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Robinson, Clyde Clark

THE EFFECTS OF SEX-TYPED LABELING IN CONJUNCTION WITH SEX-TYPED MODELING UPON PRESCHOOL CHILDREN'S TOY PREFERENCE BEHAVIOR

The University of North Carolina at Greensboro

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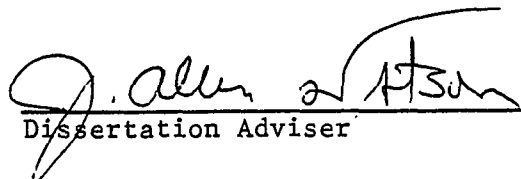
by

Clyde Clark Robinson

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Approved by


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APPROVAL PAGE

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ROBINSON, CLYDE CLARK. The Effects of Sex-Typed Labeling in Conjunction with Sex-Typed Modeling Upon Preschool Children's Toy Preference Behavior. (1983) Directed by: Dr. James A. Watson. Pp 76.

Modeling and labeling are two mechanisms which have been identified as playing an integral part in the development of children's sex-typed interests and activities. The purpose of the present study was to investigate the manner in which young children use these two sources of sex-appropriate information--modeling and labeling--to direct their subsequent preferences for sex-typed and neutral toys.

Photographs of two equally attractive toys were presented to 144 three- and four-year-old children. One toy was verbally labeled as appropriate for boys and the other labeled appropriate for girls. Following the labeling procedure, the children viewed on a videotape monitor one of the labeled toys being played with by either a same-age boy or a same-age girl. After the videotape modeling sequence, the children were again shown photographs of the pair of toys and their toy preference behavior was recorded.

There were no differences between children's toy preferences for modeled or labeled toys when controlling for age, sex, and social-class background of children. There were no differences between children's preferences in the modeling and labeling conditions for neutral toys and sex-typed toys. The effect of a model's sex upon children's toy preferences was not significant; however, there was a very strong tendency for children to express a preference for toys

labeled appropriately for their own sex. When sex-appropriate modeling and labeling were presented together, labeling effects upon children's toy preferences were predominant regardless of the sex of the model. Labeling appeared to provide unequivocal information to children which led them to avoid sex-inappropriate toys and to approach sex-appropriate toys. On the other hand, single episodes of modeling did not appear to be sufficient to cause children to prefer one equally attractive toy over another.

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TABLE OF CONTENTS

	Page
APPROVAL PAGE	ii
ACKNOWLEDGMENTS	iii
LIST OF TABLES	vi
LIST OF FIGURES	vii
 CHAPTER	
I. INTRODUCTION	1
Statement of the Problem	2
Theoretical Framework	2
Purpose of Present Study	6
Assumptions	7
Hypotheses	8
II. REVIEW OF RELATED LITERATURE	10
Sex Differences in Toy and Activity Preferences	10
Instruments for Measuring Sex Identity	13
Studies Addressing Parental and Peer Influences	16
Social Learning Theory and Same-Sex Peer Modeling	21
Kohlberg's Cognitive Theory of Sex-Role Development	24
Schematic Processing Model of Sex Typing and Sex Stereotyping	29
III. METHODOLOGY	34
Sample	34
Apparatus and Materials	34
Experimental Conditions	35
Procedure	36

CHAPTER	Page
IV. RESULTS	40
Data Analysis	40
Preliminary Check for Possible Age and Sex Effects	40
Effects of Social Class	41
V. DISCUSSION	53
Age, Sex, and Social Class	53
Neutral Toys vs Sex-Typed Toys	53
Interactive Effects of Modeling and Labeling . .	55
Kohlberg's Theory for Sex-Typing	58
Martin and Halverson's Model	60
Implication for Changing Sex-Role Orientations .	61
Summary	64
BIBLIOGRAPHY	66
APPENDIX A	72

LIST OF TABLES

	Page
TABLE	
1. Toy Classification and Toy-Labeling Sequence	37
2. Frequency of Sex-Appropriate Modeling and Sex-Appropriate Labeling Sex-Typed Toy Preferences by Sex and Age	42
3. Frequency of Sex-Appropriate Modeling and Sex-Appropriate Labeling Sex-Typed Toy Preferences by Social Class	43
4. Frequency of Sex-Appropriate Modeling and Sex-Appropriate Labeling Toy Preferences by Toy Category	44
5. Proportion of Subjects in Each Cell Who Chose the Modeled and/or Labeled Sex-Typed Toy .	45

LIST OF FIGURES

	Page
FIGURE	
1. Sex Similarity of Model and Sex Similarity of Label as Determinants of Children's Preferences for Sex-Typed Toys in the Three Modeling Conditions .	48
2. Sex Similarity of Model and Sex Similarity of Label as Determinants of Children's Preferences for Neutral Toys in the Three Modeling Conditions . .	49
3. Sex Similarity of Model and Sex Similarity of Label as Determinants of Children's Preferences for Sex-Typed Toys in the Three Labeling Conditions .	50
4. Sex Similarity of Model and Sex Similarity of Label as Determinants of Children's Preferences for Neutral Toys in the Three Labeling Conditions . .	52

CHAPTER I

INTRODUCTION

Sex-typing is viewed as the process whereby individuals come to acquire, to value, and to adopt for themselves behavior patterns that are appropriate for their ascribed gender (Mischel, 1970). From the 1930s into the 1980s, studies on sex-typing of preschool children have yielded several consistent results, notwithstanding the cultural awareness brought about by the women's movement.

Evidence from the literature suggested that boys and girls develop sex-typed interests and activity preferences which reflect sex-stereotyped standards at a very early age. When presented with pictures of toys, children consistently made sex-stereotyped discriminations and displayed preferences for toys which adults would consider sex-appropriate (Blakemore, LaRue, & Olejnik, 1970; Brown, 1957; DeLucia, 1963, 1972; Eisenberg, Murray, & Hite, 1982; Fauls & Smith, 1956; Fling & Manosevitz, 1972; Hartup & Zook, 1960; Nadelman, 1974; Rabban, 1950; Vance & McCall, 1934; Ward, 1968, 1969; Wohlford, Santrock, Berger, & Liberman, 1971). When given actual toys to play with, children frequently chose toys which adults considered to be sex-appropriate (Farwell, 1930; Frasher, Nurss, & Brogan, 1980; Hartup, Moore, & Sager, 1963). Most children have been observed to play predominantly with sex-appropriate toys in natural nursery-school setting (Barry & Barry, 1976; Connor & Serbin, 1977; Eisenberg

et al., 1982; Eisenberg-Berg, Boothby, & Matson, 1979; Fagot, 1978; Fagot & Patterson, 1967; Harper & Sanders, 1975; Lamb & Rooprovine, 1979; Parten, 1933; Ross, 1971). In home settings, toys which most children play with have been recorded or observed as being predominantly sex-appropriate (Fagot, 1974; Giddings & Halverson, 1981).

Statement of the Problem

Two important determinants that are assumed to influence children's sex-typed interests and activity preferences are like-sex modeling and sex-appropriate labeling. Considerable theoretical attention has been directed toward these two determinants (Bandura, 1969; Mischel, 1970; Kohlberg, 1966; Kohlberg & Ullian, 1979; Martin & Halverson, 1981). Regardless of the attention, few empirical studies have examined the manner in which young children use these two sources of sex-appropriateness information--labeling and modeling--in conjunction to direct their subsequent preferences for sex-typed or neutral items. As a result, little is known concerning how labeling and modeling interact when presented together upon children's preferences and which one, if either, plays the more predominant role.

Theoretical Framework

A variety of theoretical interpretations exist as to why young children differentiate their sex-typed interests and activity preferences (e.g., Mussen, 1969; Maccoby & Jacklin, 1974); however, two views have become the most prominent--the cognitive-development

theory of sex-typing (Kohlberg, 1966; Kohlberg & Ullian, 1979), and a social-learning approach to sex-typing (Mischel, 1970). A more recent view somewhat akin to the cognitive-development approach but which has risen out of the proliferation in social cognitive research (Taylor & Crocker, 1979) is a schematic processing theory of sex-typing in children proposed by Martin and Halverson (1981).

The social learning, cognitive-developmental, and schematic processing theories have two major differences in their views: (1) how children maintain their sex-typed interests and preferences, and (2) how stable or resistant to change these interests and preferences are in children. Regardless of the differences, these theories share similar mechanisms that merge environmental factors with children's social cognitions to explain the acquisition of sex-typed interests and activity preferences. The degree of emphasis may vary but all three theories utilize the concepts of observational learning and sex-labeling. Social learning theory appears to place greater emphasis upon observational learning while the schematic processing theory appears to place greater emphasis upon the role of sex-labeling.

In explaining social learning theory, Mischel (1970) noted that sex-typed behaviors, like all other social behaviors, depend to a large extent on observational learning and cognitive process. Observational learning may result from watching what others (models) do, or from attending to the physical environment, to events, and to symbols such as words and pictures (Mischel, 1970). Two important determinants of children's observational learning and behavior are

the sex of a model and the sex-appropriateness of the modeled behavior relative to the sex of the child. Social learning theorists (Bandura, 1969; Mischel, 1970) have repeatedly noted that similarity between observer and model enhances imitation. From this it is argued that children should generally attend to and imitate same-sex models more than opposite-sex models because they perceive same-sex models to be more similar to themselves.

Kohlberg's (1966) cognitive-development theory of sex-typing also intertwines gender labeling and observational learning but appears to place more emphasis upon the gender-labeling and sex-categorizing functions. According to Kohlberg's theory, children first gain a concept of what it is to be male or female, then children label and self-categorize themselves as "boys" or "girls." Once children have a clear understanding of their own gender identity, they attempt to fit their own behavior to their concepts of what behavior is sex-appropriate. Children's perceptions of what is appropriate behavior for males and females depend both upon what they see males and females doing and upon the approval or disapproval that these actions elicit differentially from others.

The schematic processing theory (Martin & Halverson, 1981) seems to place greater emphasis upon the role of labeling in children's sex-typing interests and activity preferences. The basic unit in this model is the schema. Schemas are viewed by Martin and Halverson (1981) as being naive theories that guide information processing by structuring experiences, regulating behavior, and providing a basis for making inferences and interpretations.

Sex-typing schemas guide children's behaviors by giving information at the level of labels (e.g., for boys) about what kinds of things should be approached because they are sex-appropriate. Martin and Halverson stated:

A boy can rely upon his (sex-typed) schema to obtain the information that "boys play with trucks" and "girls play with dolls." Both bits of information are necessary so the boy can act consistently with his own sex by playing with trucks and not by playing with dolls. (1981, p. 1121)

Observational learning plays a role in the sex-typing schematic process although it is not emphasized to the extent that it is in social learning theory. In the schematic processing model, observational learning can play a role by assisting children to filter, categorize, and expand their repertoire of sex-appropriate and inappropriate behaviors.

Even though the current predominant sex-typing theories rely upon the concepts of observational learning and sex labeling as intrinsic components to explain the sex-typed interests and activity preferences of children, few studies utilizing and testing these theories have combined the concepts of observational learning and sex labeling in the same experimental procedure. The major utilization of Kohlberg's theory has not been one of understanding the role of sex labeling and same-sex modeling working together but one of examining their effects separately (Blakemore et al., 1979; Kuhn, Nash, & Bruckner, 1978; Maccoby & Jacklin, 1974; Muller & Goldberg, 1980).

Investigators utilizing observational learning have focused upon various dimensions of the role of modeling on children's sex-typed interests; however, the role of labeling has seldom been used in these studies. From an extensive review of previous research on children's imitation, Barkley, Ullman, Otto, and Brecht (1977) concluded that the like-sex hypothesis that children imitate same-sex models to a greater extent than opposite-sex models, although possessing some validity, is inadequate to account for sex differences in imitation, suggesting that other factors come into play.

Five studies have addressed the role of sex labeling upon children's sex-typed interests but have excluded the role of modeling. These studies (Liebert, McCall, & Hanratty, 1971; Montemayor, 1974; Ross & Ross, 1972; Stein, Poly, & Mueller, 1971; Thompson, 1975) have yielded results which suggest that sex-appropriate labeling has strong effects upon children's choices of toys and activities, their resistance to sex-inappropriate toys and activities, and their greater persistence on tasks labeled as sex-appropriate.

Purpose of Present Study

The literature seems to indicate that sex of a model and sex-appropriate labeling affect children's sex-typed interests and activity preferences. However, because these two determinants have seldom been examined together, the present investigation focused upon the manner in which young children use these two sources of sex-appropriate information--labeling and modeling--to direct their subsequent sex-typed toy preferences.

Since findings addressing social-class factors were not conclusive (Nadelman, 1974; Rabban, 1950), subjects from professional middle-class and working-class families were used to test for possible social-class effects upon children's toy preferences. In addition, because previous studies failed to test how sex modeling and labeling may differ for toys traditionally classified as sex-neutral as opposed to toys traditionally classified as sex-typed, toy classification was included in the experimental design.

Sex of model, social class of subjects, sex appropriateness of a toy's label, and toy classification were varied, and their effects upon children's sex-typed toy preferences were assessed. The goals of the experiment were to elucidate the influence of multiple sources of sex typing on children's responses by (a) combining modeling and labeling in a single factorial design, (b) utilizing toys of two sex-appropriate classifications (i.e., appropriate for one's own sex or appropriate for both sexes) and experimentally manipulating the toy's sex appropriateness by a modeling and verbal labeling procedure, (c) utilizing same- or opposite-sex peer models, and (d) drawing subjects from professional middle-class and working-class backgrounds.

Assumptions

The major assumptions of the study were those commonly shared by the cognitive-development, social learning, and schematic processing theories concerning the acquisition of children's sex-typed interests and activity preferences. The first assumption was that

preschool children classify themselves as males or females and that they are rewarded for and find rewarding activities that are classified as appropriate to their gender. Second, to assist them in their gender differentiation process, children use multiple sources of information supplied by their environments that provide cues concerning the sex appropriateness of various activities. Third, children attempt to assess the information available to them for assimilation and accommodation into their repertoire of appropriate behaviors. The literature has identified modeling (especially same-sex modeling) and sex labeling as two possible sources of sex-appropriate information. Finally, an assumption was made that it may be inappropriate to view the modeling and labeling processes as occurring in isolation of each other in the children's natural environment. A more appropriate approach may be one of considering these two sources of sex-appropriate information as occurring together more often than not.

Hypotheses

This study focused upon the manner in which three- and four-year-old children use sex labeling and peer modeling as sources of sex-appropriate information to direct their subsequent preferences for sex-typed and neutral toys.

Five major research questions were addressed. First and primary, when combining sex-labeling and peer-modeling mechanisms into the same research design, do the mechanisms work independently of each other or do they interact in some way? Second, if they do

interact, what are the effects? Third, does one mechanism play a more predominant role than the other when interacting? Fourth, does social class influence sex-typed labeling or modeling as sources of appropriate information and if so, in what way? Finally, are the effects of experimentally manipulating sex labeling and peer modeling the same for toys considered to be sex-typed as for those considered to be sex-neutral?

The following hypotheses were tested in order to investigate the research questions:

- Hypothesis 1. Labeling indicating the sex appropriateness of the toys would have a strong effect on the children's stated sex-typed toy preferences.
- Hypothesis 2. If labeling is more salient than same-sex modeling when examined together, then children would choose toys that have been labeled sex-appropriately more than toys that have been modeled sex-appropriately.
- Hypothesis 3. Same-sex modeling indicating the sex appropriateness of the toys would have an effect upon the children's stated sex-typed preferences.
- Hypothesis 4. If same-sex modeling is more salient than labeling, then children would choose toys that have been modeled sex-appropriately more than toys labeled sex-appropriately.
- Hypothesis 5. Labeling and same-sex modeling would have a stronger effect on children's stated preferences for neutral toys than for sex-typed toys.

CHAPTER II
REVIEW OF RELATED LITERATURE

The review of related literature will address questions concerning the development of children's sex-typed interests and activity preferences, as follows: (1) nontheoretical studies, many of them early, that showed sex differences in children's toy and activity preferences, (2) studies dealing with the development and refinement of instruments to measure sex identity through toy preferences, (3) studies dealing with parental and peer influences upon children's toy preferences, (4) studies based upon the social learning theoretical orientation addressing same-sex modeling, (5) studies testing the assumptions of the cognitive-development theoretical orientation of sex-typing in young children, and (6) the theoretical development of the schematic processing theory of sex-typing and the studies supporting its premises.

Sex Differences in Toy and Activity Preferences

A major group of studies on children's toy preferences, beginning in the 1930s, documented the differences that existed between the sexes. Bridges (1927), observing two- and three-year-old nursery-school children during free-play periods, found that boys' most frequent activities were building with large bricks, fitting cylinders into holes, color pairing, naming objects in postcards, and cube

construction. Girls' most frequently chosen activities were fitting cylinders into holes, threading beads, writing on blackboards, and fastening buttons.

Farwell (1930) examined the reactions of kindergarten, first-grade, and second-grade children to constructive play materials. Subjects were observed as they played with building, drawing, painting, sewing, and paper-construction materials. Farwell found that boys showed a marked preference for blocks and girls showed preference for sewing, while both sexes preferred painting materials and modeling clay.

Parten (1933) focused upon social play among two-, three-, and four-year-old preschool children during free-play periods and found that girls played with dolls, strung beads, cut paper, and played on swings more than did boys. Boys rode on kiddie cars and played with blocks and trains more often than did girls.

Vance and McCall (1934) showed photos of toys to three- through six-year-olds and found that boys showed preferences for woodwork, large blocks, and equipment requiring large-muscle activities. Girls preferred housekeeping materials and materials for more passive play.

Rabban (1950) found that children from lower socioeconomic classes showed sex-typed interests earlier than middle-class children did. Boys from both social classes preferred guns, steamrollers, trucks, racing cars, soldiers, knives, and fire engines, while girls from both social classes preferred dolls, doll buggies, doll cribs, beads, and dishes.

Ward (1968) presented four- through seven-year-olds pictures of 15 pairs of toys, one masculine and one feminine, and asked the subjects to indicate which toy in each pair they preferred to play with. The results revealed that girls showed greater group variance than boys and that boys preferred boys' toys more than girls preferred girls' toys.

More recent studies documenting sex differences in children's sex-typed interests and activity preferences have sought to find out if changes in children's sex-typed interests have taken place since the 1950s and the 1960s due to the possible impact of the women's movement. Nadelman (1974) studied 240 five- and eight-year-old children from working-class and professional middle-class families to test Rabban's findings on class differences. Subjects who were shown pictures of sex-appropriate activities recalled, knew, and preferred same-sex items significantly more than opposite-sex items from all socioeconomic classes. These results contradicted Rabban's earlier findings. Girls' scores were less rigidly sex-typed than were boys' and older children showed greater stereotyping in preference tests than did younger children.

Barry and Barry (1976) observed three- to five-year-old children in their use of a stereotypically female "housekeeping corner." They found that most boys merely visited the corner without playing, whereas girls spent more time playing in the corner. The investigators concluded that regardless of apparent advances made by the women's liberation movement, role-playing behaviors in young children indicated continued sex-role stereotyping.

Frasher, Nurss, and Brogan (1980) scattered toys on a floor and asked five-year-olds to select four toys with which they would most like to play. The investigators concluded that the selections were highly consistent with the sex-typed choices of children in the 1950s and 1960s; few boys chose girl toys, few girls chose male toys, and neutral toys were selected equally.

Gidding and Halverson (1981) shifted the study of children's toy and activity preferences from the nursery schools and laboratories to the home. Mothers were asked to provide detailed hour-by-hour accounts of their children's activities in the home for one week. An analysis of the diaries revealed that the preschool children spent approximately 20 percent of their waking time in play. Boys played more with vehicles and girls spent more time playing with dolls, in domestic role play, and in dressing up. Both boys and girls played about equally with items generally considered to be nonstereotyped.

Thus, studies have documented that children's preferences for sex-typed toys have been fairly consistent from the 1930s into the 1980s. The results have indicated that children's preferences for toys are differentiated by the time they reach school age with boys predominately preferring traditional masculine items and girls predominately preferring traditional feminine items.

Instruments for Measuring Sex Identity

Following early documentation of sex differences in children's toy and activity preferences, Brown (1957) developed the IT Scale to

measure the degree of masculinity or femininity in a child's sex-role preference. The IT Scale is a projective test in which the child is presented with a drawing of "IT," an ambiguous child-figure. The child has to choose what IT would like in a series of objects or picture cards associated with either masculine or feminine roles. Using this test, Brown found that boys appeared to develop sex-typed choices at an earlier age than did girls. Brown also found that girls chose less feminine sex roles as they increased in age between five and ten years (i.e., they became less sex-typed as they became older).

Brown's results were called into question by the possibility that the IT figure was more masculine than neuter in appearance which suggested test bias. Several investigators eliminated this possible bias by administering the test with IT concealed in an envelope (Endsley, 1967; Lansky & McKay, 1969; Sher & Lanskey, 1968). Endsley found no significant difference between the mean scores for both boys and girls on the concealed and standard version. In the other two studies, a nonsignificant tendency was found for girls to be more feminine on the concealed test than on the standard test. Sher and Lansky, in addition, found that a majority of both sexes labeled the IT figure as a boy while a majority of both sexes guessed the concealed IT to be their same sex.

Fling and Manosevitz (1972) attempted to clear up conflicting results obtained from a possible bias between the standard IT test and the concealed IT test. They substituted a blank card for the IT figure and had the subjects pretend that there was a picture of IT

on the card. With the masculine bias of the test apparently eliminated, Fling and Manosevitz found that among children of three and four years of age, both boys and girls made sex-typed choice, but neither sex was significantly more likely to make sex-appropriate choices. There was a nonsignificant trend in this study for boys to be more sex-typed.

DeLucia (1963) developed another method for measuring sex-typing in children. DeLucia developed a toy preference test in which a pair of pictures was placed on a flannel board along with a drawing of a male figure for boy subjects or a female figure for girl subjects. The subject was asked with which of the two toys the child in the drawing would like to play. DeLucia tested 110 children, kindergarten through fourth grade, and found that both boys and girls apparently increased their sex-appropriate choices as they increased in age. Even though with increasing age both boys and girls increased in their sex-appropriate responses, girls' responses were less sex-appropriate as they became older.

The IT Scale and toy preference tests in the 1950s and early 1960s were used to determine the amount or how well children were sex-typed. Obtaining a sex-typed measure for children was crucial for the sex identification theories that were prevalent at that time (Mischel, 1970). Identification was the mechanism involved to explain how children developed attributes and behavior patterns similar to those of their parents or other social models (Mischel, 1970). Identification concepts generally stemmed from Freudian

theorists. These theorists failed to explain why or how children came to prefer certain toys and activities over others when adult agents were not found to be involved in children's toy preferences. For example, Maccoby and Jacklin (1974) pointed out that:

. . . it is possible that societies begin to label as "masculine" those toys that differentially attract boys even if there is no relationship of the toy to a masculine role. For example, blocks are thought of as "boyish" toys even though they are not related to adult male occupation in the sense that a fireman's hat or a toy truck is. In a similar vein, there is no obvious reason why preschool girls should be spending more time in painting, drawing, cutting paper, or manipulating play dough (since few modern mothers make bread, and professional artists are frequently male). If these activities become labeled as more appropriate for one sex, then, it seems possible that it is because children of one sex choose to do them rather than vice versa. (p. 278)

Studies Addressing Parental and Peer Influences

In an attempt to explain why specific toys and activities are preferred by one sex over others, some researchers have focused on the role that parents and peers may play in influencing children's toy and activity preferences. Fauls and Smith (1956) showed four- and five-year-old children picture pairs of family scenes. One scene showed a stereotyped male activity while the other scene showed a stereotyped female activity. In each scene, parents were watching a child of the same gender as the subject. Children were asked what the parents wanted the girl or boy to do. The results indicated that the children described the parents as preferring traditional sex-appropriate child activities.

Muller and Goldberg (1980) examined children's knowledge of parental expectations concerning their sex-typed activities to see if there was any systematic changes from three to five year olds. They presented the subjects with pictures of a boy and girl doing a male-appropriate activity, pictures of a boy and girl doing a female-appropriate activity, and pictures of a boy and girl doing neutral activities. The subjects were told a story while the pictures were shown, and were asked, for example, which child would father or mother give the doll to? For sex-typed items, the subjects chose the same-sex child, and for neutral items the girl and boy were chosen equally. Muller and Goldberg concluded that from three to five years old, children become increasingly aware that parents behave differently toward girls and boys, especially in sex-typed situations.

Lansky (1967) examined parental attitudes about children's sex-typed behaviors by presenting parents of preschool children with hypothetical situations in which a boy or girl chose either a masculine or feminine activity. When a girl chose a boy activity, neither mothers nor fathers seemed especially concerned. When a boy chose girl activities, however, both parents reacted negatively. This was especially true for fathers. Fathers were somewhat more likely to show positive reactions when a boy chose masculine activities than when a girl chose feminine ones.

Results similar to Lansky's findings have been obtained by Fling and Manosevitz (1972) who studied families with nursery-school-age

children. The investigators asked the parents to make "IT test" choices for their children; afterward, they asked the parents to report about the guidance they gave their children toward or away from certain sex-typed objects. Parents were asked how strongly they would object to their children engaging in any of the activities they had omitted in their choices for IT. Both mothers and fathers chose more sex-appropriate activities for their sons in the IT test than for their daughters. Parents were stronger in their discouragement of sex-inappropriate behaviors in their sons than in their daughters. In addition, mothers encouraged their daughters toward sex-appropriate activities more than they did their sons.

Fagot (1978) directly measured different parental behaviors toward their children. Fagot observed two-year-olds and parents in their homes using an observation checklist of 46 child behaviors and 19 parent-reaction behaviors. The parental behaviors were categorized as positive, negative, or neutral. Parental reactions to specific child behaviors were analyzed to determine whether they were influenced by the child's actual behavior or merely a result of the child's sex. Parents reacted significantly more favorably to the child when the child was engaged in same-sex preferred behavior (e.g., boys playing with blocks, manipulative objects, transportation toys, and girls playing with dolls, soft toys, dress up). Parents were more likely to give negative responses to cross-sex preferred behaviors. Parents' self-reports and parent-observation data did not correlate highly, suggesting that parental interviews used to

determine parental behaviors toward children's toy and activity preferences may be suspect.

Hartup, Moore, and Sager (1963) wanted to determine whether children's rate of playing with toys culturally stereotyped as appropriate for the opposite sex was reduced if in the presence of an adult, or if associated with reinforcement of sex-appropriate or punishment of sex-inappropriate play. To test their hypothesis, they offered nursery-school children two toys: an unattractive sex-neutral toy, and an attractive toy that was suitable for the other sex. They found that boys were more likely to avoid the sex-inappropriate toy than were girls. Boys' avoidance of feminine toys was especially marked when an experimenter was present suggesting that male subjects expected adult disapproval for playing with girls' toys.

Fagot and Patterson (1969) asked if children reinforce peers of the same sex more than they reinforce children of the opposite sex. They made observations of three-year-olds during free-play activities using 28 play behaviors and ten social consequences of these behaviors. They found that peers reinforced one another for gender-appropriate behavior with positive reinforcements occurring much more frequently than punishments.

Servin, Connor, Burchardt, and Citron (1979) wanted to see whether peers function directly as discriminative stimuli for preschoolers' sex-typed play behavior, inhibiting exploration of toys culturally labeled as appropriate for the opposite sex. They observed three- and four-year-olds in a playroom with three male toys

and three female toys either alone or with same-sex peers or with opposite-sex peers. They found that the proportion of play with opposite-sex toys was higher for both boys and girls in the solitary condition and lower in the opposite-sex peer condition. In each condition, girls played with opposite-sex-typed toys a greater portion of the time than did boys.

Studies with parents present in the room yielded different results from those of Serbin et al., who found that with the presence of peers in the experimental room, the sex of the peers affected the subjects' toy-playing behavior. In contrast, Schau, Kahn, Diepold, and Cherry (1980) found that with the presence of parents in the experimental room, the sex of the parent had no significant impact upon their children's toy-playing behaviors.

Langlois and Downs (1980) examined the effects upon three- and five-year-old children's toy-playing activities with both parents and peers present in the experimental condition. The subjects were given three sets of toys matched for attractiveness and complexity with which to play (one toy in each pair being typed as masculine and the other as feminine). The results indicated that children predominantly played with sex-appropriate toys. Mothers used more rewards in their children's play than did peers, while peers used more punishment than mothers. For boys, mothers rewarded their children when playing with opposite-sex toys but with little apparent impact. Fathers, in contrast to mothers, rewarded both sons and daughters more when playing with same-sex toys and punished their children more when playing with cross-sex toys.

With the mixed evidence in the literature concerning the role of parents in shaping their children's toy preferences, the emphasis in recent years has shifted from parental behaviors to the role of peers. Mischel (1970) stated:

. . . children's sex-typed patterns and preferences are not merely a child-sized version of those displayed by the same-sex parent. In some areas, such as toys and activity preferences, parental patterns may have virtually no influence on the child . . . youngsters . . . may be influenced chiefly by peers. (p. 31)

Mussen and Rutherford (1963) had parents answer a questionnaire intended to assess how strongly they encouraged their children to engage in traditionally sex-appropriate play, games, and activities. No significant relations were found between this measure and the children's sex-typed preferences, suggesting that children's game and activity choices may be relatively independent of parental tutelage and more influenced by their peer culture.

Rosenberg and Sutton-Smith (1966) found in extensive family studies that the child's sex-role learning is influenced substantially by other children. Their results indicated that cross-sex behavior was increased by exposure to the opposite-sex behavior of older children as reflected by the greater frequency of cross-sex behavior in children who have older opposite-sex siblings.

Social Learning Theory and Same-Sex Peer Modeling

Considerable theoretical and empirical attention have been given to modeling and social learning (Bandura, 1969; Kohlberg, 1966; Maccoby & Jacklin, 1974; Mischel, 1970). In explaining social

learning theory, Mischel (1970) noted that sex-typed behaviors, like all other social behaviors, depend to a large extent on observational learning and cognitive process. Mischel stated:

Such learning can occur without direct reinforcement to the learner. People learn through their eyes and ears by observing other persons and events and not merely from the consequences they get directly for their own overt behavior. (1970, p. 29)

Social learning theorists such as Bandura (1969) and Mischel (1970) have repeatedly noted that similarity between observer and model enhances imitation. From this it is argued that children should generally attend to and imitate same-sex models more than opposite-sex models, because they perceive same-sex models to be more similar to themselves. Mischel (1970) amplified this point as follows:

From the viewpoint of social learning theory, the greater attentiveness to same-sex models, especially when they are displaying appropriately sex-typed behavior, probably reflects that people generally are reinforced throughout their histories more for learning the sex-typed behaviors of same-sex models than those of cross-sex models. It certainly seems likely that children are much more frequently rewarded for watching and imitating same-sex models (rather than cross-sex models), especially when the models display sex-typed behaviors. Boys do not learn baseball by watching girls and girls do not learn about fashions from observing boys. (p. 38)

With numerous empirical studies on same-sex modeling in the literature, the findings are far from conclusive. Maccoby and Jacklin (1974) reviewed 20 studies in which children were exposed to models of both sexes and the children's imitations of same-sex models were compared. Of these studies, only seven were found to yield supportive evidence attesting to the importance of same-sex modeling.

Barkley et al. (1977) reviewed 81 studies on children's imitations and of these only 18 actually supported the same-sex hypothesis. One of the problems for the lack of empirical support for same-sex modeling may be due to so many studies using children viewing adult models. It is possible that if more studies focused upon same-sex peer modeling the results may be more supportive given the possible importance of peers upon children's toy preferences as mentioned above (Mischel, 1970).

Two studies by Wolf that did use same-sex peer models indicated that same-age or peer modeling may be an important factor for same-sex modeling. In the first study (Wolf, 1973), subjects viewed a male or female peer model playing with a toy judged to be sex-inappropriate for the child observer (for boys, a toy oven with a kettle on it; for girls, a truck). The subjects later had an opportunity to choose to play with each of these two toys. Boys played with the oven longer following exposure to a boy oven player than to a girl oven player. Girls played with the truck longer following exposure to a girl playing with the truck than when exposed to a boy playing with the truck. In the second study (Wolf, 1974), subjects viewed a videotape of a boy or girl model playing with sex-inappropriate toys (a doll for boys; a firetruck for girls). During a free-play period, both sexes played with the inappropriate toy longer when exposed to same-sex models than after viewing an opposite-sex model.

Kohlberg's Cognitive Theory of
Sex-Role Development

Kohlberg (1966) developed a theory that attempted to clarify the reasons for the inconclusive results obtained by studies testing the social learning and same-sex modeling hypothesis. Kohlberg presented strong arguments based upon children's cognitive processes as to why boys prefer masculine toys and girls prefer feminine toys. In Kohlberg's theory, gender identity or self-categorization as boy or girl is the basic organizer of sex-role attitudes and preferences. The reason gender identity is so crucial, according to Kohlberg, is that it is the most salient category to which the child assigns him/herself. Kohlberg and Ullian (1979) maintained that, in fact, gender is the only basic general category or role to which children do assign themselves. The other basic category of self-identity for children is that of child as opposed to adult. Unlike gender, however, age identity is not fixed; children know they will become adults. The development of gender identity appears to involve labeling, distinguishing self from others, and, eventually, recognition that gender categories do not change. Kohlberg and Ullian (1979) suggested that the growing cognitive constancy or irreversibility of gender identity in early childhood is the bedrock of later sexual and sex-role attitudes. In Kohlberg's theory, cognitive constancy develops between the fourth and seventh year. For Kohlberg then, children's problems in behaving in sex-appropriate ways are two-fold: they not only must have some conception of what boy and girl behavior

is, but they must also have a clear conception of their own sex identity so that they know which kind of behavior to adopt.

Another cornerstone in Kohlberg's theory is the assumption that gender identity determines basic values. "Masculine-feminine values develop out of the need to value things that are consistent with or like the self" (Kohlberg, 1966, p. 165). According to Kohlberg and Ullian (1979), this comes from a natural tendency that children have to like themselves, to think well of themselves, and of that which is connected to or is like themselves. Boys tend to prefer males or things that males like, because they are male. This tendency on the child's part:

. . . requires the conceptual growth reflected in the ability to perform concrete operations and to maintain fixed logical classes. For boys less than five years old, it applies only to peers. By age six to seven, it applies to both fathers and strange adults Thus, what is often called father identification, as well as what is called masculinity of values, grows with and out of the cognitive growth of the child's gender identity. (Kohlberg & Ullian, 1977, p. 212)

Investigators testing Kohlberg's theory have tended to stress the age of onset of (1) sex-role preferences, (2) sex-role knowledge, (3) sex-role valuations, and (4) sex-role constancy.

Maccoby and Jacklin (1974) stated:

There is a problem with the Kohlberg view: sex typing behavior occurs much earlier than gender constancy normally develops. We do not question that the achievement of gender constancy may accelerate the process of sex typing But we would like to argue that gender constancy is not necessary in order for self-socialization into sex roles to begin. (p. 365)

In testing their claim, Jacklin and Maccoby (1978) found that in toy-playing activities, children as early as 33 months of age

directed more social behavior--both positive and negative--to same-sex playmates than to opposite-sex ones. Kohlberg (1966) maintained that attraction based upon judgments of sex similarity between self and others was a relatively late-blooming phenomenon, dependent on the achievement of sex constancy, and hence, unlikely to appear before the age of five or six.

Blakemore et al. (1979) tested Kohlberg's assumption that knowledge about what things are sex-appropriate plays an important role in shaping these preferences. The investigators asked two-, four-, and six-year-olds which toys they preferred and then asked the children to separate the toys into piles of "toys for boys" and "toys for girls." Children from all three age groups preferred sex-appropriate toys with a high degree of accuracy; however, only the four- and six-year-olds could sort the toys into sex-appropriate piles. Blakemore et al. concluded that although cognition may well play a role in the development of sex-typed preferences, its role is somewhat complex. Sex-appropriate toy preferences were quite strong among those children who were cognitively advanced enough to understand the sex-role dimension of toys. However, for two-year-olds, who were assumed to be less cognitively sophisticated, no straightforward relation between cognition and sex-role development was thought to exist. For the four- and six-year-olds, Blakemore et al. interpreted their findings as supporting Kohlberg's claim that children's conscious knowledge of what toys are sex-appropriate is an important determinant of sex-typed activities and object preferences.

Muller and Goldberg (1980) addressed Kohlberg's premise that children's awareness of adult behavior plays a central role in the development of sex differences in behavior. To test this hypothesis, the investigators asked subjects three, four, and five years old to finish incomplete stories. The stories had adult characters of each sex together with children playing with various sex-appropriate and sex-inappropriate toys. The subjects were to complete the stories by telling the investigators what the adult character in the story would do or how the adult character would behave toward the child playing with the object. Muller and Goldberg found that from three to five years of age, children became increasingly aware that adults would behave differently toward girls and boys in ways that support sex-stereotyped behavior.

Eisenberg et al. (1982) questioned the interpretation of Blakemore et al., claiming that they did not collect data which would enable one to determine whether children are actually conscious of their sex-role knowledge. To learn whether children's conscious knowledge of sex roles led them to prefer sex-stereotyped toys, Eisenberg et al. asked three- and four-year-old children playing with the targeted sex-typed toys why they liked the boys. The subjects responded predominantly with answers about what the toys could do (e.g., "you can wash her hair" or "you can roll it"). Only about one percent of the responses were for sex-role reasons (e.g., "because it is for boys"). However, when the subjects were asked why other children would like these toys, the subjects gave

predominantly sex-role responses. The investigators concluded that toy preferences may be due to specific characteristics of the toys. The children's knowledge of sex-role stereotypes may indeed lead to preferences for sex-typed toys, but this process may not be conscious. Preferences for sex-typed toys may become so automatic that children do not realize why they prefer these toys.

Kuhn et al. (1979) addressed Kohlberg's arguments about basic values that children place upon self- and like-self activities. They found that children as young as two years possessed substantial knowledge of sex-role stereotypes prevailing in the adult culture. Knowledge of sex-role stereotypes was highly correlated with comprehension of gender identity as an irreversible characteristic. Girls tended to ascribe positive characteristics to their own sex and negative characteristics to males, while boys did the reverse. Kuhn et al. concluded that their findings supported the ideas that children's concepts pertaining to sex and sex roles significantly influence their affective valuations and behaviors as Kohlberg suggested. However, the investigators were not convinced that these affective phenomena did not begin to occur until after the relevant cognitive concepts were well established and able to produce them. They argued that these phenomena began much earlier.

Schematic Processing Model of Sex

Typing and Sex Stereotyping

While Kohlberg's sex-role cognitive-development theory is about children's cognitions in a social content and contains rudimentary concepts with the potential for exploring process mechanisms, Kohlberg did not elaborate upon cognitive schemata and their roles in children's sex-role cognitions. Because of this emphasis upon age and constancy, Kohlberg's theory in the sex-role literature has not been used to test schematic processes in children's sex-role development. Martin and Halverson (1981) developed a theory that does emphasize schematic processes in sex typing and stereotyping. The literature base that Martin and Halverson used to develop their framework was derived from cognitive and social psychologists' studies of children's cognitions and emphasizing processes. This area of research has been concerned with how and why social cognitions and schemata are formed, the schematic mechanisms involved, and how these mechanisms influence perceptions, information processing, and behavior.

The concept of the schema is not new in psychology, dating back at least to Bartlett (1932) and Piaget (1926). What is new is the recent flurry in schematic research since the early 1970s. A major line of schematic research followed by many cognitive psychologists has been the relating schemata to artificial intelligence (Lachman, Lachman, & Butterfield, 1979). Another line was followed by Martin and Halverson (1981) who were concerned with schemata in a social

context, and how individuals use social schemata to process information (Taylor & Crocker, 1979). Martin and Halverson drew upon the extensive review of the schematic literature by Taylor and Crocker (1979).

Martin and Halverson (1981) took the general characteristics of schematic processing as outlined by Taylor and Crocker and conceptualized a specific model of sex stereotyping in young children. Taylor and Crocker (1979) argued that the processing of information involves scanning the environment, selecting items to attend to, taking information about those items, and either storing that information in some form, so that it can be retrieved later for consideration, or using the information as a basis for action. A tremendous amount of selectivity exists in this process because of the limitations upon noticing every detail in the environment. To facilitate the processing of information quickly and efficiently, selection criteria and guidelines are established by individuals. Hypotheses about how the world works provide such criteria and guidelines. Hypothesis-driven processing is processing that Neisser (1976) called "schematic processing." Schematic hypotheses tell the social perceiver what data to look for and how to interpret the data that are found. In addition, data do not have meaning unless they fit into a cognitive context, or a schema about the meaning of the stimulus.

Schemata are organized through experience and interaction with the environment; they consist not only of categorized knowledge but also include plans for interpreting and gathering schema-related information. Schemata provide a basis for activating actual

behavioral sequences or expectations of specific behavioral sequences, i.e., scripts for how individuals behave in social situations (Abelson, 1981). Martin and Halverson (1981) proposed two types of schemata that are involved in the sex typing and sex-role learning of children. The first type is an overall "in-group/out-group" schema consisting of all the general information children need to categorize objects, behavior traits, and roles as being either for males or for females. The second is an "own-sex" schema, a narrower, more detailed and specific version of the first, consisting of the information children have about the objects, behavior, traits, and roles that characterize their own sex.

The first or overall schema (Martin & Halverson, 1981) guides behavior by giving children information at the level of labels, i.e., for boys or for girls, about what kinds of things should be approached because they are sex-appropriate or sex-inappropriate. According to the schematic model, a young girl when presented with an object would make several decisions based on her sex-typing schemas that will influence if or how she will interact with the object. For example, when presented with a doll, she will decide first that dolls are self-relevant; second, that dolls are "for girls" and "I am a girl," which means "dolls are for me." The results of these decisions are that the girl will approach the doll, explore it, ask questions about it, and play with it to obtain further information about it. A boy can rely on his overall schema to obtain the information that "boys play with cars" and "girls play

with dolls." Both bits of information are necessary so the boy can act consistently with his own sex by playing with cars and not playing with dolls (Martin & Halverson, 1981).

After the child has determined whether the object is self-relevant and approaches the object, the second or own-sex schema comes into play. The own-sex schema (Martin & Halverson, 1981) consists of detailed scripts and plans resulting from the child's elaborating, exploring, interacting, etc., with the object determined to be sex-appropriate. Boys would focus upon the details of cars (they have wheels, have engines that require fixing, etc.), whereas boys would not necessarily focus and elaborate upon the details of dolls ("dolls are for girls, not for me"), because boys would lack the motivation to learn more detailed information about dolls.

The Martin and Halverson schematic model predicts that children's behavior is guided toward sex-appropriate activities and objects by labels that define the first or overall schema of in-group and out-group. A few researchers have addressed the role of sex labeling upon children's sex-typed interests that support the Martin and Halverson hypothesis. Liebert, McCall, and Hanratty (1971) found that children altered their choices of toys to conform with toys preferred by children of their own sex (as designated by labeling), while on the other hand, toys preferred vocally by opposite-sex children had no influence on the subjects' choices. Stein, Poly, and Mueller (1971) found that the sex label given to three paper-and-pencil tasks was a significant determinant of choice of task and

of time spent on each task for sixth-grade boys but not for girls. Ross and Ross (1972) found that when a teacher suggested opposite-sex toys to preschool children, both boys and girls resisted playing with the suggested toy. Working with six-, seven-, and eight-year-olds, Montemayor (1974) found that for both males and females, performance on a game was highest when the game was labeled as sex-appropriate, and significantly lower when the game was labeled as sex-inappropriate. Finally, Thompson (1975) found that when gender labels were supplied by the experimenter, children as young as three years chose the objects that were labeled appropriate for their own sex.

CHAPTER III

METHODOLOGY

Sample

The experiment used a total of 144 three- and four-year-old subjects, who were randomly assigned to the experimental conditions equated for age and sex. An university-affiliated nursery school and daycare center was the source of 72 subjects. Demographic information from enrollment forms revealed that their parents were from predominantly professional and middle-class backgrounds. The other 72 subjects were drawn from private daycare centers; their parents were predominantly working-class people who received federal funds for daycare support.

Apparatus and Materials

The study was designed to provide the subjects with two sources of sex-appropriate information concerning two types of toy classifications: neutral toys and sex-typed toys. The medium used to accomplish the sex-appropriate modeling was a Sony black-and-white videotape player and monitor. The media used to accomplish the sex-appropriate labeling were black-and-white 3" x 5" photographs of the same neutral and sex-typed toys. A set of neutral toys consisted of a round balloon and an oblong balloon. These two types of balloons were chosen because they have been found to be easily differentiated

by children on videotape monitors (Masters et al., 1979). Two sets of sex-typed toys were used: one set for boy subjects, and another set for girl subjects. The sex-typed toy set for boys consisted of two large model cars. One was a model of a yellow sports car, and the other was a model of a black sports car. The cars were matched for attractiveness of features, yet they also had to be distinct enough so that the boy subjects could easily discriminate between them on the videotape monitor and in the photographs. The sex-typed toys for the girls consisted of one 12-inch, blond-haired doll and one 12-inch, brunette-haired doll. The dolls likewise were matched for attractiveness, yet distinct enough for discrimination purposes on the monitor and photographs. The photographs and videotapes of the dolls and model cars were pretested and the results revealed that they satisfied the necessary experimental requirements.

Experimental Conditions

A 2 x 2 x 3 x 3 factorial design with repeated measures on the second factor and eight subjects per cell was used to analyze the experimental conditions. The factors were (1) social class of subject (professional middle-class, working-class), (2) toy classification (neutral, sex-typed), (3) sex of label (same-sex, opposite-sex, no label), and (4) sex of model (same-sex, opposite-sex, no model). For boy subjects, neutral toys were balloons and sex-typed toys were cars. For girl subjects, neutral toys were balloons and sex-typed toys were dolls. The repeated measure was on toy classification so

that the order of presentation of neutral toys and sex-typed toys was balanced as shown in Table 1. The eight subjects in each cell were balanced for age and sex (two three-year-old boys, two four-year-old boys, two three-year-old girls, two four-year-old girls). Table A (Appendix A) presents the experimental conditions for the professional middle-class subjects. The table for working-class subjects is identical.

Procedure

The procedure that follows was for a boy subject. Girl subjects had identical procedures with the exception that dolls were used for the sex-typed toys instead of cars. The female experimenter brought each child to an experimental room, mentioning to the child that he would be shown some movies and pictures of toys. The subject was shown one of two possible pairs of black-and-white photographs. The pictures within each pair were glued side-by-side on a mat board. One pair consisted of a photograph of a yellow car next to a photograph of a black car. The other possible pair was a photograph of an oblong balloon placed next to a photograph of a round balloon. Which photographic pair the subject was tested for first depended upon the balanced order of presentation (see Table 1).

After the photographic pair was presented to the subject, the toys within the pair were either labeled for sex-appropriateness or not labeled and then modeled on the videotape monitor or not modeled depending upon which of the nine experimental conditions the subject was selected for.

Table 1
Toy Classification and Toy-Labeling Sequence

Subject	Labeling Sequence (M=Male, F=Female)			
	First Measure		Repeated Measure	
Males				
1	Car A (M)	Car B (F)	Balloon B (M)	Balloon A (F)
2	Car A (F)	Car B (M)	Balloon B (F)	Balloon A (M)
3	Car B (M)	Car A (F)	Balloon A (M)	Balloon B (F)
4	Car B (F)	Car A (M)	Balloon A (F)	Balloon B (M)
5	Balloon A (M)	Balloon B (F)	Car B (M)	Car A (F)
6	Balloon A (F)	Balloon B (M)	Car B (F)	Car A (M)
7	Balloon B (M)	Balloon A (F)	Car A (M)	Car B (F)
8	Balloon B (F)	Balloon A (M)	Car A (F)	Car B (M)
Females				
1	Doll A (M)	Doll B (F)	Balloon B (M)	Balloon A (F)
2	Doll A (F)	Doll B (M)	Balloon B (F)	Balloon A (M)
3	Doll B (M)	Doll A (F)	Balloon A (M)	Balloon B (F)
4	Doll B (F)	Doll A (M)	Balloon A (F)	Balloon B (M)
5	Balloon A (M)	Balloon B (F)	Doll B (M)	Doll A (F)
6	Balloon A (F)	Balloon B (M)	Doll B (F)	Doll A (M)
7	Balloon B (M)	Balloon A (F)	Doll A (M)	Doll B (F)
8	Balloon B (F)	Balloon A (M)	Doll A (F)	Doll B (M)

Same-Sex Label/Same-Sex Model

If the subject was selected for this experimental condition, the experimenter pointed to the photograph of one toy and said, "This toy is for girls," and then pointed to the other toy and said, "This toy is for boys." The subject was asked to tell the experimenter which toy was for girls and which one was for boys. This question was asked to insure that the subject understood clearly which toy was for which sex. None of the subjects tested appeared to have any difficulty with this task.

Following the sex-labeling procedure, the subject then viewed a 35-second videotape segment of a same-sex model--in this example, boy--playing with the boy-labeled toy. At the conclusion of the videotape segment, the subject was again presented with the photographs of the two previously labeled toys and asked, "Point to the toy that you would like best," or, if no response, "Which toy would you like to play with most?"

Opposite-Sex Label/Same-Sex Model

If the subject was selected for this condition, the procedure was identical to the previous condition with the exception that the subject viewed a boy (same-sex) playing with the girl (opposite-sex) labeled toy.

Same-Sex Label/Opposite-Sex Model

If the subject was selected for this condition, he viewed a girl playing with the boy-labeled toy.

Opposite-Sex Label/Opposite-Sex Model

If the subject was selected for this condition, he viewed a girl playing with the girl-labeled toy.

Same-Sex Label/No Model;
Opposite-Sex Label/No Model

If the subject was selected for either of these two conditions, the toys would be labeled following the procedure above. After the sex labeling, the subject viewed a videotape segment of a dog playing with a ball instead of a child playing with the experimental toy.

Following the videotape segment, the subject was presented with the photographs of the experimental toys and asked to point to the one he liked best.

No Label/Same-Sex Model;
No Label/Opposite-Sex Model

If the subject was selected for either of these two experimental conditions, he was shown the photographic pair of toys which, in turn, were not sex labeled. This was accomplished by the experimenter's saying, "Here are some toys that children like to play with." The subject then either viewed a girl playing with one of the toys on the videotape monitor for the opposite-sex model condition or the subject viewed a boy playing with one of the toys for the same-sex model condition.

No Label/No Model

If the subject was selected for this condition, then he was shown the photographic pair of toys and told, "Here are some toys that children like to play with," and then asked to point to the toy he would like to play with most.

After the subject selected which toy he would like best from the first toy pair, the labeling and modeling procedures were repeated with the same subject using a second photographic pair of toys. If the subject was first tested with sex-typed toys (cars), the repeated measure would be tested with neutral toys (balloons), or vice versa. Each subject was tested twice, once with sex-typed toys and once with neutral toys.

CHAPTER IV

RESULTS

Data Analysis

The dependent measure used to test the relative importance of sex-appropriate modeling and sex-appropriate labeling was the proportion of subjects who chose the toy which was modeled and/or labeled in each cell. Categorical data analyses were used to compare the consistencies between the groups depicted in the multileveled contingency tables.

Preliminary Check for Possible Age and Sex Effects

Since the literature has shown generally that the age and sex of a subject do not play significant roles in children's toy preferences, these two factors were experimentally controlled in the design of this study by balancing them in each of the experimental cells. As a check to see whether the present study yielded results consistent with previous studies concerning possible age and sex effects, preliminary analyses were carried out statistically, controlling for these factors. The procedure used tested the consistency of proportions across strata or levels by providing a summary measure of the difference in proportion for dichotomous data (Cochran, 1954; Mantel & Haenszel, 1959). Two $2 \times 2 \times 2$ (sex of subject \times sex appropriateness of model \times sex appropriateness of label) and (age of subject \times

sex appropriateness of model x sex appropriateness of label) Cochran-Mantel-Haenszel analyses were performed, which revealed that the subject's age ($X^2_{c-m-h} = .1940, p > .50$) and sex ($X^2_{c-m-h} = .4109, p > .50$) had very little if any effect upon the children's toy preferences in the modeling and labeling experimental conditions. It should be noted that the size of the sample was somewhat small for the type of analysis used. However, because the p values were so large, increasing the sample size would still probably fail to produce significant results.

The proportion of subjects who chose the modeled and labeled sex-typed toys controlling for age and sex is shown in Table 2, which also shows that the proportions of toy preferences were consistent across the sex of the subject as were the proportions of toy preferences across the age of the subjects.

Effects of Social Class

Since there were mixed findings concerning the possible effects of social class upon modeling and labeling processes, social class was included in the experimental design. The Cochran-Mantel-Haenszel procedure was used to test for differences in the toy-preference proportions controlling for social class. The 2 x 2 x 2 (social class x sex appropriateness of model x sex appropriateness of label) analysis revealed that social class ($X^2_{c-m-h} = .2216, p > .50$) was nonsignificant. The proportions of subjects who chose the modeled and labeled sex-typed toys controlling for social class are shown in

Table 2
 Frequency of Sex-Appropriate Modeling and Sex-
 Appropriate Labeling Sex-Typed Toy
 Preferences by Sex and Age

Control Variable	Modeling Groups	Labeling Groups		Total
		Same-Sex	Opposite-Sex	
Boys	Same-Sex	7	1	8
	Opposite-Sex	$\frac{7}{14}$	$\frac{1}{2}$	$\frac{8}{16}$
	Total			
Girls	Same-Sex	8	1	9
	Opposite-Sex	$\frac{7}{15}$	$\frac{2}{3}$	$\frac{9}{18}$
	Total			
Three-Year-Olds	Same-Sex	7	0	7
	Opposite-Sex	$\frac{8}{15}$	$\frac{1}{1}$	$\frac{9}{16}$
	Total			
Four-Year-Olds	Same-Sex	8	2	10
	Opposite-Sex	$\frac{6}{14}$	$\frac{2}{4}$	$\frac{8}{18}$
	Total			

Table 3, which also shows that the proportions of toy preferences were consistent between subjects from the middle class and from the working class.

Hypothesis 5

Labeling and same-sex modeling have a stronger effect upon children's stated preferences for neutral toys than for sex-typed toys.

Table 3
 Frequency of Sex-Appropriate Modeling and Sex-
 Appropriate Labeling Sex-Typed Toy
 Preferences by Social Class

Control Variable	Modeling Groups	Labeling Groups		Total
		Same-Sex	Opposite-Sex	
Middle Class	Same-Sex	7	2	9
	Opposite-Sex	$\frac{8}{15}$	$\frac{1}{3}$	$\frac{9}{18}$
	Total			
Working Class	Same-Sex	8	0	8
	Opposite-Sex	$\frac{6}{14}$	$\frac{2}{2}$	$\frac{8}{16}$
	Total			

For the analysis testing this toy classification hypothesis, the data were collapsed across age, sex, and social class because these factors were found to be nonsignificant. A Cochran-Mantel-Haenszel test was performed to determine whether toy-preference proportions were consistent between the neutral and sex-typed toys. The 2 x 2 x 2 (toy classification x sex appropriateness of model x sex appropriateness of label) analysis revealed that there was not a significant difference in the proportions of toy preferences between the neutral toys and the sex-typed toys ($\chi^2_{c-m-h} = .0314, p > .80$). The proportions of subjects who chose the modeled and labeled toys controlling for toy classification are shown in Table 4, which also shows that the proportions of toy preferences were consistent between sex-typed and neutral toy classification for all subjects.

Table 4
 Frequency of Sex-Appropriate Modeling and Sex-
 Appropriate Labeling Toy Preferences by
 Toy Category

Control Variable	Modeling Groups	Labeling Groups		Total
		Same-Sex	Opposite-Sex	
Sex-Typed Toys (Cars and Dolls)	Same-Sex	15	2	17
	Opposite-Sex	<u>14</u>	<u>3</u>	<u>17</u>
	Total	29	5	34
Neutral Toys (Balloons)	Same-Sex	15	3	18
	Opposite-Sex	<u>13</u>	<u>1</u>	<u>14</u>
	Total	28	4	32

Based upon these results, Hypothesis 5 could not be supported.

Hypothesis 1

Labeling indicating the sex appropriateness of the toys would have a strong effect on the children's stated sex-typed toy preferences.

Since there was virtually no difference between the neutral toy and sex-typed toy proportions, this hypothesis was tested only upon the sex-typed toy responses. The proportion of subjects in each of the nine experimental cells who chose the modeled and/or labeled sex-typed toy is presented in Table 5. The data were collapsed across age, sex, and social-class factors which were shown above to be not significantly different.

Table 5
 Proportion of Subjects in Each Cell Who Chose the
 Modeled and/or Labeled Sex-Typed Toy

Modeling Groups	Labeling Groups			Total
	Same-Sex	Opposite-Sex	No Labeling	
Same-Sex	.94	.13	.63	.56
Opposite-Sex	.88	.19	.63	.56
No Modeling	<u>.94</u>	<u>.06</u>	<u>.44</u>	.48
Totals	.92	.13	.56	

If sex-appropriate labeling does have an impact upon children's toy-preference behavior, then an expected pattern should be found among the three labeling condition totals (i.e., column totals in Table 5). The hypothesized pattern would be for Same-Sex Labeling > No Labeling > Opposite-Sex Labeling. Same-sex labeled toys should be preferred more than toys not labeled (No Label) which in turn should be chosen more than opposite-sex labeled toys. For these data, .92 (Same-Sex Labeled toys) should be greater than .56 (No Labeled toys), which in turn should be greater than .13 (Opposite-Sex Labeled toys). Testing for differences between proportions using z-scores (Ferguson, 1966), the results suggested that .92 was significantly greater than .52 (z-score = 4.02, $p < .0000$) and that .52 was significantly greater than .13 (z-score = 4.27, $p < .0000$).

For these data, Hypothesis 1 was supported. Sex-appropriate labeling did appear to have a strong effect on the children's stated toy preferences.

Hypothesis 3

Same-sex modeling indicating the sex appropriateness of the toys would have an effect upon the children's stated sex-typed toy preferences.

This hypothesis was also tested only for the sex-typed toy responses. If sex-appropriate modeling does have an impact upon children's toy-preference behavior, then an expected pattern for the three modeling condition totals (i.e., row totals in Table 5) should be found similar to the pattern of the labeling conditions. Same-sex modeled toys should be preferred more than nonmodeled toys, which in turn should be preferred more than opposite-sex modeled toys. For the row totals in Table 5, .56 (Same-Sex Modeling) should be greater than .48 (No Modeling), which would be greater than .56 (Opposite-Sex Modeling). The analysis testing for the differences between proportions revealed that the three modeling-condition proportions did not significantly differ from each other ($z\text{-score } \frac{.56-.48}{\sqrt{.56+.48}} = .78, p = .2177$).

Based upon these results, Hypothesis 3 could not be supported.

Hypothesis 2

If labeling is more salient than same-sex modeling when examined together, then children would choose toys that have been labeled sex appropriately more than toys that have been modeled sex appropriately.

The percentages of labeled sex-typed toys preferred in each of the three modeling conditions are shown in Figure 1. The percentages of toys chosen illustrate how strongly the effects of sex-appropriate labeling dominate any effects of sex-appropriate modeling. The percentages in Figure 1 show that regardless of the sex of model, subjects overwhelmingly chose toys that were labeled appropriate for their own sex. The subjects chose same-sex labeled toys 94 percent, 94 percent, and 88 percent of the time in the three types of modeling conditions. The opposite-sex labeled toys on the other hand were chosen 13 percent, six percent, and 19 percent of the time. Tests of z-score differences between proportions revealed that 94 percent, 94 percent, and 88 percent were all significantly greater than 13 percent, six percent, and 19 percent ($Z_{88\% - 19\%} = 4.18, p < .0000$). The percentages of neutral toys with sex-appropriate labels preferred in each of the three modeling conditions are shown in Figure 2. The pattern and results in Figure 2 are similar to those in Figure 1.

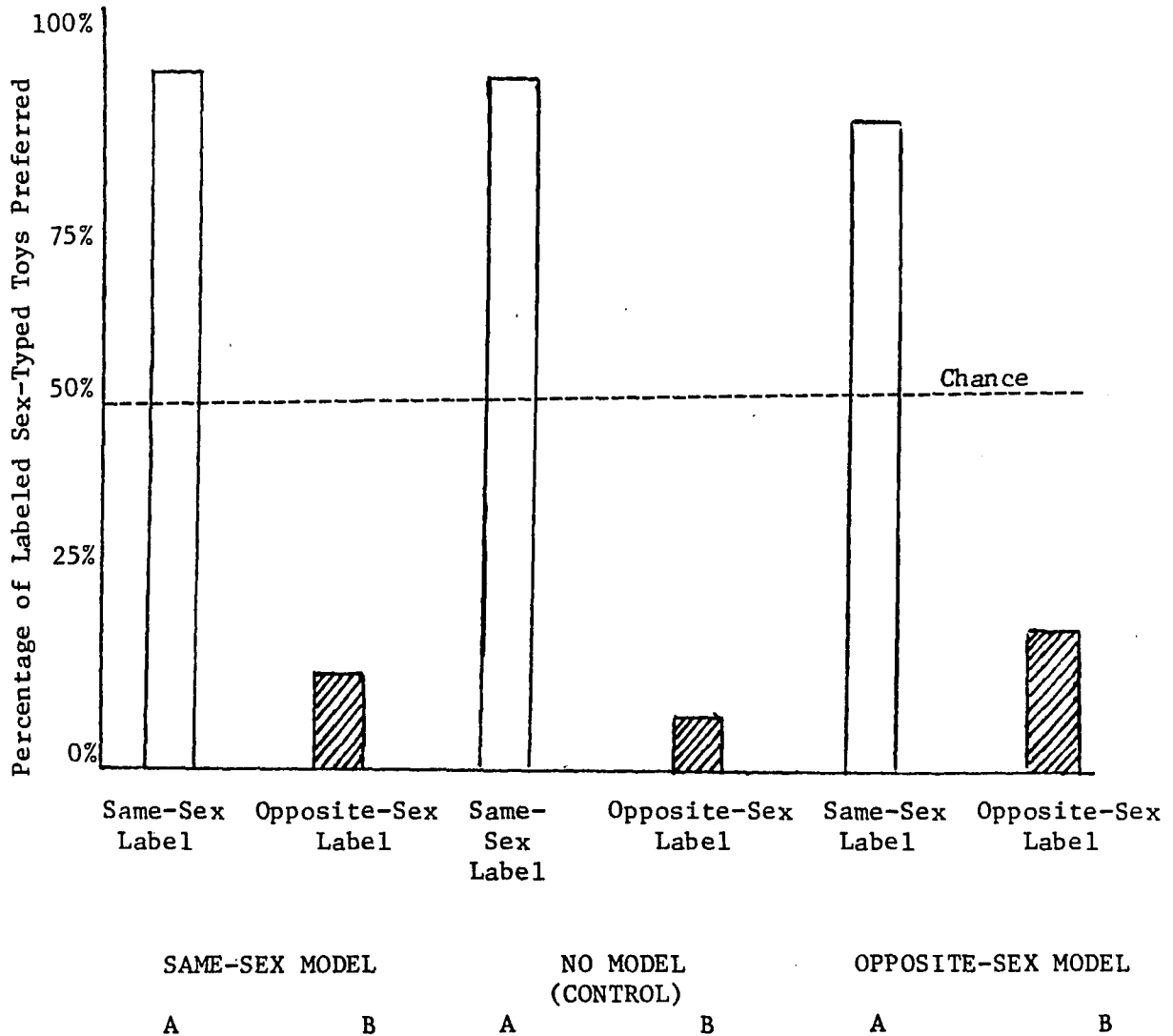
Hypothesis 2 was supported by the data in this study. Sex-appropriate labeling appears to be more salient than sex-appropriate modeling when presented together.

Hypothesis 4

If same-sex modeling is more salient than labeling, then children would choose toys that have been modeled sex appropriately more than toys labeled sex appropriately.

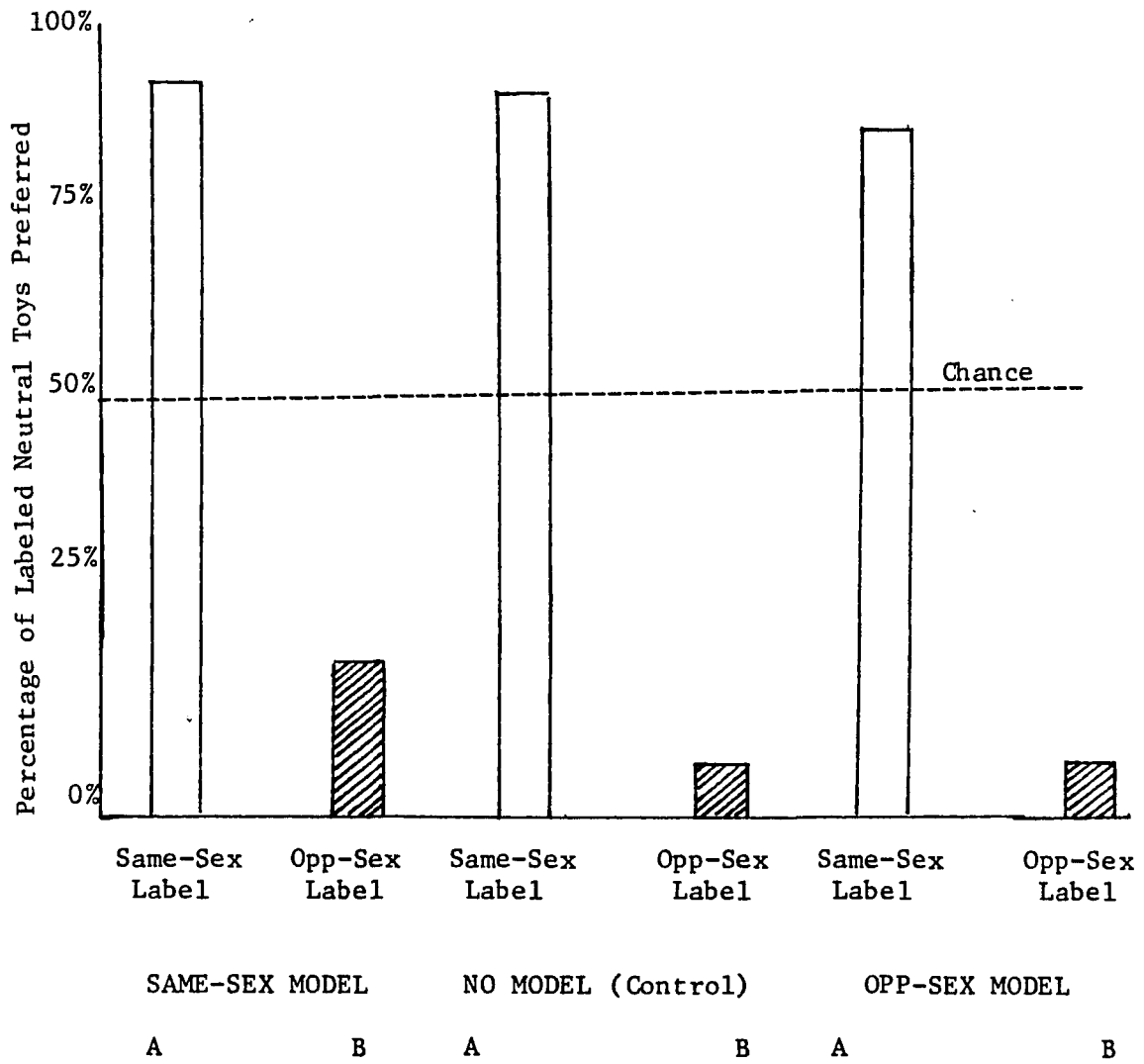
The percentages of modeled sex-typed toys preferred in each of the three labeling conditions are presented in Figure 3, which shows

Figure 1
 Sex Similarity of Model and Sex Similarity of
 Label as Determinants of Children's
 Preferences for Sex-Typed Toys in
 the Three Modeling Conditions



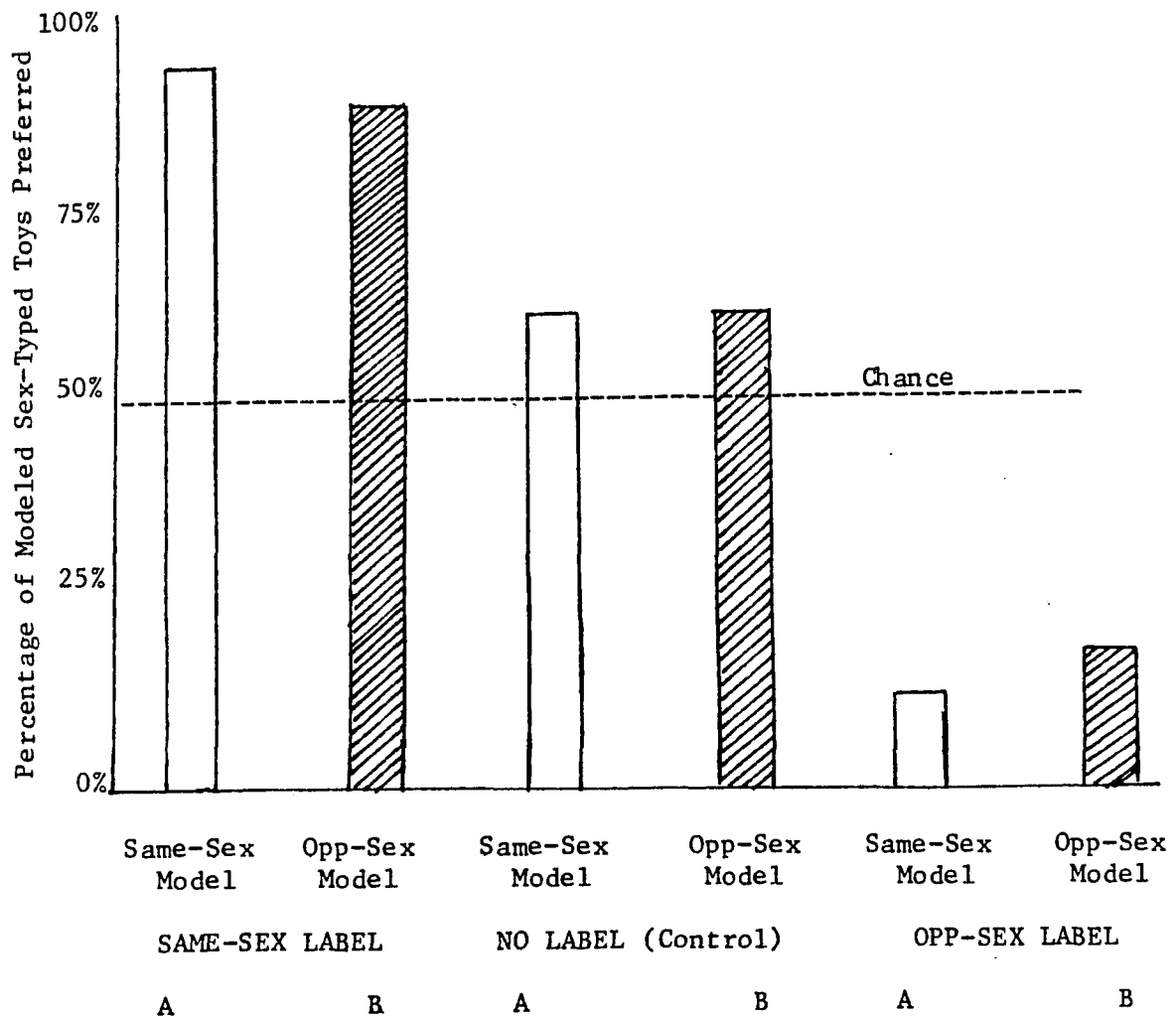
Note. Groups that do not share a letter differ at $p < .05$, using z-score tests for differences between proportions.

Figure 2
 Sex Similarity of Model and Sex Similarity of
 Label as Determinants of Children's
 Preferences for Neutral Toys in
 the Three Modeling Conditions



Note. Groups that do not share a letter differ at $p < .05$ using z-score tests for differences between proportions.

Figure 3
 Sex Similarity of Model and Sex Similarity of
 Label as Determinants of Children's
 Preferences for Sex-Typed Toys in
 the Three Labeling Conditions



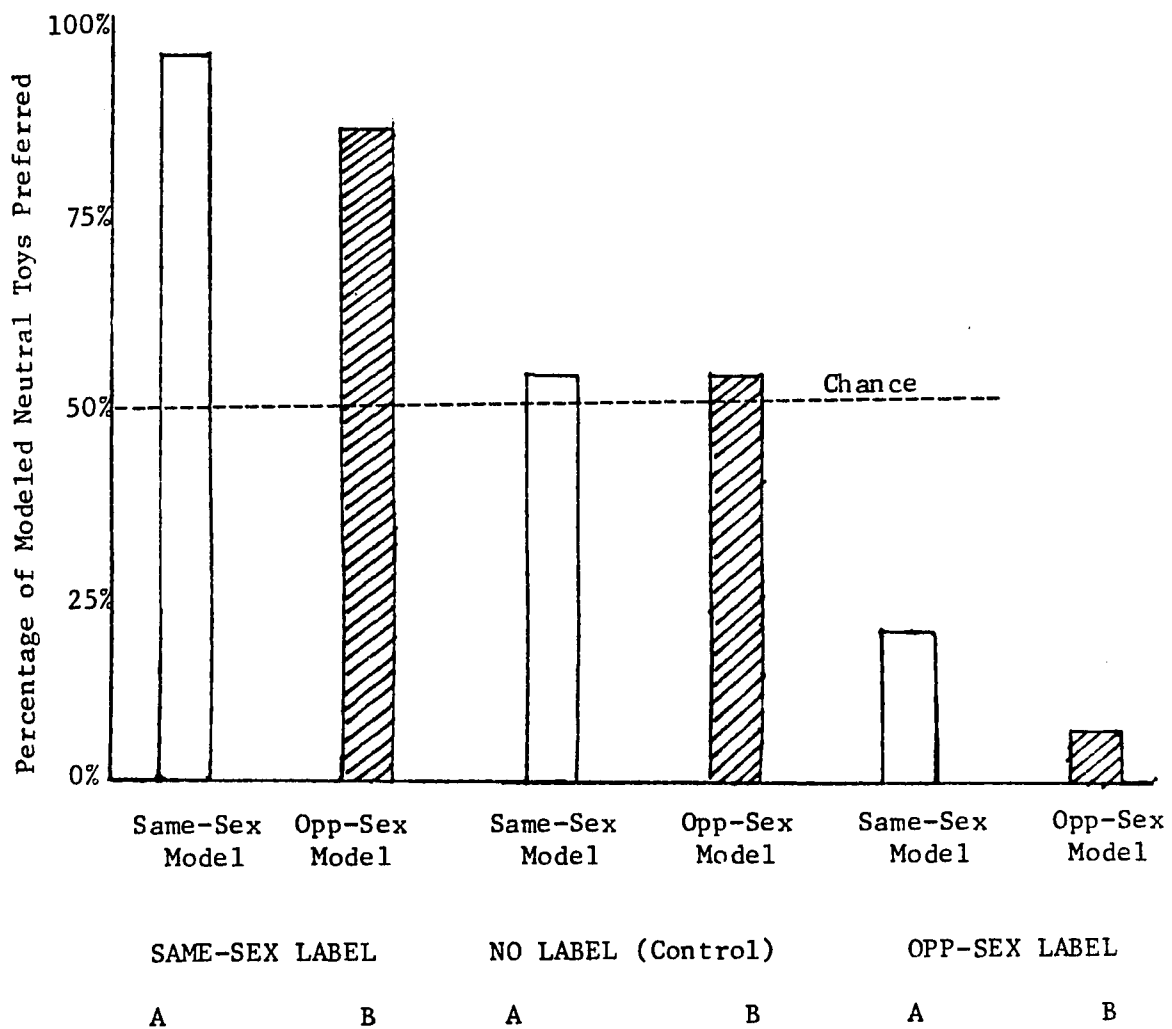
Note. Groups that do not share a letter differ at $p < .05$ using z-score tests for differences between proportions.

* $p = .0516$

that there is no statistical difference between the children's toy preferences after viewing a same-sex model or an opposite-sex model in each of the three labeling conditions. Z-score tests between proportions showed that the only time the subjects chose modeled toys significantly greater than chance was when modeling (either same-sex or opposite-sex) was accompanied by same-sex labeling ($Z_{94\%} = 3.52$, $p = .0002$, $Z_{88\%} = 3.04$, $p = .1492$). The percentages of modeled neutral toys preferred in each of the three labeling conditions are shown in Figure 4. The pattern of the results and conclusions were very similar to those deduced from Figure 3.

Hypothesis 4 could not be supported by the data in this study. Sex-appropriate modeling did not appear to be more salient upon children's toy preferences than sex-appropriate labeling.

Figure 4
 Sex Similarity of Model and Sex Similarity of
 Label as Determinants of Children's
 Preferences for Neutral Toys in
 the Three Labeling Conditions



Note. Groups that do not share a letter differ at $p < .05$ using z-score tests for differences between proportions.

* $p = .0630$

CHAPTER V
DISCUSSION

Age, Sex, and Social Class

Results of the study provided evidence that at least for three- and four-year-old preschool children, age, sex, and social class variables do not effect sex-typing mechanisms of modeling and labeling. Rabban (1950) found that children from lower socioeconomic classes showed sex-typed interests earlier than did middle-class children. However, his study was not concerned with processes involved in sex-typing but was concerned with quantity measures or how much children were sex-typed. In contrast to Rabban's study, this study did not focus upon how much children were sex-typed but instead focused upon processes involved in sex-typing. As a result of the emphasis upon process, the evidence from this study suggests that there are certain sex-typing mechanisms which are the same for both three- and four-year-old children regardless of their social class and sex.

Neutral Toys vs Sex-Typed Toys

None of the studies examined in the review of literature factored toys into neutral and sex-typed categories prior to testing for effects of modeling or labeling upon children's toy preferences. In this study, it was hypothesized that the sex-typing mechanisms of

modeling and labeling would be more likely to have a greater impact upon children's toy preferences for neutral toys than for sex-typed toys. The logic behind this hypothesis stemmed from the assumption that children would bring into the experimental conditions a certain amount of knowledge that, for example, dolls are appropriate for girls and cars are appropriate for boys. This prior knowledge about traditionally sex-typed toys would possibly interact with the sex appropriateness of the information provided by the experimental modeling and labeling, producing confounding effects. It was assumed that neutral toys such as balloons would have less sex-appropriate information associated with them prior to the study. As a result, the sex appropriateness of the information provided by the modeling and labeling in the study for the neutral toys would be more salient to the children and as such be less confounding upon the subject's toy-preference behaviors.

The hypothesis that modeling and labeling effects would be stronger for neutral toys than for sex-typed toys was not supported by the results of this study. For the three- and four-year-old children in this study, there was no difference between modeling and labeling effects upon neutral or sex-typed toys. For older, school-aged children, these findings may not hold up. Sex-appropriate information for traditionally sex-typed toys may be more ingrained in older children due to longer exposures to toys and sex-typing mechanisms. This increased exposure to toys and sex-typing mechanisms could conceivably make the toys less susceptible to modeling or

labeling influences. Additional research will have to be done in this area if it is desired to determine if or when in the developing child traditionally sex-typed toys, as compared to neutral toys, become more resistant to sex-appropriateness alterations.

Interactive Effects of Modeling and Labeling

The hypothesis that same-sex modeling indicating the sex-appropriateness of the toys would have a significant effect upon children's toy preferences was not supported by the results of this study. The hypothesis that same-sex modeling would have a greater effect upon children's toy preferences than same-sex labeling was likewise not supported by the data. From the results of the study, it is plausible to deduce that same-sex modeling separate from same-sex labeling or in combination with same-sex labeling appears to have no direct consequence for differential toy-preference behavior for three- and four-year-old children. When modeling was accompanied by labeling, modeling effects appeared to be washed out entirely. Regardless of the modeling condition, subjects overwhelmingly preferred toys labeled appropriately for their own sex. Even when modeling was examined without any labeling, nonsignificant modeling effects were observed. Toy preferences of subjects viewing same-sex models were not different from those of subjects viewing either same or opposite-sex models. In addition, toy preferences of subjects viewing either same or opposite-sex models were not different from those of subjects in the No Modeling/No Labeling (control) condition.

In contrast to the nonsignificant effects of modeling, labeling effects were pronounced and unequivocal. Both of the labeling hypotheses were supported by the data in this study in a convincing way. The present findings lead to deductions which confirm that the sex appropriateness of labels is a more powerful determinant of toy-preference behavior than sex-appropriate modeling. The results are consistent with those of the five labeling studies found in the literature (Liebert, McCall, & Hanratty, 1971; Montemayor, 1974; Ross & Ross, 1972; Stein, Poly, & Mueller, 1971; Thompson, 1975).

Why should a verbal label pose a more powerful constraint on children's toy-preference behavior than the obvious sex of a peer model? One explanation could be a naive sampling theory of children's early observational learning and socialization proposed by Masters et al. (1979). This explanation maintains that single or short-term observations common to many experimental designs examining modeling effects are limited in the amount of information they provide children as to what is sex-appropriate. Repeated observations on the child's part of different models who consistently show sex-related preferences may be required to provide the necessary information to affect acquisition of or changes in sex-typed preferences in young children. On the other hand, labeling, even in single episodes, provides for the child unequivocal information as to sex appropriateness. This in turn is more likely to be predictive of the judgments and consequent socialization pressures from peers and adults in general.

Masters et al. (1979) maintained that a label designating a behavior or item as appropriate for boys or for girls prevents rationalizing interpretations on the part of the young child. In addition, labeling lessens the need in children for making cognitive reconstructions that could neutralize or even reverse the labeled behavior's or item's implicit or already designated sex-typing. In summary, this theory maintains that single modeling episodes do not provide enough sex-appropriate information for children, while single episodes of labeling do provide adequate and unequivocal information to effect children's toy preferences.

The limited sampling theory may explain why there is little consistency between the results of the numerous studies examining the effects of modeling upon children's toy and activity preferences. Maccoby and Jacklin (1974) and Barkley et al. (1977) have discussed the inconclusive support for modeling in the literature. Another possible explanation of why modeling studies have produced inconclusive results was put forth by Maccoby and Jacklin (1974). After reviewing numerous studies on the impact of modeling upon children's sex typing, Maccoby and Jacklin suggested that:

(a) the modeling process is crucial in the acquisition of a wide repertoire of potential behaviors, but this repertoire is not sex-typed to any important degree; (b) knowledge of what behavior is appropriate is crucial in the selection of what items will be used in performance out of the repertoire of potential actions. (p. 301)

Following Maccoby's and Jacklin's line of reasoning, modeling may apply more to how children learn specific behaviors concerning what they can do with sex-appropriate toys (e.g., how to play football,

comb a doll's hair, jump rope, etc.). On the other hand, labeling's role may be more crucial in providing information to children concerning what exactly is appropriate for them to approach or avoid. Thus, labeling may play a larger role in the acquisition of sex-typed interests, whereas modeling may come into play more in the subsequent sex-typed performance.

Kohlberg's Theory for Sex-Typing

From a theoretical viewpoint, the conclusion of this study, that labeling is a more powerful restraint upon children's toy preferences than modeling, lends itself to the growing support for the cognitive (Kohlberg, 1966) and schematic processing (Martin & Halverson, 1981) theories of sex-role development. In addition to measuring labeling's effects upon children's toy preferences, data were gathered which supported Kohlberg's assumptions that children are aware of their gender identity, make decisions based upon their gender identity, and that this identity in turn helps them to determine the basic values they place upon objects or activities. After the subjects finished their task of pointing out which of the modeled and/or labeled toys they would like to play with most, they were asked why they chose that particular toy. Following a procedure used by Eisenberg et al. (1982), the responses were categorized. The two most frequent answers were "Because I like that one best," and "Because that one is for boys" (if the subject was a boy) or "Because that one is for girls" (if the subject was a girl). These

two response categories made up 76 percent of the total responses. . By comparison, only two percent of the responses were centered on what the toy could do (e.g., could catch it; could roll it), and 23 percent of the responses were associated with specific characteristics of the toy (e.g., it has stickers; it's round). The results of the response categories suggest that children indeed are aware of the sex labels given the toys, that these labels then influence their subsequent preferences for the toys, and finally, that the children place value upon those toys which were labeled similar to their own sex.

When children's preferences and reasons they chose the toys they did were examined, the data from this study did not support Kohlberg's claim that sex-typed behaviors do not occur before six or seven years of age when gender consistency is thought to occur in children. The data from this study, showing that children strongly prefer same-sex labeled toys and give reasons that the toys are for their sex, suggest that children as young as three and four years old are exhibiting sex-typed behaviors. These data are consistent with the findings and conclusions of Jacklin and Maccoby (1978), Kuhn et al. (1978), and Blakemore et al. (1979), mentioned in the review of the literature chapter. It appears that sex-typing behaviors and preferences are occurring at a much younger age than Kohlberg maintained was necessary for cognitive consistency (a prerequisite for sex-typing) to develop.

Martin and Halverson's Model

Another theoretical framework that the results of the study appear to support is the schematic processing view of sex-typing and stereotyping presented by Martin and Halverson (1981). In this view, social schemata that children develop are the focal point of the paradigm. For sex-typing and sex-role learning, Martin and Halverson proposed that children have an overall, "in-group/out-group" schema which consists of all the general information children need to categorize objects, behavior traits, and roles as being either for males or for females. This schema guides behavior by giving children information at the level of labels (i.e., for boys or for girls) about what kinds of things should be approached because they are sex-appropriate or avoided because they are sex-inappropriate. The results of the study confirm Martin and Halverson's predictions that sex labels guide children's preferences. When presented with two apparently equally attractive cars and balloons, the boys overwhelmingly preferred the car and balloon "for boys" and consistently avoided the car and balloon "for girls." When presented with two apparently equally attractive dolls and balloons, the girls overwhelmingly preferred the doll and balloon "for girls" and consistently avoided the doll and balloon "for boys."

In addition to the overall, in-group/out-group schema, the Martin and Halverson (1981) theoretical viewpoint of sex-typing contained a second or own-sex schema which is necessary in children's sex-typing. The own-sex schema consists of detailed scripts and

plans resulting from the child's elaborating, exploring, interacting, etc., with the approached sex-appropriate object of activity. The present study's purpose was not one of addressing issues related to this schema. Therefore, additional research will be required to assess modeling's role related to the development of children's own-sex schema. It is logical that after children approach objects and activities labeled sex-appropriate that modeling mechanisms may then come into play. Same-sex modeling may be more relevant for the development of the second or own-sex schema of the Martin and Halverson viewpoint. Same-sex modeling could assist children in elaborating upon activities and behaviors which they have determined to be sex-appropriate. This explanation as to modeling's function would be compatible with both the Maccoby and Jacklin (1974) statement on modeling mentioned at the beginning of this chapter and Mischel's (1970) claim that boys learn to play baseball from other boys and not from girls.

Implication for Changing Sex-Role Orientations

Given the way humans process information--filtering, categorizing, and stereotyping--and the type of society in which we live, it is not surprising that children are highly sex-stereotyped by the age of four years. This issue begs the question--how stable or resistant to change are the sex-typed schemata of children. Evidence in the literature suggests that children's sex-role schemata are quite stable throughout grade school. DeLucia (1963) did find,

however, that children do become slightly more sex-role flexible as they increase in age between the years of four and ten. In addition, Bem (1974) found that there are adults who apparently are not highly sex stereotyped even though most children are.

The androgynous person (Bem, 1974) is thought to be "sex-role flexible," since both masculine and feminine behavior patterns are included in their behavior repertoire. For individuals to become androgynous, they would, therefore, have learned plans for action for both sex-appropriate and sex-inappropriate behaviors. This concept is similar to the social learning view championed by Mischel (1966), who maintained that children know how to perform both appropriate and inappropriate behaviors--but since environmental supports, in the form of reinforcements, for the performance of inappropriate behaviors are not present, they are not performed. The schematic model, in contrast, posits that the problem is not performance, but rather competence or the lack of complete knowledge about how to perform the inappropriate behaviors. Sex-role flexibility, therefore, can occur only after the individual has learned how to perform inappropriate behaviors.

Given the present stage of development in the sex-role schematic theory, it is only possible to speculate on how sex-stereotyping schemata may become more flexible and the amount of time that is required for individuals to learn inappropriate behaviors. In discussing constancy and change in human development, Kagan (1980) pointed out that most psychological research and theory assume that

the experiences of infancy and early childhood have a lasting effect on adult behavior and personality. At best, change is very slow and requires much time and energy. Examining studies concerned with such changes, Kagan (1980) pointed out that in almost all longitudinal studies, the investigators have been so eager to find heterotypic continuities that they often have failed to consider seriously the possible role of continuing social influences ". . . for their presence would have weakened the conclusion so dearly sought" (p. 65). Kagan's view was that humans have a capacity for change across the entire life span and that the poor correlations found between individuals' behaviors and attitudes measured in childhood with their behaviors and attitudes in adulthood result from researchers not taking into account changes and influences in the society.

Children's sex-typed schemata, or what is appropriate or inappropriate, have the mechanisms for change in that they are largely determined by the environment. Society provides the labels for children to use and the children's sex-role schemata determine how that information will be processed. Following Kagan's (1980) arguments, the degree of stability or the rate of change in sex-role schemata would depend upon the interaction between the rate that society changes labels as to what is sex-inappropriate or sex-appropriate, and the amount of time it takes children to become more cognitively sophisticated. The increase in cognitive sophistication allows children to elaborate upon and alter the sex-appropriate schematic categories that they form during their early childhood. In any event, it may be

assumed that even though four-year-olds are highly sex-stereotyped, they are not predetermined to maintain these stereotypes and may change in the course of their lives. Further longitudinal research is necessary if we are to understand the social mechanisms needed for change and the time periods required.

Summary

There were no differences between children's toy preferences for modeled and/or labeled toys when controlling for the sex, age, and social-class background of the children. There were no differences between the children's preferences in the modeling and labeling conditions for neutral toys and sex-typed toys. The effect of a model's sex upon children's toy preferences was not significant, but there was a strong tendency for children to express a preference for toys labeled appropriately for their own sex. When sex-appropriate modeling and labeling were presented together, labeling effects upon children's toy preferences were predominant regardless of the sex of the model. Labeling was found to provide unequivocal information to the children, which led them to avoid sex-inappropriate toys and approach sex-appropriate toys. On the other hand, single episodes of modeling were not sufficient to cause children to prefer one equally attractive toy over another.

Theoretically, it was posited that sex schemata develop as part of the child's self-socialization. That is, sex-typing information is acquired through a process of the child's defining the self and

defining the relationship of the self to others. The combination of the motivation to define the self and the way in which people process information leads to the acquisition and maintenance of sex-typing schemata. Sex-typing schemata can be considered the result of normal cognitive processes, developing with little effort, and requiring only minimal socialization input.

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APPENDIX A
TABLES A, B, AND C

Table A
 Experimental Condition for Professional
 Middle-Class Subjects

Model	Label								
	Same Sex as Subject			Opposite Sex as Subject			No Label		
	Age	Sex	Sub. No.	Age	Sex	Sub. No.	Age	Sex	Sub. No.
Same Sex as Subject	3	Boy	1	4	Boy	25	4	Boy	49
	4	Boy	2	3	Boy	26	3	Boy	50
	4	Boy	3	3	Boy	27	3	Boy	51
	3	Boy	4	4	Boy	28	4	Boy	52
	4	Girl	5	3	Girl	29	3	Girl	53
	3	Girl	6	4	Girl	30	4	Girl	54
	3	Girl	7	4	Girl	31	4	Girl	55
	4	Girl	8	3	Girl	32	3	Girl	56
Opposite Sex as Subject	4	Boy	9	3	Boy	33	4	Boy	57
	3	Boy	10	4	Boy	34	3	Boy	58
	3	Boy	11	4	Boy	35	3	Boy	59
	4	Boy	12	3	Boy	36	4	Boy	60
	3	Girl	13	4	Girl	37	3	Girl	61
	4	Girl	14	3	Girl	38	4	Girl	62
	4	Girl	15	3	Girl	39	4	Girl	63
	3	Girl	16	4	Girl	40	3	Girl	64

Table A (Continued)

Model	Label								
	Same Sex as Subject			Opposite Sex as Subject			No Label		
	Age	Sex	Sub. No.	Age	Sex	Sub. No.	Age	Sex	Sub. No.
No Model	4	Boy	17	3	Boy	41	4	Boy	65
	3	Boy	18	4	Boy	42	3	Boy	66
	3	Boy	19	4	Boy	43	3	Boy	67
	4	Boy	20	3	Boy	44	4	Boy	68
	3	Girl	21	4	Girl	45	3	Girl	69
	4	Girl	22	3	Girl	46	4	Girl	70
	4	Girl	23	3	Girl	47	4	Girl	71
	3	Girl	24	4	Girl	48	3	Girl	72

Table B
Modeling Sequence on Videotape

Code	Sex of Child	Toy Order	Counter Number
A	Girl	Yellow Car - Oblong Balloon	0-13
B	Girl	Black Car - Round Balloon	14-27
C	Girl	Round Balloon - Black Car	28-41
D	Girl	Oblong Balloon - Yellow Car	42-58
E	Girl	Blonde Doll - Oblong Balloon	60-76
F	Girl	Brunette Doll - Round Balloon	77-92
G	Girl	Round Balloon - Brunette Doll	96-109
H	Girl	Oblong-Balloon - Blonde Doll	111-124
I	Boy	Yellow Car - Oblong Balloon	126-142
J	Boy	Black Car - Round Balloon	144-159
K	Boy	Round Balloon - Black Car	161-177
L	Boy	Oblong Balloon - Yellow Car	179-195
M	Boy	Blonde Doll - Oblong Balloon	197-212
N	Boy	Brunette Doll - Round Balloon	214-229
O	Boy	Round Balloon - Brunette Doll	231-245
P	Boy	Oblong Balloon - Blonde Doll	247-263
	Dog Playing		266-
	Dog Playing		-
	Dog Playing		-
	Dog Playing		-
	Dog Playing		-317

Table C
 Experimental Condition and Subject's
 Toy-Preference Responses

Subject Number _____ School: UNC-G United Day _____

Age: 3 4

Sex: M F

Label:	<u>For Boys</u>	<u>For Girls</u>	<u>For Boys</u>	<u>For Girls</u>
	Yellow Car	Yellow Car	Round Balloon	Round Balloon
	Black Car	Black Car	Oblong Balloon	Oblong Balloon
	Blonde Doll	Blonde Doll		
	Brunette Doll	Brunette Doll		

Modeling: A B C D E F G H I J K L M N O P No Modeling: Dog

Opp Same Same Opp

Child's Choice:

Yellow Car	Blonde Doll	Round Balloon
Black Car	Brunette Doll	Oblong Balloon
