhood, many girls express the desire to be boys instead of girls (Wesley and Wesley, 1977).

In Etaugh, Collins and Gerson (1975), it was reported that boys of nursery school age, spent more time than girls in opposite sex activities. These findings were supported in another study of twenty-month-olds observed in a play situation (Fein, Johnson, Kossen, Stork, and Wasserman, 1975). They found that boys played with masculine

and feminine toys equally but that girls spent more time with feminine toys than masculine toys. In the middle years of childhood, this trend reverses itself; boys are rarely found playing with 'sex-inappropriate toys' whereas girls more frequently play with both male and female toys (Wesley and Wesley, 1977).

Rosenberg and Sutton-Smith (1959) studied which play activities were considered masculine, feminine or neutral by adults. They reported that girls have a wider range of play behaviors that are considered appropriate than they did in the past. Comparing their results to two studies done about 30 years earlier, Terman and Miles (1936), Lehman and Witty (1927), they found that 17 play activities out of 27 play activities that had been considered masculine in the past were in 1960, considered neutral. However, the boys' play repertoire had not been similarly broadened.

Toy and play preferences have been described by some researchers as clear and distinct at the three-year-old level. Observations of three-year-olds in a nursery school setting were reported by McCandless and Evans (1973). They reported observing both boys and girls being engaged in sex-appropriate activities nearly ninety percent of the time. Why children become involved in different types of activities at such an early age is unclear.

Several researchers have noted that nursery school teachers give significantly more reinforcement to both boys and girls for 'feminine' behaviors (McCandless and Evans, 1973; Etaugh et al, 1975). One might wonder then if boys are being effectively conditioned to perform more and more feminine activities. Interestingly, this trend has not been

observed despite the rewards for feminine behavior numbering 200 as opposed to 32 for masculine behavior as reported by McCandless and Evans (1973).

Differential Treatment of Infants

After reviewing the literature dealing with the total amount of parent-child interaction, Maccoby and Jacklin (1974), reported that "...the amount of interaction between parent and the young child does not consistently depend on the sex of the child" (p. 342). They noted that in those studies where a difference in total interaction time occurs, there were more studies which reported more interaction with boys. However, the majority of the studies they reviewed reported no sex differences.

There have been a number of studies investigating differential tendencies of parents to elicit motor behavior from their young children. This type of parental behavior has been observed in various forms. Mothers have been observed to respond more to a son's large muscle movements than to similar movements made by a daughter, as reported in Lewis (1972). Two other studies reported that parents and caretakers "stress the musculature of male infants" (Maccoby and Jacklin, 1974). Both Yarrow, Rubenstein and Pederson (1971) and Moss (1969), reported as a result of their findings that parents handled and played with infant sons more roughly than did parents of infant daughters. Tasch (1952) reported that fathers of children played more roughly with their boys from ages 6 to 17 but there were no sex differences of this type reported from parents of children 0 to 5 years of age. It should be noted that Tasch's study, as it relied on parental report, may or

may not be considered to indicate what differences in parental behavior actually occurred or did not occur.

In addition to parents' seeming tendency to encourage gross motor behavior from their sons more than daughters, there appears to be more apprehension about the welfare of female children. Pederson and Robson (1969) found that fathers were more concerned about the well being of their daughters than their sons when the children were nine months of age. Minton, Kagan and Levine (1971) reported that mothers were more apprehensive about physical danger to their daughters than to their sons when their children were 27 months of age.

Trends in the literature seem to be emerging which suggest parents of young children are more apprehensive about their daughters' well being and that parents stress the musculature of sons more than daughters. However, there is not yet sufficient data to say that these parental behaviors and attitudes are consistently affected by the gender labels of their children.

Evidence has pointed to the conclusion that girls have a more rapid verbal development than boys (Maccoby and Jacklin, 1974). A plausible explanation of girls' superior verbal performance would be that parents and caretakers stimulate and reinforce verbalizations in female infants significantly more than in male infants. However, the majority of studies in this area do not show significant differences in the amount or type of vocalization made to sons as compared to daughters.

In Thoman, Leiderman, and Olson (1972) it was reported that mothers of first-born girls vocalized more to their infants than did mothers of first-born males during breastfeeding. There were no differences between the amount of vocalizations made to male or female later-born infants

during breastfeeding. However, there was a trend indicating that during non-feeding activities, mothers of both first-borns and later-borns talked more to girl infants than to boy infants. Lewis (1972) reported that in his study of infants and their mothers girls were talked to more than boys at three months of age. In another study done by Lewis and Freedle (1972), mothers responded more to infant boys' vocalizations and vocalized more to infant girls. Goldberg and Lewis (1969) found that mothers of six-month-olds talked more to their daughters than to their sons in an experimental setting.

Some of these authors have suggested that the quality and content of vocalizations to female infants may be different and in that they were reinforcing. Kagan (1971) found that well-educated mothers used more distinctive verbalizations with their daughters than with sons, but these differences did not occur among less educated mothers. There does not appear to be evidence describing what differences consistently occur in quality and content of vocalizations.

Results from another study (Moss, 1967) indicated that mothers of female infants steadily increase the amount of time spent talking to their infants after they are three months of age though mothers initially talk more to infant boys. However, mothers of infant boys decrease the amount of time spent talking to their infants after three months of age. Moss suggested that mothers may increase their verbalizations to female infants as they were more pleasant to talk to since they were reported to be calmer and more frequently vocal than their male counterparts. Furthermore, he suggests that mothers' greater early response to boys may be a result of their boys being awake and active more often than girls in the first few months of life. Amusingly, he also suggests that

mothers of boys may get tired of talking with their sons as they are more irritable than are female infants. This explanation revolves around the interaction between mother and child as it suggests biological dispositions affecting mothers' interactions with their infants.

Moss (1974) reported findings concerning parents and their verbal expressions of affection towards their infants. The frequency of mothers' and fathers' use of terms of endearment such as ('precious', 'angel', 'honey' etc.) with their seven-week-old infants was recorded from tape recordings of the infants and their parents in a structured situation. The frequency of affectionate terms was greater with female infants for both fathers and mothers.

There have been a considerable amount of studies dealing with parental warmth, nurturance and acceptance. Most of these have found little differences in the mothers' overall affectional behavior towards children as a function of the infants' sex (Moss, 1967; Kagan, 1971; Clarke-Stewart, 1973; Stayton, Hagan, and Ainsworth, 1971).

Sears, Maccoby and Levine (1957) did a study investigating mothers' behavior during their children's infancy. The data he collected were based on the mothers' recall accounts. Mothers felt they had expressed more warmth to their female infants than male infants. However, since the data were based on recall, it may not have reflected real differences in their actual behaviors towards the children. Clarke-Stewart (1973) found that according to questionnaires, mothers felt more positive towards their eighteen-month-old sons than daughters. They did not however report behavioral differences supporting these differences in feelings.

Leiderman, Leific, Seashore, Barnett and Grobstein (1971) found that mothers of premature infants affectionately touched male infants more than female infants at four weeks of age. In his investigation, Lewis (1972) reported that at three months of age male infants were held more often by their mothers than were female infants. However, he reported no differences in time mothers spent rocking, touching, or smiling at male versus female infants. In another study, Goldberg and Lewis (1969) observed that mothers touched infant boys more often than infant girls.

Despite the fact that a considerable amount of studies have been done exploring sex differences in maternal affection towards infants, evidence from this research does not seem to present us with consistent findings at this time. As in other areas of developmental studies, the more frequent inclusion of fathers in these studies would be beneficial. It is also possible that subtle differences in affectional ties between parents and infants occur which have not been measured in these studies. This would be supported by the evidence showing that expectant parents often have sex preferences and parents in general have different expectations for male versus female children.

Parental Preferences, Expectations and Perceptions

Expecting parents often express sex preferences long before the birth of a child. There is at least one book solely devoted to and currently available to instruct parents in methods of predetermining the sex of their child.

Studies have consistently reported that most parents would prefer their first born child to be a male (Markel and Nam, 1971; Landis,

(1960), and Peterson and Peterson (1973) reported future parents' preference of sex for their firstborn children. Preference for a male child was indicated by 90% of the men and by 92% of the women in their study. These results are comparable to a similar study by Terman and Tyler (1954), where 93% of the men and 90% of the women preferred their firstborns to be male. These are high percentages of preference and seem to indicate no real changes having occurred in this area of parental attitudes towards the sex of their offspring.

Beyond this preference for male firstborns, research has indicated an overall preference for having more boys than girls in families (Westoff, 1975). According to Etzioni (1977) if it was possible for parents to determine the sexes of their children, the result would be 133 boys for every 100 girls. It has also been reported that when the firstborn is female as opposed to a male the next birth of a child to those parents occurs an average of three months sooner (Westoff, 1975).

Sex appropriate names are often chosen before the birth of a baby and there is a considerable amount of time spent wondering about and discussing whether the child will be a boy or a girl. Attempts to guess the sex of the fetus range from more scientific methods such as trying to pinpoint the time of conception to speculation based on tradition such as whether the mother is carrying the baby "high" or "low." Interpretations of fetal activity are also common leading to conclusions such as, "its very active, kicks and moves a lot, it must be a boy."

This preoccupation with the sex of an unborn baby can be explained by the parents desire to know something definite about this new individual who is going to become an important part of their lives. How-

ever, when the preoccupation about a child's sex continues after the child's birth, curiosity about the unknown is no longer an acceptable explanation. Also, the fact that sex preferences are often expressed by parents cannot be easily explained. Research has shown that there are various individual differences between babies from birth onward (Thomas, Chess, and Birch, 1970). Why then are parents of newborn children often more concerned about the sex of their children than about other individual characteristics such as size, temperament, activity level, distractability, adaptability, etc.? It might be suggested that the basis behind this preoccupation with the sex of infants is that parents have different expectations for their children as a function of the children's sex.

It would be interesting to examine the differences in parental expectations for their children depending on their children's sex. However, the present investigation is more concerned about how these sex-specific expectations affect adults' behaviors towards infants. The fact that there is a preoccupation with the sex of infants lends support to the theory that boys and girls are likely to be perceived and treated differently in some ways as a function of the sex of at birth and in early childhood.

In their investigation, Rubin, Provenzano and Luria (1974) found that parents described their newborns in sex-appropriate terms. Girl babies were described as softer, finer-featured, smaller and less attentive; whereas, boys were described as firmer, larger-featured, better coordinated, more alert, stronger and hardier. However, these boys and girls did not actually significant differ in birth weight, length or Apgar scores. Their data indicated that both parents differentially label their infants as a function of their infants' gender

labels. They also reported an interactions between sex of infant and sex of parent and stated that in general, fathers were the stronger "sex typers".

Other studies have examined the influence of gender labels on adults' perceptions of infants. For example, Condry and Condry (1976) presented a group of students with a videotape of a nine-month-old infant and asked the students to rate the infants' emotional reactions to different stimuli. Half of the students was told that the infant was a girl and the other half was told that the infant was a boy. The infant's crying and agitation were described as fear more often by those students who believed they were viewing a girl. The same response was more often described as anger by those students who believed they were viewing a male. Students viewing the "male" infant perceived the infant as more active and potent than those viewing a "female" infant. Female observers consistently described the infant as having greater emotional intensity whether they thought they were seeing a male or female. The authors reported that the same infant, in the same situation, was perceived as displaying different emotions and levels of emotional intensity depending on the sex of the observer, the perceived sex of the infant, and the amount of experience the observer had had with young children. Interestingly, high-experience male observers perceived greater differences between the 'boy' and 'girl' than did low-experience male observers. This effect of experience was reversed for the female observers.

Other researchers (Meyer and Sobieszek, 1972) presented 85 adults with videotapes of two 17-month-old children and asked the adults to rate the children on an adjective attribute scale. The list of 24 adjectives contained 17 sex-typed adjectives and 7 placebo adjectives

which were not clearly sex typed attributes. The children were viewed and each was sometimes described as a boy and sometimes described as a girl. Subjects did not show an overall tendency to rate a child described to them as a male with more male attributes. However, both male and female subjects rated children of their own sex to have more attributes. Meyer and Sobieszek suggest that adults are able to define and to respond more meaningfully to behavior of a child when the child is the same sex as the adult.

Aberle and Naegele (1952) and Tasch (1952) investigated the expectations fathers had for their children. Fathers expected that their sons would be aggressive and athletic. They felt their daughters would be pretty, sweet, delicate and fragile. Reblesky and Hanks (1971) have suggested that the father-daughter role is seen as a more nurturant one than the father-son role. The literature concerning parental expectations shows that females are perceived as weaker and softer and consequently as having a greater need for nurturance and protection than male infants.

These studies suggest that males respond with more 'sex-typed' expectations than do females. Both males and females have differences in perceptions of and expectations for infants as a function of gender labels of the infants. Also, there are significant interactions occurring between the sex of the adult and the sex or perceived sex of the infant.

Role Expectations

Perhaps one reason why fathers are the greater 'sex-typers' is due to how parent-infant relationships are viewed. The mother-infant relationship, regardless of the sex of the infant, is basically supposed

to be a nurturing caregiver. However, the father-infant relationship seems less easily defined and there appear to be differences in the father's role due to the sex of the infant. Fathers, themselves, expect to and are expected to by others to be more nurturing and protective of their daughters than towards their sons.

Research has shown that fathers are generally more concerned than mothers that their sons and daughters develop distinct sex roles (Goodenough, 1957; Sears, Maccoby and Levine, 1967). Findings suggest that in general fathers are more concerned than mothers with their children's correct display of sex role behavior and that fathers are more effective in enhancing their daughters' femininity than are mothers (Bronfenbrenner, 1960; Mussen and Rutherford, 1963; Heilburn 1965a).

Fagot (1974) did an interesting study using 18-24 month-olds and their parents. Her observations of twelve families showed that both parents gave more criticism and praise to their girls than to their boys. Both parents joined in play with their sons more often than their daughters but boys were left alone to play more often than girls.

While only one of the couples with daughters felt certain parts of their child's rearing belonged to one parent or the other, all but one of the couples with boys felt this was true. Fathers were expected to play with and provide role models for their sons. When asked about sex appropriate behavior for children the parents placed fewer restrictions on girls than on boys.

Fathers of boys reported they would treat a girl child more gently and fathers of girls reported they would spend more time with a son and play with him more roughly. Mothers of girls said they did not think they would treat a son differently but mothers of boys said they would

restrain a daughter more in reference to choice of friends and use of aggression.

This study indicates that parents treat their children differently according to their sex and feel that more behaviors are sex-inappropriate for boys than for girls at 18-24 months of age. It also shows that some parents feel that fathers have some special duties with sons and that there are differences in the ways both parents treat children of different sexes. An obvious fault of this study is the small sample size. Nevertheless, the study is valuable as it explores various aspects of parental behavior in reference to sex differences.

The father's role in early childhood development seems to be considered more important now than in the past. This notion is supported by the fact that the father's role is currently being studied more directly rather than through indirect methods of the past such as mother and child reports. Presently, fathers are encouraged to participate in prenatal education and to be actively present during the labor and the delivery of their children which reflects the increased concern about the father's role in early childhood development.

Lamb (1976) undertook a direct study of parents' behavior with their 8-month-old children. He reported that mothers engaged in more caretaking, nurturing activities with their children while fathers participated in more play with their children. A similar study done by Smith and Daghish (1974) also reported that fathers joined in play with their children more often than did mothers.

It has been suggested that children elicit different behaviors from male versus female adults and that sex differences in both children's and adults' behavior may not be a result of adults' attitudes (Fagot,

1974). However, there are certainly differences in male and female role expectations in relation to child rearing.

'Parenting' has come into popular use as a word that attempts to disregard boundaries between male and female roles in child rearing. The word has met with criticism such as by Middleton (1979), who complains about the use of the word since he feels it overlooks important differences described by the two words "mothering" and "fathering". Fathering has been described as a non-complex enjoyable, unskilled task but mothering entails providing special, tender, loving care. This popularly preconceived dichotomy between the mothers' and fathers' roles seems to be supported by differences seen in the literature which examines sex differences in relation to parental behavior.

Beyond observed differences in parents' behavior, there appears to be evidence of differences in the behavior of adults in general towards children due to the sex of the adult and the sex of the child. Feldman and Nash (1978, 1979) did two studies of adults' interactions with babies. They report that adult-infant interactions are influenced by the stage of life in which the adults find themselves. At all stages of life, females were found to respond more to babies than did males. Furthermore they described males as being involved in more distal interactions while females verbalized and comforted the babies more and stayed in closer proximity. Blakemore (1979) explored interactions between 4, 11 and 20 year old subjects with a year old. He reported that females interacted more at all ages than did males. Though his findings support the above findings of sex differences in amount of interaction time, Blakemore did not report significant qualitative sex differences in the interactions.

Theory of Sex Role Acquisition

In order to organize and interpret research findings in the area of sex differences, it appears desirable to examine the theories concerning sex role acquisition. Theories of sex role acquisition have been presented revolving around more general psychological theories such as learning theory, psychoanalytical and ego theory, cognitive developmental theory, biological theory and environmental theory.

Biological Influences

The longstanding dilemma of nature versus nurture has been presented in reference to psychological research and theory and is of course discussed in relation to sex role development as well as other areas.

Nash (1970) has suggested that people are born with a bias towards learning sex role behaviors appropriate for one sex or the other based on their biological sex. His research suggested that males are less resistant to learning cross-sex behaviors than are females. However Nash also says that learning can either elaborate on this biological bias or completely negate the basis. However, Maccoby and Jacklin (1974), after reviewing the literature on sex differences, cite greater verbal ability for girls and greater aggressiveness and visual spatial and math abilities as the only areas in which a sex difference may be related to biology. Even in these areas where biology is thought to be related to sex differences, environmental factors are felt to be also influencing the differences. Research on hermaphrodites presents us with evidence suggesting the amount of influence exerted by environment versus biology.

Nash's theory of "biological bias" appears to be supported by Money and Erhardt (1972) who reported that differences occurred between

"normal" girls and "fetally androgenized" girls. They noted that while the girls who were "biological boys" developed tomboy type behaviors more so than their "normal" girl counterparts, they were also responsive to environmental dictates. Nash, Money and Erhardt believe that despite a person's genetic code, the environment will successfully dictate behavior (though perhaps subtly different) which falls within the range of acceptable behavior for whichever sex the environment considers an individual to be.

Money and Erhardt's findings were strongly supported by Hampson and Hampson (1961), who also did a well-controlled study of hermaphrodites. They reported that in all 19 cases they studied the environmentally assigned gender of the individual determined the individual's sex role behavior. They concluded that chromosomal determination of sex was much less important than the gender in which the child was reared.

Researchers appear to agree that individuals develop sex roles on the basis of information from their environment, in particular based on what sex their parents believe them to be. This occurred for hermaphrodites though the believed sex was contrary to chromosomal, hormonal and or gonadal determination of sex and furthermore despite uncorrected morphologic appearance in some cases.

Money and Erhardt (1971) have studied cases where children were raised as females though they were genetically males and vice versa. This occurred when "genetic" males are born ambiguous or with feminine genitalia and genetic "females" are born with masculine genitals. They reported that there was a critical period for sex role acquisition, in these cases, which was the first two to three years of life.

Children raised according to their reproductive makeup, despite their actual, contradictory genetic makeup, were able to achieve secure gender identity. They also reported that sex reassignments (made up to 18 to 36 months in childrens' lives) corresponding to chromosomal sex of the child could occur with little difficulty. Severe problems have occurred if sex reassignment is attempted later in the child's development.

This research strongly supports the theory that experience plays the major role in sex role acquisition rather than biology. There does appear to be an influence of biology but what degree of influence and how biology influences behavior in this area is not known. Biology does usually of course provide the critical information that decides whether the child's environment will provide appropriate masculine or feminine training. The research above also indicates that there is probably a critical time period in sex role acquisition. Research in other theories such as psychoanalytic theory also indicates a critical period in sex role acquisition.

Environmental Influences

The extreme environmentalist viewpoint contends that any sex differences other than obvious anatomical ones are learned in society. de Beauvoir, who holds to this extreme position, presents us with the basic assumption behind this view. She asserts that male and female newborns are equal in experiences, interests, experiences of pleasure and amounts of passivity and activity. Though this statement is probably more true than not, it is clearly not entirely accurate. Research has for instance indicated that male infants are more active at birth than female infants (McCandless and Evans, 1978).

Nevertheless, Margaret Mead presented this extreme view in a book in which she describes several New Guinea tribes and the differences they evidenced with respect to masculine/feminine traits. Mead asserts that sex roles in any society are exclusively the product of conditioning according to social customs and do not depend on biological inheritance. (Mead, 1935). Though Mead's view is extreme and can be criticized by its presentation based on interesting but incomplete evidence, it has value. The value of Mead's anthropological cross-cultural data is that she presents evidence which indicates the people in other cultures can learn and feel comfortable in sex roles which differ drastically from our own. In doing so, the evidence again suggests that environment plays a more important role than does biology.

Learning Influences

According to Diamond, "Whatever the potential for behavior in man's genes, his actual behavior is determined from what he learns and what he learns is defined by his cultural heritage and his experiences" (p. 127).

Learning theory and research have given us specific information concerning specific sex role behaviors and by what methods these behaviors are developed and maintained. The behavioral theorists such as Skinner (1957) have expounded on reinforcement principles and schedules which enables sex role behaviors (among all other behaviors) to be learned. Social learning theorists have concentrated on specific sex role behaviors and attempted to explain how parents in particular teach these behaviors. The extreme behaviorist maintains that all secondary behaviors (those not present at birth) are developed through schedules

of reinforcement and reinforcement is constituted by the gratification of needs (Skinner, 1957; Bijou and Baer, 1961). Social learning theorists are more inclined to cite the motives for the child's learning of behaviors to be the child's dependency on his mother (Sears, 1965).

The concept of observational learning has been proposed by Bandura in reference to learning sex role behaviors. Observational learning is said to occur when people observe another person's behavior and choose to imitate or not imitate it based upon the consequences which follow the behavior. Observational learning is said to be based on "empathetic" or "vicarious" experiencing of rewards and punishment. Bandura, Ross and Ross (1963) found that a child is more likely to imitate behavior of a "model" which he perceives as more mature. It is evidence such as this that appears to be the basis of Bandura's assumption of the occurrence observational learning. Over the years, Bandura includes differential reinforcement, knowledge of possible consequences and verbal explanations to his theory on children's learning (Bandura, 1971).

Learning theorists believe that children are aware of their gender and begin learning what is socially accepted behavior for each gender at a very early age. Learning of sex-role behaviors is mainly accomplished by direct reinforcement, self reinforcement, imitation and organization of one's social thinking. Parents, or the primary care givers of a child, are seen as potent reinforcement agents of socially acceptable sex-role behavior.

In general, social learning theorists feel that masculinity and femininity need not be seen as opposite ends of a bipolar continuum of sex-typed behaviors. Rather, they are basically independent behavioral domains and most certainly not mutually exclusive. They indicate

there is no need for a "dynamic process of identification" to explain sex role acquisition (Anastasion and Hanes, 1975, p. 180).

Learning theorists generally do not devote much attention to dynamic cognitive processes and avoid more speculative, complex explanations of behavior which are virtually impossible to validate by research.

Cognitive Influences

Cognitive theorists believe that as a child interacts with his environment, he develops constructs which are groups of internalized relations which are organized cognitively into "wholes." Groups of things or events which have commonalities are organized into wholes which are called cognitive styles by Harrington (1970). Harrington cites sex role identity as a cognitive style among other cognitive styles. Likewise, Anastasiow (1970) says that sex role behaviors are learned by a cognitive process which organizes behaviors which are considered culturally appropriate for one role. This cognitive process described by these theorists is frequently called identification.

The cognitive developmental theory of sex role development is in a way an extension of Piaget's ideas about cognitive intellectual development. It is presumed that masculinity and femininity are defined in social stereotypes for most members of a culture (Kagan, 1964). Children select and arrange their experience while responding to these sex role stereotypes. As a child is labelled a boy or a girl, positive experiences become associated with a child's label and this provides the child with a gender identity. This gender identity is a fundamental element in an overall self concept. While this process takes place, the child learns to use sex-labels for others, also (Kolberg, 1966).

Gender identity becomes then a basis for expectations and value judgements of oneself as well as of others. It allows one to organize attitudes and behavior in a simplistic but potentially confusing fashion. Masculinity and femininity as constructs arise from the need to assimilate things seeming to be consistent with gender identity. However, one can easily understand the confusion that may result in attempting to label certain behaviors as strictly masculine or feminine (Evans and McCandless, 1978).

Cognitive developmentalists believe "sex typing is an accompaniment of maturation and cognitive development, independent of specific training or organized teaching. Some degree of observational learning is of course essential for sex role acquisition" (Bee, 1977, p. 156). Unlike psychoanalysts, cognitive development theorists see sex-typing occurring before identification as opposed to sex typing as a result of identification.

Psychoanalytic and Ego Theory

Freud and his close followers have given the first and a considerably influential explanation of psychosexual development. In terms of psychoanalytic theory, identification is extremely important for total personality development (Freud, 1924). In psychosexual development there are two important identification processes. One process called anaclitic identification involves the mother-infant relationship which occurs for both boys and girls. There is a strong dependency and love relationship in infancy with one's mother, which Freud believed to be the first and most critical relationship in one's life.

This relationship appears to be threatened as the child grows older and more of mother's attention is diverted away from the child. At this point, girls develop a conscience (superego) in order to please their mothers and maintain their mother's love. However, boys become aware of the anatomical differences of the sexes and that their fathers are rivals for their mothers affection. Both to escape castration fear and to ensure the love of mother, boys identify with their fathers assuming that father will not castrate someone like himself and that mother will love someone like father since she loves father.

Other theorists of psychoanalytic orientation (Meerlo, 1956, 1968; Von Der Heydt, 1964) relate the importance of the father's role in breaking the infantile, symbiotic mother-child relationship. An early father-infant relationship is therein presumed absent. Meerlo says that the father's role in breaking the mother-child dyad is impossible if there is an early father-infant relationship. Jung (1939), though he published a book on the role of the father, still placed the greater emphasis on the mother's role during infancy.

Anna Freud and other contemporary theorists (e.g., Biller, 1969, 1971 and Santrock, 1970) dealt with both the role of the mother and of the father in the child's early years. They were also concerned with the qualitative differences between mother-infant and father-infant relationships. Machtlinger in her analysis of the father's role in psychological development points out the recent strengthening of the belief that a child's early years are crucial to an individual's personality development. Psychoanalysts have maintained that the process of personality development is extremely complex and have warned of the dangers of simplistic explanations of the father's role in this development.

Ego psychologists such as Freud (1965) contend that the child's acceptance and adoption of cultural norms and values are a result of efforts to maintain their mother's love and their consequent defense mechanism of identification. In traditional Freudian theory, identification was pronounced as the major stage in one's development. Freudians illuminate the importance of sex role acquisition by their proposal that individuals develop the superego through identification as their struggle to resolve the oedipal conflict is resolved. Freudian and ego psychologists therefore seem to be suggesting that an individual's identification and sex role behavior is the basis upon which an individual builds his entire value system.

Interactionist View

Maccoby and Jacklin cite three types of factors which influence the development of sex differences. The first type - "genetic factors," the second - "shaping of boy-like and girl-like behavior by parents and others socializing agents" and finally - "the child's spontaneous learning of behavior appropriate for his sex through imitation." They warn that attempts to explain the process of acquiring sex appropriate behavior; through one or two or even all three of these factors but neglecting the interaction between the three factors are "doomed to disappointment" (Macklin and Jacklin, 1974).

CHAPTER 3

METHODS AND PROCEDURES

This chapter describes the experimental procedures which were used in this investigation. Information about the population and sampling procedure, data collection, materials and instrumentation, design of the study and the data analysis are discussed.

Population and Sampling

The subjects were 120 students at a small midwestern university. The age range of the subjects was from 18-years-old to 30-years-old though the great majority were in the 18 - 20 year age range. The subjects were enrolled in psychology or education courses at the undergraduate level during the academic year of 1979 to 1980.

The expected intelligence level of the students was average to above average and the educational level of the subjects was obviously above average. Eight percent of the students were married and less than four percent of the subjects were parents. The majority of the students were presumed to not have had a great deal of experience with young children nor any experience as parents.

Materials and Instrumentation

Social Stimulus

A 30-minute videotape of a 20-month-old white, male child was made under the direction of the experimenter. The tape was made in a small midwestern television studio and showed the child playing by himself and then playing with another child, also a white, male child about 20-months

old. The videotape was edited to an 11-minute tape showing the child playing by himself for about 8 minutes and with the other child for the remainder of the time.

Experimental Setting

The subjects were shown the videotape and then asked to complete questionnaires related to the tape in their classrooms.

Design of the Study

This was a study primarily designed to investigate the differences that might occur in college students' perceptions of a child and attitudes toward play behavior of children due to the sex of the student and gender information about the child. This study was designed as an observational and reactive study and it is a 2 x 3 design. In this study the two independent variables were the sex of the student and the gender information about the child. Two types of dependent variables were measured in this study--students' perceptions of a child and attitudes toward children's play behavior.

Experimental Conditions

There were three experimental conditions in this study: 1) the child on the videotape is presented as a male, 2) the child on the videotape is presented as a female, and 3) the child on the videotape is presented with no gender information given.

Data Collection

Subjects in this study participated in classroom groups. All subjects were tested in a one-day period to avoid possible contami-

nation. The investigator read similar instructions to each group of subjects depending on which of three experimental conditions has been assigned to that group. All subjects were told that this was an investigation about young children's play behavior. The following instructions were read under the three different experimental conditions:

Condition 1: This is a study about young children's play behavior. When I turn on the videotape you will see a child who is about 20-months old. This child's name is Steven. You will see Steven playing with some toys in a small room. Later in the tape he will be seen playing with another child. Please observe the way Steven, the first child you see, behaves throughout the tape so you can describe him on a questionnaire when the tape is over.

Condition 2: This is a study about young children's play behavior. When I turn on the videotape you will see a child who is about 20-months old. This child's name is Suzanne. You will see Suzanne playing with some toys in a small room. Later in the tape she will be seen playing with another child. Please observe the way Suzanne, the first child you see, behaves throughout the tape so you can describe her on a questionnaire when the tape is over.

Condition 3: This is a study about young children's play behavior. When I turn on the videotape you will see a child, who is about 20-months old. This child is child A. You will see Child A playing with some toys in a small room. Later in the tape Child A will be seen playing with another child. Please observe the way Child A, the first child you see, behaves throughout the tape so that you can describe that child on a questionnaire when the tape is over.

Immediately after viewing the videotape, all subjects were asked to fill out the adjective rating scale describing the child on a number of qualities. After those questionnaires were completed the subjects were asked to complete the activity checklist and then a brief questionnaire about subject information. Subjects were then thanked for their participation and encouraged to remain silent about the nature of their participation in this experiment.

Data Analysis

In this investigation two types of dependent variables were measured--students' perceptions of a child and students' attitudes towards children's play behavior. The students' perceptions of the child were measured on an adjective rating scale with a five point range between bipolar adjectives. A 2 x 3 ANOVA was used to evaluate the adjective scale measure items.

The students' attitudes towards play behavior were measured on the activity checklist questionnaire. Three response categories were employed on the activity checklist. An analysis of variance was applied to two of these categories of response--selection of activities and activity appropriateness. Percentages were calculated for all responses to the activity checklist questionnaire.

CHAPTER 4

RESULTS

This chapter will examine the results of this investigation. The results of the adjective scale measure will be presented first, then the results of the activity checklist will be presented. The order of presentation for the adjective scale measure results will be 1) the effects found to be statistically significant, 2) the effects which approach statistical significance, and 3) the effects which were not statistically significant. Percentages for the activity checklist will be presented first for the selection of activities and next for the sex-appropriateness of the items.

Adjective Scale Measure

A 2 x 3 ANOVA was used to evaluate the adjective scale measure items. There were seven missing responses out of the total possible 2,280 responses on the adjective scale measure. The six adjective items for which there were missing responses were analyzed first as they were. Then corresponding mean values for the items were used in place of the missing values and a second ANOVA was performed on those six items.

In Table I, the mean ratings of subjects, by condition, for each of the 19 adjective scale items are presented. In Table 2, the mean ratings of subjects, as a function of sex of subject, are presented. The mean ratings of subjects, as a function of condition, are presented in Table 3. The extreme right column of all tables show the means for each adjective scale which have been averaged across conditions.

Table 1

Mean Rating on the Adjective Scale Measure as a function of Sex of Subject (Male vs. Female) and Gender Information about the child (male vs. female vs. unknown)

Scale Item (1-5)	Experimental Condition						\bar{X}
	M-M	M-F	M-U	F-M	F-F	F-U	
1. firm-soft*	2.95	3.50	3.05	3.05	3.00	3.15	3.12
2. relaxed-nervous*	2.15	2.20	1.75	1.90	1.60	2.20	1.97
3. cuddly-not cuddly	2.65	2.60	2.32	2.20	2.35	2.20	2.39
4. little-big*	2.95	2.50	3.00	3.05	2.35	2.35	2.73
5. shy-outgoing	3.95	4.30	4.35	4.15	4.50	4.30	4.26
6. cranky-cheerful*	3.95	3.85	3.75	4.40	4.25	4.40	4.10
7. awkward-well coordinated	3.70	3.21	3.75	4.30	4.10	4.20	3.88
8. inattentive-alert*	4.20	4.20	4.25	4.50	4.50	4.40	4.34
9. delicate-hardy	3.45	3.53	3.30	3.25	3.85	3.65	3.50
10. friendly-unfriendly*	2.05	2.25	2.10	1.95	1.80	2.10	2.40
11. weak-strong*	3.80	3.70	3.95	3.90	4.15	3.80	3.88
12. dependent-independent	3.65	3.50	3.75	3.80	4.25	3.65	3.77
13. calm-excitabile*	3.70	3.70	3.50	3.55	3.20	3.55	3.53
14. beautiful-plain	2.75	2.80	2.75	2.68	2.50	2.65	2.69
15. quiet-noisy*	3.70	3.85	3.65	3.80	3.20	3.50	3.62
16. sociable-unsociable*	1.89	2.50	2.10	1.80	1.75	2.15	2.03
17. passive-active*	4.75	4.60	4.70	4.80	4.90	4.80	4.76
18. insecure-confident*	4.05	3.80	4.30	4.20	4.45	4.35	4.19
19. fussy-easy going	3.35	3.10	3.40	3.95	4.00	3.90	3.62

** Items are presented in reference to 1-5 pt, rating scale but were presented in reverse order during the investigation.

* Values of means are rounded to the hundredths place.

Table 2

Mean Ratings on the Adjective Scale Measure
as a Function of Sex of Subject (Male vs. Female)

Scale Item (1-5)	M	F	\bar{X}
1. firm-soft*	3.16	3.06	3.12
2. relaxed-nervous*	2.03	1.90	1.97
3. cuddly-not cuddly	2.52	2.25	2.39
4. little-big*	2.81	2.65	2.73
5. shy-outgoing	4.20	4.31	4.26
6. cranky-cheerful*	3.85	4.35	4.10
7. awkward-well coordinated	3.55	4.20	3.88
8. inattentive-alert*	4.21	4.46	4.34
9. delicate-hardy	3.42	3.58	3.50
10. friendly-unfriendly*	2.13	1.95	2.40
11. weak-strong*	3.81	3.95	3.88
12. dependent-independent	3.63	3.90	3.77
13. calm-excitable*	3.63	3.43	3.53
14. beautiful-plain	2.76	2.61	2.69
15. quiet-noisy*	3.73	3.50	3.62
16. sociable-unsociable*	2.16	1.90	2.03
17. passive-active*	4.68	4.83	4.76
18. insecure-confident*	4.05	4.33	4.19
19. fussy-easy going	3.28	3.95	3.62

Table 3

Mean Ratings on Adjective Scale Measure as a
Function of Condition (Male vs. Female vs. Unknown)

Male Item	M	F	UNK	\bar{X}
firm-soft*	3.00	3.25	3.10	3.12
relaxed-nervous*	2.02	1.90	1.97	1.97
cuddly-not cuddly	2.42	2.47	2.25	2.39
little-big*	3.00	2.42	2.77	2.73
shy-outgoing	4.05	4.40	4.32	4.26
cranky-cheerful*	4.17	4.05	4.07	4.10
awkward-well coordinated	4.00	3.66	3.97	3.88
inattentive-alert*	4.35	4.35	4.32	4.34
delicate-hardy	3.35	3.69	3.47	3.50
friendly-unfriendly*	2.00	2.02	2.10	2.40
weak-strong*	3.85	3.92	3.87	3.88
dependent-independent	3.72	3.87	3.70	3.77
calm-excitable*	3.62	3.45	3.52	3.53
beautiful-plain	2.71	2.65	2.70	6.69
quiet-noisy*	3.75	3.52	3.57	3.62
sociable-unsociable*	1.84	2.12	2.12	2.03
passive-active*	4.77	4.75	4.75	4.76
insecure-confident*	4.12	4.12	4.32	4.19
fussy-easy going	3.65	3.55	3.65	3.62

The analysis of variance of the adjective scale yielded some interesting findings. The effect of sex of subject yielded significant differences for four scale items--items 6, 7, 18, and 19. On item 6, cheerful-cranky, female subjects rated the child more cheerful than did male subjects ($F = 8.33$, $df = 1,119$, $p < .0047$). Female subjects rated the child as more coordinated than did male subjects on item 7, awkward-coordinated ($F = 10.75$, $df = 1,119$, $p < .0014$). Female subjects also rated the child as more confident on item 18, confident-insecure ($F = 3.98$, $df = 1,119$, $p < .0485$). Finally, significant differences were found for Item 19, fussy-easy going, where females rated the child as more easy-going than did male subjects ($F = 13.11$, $df = 1,119$, $p < .0004$).

There was also a trend towards significance on Item 17 in which females rated the child as more active than did males ($F = 3.67$, $df = 1,119$, $p = .0578$).

No significant differences in rating due to the effect of Sex of Subject were found for the other adjective scale items, including Items 1-5, and 8-16.

Significant rating differences were not found as a function of gender information given about the infant. There was, however, a trend towards a significant difference in Item 4, big-little. The trend for subjects was to rate the "boy" as biggest, the "unknown" child as next biggest and the "girl" child as least biggest ($F = 3.02$, $df = 2,119$, $p > .05$). When this item was rerun with a mean substituted for the one missing value, statistical significance was indicated ($F = 3.08$, $df = 2,119$, $p < .0499$).

In relation to the effect of gender information about the child, the null hypothesis that subjects would generally not differ in their perceptions is accepted. Despite one trend towards significance, the subjects appeared to agree on their ratings of the child despite the condition in which the child was presented to them. The child was not perceived differently due to gender information given about him.

There were no significant differences found due to the interaction of the effects--Sex of Subject and Gender Information about the child.

Activity Checklist

Three response categories were employed on the activity checklist. Subjects were first asked to select activities they would choose to do if spending a day with the infant they had observed on the videotape. The second category of responses required the subjects to select activities they felt to be not appropriate for males and/or female infants. The final response required only of those subjects not given gender information about the child (Condition 3), was to attempt to guess the sex of the child they had observed on the videotape. Percentages were calculated for the three categories of responses with respect to the appropriate subject groups.

An analysis of variance was applied to the first category of responses--selection of activities--to the activity checklist. The effects of sex of subject and condition did not create significant differences between the number of subject responses in this category. There were also no significant differences in the number of subjects responses due to the interactions between the main effects. Male and female subjects selected approximately the same number of activities regardless of the condition--the gender information about the child with whom they were

hypothetically going to spend the afternoon. However, in relation to the effect of sex of subject a trend developed as females selected more activities than males ($F = 3.402$, $df = 1$, $p < .068$).

In Table 4, the percentages of activity items selected as a function of sex of subject and gender information about the child are presented. The percentages of activity items selected as a function of sex of subject without respect to gender information about the child are tested in Table 5. In Table 6, the percentages of activity items selected with respect to gender information about the child are presented.

The first category of responses to the activity checklist required the subjects to imagine they were going to spend the afternoon with the child they viewed on the videotape and select activities for the afternoon.

Items 3, 6, 7, 12 and 18, respectively running, jumping, climbing, play with transportation toys, playing with balls, playing with building blocks and playing with trikes, riding toys were selected by more than 80 percent of all subjects across conditions. These items were selected by subjects as a function of sex of subject and gender information about the child from 70 to 100 percent of the time.

Items 16 and 19, dressing up like a man and dressing up like a woman, were only selected by 10 or less percent of all subjects across conditions and were selected by female subjects and male subjects as a function of condition 20 or less percent of the time. Only 2.5 percent of all subjects selected cross-sex dressing up as an activity.

Item 1, rough play, was selected by 36.7 percent of all subjects. This item was selected for the male child by 55 percent of female sub-

Table 4

Percentage of activity items selected as a function of sex of subject (male vs. female) and gender information about the child (Male vs. Female vs. Unknown)

	m-m	m-f	m-u	f-m	f-f	f-u
1. rough play	75%	30%	55%	55%	20%	15%
2. listen-music	35	15	20	30	30	25
3. run,jump,climb	75	70	90	90	80	95
4. dolls-house	20	60	15	20	70	25
5. singing	20	25	25	40	35	40
6. transport toys	80	70	80	100	85	95
7. balls	75	70	80	90	85	95
8. pots,pans,dishes	20	30	30	20	55	40
9. watch T.V.	20	35	25	10	0	5
10. read book	35	75	30	50	55	45
11. stuffed anim.	95	60	50	75	75	80
12. blocks	90	70	80	95	100	70
13. puzzles	65	85	55	50	70	40
14. dancing	15	10	20	30	30	35
15. verbal games	25	45	35	40	15	30
16. dress-woman	20	5	5	20	5	5
17. draw,scribble	75	65	50	60	85	70
18. riding toys	100	70	90	90	95	100
19. dress-man	0	10	0	5	20	5
20. show affection	45	60	25	60	70	45

Table 5

Percentage of activity item selected
as a function of sex of subject (male vs. female)

	Male	Female	All
1. rough play	43.3	30.0	36.7
2. listen-music	23.3	28.3	25.8
3. run,jump,climb	78.3	88.0	83.3
4. dolls-house	31.7	38.3	35.0
5. singing	23.3	38.3	30.8
6. transport toys	76.0	93.3	85.0
7. balls	75.0	90.0	82.5
8. pots,pans,dishes	23.3	53.3	30.8
9. watch T.V.	26.7	05.0	15.8
10. read book	46.7	50.0	48.3
11. stuffed animal	70.0	76.6	72.5
12. blocks	80.0	88.3	84.2
13. puzzles	68.3	53.3	60.8
14. dancing	15.0	31.7	23.3
15. verbal games	35.0	28.3	31.7
16. dress-woman	10.0	10.0	10.0
17. draw,scribble	63.3	71.6	67.5
18. riding toys	86.7	93.3	90.0
19. dress-man	03.0	10.0	06.7
20. show affection	43.3	58.3	50.8

Table 6

Percentages of activity items selected
as a function of condition-genders
information about child (male vs. female vs. unknown)

	M	F	U
1. rough play	50.0	25.0	35.0
2. listen-music	32.5	22.5	22.5
3. run,jump,climb	82.5	75.0	92.5
4. dolls-house	20.0	65.0	20.0
5. singing	30.0	30.0	32.5
6. transport toys	90.0	77.5	87.5
7. balls	82.5	77.5	87.5
8. pots,pans,dishes	20.0	42.5	35.0
9. watch T.V.	15.0	17.5	15.0
10. read book	42.5	65.0	37.5
11. stuffed animal	85.0	67.5	65.0
12. blocks	92.5	85.0	75.0
13. puzzles	57.5	77.5	47.5
14. dancing	22.5	20.0	27.5
15. verbal games	32.5	30.0	32.5
16. dress-woman	20.0	05.0	05.0
17. draw,scribble	67.5	75.0	60.0
18. riding toys	95.0	80.0	95.0
19. dress-man	02.5	15.0	02.5
20. show affection	52.5	65.0	35.0

jects and 45 percent of male subjects and for the female child by 20 percent of the female subjects and 30 percent of the male subjects. Both male and female subjects appear to be less inclined to select rough play as an activity with the female child. Interestingly, when gender information was not given about the child, 55 percent of the male subjects selected rough play as an activity but only 15 percent of the female subjects did so.

Items 2 and 5, listening to music and singing songs, were selected by 25.8 and 30.8 percent of all subjects. These items were selected from 15 to 40 percent by subjects as a function of sex of subject and gender information about the child.

Item 8, play with pots, pans and dishes, was selected by 30.8 percent of all subjects. It was selected by female subjects 53.3 percent of the time and by males 23.3 percent of the time. This item was selected 20 percent of the time for male children by both male and female subjects and for the child's sex unknown condition by male subjects 30 percent of the time and by female subjects 40 percent of the time. Play with pots, pans and dishes was selected for the female child by 55 percent of the female subjects but only by 30 percent of the male subjects.

Item 9, watching television, was selected by 15.8 percent of all subjects and 26.7 percent of the time by male subjects, but only 5 percent of the time by female subjects. Watching television was selected most often (35 percent of the time) by males for the female child and never selected by female subjects for the female child.

Item 11, play with stuffed animals, was chosen by 72.5 percent of all subjects and by 70 percent of male subjects and 76.6 percent of

female subjects. Interestingly, it was the second most often activity selected by male subjects with the male child. It was selected 95 percent of the time in that condition by males and 75 percent of females for the male child. This item was selected from 60 to 75 percent of the time for female subjects. In the sex unknown condition, females selected play with stuffed animals 80 percent of the time, but males only selected it 50 percent of the time.

Item 13, play with puzzles, was selected by all subjects 60.8 percent of the time. It was selected for play with the female subject most often, 85 percent of the time by male subjects and 70 percent of the time for the female child by female subjects. This item was chosen for the male child 50 to 65 percent of the time and for play with the child, sex unknown, 40 to 55 percent of the time.

Item 19, dancing, was selected by 23.3 percent of all subjects and by 31.7 percent of female subjects and 15 percent of male subjects. This item was chosen from 10 to 20 percent of the time by male subjects as a function of condition. It was chosen by 30 to 35 percent of the female subjects as a function of condition.

Item 15, verbal games, was selected 31.7 percent of the time by all subjects and 28.3 percent of the time by female subjects and 35 percent of the time by male subjects. This item was selected for the female child 15 percent of the time by female subjects and 45 percent of the time by male subjects. It was selected by 25 percent of male subjects and 40 percent of female subjects for the male child. This item was chosen from 30 to 35 percent of the time for the child, sex unknown.

Item 17, drawing, scribbling, painting, was chosen by 67.5 percent of all subjects. This item was chosen 67.5 percent of the time for the male child and 75 percent of the time for the female child. It was most often chosen by females with female child (85 percent) and least often chosen by males for the child, sex unknown (50 percent).

Item 20, hug, kiss, show affection, was selected by 50.8 percent of all subjects. This item was selected for female child by 60 percent of the male subjects and 70 percent of the female subjects. It was selected by 45 percent of the male subjects and 60 percent of the female subjects for the male child. Hug, kiss, show affection was selected for the child, sex unknown, by 45 percent of the female subjects and only 25 percent of the male subjects.

An analysis of variance was also applied to the category of responses indicating activity appropriateness. The effect of sex of subject created significant differences in subject responses to behaviors felt to be not appropriate for males, not appropriate for females, and appropriate for both sexes. Male subjects more often selected behaviors as not appropriate for female infants than did female subjects ($F = 4.37$, $df = 1,119$, $p < .008$).

There were no significant differences in responses concerning appropriateness found due to the effect of condition, gender information given about the child. There was also no significant differences in responses concerning the appropriateness of activities due to the interaction between the effects of Sex of Subject and the Condition. Apparently, the condition in which the subjects viewed the infant did not create significant differences in their responses about the appropriateness of activities for male vs. female children.

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The second category of responses to the activity checklist required subjects to select activity items they felt were inappropriate for males, females or both. Items which were not designated by subjects as inappropriate were considered appropriate for both sexes. There were 10 activity items out of 20 which were considered to be appropriate for both sexes by more than 95 percent of all the subjects. These items included listening to music; sing song; playing with balls; watching T.V.,; reading story book to child; play with stuffed animal; play with puzzles and small toys; playing verbal games; drawing; scribbling, painting and play with trikes; riding toys.

In Table 7 the percentages of activity items selected as inappropriate as a function of sex of subject are presented. The percentages of times activities were selected as inappropriate by all subjects are presented in Table 8.

Item 1, rough house play, was selected by 70 percent of all subjects to be appropriate for male and children. It was selected as inappropriate for female children by 41.7 percent of the male subjects and 16.7 percent of the female subjects. One female subject felt the activity was inappropriate for male and female children. Despite this subject's response, all other subjects felt rough house play was appropriate for male children.

Item 3, running, jumping, climbing, was selected by 93.3 percent of all subjects as appropriate for both sexes and by 100 percent of all subjects as appropriate for male children. This item was selected as inappropriate for female children by 10 percent of the male subjects and 3.3 percent of the female subjects.

Table 7

Percentage of activity item selected as inappropriate (not female, not male or not female or male) as a function sex of subject male vs. female

	Sex of Subject					
	Males			Females		
	NF	NM	NMF	NF	NM	NMF
1. rough house	41.7			16.7		01.7
2. listen-music		05.0			01.7	
3. run,jump,climb	10.0			03.3		
4. dolls-house		58.3			25.0	
5. singing		05.0				
6. transport toys	13.3			06.7		
7. balls	01.7			01.7		
8. pot,pans,dishes	01.0	28.3			10.0	
9. watch T.V.		01.7				
10. read book		01.7				
11. stuffed animal	01.7				01.7	
12. blocks	08.3			01.7		
13. puzzles	01.7	01.7		01.7		
14. dancing	01.7	13.3			01.7	
15. verbal games		01.7				
16. dress-woman	58.3			60.0		
17. draw,scribble		03.3				
18. riding toys	05.0					
19. dress-man		68.3		65.0		
20. show affection	01.7	06.7		01.7	01.7	

Table 3

Percent of time attitudes were selected as inappropriate by all subjects for males (nm) females (nf) and both(n-m-f)

	NF	NM	NMF.
1. rough house	29.2	0	.8
2. listen-music	0	3.3	0
3. run,jump,climb	6.7	0	0
4. dolls-house	0	41.7	0
5. singing	0	2.5	0
6. transport toys	10	0	0
7. balls	1.7	0	0
8. pot,pans,dishes	.8	19.2	0
9. watch T.V.	0	.8	0
10. read book	0	.8	0
11. stuffed anim.	.8	.8	0
12. blocks	5.0	0	0
13. puzzles	1.7	.8	0
14. dancing	.8	7.5	0
15. verbal games	0	.8	0
16. dress-woman	59.2	0	0
17. draw,scribble	0	1.7	0
18. riding toys	2.5	0	0
19. dress-man	0	66.7	0
20. show affection	.8	4.2	.8

Item 4, play with dolls and dollhouse, was selected as appropriate by 58.3 percent of all subjects for both sexes and by 100 percent of all subjects as appropriate for female children. This item was chosen as inappropriate for male children by 58.3 percent of the male subjects and 25 percent of the female subjects.

Item 6, play with transportation toys, was selected as appropriate for both sexes by 90 percent of all subjects and as appropriate for male children by 100 percent of all subjects. This item was selected as inappropriate for female children by 13.3 percent of the male subjects and 6.7 percent of the female subjects.

Item 8, play with pots and pans, was selected as appropriate for both sexes by 80 percent of all subjects and as appropriate for female children by 99.2 percent of all subjects. This item was selected as inappropriate for male children by 28.3 percent of the male subjects and 10 percent of the female subjects.

Item 12, play with building blocks, was selected as appropriate for both sexes by 95 percent of all subjects and appropriate for male children by 100 percent of all subjects. This item was selected as inappropriate for a male child by 68.3 percent of all male subjects and 65 percent of female subjects.

Item 20, show affection, was selected as appropriate for both sexes by 94.2 percent of all subjects. This item was selected as inappropriate for male children by 6.7 percent of male subjects and 1.7 percent of female subjects. The item was also chosen as inappropriate for a female child by 1.7 percent of the male subjects and inappropriate of both sexes by 1 percent of the female subjects.

The third category of responses on the activity checklist required subjects who were unaware of the sex of the child to attempt to guess the sex. In reference to this response, 85 percent of the subjects guessed correctly, 2.5 percent guessed incorrectly, and 12.5 percent chose not to guess.

CHAPTER 5

This chapter is a discussion of the results of this investigation. This study was conducted to determine if significant differences in male or female students' behavior due to gender information about a child. The findings will be discussed in relation to past research findings reported in the literature. Recommendations for further research will be suggested.

Summary and Conclusions

Results from the adjective scale measure used in this investigation yielded some interesting findings concerning the students' perceptions of the infant. The sex of the student had a significant effect on the students' perceptions of the child in relation to some characteristics. Female subjects rated the child as more cheerful, coordinated, confident and easy-going than did male subjects.

Surprisingly, the effect of gender information given about the child only created a marginally significant difference in the students' perception of the infant in relation to one characteristic. The trend was predictable as the "boy" child was rated as biggest, the unknown child as next biggest and the "girl" child as smallest. This finding is consistent with that of Rubin, Provenzano and Luria (1974), who found that parents rated male newborns as bigger than female infants despite the fact that there were not significant differences in the infants birth weight or length.

However, the results of this study indicated that overall, the students' perceptions of the infant did not differ significantly

depending on what sex child they thought they were viewing or in the absence of information indicating the child's sex. These results are somewhat contrary to those found by Rubin, Provenzano and Luria (1974) in which parents' perceptions did significantly differ as a function of the sex of the child in relation to several characteristics. Perhaps great difference between amount of personal involvement between the two subject groups and the infants in these two studies accounts for some of the differences in the findings.

The results of the present investigation would seem to support the hypothesis that adults respond differently to infants on the basis of their (the adult's) sex but not on the basis of perceptual differences created by the effect of the child's sex. This is not consistent with the findings of Condry and Condry (1976), who found that the same infant, viewed in the same situation was perceived as displaying different emotions and levels of emotional intensity depending on what sex infant the students thought they were viewing.

Female subjects in the present investigation tended to perceive the child as having more positive characteristics than did male subjects. This finding is consistent with Blakemore's (1979) study which reports that females at all stages of life were found to respond more to babies than did males. Perhaps females respond more to babies because they perceive them in more positive terms than do males.

The results of this study did not indicate significant differences in students' perceptions due to an interaction between the effects of sex of student and gender information about the child. These findings are also contrary to the findings of Rubin, Provenzano and

Luria (1976). Those authors reported significant interactions between the effect of sex of parent and the effect of sex of child.

Perhaps the interaction of these effects is more likely to reveal significant differences in perceptions of subjects who have a high level of personal involvement with the children. The students in the present investigation were indicating their perceptions of a child who was and would remain virtually unknown to them. Differences in the way one perceives his or her role to be in reference to a child may effect how biased their perceptions become of the child.

The sex of the student and gender information about the child did not significantly affect the number of activities students selected to do in their hypothetical afternoon with the child. There was however an expected trend indicating female students choose more activities than male students. This trend is consistent with Blakemore's finding that females are more responsive to babies than are males (Blakemore, 1979). It is also consistent of similar findings of two studies by Feldman and Nash (Feldman and Nash, 1978, 1979).

The students selected activities such as running, jumping, climbing, play with transportation toys, playing with balls, play with building blocks and play with trikes and riding toys a great majority of the time regardless of their own sex or gender information they received about the child.

The most clearly sex-linked activities of dressing up like a man and dressing up like a woman were infrequently chosen by either sex subject for an activity with the child regardless of knowledge of the child's sex or its absence.

At least half of the play activities were selected in differing frequencies depending on the sex of the subject and/or the gender information about the child. These results appear to indicate that adults attitudes towards play behavior in particular preferred activities are determined at least partly on the basis of their own sex and the sex of the child with which they play.

These results lend support to the hypothesis that males and females play differently with children depending on whether the child is a male or female as well as depending on whether they themselves are male or female. These findings lend further support to findings of Feldman and Nash (1978, 1979) in their two studies concerning adult-infant interactions. They reported that there are general differences in adults interaction with infants based on the sex of the infant and sex of the adult. This research supports the hypothesis suggested by Rheingold and Cook (1975) that parents who provide their children with sex appropriate toys and furnishings, probably also behave in other ways towards their children as a function of sex.

Overall, results of the investigation indicated that male students felt a wider range of activities were inappropriate for both sexes than did female students. This finding is supported in the literature which has indicated that fathers are more concerned than mothers with their child's correct display of sex role behavior (Goodenough, 1959, Sears, Maccoby and Levine, 1957, Mussen and Rutherford, 1963).

Surprisingly, results did not indicate a significant difference in the mean number activities considered inappropriate for girls versus boys. Research has usually indicated that boys have a more restricted set of behaviors considered appropriate than do girls (McGhee, 1960;

Rosenberg and Sutton-Smith 1964; Fagot 1974). Of course, though certain behaviors may not be indicated by students as inappropriate for a child of a certain sex, differences did occur in their preferences for some activities according to their choices of activities.

In general, very few activities were selected as inappropriate for child of either or both sexes. A trend towards more acceptance of activities all being acceptable for both sexes has occurred in the literature (Wesley and Wesley, 1977) and is supported by the findings of this investigation as well.

However, research has indicated that behavior is not always found to be consistent with attitudes. This was exemplified in a study by Mill, Self and Datan (1976). They found that mothers interacted differently (with respect to toy handling and stimulation) as a function of the perceived sex of the infant with whom they played. However, despite significant differences in their observed experimental behavior the mothers claimed that they did not treat their own infants differently as a function of their infants' sexes.

In summary, the students' perceptions of some of the infant's characteristics were effected by the sex of the student. Some activities were preferred by students to do with the child depending on their own sex and the gender information available about the child or both of these factors. Students in general selected few activities as inappropriate. Male subjects selected a wider range activities as inappropriate than females. The students attitudes towards play behavior for infants was effected to some extent by, the distinction of sex.

The results of this study were probably affected by several factors. The subjects in this study were students the majority of whom were 18 to 20 years old and who had no experience in parenting. An older group of subjects, who were more mature and had parenting experience may have responded differently. It would be expected that a different group of subjects as suggested above may have responded in a more personal way in a study such as this one due to their maturation level and experience with children. Other research has shown that experience with children has an effect on perception of children and attitudes towards children's play behavior (Condry and Condry, 1976).

Recommendations for Further Research

The importance of further understanding sex role acquisition seems to be emphasized by statements of dissatisfaction made by many people concerning their sex roles. A study of Elman, Press and Rosenkrantz, (1970), reported that adults, both males and females, wish to express traits of the opposite sex in their behavior. Though adults viewed behavioral traits commonly associated with the opposite sex as being valuable and desirable in their descriptions of their "ideal" self images, they reported being inhibited about and failing to behaviorally express these traits for fear of social non-acceptance or harassment.

This paper has attempted to investigate some effects of sex roles on students' attitudes and perceptions of infants and infants' play behavior. It provides a small bit of information relevant to the subject of sex role acquisition. Research concerning sex differences in childhood seems to revolve around studies of play behavior of young children and the academic behavior of older children. One might

acquisition of

wish to examine the relationships between play behavior of young children and their later academic performance in further research. This research could probably be most accurately done by long-term study designs. Along these lines, research could be done to further investigate links between sex role adjustment and other areas of functioning in later life.

The interactions between nature and nurturance should be examined further. This study has attempted to do this by employing the presentation of a single child in three experimental conditions of different gender information. This type of design is one way of approaching the nature nurturance dilemma and cross-cultural studies can also attempt to separate these effects to some degree.

There are many areas of research concerning sex-role acquisition which may be explored. Further research could explore the effects of family size, peers and siblings, the media, marital satisfaction, race and social class on sex role development. Possible discrepancies between adults attitudes about sex roles and actual behavior towards their children could be explored.

Hopefully, a further understanding of sex role development and sex differences will lead to more accepting, nurturing attitudes and behaviors in people in general. Undoubtedly it could be of benefit to the clinicians, educators, parents and their children.

111100

Naegle, W. (1974)
Surgical children
111100-111100

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Table
 The expected primary mean
 analysis of variance

From	To
1	2
3	4
5	6
7	8
9	10
11	12
13	14
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93	94
95	96
97	98
99	100

APPENDIX

Table 9

Nineteen separate two-way anova's combined into one table
analysis of variance of adjective scale

Adjective Item	Sex	Condition	SxC
1. Firm-soft ANOVASS F	0.29079428 .24	1.25294118 .52	2.41183730 1.00
2. Nervous-relaxed ANOVASS F	0.53333333 0.38	0.31666667 0.11	5.71666667 2.05
3. Cuddly-not cuddly ANOVASS F	2.25662299 1.74	1.03258996 0.40	0.52401129 0.20
4. Big-little ANOVASS F	0.79580544 0.72	6.6449578 3.02	1.55682614 0.71
5. Shy-outgoing ANOVASS F	0.40833333 0.54	2.71666667 1.81	0.41666667 0.28
6. Cheerful-cranky ANOVASS F	7.50000000 8.33**	0.35000000 0.19	0.35000000 0.19
7. Akward-coordinated ANOVASS F	12.21056830 10.75**	2.71127451 1.19	1.12320363 0.49
8. Alert-inattentive ANOVASS F	1.87500000 2.71	0.01666667 0.01	0.15000000 0.11
9. Delicate-hardy ANOVASS F	0.75778617 0.75	2.36520685 1.16	1.88806404 0.93
10. Unfriendly-friendly ANOVASS F	1.00833333 1.47	0.21666667 0.16	1.11666667 0.81
11. Strong-weak ANOVASS F	0.53333333 0.57	0.11666667 0.06	0.81666667 0.98

Adjective Item	Sex	Condition	SxC
12. Dependent-Independence			
ANOVASS	2.13333333	0.71666667	3.81666667
F	1.55	0.26	1.39
13. Exciting-calm			
ANOVASS	1.20000000	0.61666667	1.55000000
F	1.14	0.29	0.73
14. Beautiful-plain			
ANOVASS	0.72856668	0.09836242	0.31360606
F	0.85	0.06	0.18
15. Noisy-quiet			
ANOVASS	1.63333333	1.11666667	2.91666667
F	2.15	0.73	1.92
16. Unsociable-sociable			
ANOVASS	2.16046147	2.03862314	3.57698792
F	2.71	1.28	2.24
17. Active-passive			
ANOVASS	0.67500000	0.01666667	0.35000000
F	3.67	0.05	0.95
18. Confident-insecure			
ANOVASS	2.40833333	1.06666667	2.06666667
F	3.98*	0.88	1.71
19. Fussy-easygoing			
ANOVASS	13.33333333	0.26666667	0.86666667
F	13.11**	0.13	0.43

Subject # _____

Child _____

On this page there are nineteen pairs of words which are opposites. You are to rate the child you just saw on the videotape in relation to these words. Place an "X" in the space that best describes this child. The more a word describes the child the closer your "X" should be to that word.

If you cannot decide, place your "X" in the center space. There are no right or wrong answers, only your opinion.

firm : _____ : _____ : _____ : _____ : _____ : soft

nervous : _____ : _____ : _____ : _____ : _____ : relaxed

cuddly : _____ : _____ : _____ : _____ : _____ : not cuddly

big : _____ : _____ : _____ : _____ : _____ : little

shy : _____ : _____ : _____ : _____ : _____ : outgoing

cheerful : _____ : _____ : _____ : _____ : _____ : cranky

awkward : _____ : _____ : _____ : _____ : _____ : well coordinated

alert : _____ : _____ : _____ : _____ : _____ : inattentive

delicate : _____ : _____ : _____ : _____ : _____ : hardy

unfriendly : _____ : _____ : _____ : _____ : _____ : friendly

strong : _____ : _____ : _____ : _____ : _____ : weak

dependent : _____ : _____ : _____ : _____ : _____ : independent

excitable : _____ : _____ : _____ : _____ : _____ : calm

beautiful : _____ : _____ : _____ : _____ : _____ : plain

noisy : _____ : _____ : _____ : _____ : _____ : quiet

unsociable : _____ : _____ : _____ : _____ : _____ : sociable

active : _____ : _____ : _____ : _____ : _____ : inactive

confident : _____ : _____ : _____ : _____ : _____ : insecure

fussy : _____ : _____ : _____ : _____ : _____ : easy going

Subject # _____

You are going to spend the afternoon with _____.
Select activities for the afternoon by placing a checkmark
after the activity.

- _____ rough house play _____
- _____ listening to music _____
- _____ running, jumping, climbing _____
- _____ play with dolls and dollhouse _____
- _____ singing songs _____
- _____ play with transportation toys _____
- _____ playing with balls _____
- _____ play with pots, pans and dishes _____
- _____ watching television _____
- _____ reading storybook with child _____
- _____ play with stuffed animals _____
- _____ play with building blocks _____
- _____ play with puzzles and small toys _____
- _____ dancing _____
- _____ playing dress up like a woman _____
- _____ play verbal games _____
- _____ drawing, scribbling, painting _____
- _____ play with trikes, riding toys _____
- _____ playing dress up like a man _____
- _____ hug, kiss, show affection _____

In the space after the activities mark any activity you feel is
not appropriate for a female toddler with an NF and any activity
not appropriate for a male toddler with an NM.

If you are unaware of the sex of the child you viewed on the
videotape, please guess the sex of that child. Circle one.
1. Girl 2. Boy

Please give your reasons for making this guess on the back of this sheet.

Subject #

Class _____ Date _____ Instructor _____

Year in school _____ Age _____ Sex _____

Marital Status _____ No. of children _____

Major _____ Minor _____ Degree Sought _____

Comments:

Thank you very much for your participation!