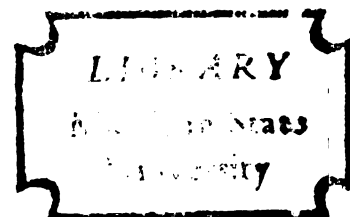


SEX IDENTIFICATION BY CHILDREN AGES
TWO AND ONE-HALF TO FIVE YEARS

Thesis for the Degree of M. A.
MICHIGAN STATE UNIVERSITY
Hazel Ogilvie Baxter
1964

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ABSTRACT

SEX IDENTIFICATION BY CHILDREN AGES TWO AND ONE-HALF TO FIVE YEARS

by Hazel Ogilvie Baxter

The prime focus of this study was the explanation of the pre-school child's accuracy in identifying differences in sex and the criteria he uses in making these distinctions. Specifically, the number and pattern of errors made by the children, the criteria they used and the relative importance of these criteria in sex identification were analyzed. The correlates of the criteria employed in sex identification--age, sex and sibling relationship were also considered.

Broad hypotheses which involved the association of the correlates with the number of errors, the criteria employed, and the relative importance of these criteria in sex delineation guided the study.

Three identical sets of dolls with primary sex characteristics were employed as the basic instrument to measure the child's accuracy in the identification of sex differences. The appearance of each set of dolls was slightly altered when presented to the child in a series of three Scenes. In Scene I, the dolls were unclothed except for shoes which were painted on by the manufacturer; in Scene II, the dolls were appropriately dressed according to the accepted fashion of the day; and in Scene III, the dress of the dolls was reversed with the "Mommy" doll wearing the "Daddy" doll's suit and the "Daddy" doll wearing the "Mommy" doll's dress.

The results of this investigation proved that the typical child in this sample population was very much aware of differences in sex. Twenty-six children made errors only when the dolls were dressed in a fashion which was inappropriate to the sex they were supposed to represent physically.

The criteria employed by the sample population in sex identification were classified as tonsorial, sartorial, somatic, or primary sex characteristics. When presented with the undressed dolls, the children mentioned the primary sex characteristics most frequently. When the clothed dolls were presented the children indicated sartorial differences most frequently. Tonsorial differences were the second most important criteria and somatic differences the third most important criteria.

When the correlates of the criteria were explored, it was demonstrated that significant clear-cut associational patterns existed between age and the criteria used in sex identification for the boys only. The responses of the girls showed no statistical significance. An explanation given for this was that other variables, i. e., intelligence, sibling relationship, and differences in socialization experiences were possibly influencing the responses of the girls.

In the analysis of the relative importance of the criteria employed in sex identification, the responses of the boys demonstrated the following:

1. In all three Scenes the responses of the boys to tonsorial differences increased with age.
2. In Scene I, the primary sex criteria were responded to less frequently by the older boys.
3. For sartorial differences, in Scene I, no clear-cut pattern of responses was observed; in Scene II, sartorial responses

increased with age, while in Scene III they decreased with age.

4. Somatic differences showed a clear-cut relationship only in Scene II. The older children responded less to somatic differences and more to other differences.

The association of the sibling relationship with the responses to the criteria used in sex identification by the children showed no statistical significance.

SEX IDENTIFICATION BY CHILDREN AGES
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By

Hazel Ogilvie Baxter

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CHAPTER I

INTRODUCTION

Statement of the Problem

The purpose of this study is to investigate children's awareness of sex differences. Similar studies have been done interviewing children three years of age and older, but the researcher has found no studies using children younger than three. Therefore, for this study children ranging in age from two and one-half to five years were interviewed. Special attention was given to the age at which children are able to make sex identification and to the distinguishing criteria mentioned in sex identification.

Further the investigation will test whether young children are more aware of clothing than of body characteristics, such as hair and genital differences in sex identification, and whether the number of factors mentioned increased with increasing age.

The term "identification" is used in the exposition that follows to mean, "to serve as a means of recognition,"¹ "to show to be a certain person or thing,"² or according to Lindesmith and Strauss, "the recognition of sex differences."³

¹Funk and Wagnalls, Standard Dictionary of the English Language, International Edition, New York: Funk and Wagnalls Doctionary, Vol. I, 1963.

²Webster's New World Dictionary of the American Language, Edited by David B. Guralnik, New York: Popular Library, Inc., 1958.

³Alfred R. Lindesmith and Anselm L. Strauss, Social Psychology, New York: The Dryden Press, 1957, pp. 322-329.

Scrutiny of the literature shows, however, that there are many other denotations of the word "identification." The writer feels a review of some of these denotations will clarify for the reader the meaning chosen for this thesis. According to Winch, "identification refers to the behavior acquired and the process of acquiring it; to behavior not only similar to the models but related in either of the other ways--reciprocally or oppositely."¹

In conventional psychological terms, as explained by Lindesmith and Strauss, "identification may refer to role-taking or taking the role of others in all intercommunications on the symbolic level,"² Mussen and Conger speak of "identification" as replacing Oedipal wishes and define it as, "taking over the characteristics of the liked-sex parent, or a learned drive to imitate or to be like another individual (or individuals) to whom one is emotionally attached."³ However Stone points out:

. . . the term identification subsumes at least two processes: "identification of" and "identification with" . . . Identification with one another, in whatever mode, cannot be made without identification of one another. Identification of one another is facilitated by appearance and often accomplished silently or non-verbally.⁴

Stone's "identification of" is perhaps the term which explains the way it is used in this paper. Also, Lindesmith and Strauss list three broad aspects of sex-identification: (1) recognition of sex

¹Robert F. Winch, The Modern Family, New York: Holt, Rinehart and Winston, Inc., 1963, p. 479.

²Lindesmith and Strauss, op. cit., pp. 386-387.

³Paul Henry Mussen and John J. Conger, Child Development and Personality, New York: Harper and Brothers, 1956, p. 234.

⁴Gregory P. Stone, "Appearance and the Self," in Arnold M. Rose, ed., Human Behavior and Social Process. Boston: Houghton-Mifflin Company, 1962, p. 90.

differences, (2) learning the meanings of male and female, and (3) identification with one or the other.¹ Their first aspect, the recognition of sex differences is the basic subject area this study will be concerned with.

It is not suggested that the child, in spite of his ability to identify persons correctly as male or female, has gained an adult conception of sex differences, for writers like Lindesmith and Strauss would have it understood that, "the meanings of male and female, like those of other symbols, cannot be fully grasped by youngsters. Children have neither the requisite experiences, nor in the case of the youngest of them, the mentality necessary to understand adult conceptions of sex contrasts."²

Should the reader feel that the meaning of the term "identification" as will be used in this thesis is not suitable, the writer suggests the substitution of the word "recognition."

Review of the Literature

Books and articles have been written on the psychological and sociological aspects of clothing for teen-age boys and girls and adults, but comparatively little research attention has been given to preschool children. Jacob Conn and Leo Kanner have given the most attention to this area. These two researchers have studied the problem of sex identification and their work appears to be one of the few empirical studies directed to this point. Nevertheless, other authors have speculated about the sex identification of young children. Seward quotes Davis as writing: "Along with his awareness of genital

¹Lindesmith and Strauss, op. cit., pp. 322-329.

²Ibid., p. 323.

differences, the child becomes aware of what is expected of him as a member of his sex group."¹ And Crawley, when discussing the sexual background of dress writes:

The most distinctive social division in the permanent division of sex. Up to puberty this is more or less ignored, and the neutral quality of the previous stage is often indicated by the neutral connotation of the term 'child,' and by a neutral fashion of child-dress. It is natural that the growth and maturity of the primary sexual characters should give these a prominent place in the principles of the distinguishing garb, and that they should, as it were, mold the dress into adaptive forms. The idea of social sexuality is well brought out in the stories of children failing to distinguish girls from boys when nude.²

Lindesmith and Strauss in their basic social psychology textbook note:

It is imperative in any society that every child must not only (1) learn to distinguish male from female but also (2) classify himself as one or the other. He cannot, at least publicly, identify himself with both or neither. This poses the problem of how do children learn to identify themselves as members of one or the other sex.³

These authors continue:

When young children begin to learn sex distinctions, they employ criteria which betray rudimentary conceptions of the differences between men and women. These criteria vary according to opportunities available to children for observing and conversing about sex behavior. In the United States such experiences vary widely according to social class, conditions of housing, number of siblings in the family, sibling position, moral philosophies of the parents, and other relevant factors.⁴

¹Georgene A. Seward. Sex and the Social Order, New York: McGraw-Hill Book Company, 1946, p. 152, quoting A. Davis, "American Status Systems and the Socialization of the Child," American Sociological Review, 1941, Vol. 6, pp. 345-356.

²Ernest Crawley, Dress, Drinks, and Drums, London: Methuen and Company, Ltd., 1931, p. 126.

³Lindesmith and Strauss, op. cit., p. 321.

⁴Ibid., p. 322.

Conn and Kanner have, however, done the major research based on, as they phrase it, "children's awareness of sex differences." Although Conn and Kanner's study will be presented in much detail, the writer recognizes the errors in their research methods, especially the representativeness of their sample.

According to Conn and Kanner, clothing dissimilarity and body size present themselves for earliest observation to the child.

The infant sees two kinds of differently clad people before he can be even remotely aware of the full meanings of this distinction, has sufficient linguistic equipment to use masculine and feminine pronouns, and is capable of enough discrimination of detail to notice genital differences even when he does have occasion to see them.¹

The investigation by Conn and Kanner consisted of a sample of 200 children, 128 boys and 72 girls. Children were gathered from the Pediatric Department of the Johns Hopkins Hospital, yet Conn and Kanner report that this sample is representative of a "normal" population of children.

Some attention must be given to the mode of examination used by Conn and Kanner. Such an area presents a major difficulty for research because it, as well as other related subjects, is an area of sensitiveness. In an effort to reduce the sensitivity in discussing a topic of this nature, Conn and Kanner used dolls. They set up a play interview in which the child was able to speak for the dolls whenever he chose. Children were taken separately into a playroom and were permitted to play with the dolls. After a short time the investigator asked the child to play his favorite game and tell his favorite story using the dolls. The investigator conducted the interview by directing the conversation through the use of lead questions but did not urge the child to discuss a particular aspect.

¹J. H. Conn and L. Kanner, "Children's Awareness of Sex Differences," Journal of Child Psychiatry, I (1947), p. 12.

The researchers reported the responses of the children under two broad headings: (1) those dealing with the personal inequalities or those distinctions the children found in individual appearance and (2) those showing themselves in interpersonal relationships, or an account of the reactions to the discovery of genital differences, emotional and "moral" connotations, and the development of "modesty."

Conn and Kanner agree that attire, hair, genitalia as well as urination posture are the primary personal differences children notice in sex identification. The children interviewed named differences in attire 150 times, genital differences 116 times, tonsorial differences 93 times, urination posture 44 times, and breasts and nipples nine times.¹

Differences in clothing was given first place in sex identification by three-fourths of the children. Boys and girls were distinguished with reference to the idea that boys wear pants and girls wear dresses. Other articles of clothing typical for girls and boys were also mentioned. According to Conn and Kanner, "a very few children, all below seven years of age, spoke of attire as the only possible means of telling boys and girls apart." ²

As stated earlier, differences in genitalia was the second most frequently mentioned criteria in sex identification, in Conn and Kanner's study. Evidence of the child's knowledge of differences in genitalia was gained through his verbal expression and in some cases through gestures.³

Few children made reference to the breasts as a distinction between the sexes. An explanation for the infrequency of reference to

¹Ibid., p. 11.

²Ibid., p. 12.

³Ibid., p. 20.

the breasts may be that the adult figures were not represented by the dolls.

Other studies have investigated the sex-role development as well as sex-identification of children concentrating on appropriate sex-role behavior and awareness of sex-role differences. Meyer Rabban studied sex-role identification, but in the analysis of the data he did give some attention to the awareness of sex differences in general. To test the hypothesis that awareness will make no difference between high and low correct toy choices, Rabban analyzed the awareness of sex differences in each child and compared this with his toy choices. The three questions used to test awareness of sex differences in general pertained to (a) awareness of self as male or female; (b) accuracy in awareness of clothing and hair style as features of maleness and femaleness; and (c) wishes regarding future parental role. The child was asked to choose the doll which looked most like himself, to identify the sex of all the dolls, and to choose the doll which represented the parent he would like to become.¹

An analysis of this part of the data revealed that at three years, boys and girls of both groups showed an incomplete recognition of sex differences of the dolls or in themselves; while at four years, there was nearly perfect accuracy in all aspects of identification.²

More recently, Evelyn Pitcher did a study of the ways in which parents influence sex differences in children. Although her study is not directly concerned with the awareness of young children of male and female differences, her play interviews with children, both boys and girls, reveal that girls mention clothing with more attention to

¹Meyer Rabban, "Sex Role Identification," Genetic Psychological Monographs, 42 (August, 1950), p. 119.

²Ibid., pp. 119-120.

detail than do boys. Her interviews with parents suggest that the influence of the parents upon the children in terms of clothing and appearance influences and strengthens the children's awareness of sex differences.¹

Summary

Very little research attention has been given to the investigation of sex identification by children. However, writers like Rabban, Crawley, Lindesmith and Strauss, Pitcher, as well as Conn and Kanner agree that this is a crucial as well as a very significant part of a child's development.

There is much agreement that clothing is a vital criterion used by the young child in the identification of sex differences. Other criteria, such as hair, urination posture, and the primary sex characteristics have also been considered important factors in the child's delineation of sex differences.

Focus of the Study

Based on the reported research, it would seem that four years is the earliest age at which children are able to make accurate sex identifications. However, there is reason to believe that, due to the limitations of the research designs and the sample compositions of the studies reviewed, younger children may also be able to make accurate sex identifications. One of the purposes of this study, therefore, is to investigate younger children's awareness of sex differences. In addition, the criteria they use to make these distinctions will also be considered.

¹Evelyn G. Pitcher, "Male and Female," Atlantic, CKI (March, 1963), pp. 87-92.

The specific assumptions, objectives and hypotheses guiding this study are as follows:

Assumptions:

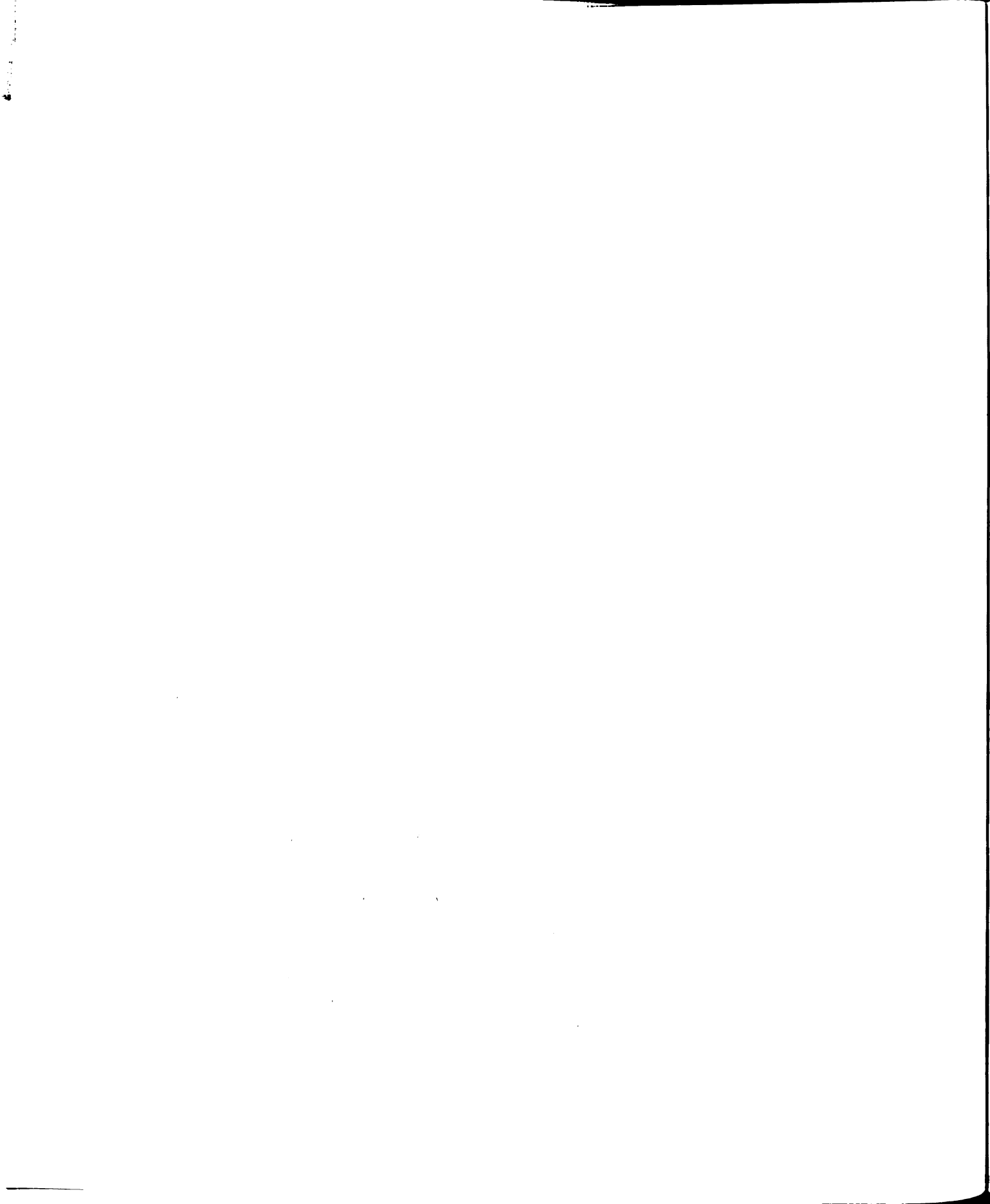
1. There are a number of criteria involved in sex identification.
2. The dolls with primary sex characteristics and clothing provide a means by which the researcher may discover the child's awareness of sex differences.

Objectives:

1. To determine at what age children are able to make accurate sex identifications.
2. To determine the relative importance of the criteria indicated in sex identification.
3. To determine if there is any relationship between the age of the child and the number of criterion mentioned in sex identification.

Hypotheses:

1. If age groups are arranged serially, there will be a larger number of criteria named by each successive age group.
2. If the age groups are arranged serially, the younger the child the more clothing will be mentioned as a criterion in sex identification.



CHAPTER II

METHODOLOGY

Because no previous studies have considered the awareness of sex differences of children under the age of three years, a large part of this research will be exploratory in nature.

The methodology of this study will be described in this order: (1) selection of method, (2) development of the instrument, (3) pre-test, (4) the community setting, (5) selection and description of sample, (6) administration of instrument, and (7) method of analysis.

Selection of Method

The children of preschool age were considered carefully in formulating the research method to be used in this study. Developmental factors such as the comprehension of language, language facility, and sociability effecting the preschool child were seriously considered in selecting the technique that would yield the best response.

Several data procurement devices used by researchers in similar studies were analyzed. After careful study, the direct interview was chosen. In the direct approach, according to Yarrow, "the interviewer maintains complete control of the content areas of the interview by setting up the framework and redirecting the interviewee's responses to keep them within the desired structure."¹ Yarrow further states that, "the interview is a technique particularly well adapted to

¹Leon J. Yarrow, "Interviewing Children," in Paul Henry Mussen edition of Handbook of Research Methods in Child Development. New York: John Wiley and Sons, Inc., 1960, pp. 561-602.

uncovering subjective definitions of experiences, to assessing a child's perceptions of the significant people and events in his environment, and to studying how he conceptualizes his life experiences."¹

Because of the age of the children and the sensitiveness of the subject under investigation, the researcher chose the use of dolls in conjunction with the direct verbal interview. Children between the ages of two and four years are quite limited in the areas of exchanging verbal information, therefore, the more directive the interview, eliciting one or two-word-sentence responses, the more ideal.

Ammons,² Bender,³ and Conn⁴ have made use of dolls in conjunction with the direct verbal interview. Of the three, Ammons has perhaps employed the most direct method which consisted of questions about dolls eliciting short answers from the children.

The interview as a method of investigation of preschoolers has many limitations but the use of the dolls adds the note of interest necessary to gain maximum benefit of the child's relatively short attention span. Further adaptation of the interview to children's linguistic and motivational characteristics is advocated by Yarrow.⁵ With preschool children, defining the interview as a play situation and

¹Ibid., pp. 561-602.

²R. B. Ammons, "Reactions in a Projective Doll-play Interview of White Males Two to Six Years of Age to Differences in Skin Color and Facial Features," Journal of Genetic Psychology, 76, (1950), pp. 323-341.

³Lauretta Bender, Aggression, Hostility and Anxiety in Children. Springfield, Illinois: Thomas Publishers, 1953.

⁴J. H. Conn, "The Child Speaks to the Psychiatrist; An Introduction to the Method of the Interview," Occupational Therapy, Vol. 17, pp. 231-244.

⁵Yarrow, op. cit., pp. 561-602.

conducting it as such have been advocated by Conn¹ and others. Another factor which was considered was the setting of the interview. Each child was interviewed in a setting away from other children and with which he was familiar. A room of the nursery school or his own home was chosen. As reported by Yarrow the physical setting was deemed an important consideration for ideally it is a factor which facilitates the reduction of anxiety and maximizes the rapport in an interview relationship.²

Development of the Instrument

The decision to use dolls in this study was a product of committee thinking. The committee was composed of two sociologists, a woman and a man, a female colleague, and the present researcher.³ The idea of using the dolls was arrived at after other studies using similar dolls had been reviewed. Consideration was given to the use of drawings or photographs of the human figures, but was given up in favor of the dolls. According to Jacob Conn:

There are man-made barriers to be overcome before children will express themselves on this and kindred topics. In our culture children notice at an early age that certain topics may not be mentioned. They often experience and become sensitized to the embarrassed and critical attitudes displayed by adults whenever anything pertaining to sex comes up for discussion. They are frequently instructed not to repeat to outsiders any information given them about genital differences or childbirth.

¹Conn, op. cit., pp. 231-244.

²Yarrow, op. cit., p. 571.

³The committee members were Dr. Joanne Eicher, Department of Textiles, Clothing and Related Arts; Dr. Arthur M. Vener, College of Social Sciences; Audray Weese, and the writer.

All this leads to considerable sensitiveness in children to any inquiry touching upon sexual matters.¹

Because of Conn's statement and the conclusion of other scholars, the use of dolls was considered most feasible. The next problem was the selection of the dolls. Since other writers had not adequately described the dolls they used, the committee had to select its own.

The initial attempt to locate dolls which displayed all of the genital features was made through a psychological testing center but these dolls did not have the genital features clearly shown nor were other features, such as hair, sufficiently realistic. Through the psychological testing center, the suggestion was made to contact a commercial firm from which we would obtain the desired type of dolls.

At the time, consideration was given to a cross-cultural study on gender discernment in one of the African cultures, therefore, since dolls were available in Negroid and Caucasoid models, our needs seemed to be satisfied. The dolls were described by the commercial firm as:

Rubber doll family with sex features, father, mother, brother, sister, baby, ranging in size from 12" father to 4" baby. Complete body details, including sex features. Weighted feet make them stand readily. Wired from head to foot. Washable. Fully clothed. Easy to dress and undress.²

Further the claim was made:

These rubber dolls can be bent and will hold their pose in any position. Used extensively by trained therapists in child guidance clinics and by child psychiatrists to reveal difficult emotional problems.³

¹J. H. Conn, "Factors Influencing Development of Sexual Attitudes and Sexual Awareness in Children," American Journal of Disorders in Children, 58 (October, 1939), p. 739.

²Creative Playthings, Inc., Catalogue. Princeton, New Jersey, 1960, p. 26.

³Ibid., p. 26.

After acquiring two sets of the dolls, a Negroid and a Caucasoid set, the committee began preliminary testing to determine if the dolls had potential for use in the study. Two available children between the ages of two and one-half and five years were interviewed. Following the suggestion, "Tell me about the dolls," a series of unstructured questions were asked.

This preliminary interviewing pointed out the need for certain revisions. First, more physical contact of the child with the doll seemed wise since the child responded more if permitted to handle and look at the dolls. The second revision was in the area of the structuring of questions. It was learned that more direct questions prompted better response from the children. While the child did not respond freely to the suggestion, "Tell me about the dolls," when asked to "Give me the 'Mommy' or 'Daddy' doll" he was most responsive. The negative approach in which the interviewer gave the child a doll of a particular sex and referred to this as the doll of the opposite sex also prompted more emphatic response.¹

The third revision came in the area of the physical appearance of the dolls. The varying sizes of the dolls presented a problem. The children were not able to associate the distinctions of male and female with the non-adult dolls, therefore, the non-adult dolls; brother, sister, and baby were excluded from the final instrument.²

Other changes concerning the method of presenting the dolls to the children and the type of lead questions the interviewer should use were made. It was determined here that more than one set of dolls was needed in order to achieve our purpose, namely, to present

¹Suggested by the anthropologist, Jules Henry, during a personal consultation.

²See Appendix C for photographs of the dolls.

the child with three different showings of the dolls. First, they were to be shown nude, the purpose being to have the child make the distinctions between male and female through the use of the primary sex characteristics alone. In the second presentation, each doll would be dressed in clothing which was appropriate for its sex. The purpose of this presentation was to have the child make the distinction between the male and female dolls through the use of clothing. As a further test of the hypothesis that clothing is the most important item of sex distinction for children of this age, the third set of dolls was to be presented in reversed dress, that is, the female doll was to be dressed in the male's clothing and the male was to be dressed in the female's clothing.

The continuous changing of clothing by the interviewers while in the presence of the child presented some difficulty, i. e., such as losing the attention of the child or giving him clues as to what was expected of him. The decision was made that three different sets of identical dolls would be used.

As a result of additional pretest interviews, the committee concluded that the dolls would be amenable to the research needs. At this stage, certain recommendations for revision of the appearance of the dolls were made. These recommendations included: (1) to replace the "painted on" hair with more realistic hair, and (2) to dress the dolls in current fashion.

The attempt to make the hair of the dolls more realistic was somewhat of a problem. Locks of human hair were tried but proved inadequate. Finally, wigs were taken from other dolls on the market and combined in such a way as to make special wigs for the "Mommy" dolls. Since this method did not prove workable for the "Daddy" dolls, their original appearance was not altered.

The clothing for the dolls was designed and constructed by a female colleague and the researcher. A suit, tie, and shirt were made for each "Daddy" doll and a dress was made for each "Mommy" doll. The two outfits for the two different presentations (appropriately dressed and dress reversed) differed in color but followed the same basic design. Completely identical attire for each presentation was considered to be a potential source of confusion for the preschool child.

As a final check of the child's accuracy in the identification of sex, toward the end of the interview all of the dolls were shown together in a random arrangement and the child was asked to bring all of the same-sex dolls to the interviewer.

The tape recorder was originally considered as a means of recording the responses of the children, but it was felt that this device would miss the multitude of their rich gesture responses. It was finally decided that a colleague, involved in a companion study, and the present researcher should cooperate in the collection of the data. One researcher would interview while the other person would be recording the interview on an interview schedule.¹

The attention span of the children presented no difficulty in conducting the interview. The child's attention was held during the 15 or 20 minutes required to conduct the interview.

From committee discussions and a review of other available studies, the hypothesis was developed that the attitudes and habits of the parents in the home situation might be an important variable influencing the child's responses. For example, it was felt that the child who saw his parents or other members of the family nude would be more aware of the differences between the sexes. Also, the vocabulary the child could use in referring to the sex characteristics

¹See Appendix A for interview schedule.

was probably determined by the parents through the sex related terms they encouraged him to use in the home situation. To gain information about these phenomena, the parents were sent questionnaires.¹ Phone calls were used when the questionnaires were not returned. To gain other information required in selecting the sample the questionnaire contained such questions as the position of the child in the family, the sex and age of siblings, the occupations of the fathers, etc.

Reliability

The reliability of any test refers to and depends on the extent to which repeated administrations to the sample population will yield the same results. The reliability of the instrument was not determined. The main disadvantage to a test for reliability was imposed by the element of time itself. It is felt that enough time would have to have elapsed between the test and the retest in order that the sample population would not recall the dolls they were tested on. Even if the boys and girls did not remember the dolls, one of the controlling variables of the study--age--would affect the retest. That is, the ages of the children would not be the same as they were in the original test and consequently under normal circumstances a degree of learning should have taken place.

Validity

The validity of an instrument or test refers to and depends on "the degree to which a measurement procedure measures what it purports to measure."² As a result of the pretest, it was assumed that the test was valid. The assumption was based on the fact that in

¹See Appendix B for questionnaire.

²Marie Jahoda, Morton Deutsch, and Stuart W. Cook, Research Methods in Social Relations, New York: The Dryden Press, 1951, p. 109.

the pretest and in the development of the instrument, a number of children were interviewed to determine whether or not the interpretation of the questions by the respondents was the same as that which was intended by the researchers. The interview was modified several times in order to convey the intended interpretation. The responses obtained from the pretest were very similar to those of the final instrument.

The Pretest

The pretest was conducted in the Michigan State University Laboratory Preschool. Children who met the requirements of the study were asked to participate. Six children were interviewed who were not returning to the school in the fall for various reasons. These children were ideal for the pretest because they would not have to be eliminated from the final sample population. The children were not returning to the school for such reasons as (1) too old and (2) family moving to another location.

The purposes of the final pretest were to provide a base of experience for the researchers, to test the interview technique for comprehension at this age level, and to see whether or not the length of the interview was within the attention span of the preschool child.

After some observation within the nursery school setting the researcher approached the child to be interviewed and became acquainted by talking with him and becoming involved in his activity. Finally, the child was asked if he would like to play a game that was located in another room. When the child consented, he and the researcher went into the designated room and the interview was conducted. The interviewer made introductory remarks such as the following, prior to the actual interview:

We are going to play a game. I have some dolls here and what I want you to do is to pick out the "Mommy" doll and the "Daddy" doll each time I show them to you.

A co-worker recorded the responses of the child on the interview schedule.¹

The length of the interview in the pretest ranged from fifteen to twenty minutes. Another researcher previously conducted an interview which lasted approximately the same length of time, yet the child's attention was held in most cases. As a result of the pretest, the instrument for data collection and the interview technique proved to be quite satisfactory for the research requirements.

The Community Setting

The community from which the sample was derived is East Lansing, Michigan. The East Lansing community is atypical in many respects. Michigan State University, which is located in East Lansing, affects a large segment of the population in relation to such elements as education, age, mobility, occupation, and income. In 1960, persons of age twenty-five and over of East Lansing have a median 15.8 years of schooling compared to 10.8 for the State of Michigan. The median age of the residents is 22.2 years. Fifty and seven-tenths percent of the population moved into their present homes in East Lansing after 1958. White collar workers predominate with 71.9 percent in white collar occupations and only seven percent in manufacturing industries. The median East Lansing income is \$7,152, while the median state income is \$6,256. Twelve and two-tenths of the residents have incomes under \$3,000, but 31.7 percent

¹See Appendix A for interview schedule.

have incomes of \$10,000 and over.¹

It can be seen from the statistical information above, that East Lansing is truly an atypical community. These facts are revealed in the similarity of the background factors of the children in the sample. As Table I shows, for example, the occupations of the sample children's fathers could all be classified as solid middle class, with a large percentage (58%) of them being university faculty members.

Table 1. Distribution of Sample Population by Father's Occupation

Father's Occupation	Number of Fathers
University faculty:	
Full professors, associate professors, assistant professors, instructors	66
Graduate students:	
Graduate fellow, full time graduate student	7
Other professionals:	
Doctors, lawyers, dentists, engineers, high school teachers	10
Business:	
Regional managers of business firms, salesmen of real estate and insurance, accountants, technicians, contractors	27
No response	3
Total	113*

* Seven families were included from which two children were interviewed.

¹The data presented above was abstracted from Betty Wass, "Clothing as Related to Role Behavior," unpublished Master's thesis, Department of Textiles, Clothing and Related Arts, Michigan State University, 1962, pp. 23-24.

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Table 2 shows that the greatest percentage (62%) of the parents was between 31 and 40 years of age.

Table 2. Age Distribution of the Parents of the Children Interviewed

Age Category	Number of Fathers	Number of Mothers	Totals
20 - 30 years	20	38	58
31 - 40 years	72	66	138
41 - 50 years	18	7	25
51 - 60 years	1	0	1
* Totals	111	111	222

* Seven families were included from which two children were interviewed. Background information was unavailable for two families.

Selection and Description of Sample

Four factors were considered in the selection of the sample-- social class, age, sex, and family composition.

For this study, the occupational status of the fathers was considered a valid criterion for evaluating whether or not the child's social class status was at least middle class. Authorities agree that occupational status is a major if not the prime element in determining social class status. Therefore, in this study, the occupational level was the only element considered as an indicator of social class position.

The father's occupation was obtained from a background information questionnaire (see Appendix B) and Table I shows the categorization made for purposes of this study. The writer is aware

of the various status indices introduced by authorities such as Warner, Meeker and Eells.¹ Yet, the sample population, because of the narrow range in the father's occupational statuses, did not prove conducive to this type of rating. If Warner's scale had been followed, for example, all of the fathers in the sample population would have been ranked in ratings one to three only.

Age and Sex

In order that statistical comparisons could be made, equal numbers of children were interviewed in each age and sex group. The resulting sample of 120 children was composed of 60 girls and 60 boys. The age group, two and one-half to five years was chosen for several reasons: first, because none of the studies reviewed dealt with an age group this young; second, the two and one-half year old was considered to have reached a vocabulary level which would enable him to communicate his ideas about the subject matter of this study; and third, five years was considered a good maximum age because of the desire to study the child before he was influenced by primary school activity.

Family Composition

Originally, two factors were to be controlled in the selection of the sample with respect to family composition. These factors were: (1) intact families with both parents living at home, and (2) families with only one child. However, the latter control factor was waived because it presented too great a limitation in terms of obtaining the desired sample.

¹W. L. Warner, M. Meeker and L. Eells, Social Class in America, Chicago: Science Research Associates, 1949, p. 185.

The Sample

Of the 120 children in the sample, 52 were interviewed at the Michigan State University Laboratory Preschool, 42 at Quonset Cooperative Nursery, 4 at Lutz Day Care Nursery, and 7 at Spartan Nursery. Each of these schools located in East Lansing, cater primarily to professional and academic personnel. Fifteen of the children were interviewed in their homes.

The total number of families in the sample was 113. Two of the families had moved to other areas before the questionnaires were mailed, therefore, no background information could be obtained from them. Seven families were included from which two children were interviewed. Thus, as can be seen from Table 2, background information was secured from a total of 111 families.

Table 3 shows the distribution of the sample by the number of siblings of the children interviewed. The greatest percentage of families was composed of two and three children, whereas, the families with one child and four or more children were comparatively rare.

Table 3. Distribution of Sample by Sibling Composition

Number of Siblings	Number of Interviewees	Percentage of Interviewees
Only child	17	14.4
One sibling	43	36.45
Two siblings	41	34.75
Three or more siblings	17	14.4
Totals	118*	100.0%

* Background information was unavailable for two of the children.

Method of Analysis

Probability statistics were used when the frequency distributions were adequate and the data were amenable to such treatment. The chi-square test of significance was used in this investigation to establish statistical probability. For the purposes of this study, a probability of .05 or less was accepted as indicating a significant association or one that is not likely to occur by chance alone. The degree of significance will be shown throughout the exposition of this thesis as follows:¹

- (1) When probability is greater than .05 not significant NS
- (2) When probability is .05 or less but greater than .01 moderately significant P .05
- (3) When probability is .01 or less but greater than .001 highly significant P .01
- (4) When probability is .001 or less extremely significant P .001.

¹The last three of these qualifying adjectives were originally used by George W. Snedecor, Statistical Methods: Applied to Experiments in Agriculture and Biology, Ames: Iowa State College Press, 4th ed., 1946, Reproduced in Margaret J. Hagood, Statistics for Sociologists, New York: Henry Holt and Company, 1952, p. 325.

CHAPTER III

ERRORS MADE IN SEX IDENTIFICATION

An analysis of the errors made in sex identification will be the focus of this chapter. An error was defined as the incorrect response made by a child when told to identify one of the dolls. For example, it was considered an error if the child was presented with the female doll and he identified it as the male doll. During the entire interview, a child could possibly make a total of twelve errors.

The number of children making errors in the identification of sex was surprisingly low. Apparently, by the time the child is two and one-half years old, he is capable of distinguishing between the sexes. Of the 120 children interviewed, only 26 made one or more errors. In fact, when the nude dolls and the appropriately dressed dolls were shown, no errors were made by any of the children interviewed. All the errors made by the 26 children were made when the dolls were shown in reversed dress. (See the Section on Methodology for a description of the attire.) What does this mean? Apparently, to the 26 children who made errors, it means that clothing is an important factor in sex identification. When the genitals were covered by clothing, the prime distinguishing characteristic between the sexes became clothing for these 26 children.

The puzzling question to the writer at this point is, "why are the findings of this study somewhat different from those of other research and from speculation concerning the child's awareness of sex differences?" It was assumed after the review of the available

literature that there would be a greater number of the 120 children in this sample population making errors in sex identification. More specifically, it was assumed that the younger children would make more errors. Could it be that other writers have been misled by the results of the limited amount of research done on children's awareness of sex differences? One possible answer may be that researchers, like Conn and Kanner,¹ have maintained that some young children were unable to make the distinction between undressed boy and girl dolls.

Since Conn and Kanner's study is often used to substantiate the proposition that young children are not able to make sex identification of nude persons,² several elements should be considered in the evaluation of these findings. First, these two researchers asked the children to distinguish between boys and girls with only moderately pronounced genitalia, while this study used adult dolls with fully developed genitalia. Second, the applicability of Conn and Kanner's findings to children of "normal" and "above normal" intelligence is questionable. As reported in their study, the group average IQ was 95.1 and some ranged as low as 70.³ Third, the ages of the children in Conn and Kanner's study and the ages of the children in this research are not comparable. Conn and Kanner's sample consisted of 200 children from four to fourteen years, whereas the age range of the children in this study was from two and one-half to five years. Finally, the children in Conn and Kanner's study were obviously "disturbed" to some degree for they were from the out-patient division,

¹Conn and Kanner, op. cit., p. 4.

²Lindesmith and Strauss, op. cit., p. 323.

³Conn and Kanner, op. cit., pp. 45-46.

semi-private dispensary, and private consultation service of the Harriet Lane Home, the Pediatric Department of the Johns Hopkins Hospital.

Although the relative number of children who made errors is small, it may be assumed that at least for this sample group, the child's sex is not related to his ability to distinguish between the sexes. Approximately half of the children who made errors in sex identification were boys (12) and half were girls (14).

The data also show a very slight relationship between the age of the child and the errors made in sex identification. Of the 26 children who made errors, eleven were 30 to 40 months old, nine were 41 to 50 months old and only six were 51 to 60 months old. The older children had a slightly less tendency to make errors than the younger ones. It must be noted that this finding is extremely tentative because of the very few individuals involved.

Pattern of Errors

The 26 children who made errors made a total of 52. Table 4 demonstrates how these 52 errors were distributed by age and sex. This table shows a very slight relationship exists between the age and the number of errors made; the six oldest children (51 to 60 months) made on the average 2.3 errors while the eleven youngest children (30 to 40 months) made only 1.7 errors per child. Thus, the fewer older children who made errors tended to make more errors per child than the younger ones. Further, no apparent relationship exists between the sex of the child and the number of errors he made. The errors are distributed about equally between the boys and girls in each age group.

A list of the children who made errors in sex identification with their sibling relationship follows:

Table 4. Distribution of Errors in Sex Identification by Age and Sex

Sex	Age						Total
	30-40 Months		41-50 Months		51-60 Months		
	No.	Average	No.	Average	No.	Average	
	of	No. of	of	No. of	of	No. of	
	Errors	Errors	Errors	Errors	Errors	Errors	
Boys	N=5 9	1.8	N=4 8	2.0	N=3 7	2.3	24
Girls	N=6 10	1.7	N=5 11	2.2	N=3 7	2.3	28
Total	19		19		14		52

Sibling Relationship	Number of Errors	Average Number of Errors
Only child N = 6	15	2.5
Same-sex sibling N = 8	15	1.9
Opposite-sex sibling N = 12	22	1.8

Here again generalizations must be made with extreme caution. However, there is some evidence that the children who had no brothers and sisters made more errors on the average than the children with brothers and/or sisters. The six only children made on the average of 2.5 errors while the eight children with the same-sex siblings made on the average 1.9 errors and the children with opposite-sex siblings made on the average 1.8 errors.

Summary

In this chapter an examination was made of the errors the children made in sex identification. The pattern of errors was also considered.

The number of errors made by the children are surprisingly low and from this it was concluded that the typical child in this sample population was very much aware of differences in sex. Twenty-six children made errors only when the dolls were dressed in a fashion which was inappropriate to the sex they were supposed to represent physically. There was some indication that younger children had a slightly greater tendency to make errors than the older children. However, these fewer older children who did make errors, made more errors per child than the younger ones. Because the sample contained such a low number of children who actually made errors in sex identification, it was pointed out that these findings were highly tentative. Studies with a larger sample may be able to test the accuracy of these findings.

CHAPTER IV

CRITERIA AND CORRELATES OF CRITERIA EMPLOYED IN SEX IDENTIFICATION

In the discussion of the focus of this study it was stated that one of the aims of this investigation was to explore the criteria employed by the preschool children in the identification of sex. As further stated in the section on the "Selection and Description of the Sample"¹ the correlates of the criteria employed in sex identification--age, sex and sibling relationship--will also be analyzed. In this chapter the criteria and the correlates of the criteria employed by the preschool children in sex identification will be examined in detail.

Criteria Employed in the Sex Identification of the Six Dolls

According to Lindesmith and Strauss, "when young children begin to learn sex identification, they employ criteria which betray rudimentary conceptions of the differences between men and women."² These criteria vary considerably because of differences in socialization experience. For example, some children have more opportunities for observing and conversing about sex behavior than others. These opportunities are affected by such factors as the philosophies of the parents, the social class, the conditions of housing, the number

¹See page 21 of the Methodology.

²Lindesmith and Strauss, op. cit., p. 322.

of siblings in the family, the sibling position and even the experiences of the child outside of the home. The experiences outside the home may be as simple as attending a nursery school or play-group where there is contact with children of other backgrounds, ages and of different sex.

As revealed in Conn and Kanner's study, young children mention such features as clothing, hair and genital differences as important indicators of the differences between men and women. Other criteria included are eyes, hands, face, complexion, feet, figure, strength and gait.¹ Following the classification scheme of Conn and Kanner, the criteria used for identification of sex in this study will be organized under four broad categories. The first category, tonsorial differences, include the hair and cosmetics. The second category, sartorial differences, includes shoes as well as other articles of attire. The third category, somatic differences, includes the parts of the body other than those commonly thought of as being specifically sexual, such as the head, arms, hands, trunk, legs and feet--and the fourth category, the primary sex characteristics, includes the genitals and breasts.

Table 5 shows the criteria employed in the sex identification of the six dolls by Scene. As stated in Chapter III, the first Scene involved the presentation of the nude dolls. When describing the nude dolls, the greatest percentage (37%) of the total responses given was indications of genital and breasts differences. The next greatest percentage (23%) of the total responses was to tonsorial differences. Somatic differences received the next highest percentage (22%) and sartorial differences received the least (18%) of the total responses. It must be made clear that the 18 percent response to sartorial differences was almost always a response to the shoes, since these were

¹Conn and Kanner, op. cit., pp. 3-57.

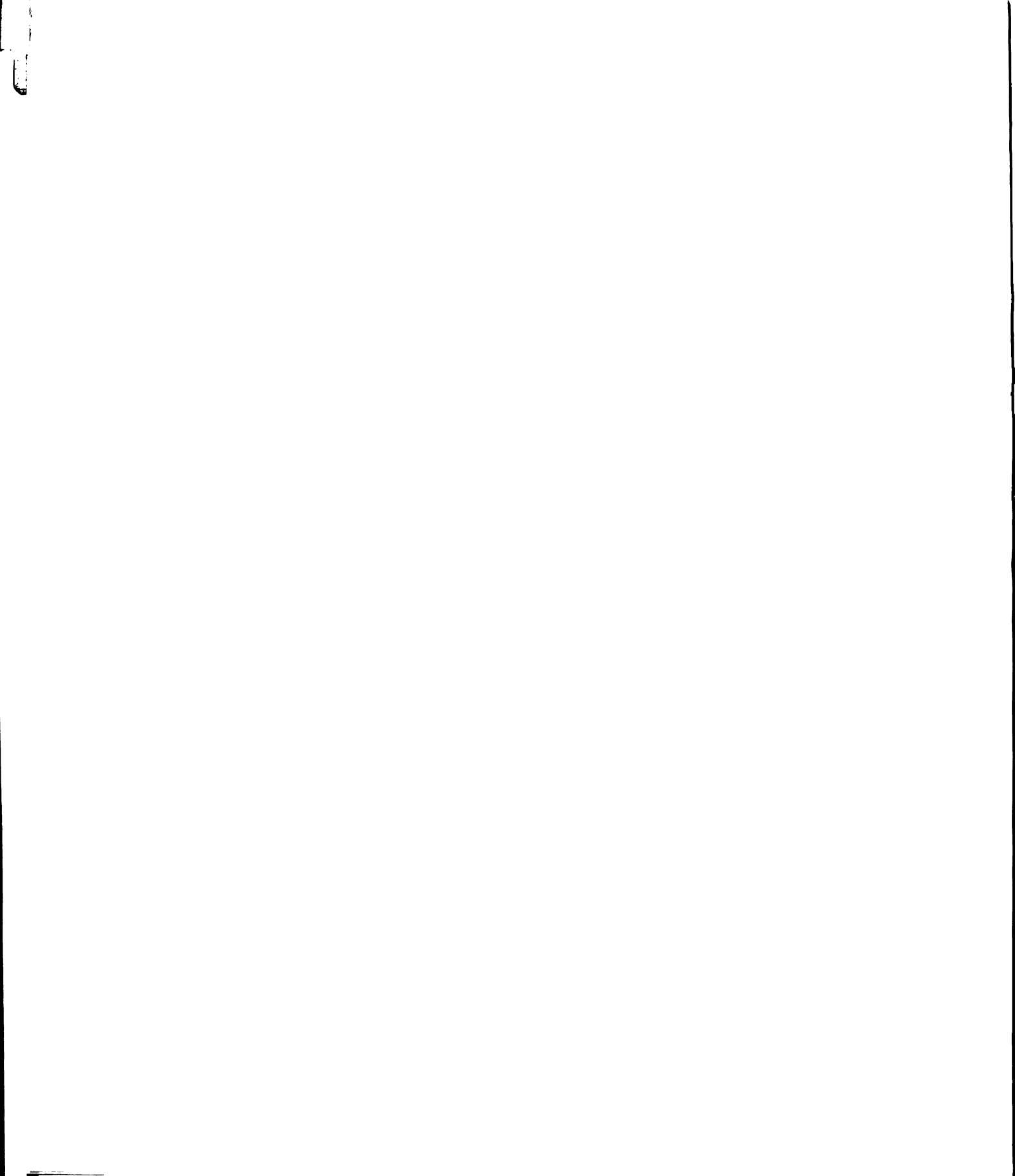


Table 5. Criteria Employed in the Sex Identification of the Six Dolls

Criteria	Scene I (Dolls I & II)		Scene II (Dolls III & IV)		Scene III (Dolls V & VI)		Total
	No.	%	No.	%	No.	%	
Tonsorial	124	23.0	128	27.5	81	29.0	333
Sartorial	96	18.0	190	40.8	109	39.0	395
Somatic	116	22.0	118	25.5	69	24.7	303
Primary Sex Character- istics	194	37.0	29	6.2	20	7.3	243
Total	530	100.0	465	100.0	279	100.0	1274

the only article of attire representing sartorial differences presented at this time. The children felt it necessary to indicate the apparent differences in the design of the male doll's shoes and the design of the female doll's shoes. (See Methodology for a description of the attire.) This is a surprisingly high percentage of responses when the consideration is made that the pair of shoes is the only article of attire representing sartorial differences visible in Scene I. A small number of the responses made to sartorial differences was negative indications. That is, the comment was sometimes made that the dolls wore "no clothing" and was therefore coded as an indication of sartorial differences. As a general analytical rule, each time during the interview, if the child recognized and mentioned that some criteria was missing, it was considered a positive indication. For example, sometimes the children indicated that the male doll wore "no lipstick" or "no make-up."

Of the 194 (37% of total) responses to the primary sex characteristics in Scene I, the genitals (penis and vagina) were referred to 122 times and the breasts 72 times. This would indicate that the children

in this sample are definitely able to make sex identifications of undressed persons, and are not, as some writers put it, "puzzled by the question" when asked to make the identification. A further indication is that the children in the sample are using the primary sex characteristics as important criteria of sex differences. This finding, together with the fact that no errors in sex identification were made by the 120 children interviewed for this study in Scene I, is further proof that even at the young age of two and one-half, children are able to make sex distinctions through the use of the primary sex characteristics.

Table 5 above shows that in Scene II when the dolls were described who wore the appropriate dress for each sex (see discussion of attire in the Methodology), the greatest percentage (40.8%) of the total responses made was to sartorial differences, the second highest response (27.5%) to tonsorial differences, the third highest percentage (25.5%) to somatic differences, and the lowest percentage (6.2%) to differences in the primary sex characteristics. This response to the primary sex characteristics is significant when the consideration is made that at this time these particular physical features were covered by clothing. During the interview some of the preschool children actually undressed the dolls in order to examine the genitalia, while others quite obviously fingered the dolls in order to establish the identity of the genitalia. Further, since the data show that no errors in sex identification were made in Scene II (see Chapter II), it can be assumed that the child of this sample population is aware of sex-linked clothing differences by the time he is two and one-half years old.

In Scene III, as shown in Table 5, when the dolls were described who wore the opposite sex dress (see discussion of attire in the Methodology), the total number of responses made by the children is low as compared to the responses obtained from the other two scenes.

This might simply mean that the children were becoming fatigued or perhaps at this point of the interview they considered the sex identification of the dolls as quite apparent and no further comment was necessary.

Although the relative number of responses in Scene III was low, a general pattern of the importance given to each criterion can still be discerned. Sartorial differences received the highest percentage (39%) of the total responses, tonsorial differences the next highest percentage (29%) of the total responses, somatic differences the next highest percentage (24.7%) and the primary sex characteristics the lowest percentage (7.3%) of the total responses. Again, this 7.3 represents a relatively high percentage since the genitals and breasts were covered.

In summary, it may be stated that the children are definitely able to make sex identifications and that generally clothing, genitalia and the breasts are the prime indicators. Tonsorial differences are also important because this type of criteria received the second most frequent response by the children in each of the three scenes.

Correlates of Criteria Employed in Sex Identification

What effect does age, sex and sibling relationship have on the criteria employed in sex identification? As stated in the hypothesis, this study proposes to test the association of age and sex and the child's recognition of male and female differences.¹ According to Lindesmith and Strauss, the sibling relationship, namely, the number of siblings in the family and the sibling position, is a relevant factor in providing available opportunities for children to observe and

¹For a discussion of the hypotheses see Chapter I.

converse about sex behavior. Therefore it was expected that this would have impact upon the kinds of criteria children will employ in the identification of sexes.¹

For this investigation the two and one-half to five year old age group was subdivided into three groups--thirty to forty months, forty-one to fifty months and fifty-one to sixty months of age. Within each of these groups there were twenty boys and twenty girls. This facilitated the investigation of the association of age and sex and the criteria employed in the sex identification of the six dolls.

The association of age and sex with the criteria employed in sex identification is shown in Table 6. A highly significant association ($P .01$) exists between age and the criteria employed in sex identification. Fewer boys and girls, ages 30 to 40 months, responded to tonsorial differences than expected, while more boys and girls, ages 41 to 50 months and 51 to 60 months, responded to tonsorial differences than expected. Generally this indicates that as age increases the tendency of the children to mention tonsorial differences also increases.

Table 6. Association of Age and Sex with the Criteria Employed in Sex Identification

Criteria	30-40 Months		41-50 Months		51-60 Months		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
Tonsorial	23	35	53	69	86	67	333
Sartorial	52	55	62	63	85	78	395
Somatic	56	41	42	46	76	42	303
Primary Sex Characteristics	29	44	39	34	60	37	243
Total	160	175	196	212	370	224	1274
$X^2 = 35.75$					$P .01$		

¹Lindesmith and Strauss, op. cit., p. 322.

More boys and girls, ages 30 to 40 months, responded to sartorial differences than expected, more boys and less girls, ages 41 to 50 months, responded to sartorial differences than expected, while fewer boys and more girls, ages 51 to 60 months responded to sartorial differences than expected. This seems to indicate that no clear-cut pattern of relationship exists between age and sex and the tendency to respond to sartorial items in sex delineation for the children of this sample population.

More boys and fewer girls, ages 30 to 40 months, responded to somatic differences than expected, fewer boys and girls, ages 41 to 50 months, responded to somatic differences than expected. For all groups the girls used somatic criteria less than expected in terms of statistical probability. Whereas, the youngest boys and the oldest boys mentioned these somatic criteria more than expected. Apparently, boys tend to rely more on somatic criteria than do girls when distinguishing between the sexes.

Fewer boys and more girls, ages 30 to 40 months, responded to differences in the primary sex characteristics than expected, more boys and fewer girls, ages 41 to 50 months, responded to the primary sex characteristics than expected, while more boys and fewer girls, ages 51 to 60 months, responded to the primary sex characteristics than expected. With the exception of the young age group, the pattern of relationship indicates that boys tend to respond to the primary sex characteristics more than do girls. Actually, the girls in the youngest age group, responded to these characteristics more frequently than the oldest girls. A possible reason for this phenomenon lies in the response pattern of the girls in the oldest age group for all of the criteria. A re-examination of Table 6 will show that the frequency of the responses for boys and girls in the first two age groups, 30 to 40 months, and 41 to 50 months, showed that

the girls total responses were higher than the boys, whereas this pattern is reversed in the oldest age group. It may be that even at this early age the girls are already influenced by social pressures not to converse about such sensitive topics.

Table 7 shows no statistical significance (NS) exists between the association of age alone and the criteria employed in sex identification. However, the responses of each age group do show an increase in each succeeding age group. The children ages 30 to 40 months, made a total of 335 responses, the children, ages 41 to 50 months, made a total of 408 responses while the children, ages 51 to 60 months made a total of 531 responses.

Table 7. Association of Age with the Criteria Employed in Sex Identification

Criteria	30-40 Months	41-50 Months	51-60 Months	Total
Tonsorial	58	122	153	333
Sartorial	107	125	163	395
Somatic	97	88	118	303
Primary Sex Character- istics	73	73	97	243
Total	335	408	531	1274
NS				

No statistical significance (NS) is found in Table 8 which shows the association of sex alone with the criteria employed in sex identification. It can be noted thus, from Tables 6, 7, and 8 that only when age and sex are considered together is there any statistical significance with the responses made by the sample population to the criteria employed in sex identification.

Table 8. Association of Sex with the Criteria Employed in Sex Identification

Criteria	Boys	Girls	Total
Tonsorial	162	171	333
Sartorial	199	196	395
Somatic	174	129	303
Primary Sex Characteristics	128	115	243
Total	663	611	1274
NS			

It might be advantageous to analyze the boys and girls separately at this point, in order to possibly establish a more definitive relationship between age and the relative importance of the four categories of criteria used in identification of the sexes.

Table 9, which shows the relationship of age and the boys' sex-distinguishing criteria, demonstrates that a more clear-cut relationship exists between the variables. For example, again we see that the oldest boys as compared with the youngest boys placed more weight on tonsorial differences; less on sartorial and somatic; and more on the primary sex characteristics.

Table 10, which demonstrates the association of age and the criteria the girls use in sex delineation, also shows that the oldest girls as compared with the youngest girls, place more emphasis on tonsorial differences and less on somatic differences. However, the oldest girls show an opposite relationship pattern than that of the boys with respect to sartorial and the primary sex characteristics. Whereas, the oldest boys placed less emphasis than the youngest ones

Table 9. Association of Age with the Criteria Employed by Boys in Sex Identification

Criteria	30-40 Months	41-50 Months	51-60 Months	Total
Tonsorial	23	53	86	162
Sartorial	52	62	85	199
Somatic	56	42	76	174
Primary Sex Characteristics	29	39	60	128
Total	160	196	307	663
$X^2 = 16.48$			$P .05$	

Table 10. Association of Age with the Criteria Employed by Girls in Sex Identification

Criteria	30-40 Months	41-50 Months	51-60 Months	Total
Tonsorial	35	69	67	171
Sartorial	55	63	78	196
Somatic	41	46	42	129
Primary Sex Characteristics	44	34	37	115
Total	175	212	224	611
$X^2 = 13.15$			$P .05$	

on sartorial differences, the oldest girls placed more emphasis on this category than the youngest ones, and finally, whereas, the oldest boys responded more frequently than the youngest ones to the primary sex characteristics; the oldest girls actually responded less than the youngest ones to these criteria. This again supports the conclusion that the older girls exhibited much more inhibition than the older boys when forced to deal with such sensitive topics of conversation.

Table 11 shows that no statistical significance (NS) exists between the association of the criteria employed in sex identification and sibling relationship. Apparently, for this sample population, the presence or absence of same-sex siblings or cross-sex siblings in the family does not predispose the child to use any one criterion or combination of criteria in sex identification.

Table 11. Association of Criteria Employed in Sex Identification with Sibling Relationship

Criteria	N = 38	N = 63	Total
	Same-Sex Sibs	Opposite-Sex Sibs	
Tonsorial	110	178	288
Sartorial	132	200	332
Somatic	94	171	265
Primary Sex Characteristics	64	137	201
Total	400	686	1086
NS			

Are the relationships analyzed above related to the child's vocabulary? To facilitate an analysis of the total number of terms employed by the children in sex identification during the entire interview, the total number of terms used by the child was collapsed into a three-fold classification; high, medium and low. "Low" includes those children who mention one or two criteria during the entire interview when they described the sexual differences between the dolls. For example, a response of "those kind of clothes" and "no tie" was coded as a two-term response and therefore placed within the "low" number of terms category. Three and four terms were categorized as a "medium" response and five or more terms as a "high" response.

Table 12 shows the association of age and sex with the total number of terms employed in sex identification during the entire interview. An extremely significant relationship ($P .001$) exists between age and sex and the number of descriptive terms used. More boys and girls than expected in the 30 to 40 months old age group used the low number of terms, more boys and fewer girls in the 41 to 50 month old group than expected used the low number of terms while more boys and fewer girls than expected in the 51 to 60 month old age group used the low number of terms.

More boys and fewer girls than expected in the 30 to 40 month old age group used the medium number of terms, fewer boys and girls than expected, in the 41 to 50 month old age group used the medium number of terms while fewer boys and more girls in the 51 to 60 month old age group than expected used the medium number of terms.

Fewer boys and less girls than expected in the 30 to 40 month old age group used the high number of terms, fewer boys and more girls than expected in the 41 to 50 month old age group used the high number of terms, while more boys and fewer girls than expected in the 51 to 60 month old age group used the high number of terms.

Table 12. Association of Age and Sex with the Number of Terms Used in Describing the Dolls

Number of Terms	30-40 Months		41-50 Months		51-60 Months		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
Low (one-two terms)	27	39	51	24	17	33	191
Medium (three-four terms)	30	25	29	29	37	48	198
High (five or more terms)	21	19	16	32	53	23	164
Total	78	83	96	85	107	104	553
$X^2 = 55.30$				P .001			

Although the relationship between age and sex and the number of terms used to differentiate the sexes in the interview is extremely significant, the detailed analysis presented above does not show any clear-cut associational pattern. It might be wise, therefore, to consider the responses of the boys and the girls separately.

Table 13 shows an extremely significant (P .001) association exists between age and the number of terms used by boys in sex identification. This table demonstrates that more of the youngest boys as compared with the oldest boys used the low number of terms, whereas, more of the oldest boys used the high number of terms. Again, the boys demonstrate the fact that as age increases the number of terms the child is able to use will also increase.

Table 14 shows a highly significant (P .01) association exists between age and the number of terms used by girls in sex identification.

Table 13. Association of Age and the Number of Terms Employed by Boys in Sex Identification

Number of Terms	30-40 Months	41-50 Months	51-60 Months	Total
Low (one-two terms)	27	51	17	95
Medium (three-four terms)	30	29	37	96
High (five or more terms)	21	16	53	90
Total	78	96	107	281
$X^2 = 39.48$		$P .001$		

Table 14. Association of Age and the Number of Terms Used by Girls in Sex Identification

Number of Terms	30-40 Months	41-50 Months	51-60 Months	Total
Low (one-two terms)	39	24	33	96
Medium (three-four terms)	25	29	48	102
High (five or more terms)	19	32	23	74
Total	83	85	104	272
$X^2 = 13.29$		$P .01$		

This table demonstrates that the association of age with the number of terms used by girls during the interview shows no clear-cut pattern of relationship. The data show that the oldest girls actually used a lower number of terms than the youngest girls. Therefore, it may be concluded that for boys only does age show a positive relationship with the number of terms used in identification of sex. The inhibition of the girls' responses was probably the reason for this association not being obtainable in their case.

The relevant literature does support the notion that a direct relationship exists between the depth of a child's vocabulary and his age. For example, Smith reports that the "active vocabulary, or words which the child can use, develops rapidly from eighteen months on."¹ She also lists the gain in the child's active vocabulary during the years. According to her findings, from two years to three years there is a gain of 624 words, from three to four years there is a gain of 644 words and from four to five years there is a gain of 532 words. But the conclusion of Mussen and Conger that girls maintain their early established superiority over boys in most aspects of language development,² was not in evidence in this study because of the inhibition factor.

Table 15 indicates no significant relationship exists between the sibling relationship and the number of terms employed in sex identification. Apparently, in this sample, the child who comes from a family of opposite-sex sibs, or from a family of same-sex sibs is not predisposed to use a more, or a less number of terms in the identification of sex.

¹M. E. Smith, "An Investigation of the Sentence and the Extent of Vocabulary on Young Children," *University of Iowa Studies in Welfare*, 3 (5), 1962, p. 409.

²Mussen and Conger, op. cit.

Table 15. Association of Number of Terms Employed in Sex Identification with Sibling Relationship

Number of Terms	Same-Sex Sibs N = 38	Opposite-Sex Sibs N = 63	Total
Low (one-two terms)	64	88	152
Medium (three-four terms)	54	104	158
High (five or more terms)	54	104	158
Total	172	296	468
NS			

Although such authors as Mussen and Conger¹ indicate that sibling relationship would be associated with the vocabulary level of the developing child, as indicated above, our data demonstrated no significant association between these variables. This finding might be due to the fact that the sibling relationship within the sample population was not evenly distributed. For example, the sample contained as few as 17 only children, 38 children with same-sex sibs and 63 children with cross-sex sibs.

Summary

The principal consideration of this chapter was to explore the criteria employed by the preschool children in identification of the

¹Mussen and Conger, op. cit.

sexes. The criteria and the correlates of criteria employed by pre-school children in sex identification were examined in detail.

The characteristics employed by the sample population in sex identification were classified as tonsorial, sartorial, somatic and primary sex criteria. When presented with undressed dolls, the children mentioned the primary sex characteristics most frequently. When the clothed dolls were presented the children indicated sartorial differences most frequently.

The data demonstrated that a highly significant relationship existed between the age and sex of the sample population and the criteria employed in sex identification. In the case of boys and girls, the oldest children placed more emphasis on tonsorial sexual differences than the youngest children and less on somatic differences. However, the oldest girls showed an opposite relationship-pattern than that of the boys with respect to sartorial and the primary sex characteristics. The oldest boys placed less emphasis than the youngest ones on sartorial differences while the oldest girls placed more emphasis on this category than the youngest ones. And the oldest boys responded more frequently than the youngest ones to the primary sex characteristics while the oldest girls actually responded less than the youngest ones to these criteria. It was suggested that the girls in this sample population demonstrated some inhibition when forced to make definitive sex distinctions.

The sibling relationship was not significantly associated with the indicated criteria in sex identification. That is to say, children who came from a family of same-sex sibs or from a family of opposite-sex sibs were not predisposed to use any one criterion or any combination of criteria in the identification of sex differences.

An analysis of the total number of terms the child used in differentiating the sexes was made to determine if the findings of this

study were in agreement with those which dealt with the child's developmental vocabulary. The literature supports our general finding that as the age of the child increases the number of terms he uses will also increase. However, a detailed analysis showed that a positive relationship existed between these variables for the boys only. The greater verbal inhibition of the girls was offered as an explanation for the lack of discernment of a clear-cut positive associational pattern between these variables in the analysis of their responses.

In addition, the sibling relationship showed no statistical significance when associated with the number of terms used by the child. The deficiency of the sample in terms of sibling relationship distribution was offered as a possible explanation for this phenomenon.

CHAPTER V

RELATIVE IMPORTANCE OF CRITERIA EMPLOYED IN SEX IDENTIFICATION

One of the goals of this investigation is to explore the relative importance of clothing and the primary sex characteristics as criteria indicated by the preschool child when distinguishing between the sexes. In addition, an exploration of the relative importance of the other criteria employed by these children in sex identification will be made. The correlates of these criteria, namely, age, sex and sibling relationship, will also be explored.

Order of Responses to the Criteria Employed in Sex Identification

As indicated by Conn and Kanner, "the dissimilarity of clothing and the size of the body are those differences that present themselves for earliest observation to the child."¹ However, the findings of this study, as indicated in the previous chapters, show that the child also learns tonsorial differences and the primary sex characteristics at an early age.

In order to determine the relative importance of the criteria employed in sex identification by the children in this sample their first, second and third responses to the indicated criteria in distinguishing between the sexes were analyzed. Because each Scene presented a different set of criteria to the child, each will be considered separately in the analysis of the data.

¹Conn and Kanner, op. cit., p. 12.

Table 16 shows the first, second and third responses to the criteria employed in sex identification by Scenes. It can be seen from this table that in Scene I--the undressed dolls--the primary sex characteristics were the most frequent first response, somatic differences the most frequent second and third responses. In Scenes II and III--the clothed dolls--sartorial differences received the most frequent first, second and third responses.

Tonsorial differences are the second most frequently indicated criteria on the first response in all the Scenes, while in Scenes II and III somatic differences were the second most frequent indication in the second and third responses. In Scene I, the primary sex characteristics were the second most frequently indicated difference in the second and third responses.

Table 16. The First, Second and Third Response Criteria Employed in Sex Identification

Criteria	Scene I (undressed dolls)			Scene II (appropriately dressed dolls)			Scene III (dolls in re- versed dress)			Total
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	
Tonsorial	56	36	21	48	26	18	42	19	16	282
Sartorial	24	13	17	132	102	71	48	49	32	498
Somatic	35	55	56	30	49	51	38	46	27	387
Primary Sex Characteristics	78	53	28	7	5	4	8	3	6	192
Total	193	157	122	217	182	144	146	117	81	1359

In summary, when presented with the nude dolls the primary sex characteristics are the most important indicators of sex differences for these young children; and when presented with dolls in the state of

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dress, clothing becomes the key factor. Tonsorial differences are the second most important criteria and somatic differences the third most important.

Correlates of the Combined First, Second and Third
Responses in Sex Identification

To facilitate statistical analysis of the association of age, sex, and sibling relationship with the criteria employed in sex identification, the first, second and third responses of the children to the criteria were combined.

Table 17 shows that a highly significant association ($P .001$) exists between age and sex and the first three responses to the criteria employed in sex identification in Scene I. Tonsorial and primary sex characteristics show some associational pattern. The tendency to mention tonsorial differences increases with age while the tendency to mention the primary sex characteristics decreases with age in terms of statistical probability. The only other associational pattern which seems clear-cut from this table are the sartorial differences for boys only--the older boys tend to mention clothing less frequently in terms of statistical probability than the youngest.

Since some of the associational patterns are not clear-cut it might be wise at this point to analyze the boys and girls separately, in order to possibly establish a more definitive relationship between age and the order of responses to the indicated criteria.

Table 18 shows the relationship of age and the boys' combined first three responses to the criteria employed in sex identification in Scene I. This table demonstrates that a more clear-cut relationship exists between the variables. For example, the oldest boys placed more emphasis on tonsorial differences and less on sartorial and primary sex characteristics than the youngest boys. In the case of

Table 17. Association of Age and Sex with the Combined First Three Responses to the Criteria Employed in Sex Identification in Scene I (Undressed Dolls)

Criteria	30-40 Months		41-50 Months		51-60 Months		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
Tonsorial	4	12	17	24	26	29	112
Sartorial	8	9	7	11	9	11	55
Somatic	29	11	14	25	46	22	147
Primary Sex Character- istics	23	27	31	16	28	21	146
Total	64	59	69	76	109	83	460
$X^2 = 45.32$				P .001			

Table 18. Association of Age and the Combined First Three Responses of Boys to the Criteria Employed in Sex Identification in Scene I (Undressed Dolls)

Criteria	30-40 Months	41-50 Months	51-60 Months	Total
Tonsorial	4	17	26	47
Sartorial	8	7	9	24
Somatic	29	14	46	89
Primary Sex Character- istics	23	31	28	82
Total	64	69	109	242
$X^2 = 18.19$		P .01		

the somatic differences, no clear-cut associational pattern was in evidence between age and somatic responses for the boys. Both the oldest and youngest boys responded to these differences more than could be expected in terms of statistical probability.

Table 19, which demonstrates the association of age with girls' combined first three responses to the criteria indicated in sex identification, shows no statistical significance (NS). Apparently, for boys only does age effect the prime criteria used by the children of this sample in distinguishing between the sexes.

Table 19. Association of Age and the Combined First Three Responses of Girls to the Criteria Employed in Sex Identification in Scene I (Undressed Dolls)

Criteria	30-40 Months	41-50 Months	51-60 Months	Total
Tonsorial	12	24	29	65
Sartorial	9	11	11	31
Somatic	11	25	22	58
Primary Sex Character- istics	27	16	21	64
Total	59	76	83	218
NS				

With respect to the girls, it is possible that variables other than age, that is, sibling relationship, intelligence and the inhibition factor, have greater impact on the kinds of criteria used in making sex distinctions. It is also possible that the socialization experiences of the girls are not dissimilar for the three age-groups represented in this sample.

Table 20 shows that a highly significant association ($P .01$) exists between age and sex and the first three responses to the criteria employed in sex identification in Scene II. For the purposes of statistical analysis the last row of the table (responses to the primary sex characteristics) was omitted because of the low number of responses. This table demonstrates an unclear pattern in the responses of the boys and girls to the criteria employed in sex identification on the combined first three responses in Scene II. The only possible exception is the associational pattern of the tonsorial responses which shows that as the age of the boys increases, the tendency to respond to tonsorial differences also increases. As in the case of Scene I, perhaps a separate analysis of the responses of boys will show a more definitive pattern.

Table 20. Association of Age and Sex with the Combined First Three Responses to Criteria in Sex Identification in Scene II (Appropriately-Dressed Dolls)

Criteria	<u>30-40 Months</u>		<u>41-50 Months</u>		<u>51-60 Months</u>		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
Tonsorial	8	10	19	21	21	13	92
Sartorial	38	44	46	47	58	62	295
Somatic	33	14	15	14	29	14	119
*Primary Sex Characteristics	2	3	4	2	4	1	16
Total	81	71	84	84	112	90	522
$X^2 = 28.79$				$P .01$			

* Last row was omitted in the computation of the chi-square.

Table 21 shows that a moderately significant ($P .05$) relationship exists between age and the boys' combined first three responses to the criteria employed in sex identification in Scene II. This table shows a very clear associational pattern. Further the table demonstrates that as age increases the boys' response to tonsorial and sartorial differences also increases, whereas an increase in age shows a decrease in responses to somatic differences in this Scene.

Table 21. Association of Age and the Combined First Three Responses of Boys to the Criteria Employed in Sex Identification in Scene II (Appropriately Dressed Dolls)

Criteria	30-40 Months	41-50 Months	51-60 Months	Total
Tonsorial	8	19	21	48
Sartorial	38	46	58	142
Somatic	33	15	29	77
*Primary Sex Character-istics	2	4	4	10
Total	81	84	112	277
$X^2 = 12.55$		$P .05$		

* Last row was omitted in the computation of the chi-square.

Table 22 demonstrates that no significant association (NS) exists between age and the combined first three responses of the girls in Scene II. As in the case of Scene I, only for boys does age effect the relative importance of the criteria used in the perception of sexual differences.

Table 22. Association of Age and the Combined First Three Responses of Girls to the Criteria Employed in Sex Identification in Scene II (Appropriately Dressed Dolls)

Criteria	30-40 Months	41-50 Months	51-60 Months	Total
Tonsorial	10	21	13	44
Sartorial	44	47	62	153
Somatic	14	14	14	42
*Primary Sex Character- istics	3	2	1	6
Total	71	84	90	245
NS				

* Last row was omitted in the computation of the chi-square.

Table 23 shows an extremely high association ($P, .001$) exists between age and sex and the first three responses to the criteria employed in sex identification in Scene III. As in the case of Scene II, the last row of the table (responses to the primary sex characteristics) was omitted because of the low frequency of responses. It can be seen from this table that as age increases the girls tend to mention a greater number of tonsorial differences and tend to mention somatic differences less frequently. Boys tend to mention sartorial differences less frequently as they get older.

Since an intensive analysis of the data show several unclear associational patterns the responses of the girls and boys will be considered separately.

Table 24 shows that a definite associational pattern exists in the case of the tonsorial and sartorial criteria for Scene III. The boys mention tonsorial differences more as age increases and sartorial

Table 23. Association of Age and Sex with the Combined First Three Responses to the Criteria Employed in Sex Identification in Scene III (Dolls in Reversed Dress)

Criteria	30-40 Months		41-50 Months		51-60 Months		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
Tonsorial	2	4	15	18	20	20	79
Sartorial	19	21	24	30	26	37	157
Somatic	19	16	10	14	38	16	113
*Primary Sex Character-istics	1	5	4	1	6	1	18
Total	41	46	53	63	90	74	367
$X^2 = 32.35$				P .001			

* Last row was omitted in the computation of the chi-square.

Table 24. Association of Age and the Combined First Three Responses of Boys to the Criteria Employed in Sex Identification in Scene III (Dolls in Reversed Dress)

Criteria	30-40 Months	41-50 Months	51-60 Months	Total
Tonsorial	2	15	20	37
Sartorial	19	24	26	69
Somatic	19	10	38	67
*Primary Sex Character-istics	1	4	6	11
Total	41	53	90	184
$X^2 = 16.51$		P .01		

* Last row was omitted in the computation of the chi-square.

differences less frequently in terms of statistical probability. However, the responses to somatic differences show no clear relationship with age. A greater expected frequency was found both for the 30 to 40 and 51 to 60 month old boys.

As in the case of the previous two Scenes, Table 25 shows that no significant association (NS) exists between age and the criteria employed for the girls.

Table 25. Association of Age and the Combined First Three Responses of Girls to the Criteria Employed in Sex Identification in Scene III (Dolls in Reversed Dress)

Criteria	30-40 Months	41-50 Months	51-60 Months	Total
Tonsorial	4	18	20	42
Sartorial	21	30	37	88
Somatic	16	14	16	46
*Primary Sex Characteristics	5	1	1	18
Total	46	63	74	194
NS				

* Last row was omitted in the computation of the chi-square.

First, a summary evaluation of the three Scenes demonstrates that significant clear-cut associational patterns existed between age and the criteria used in sex identification for the boys only. Secondly, in all three Scenes the responses of boys to tonsorial differences increased with age. Thirdly, in Scene I, the primary sex criteria was responded to less frequently by the older boys. Because of low frequency distribution, this was the only Scene in which these primary

sex characteristics could be statistically evaluated. It would seem here too that the older boys were showing some inhibition with respect to these primary sex criteria.

Fourthly, sartorial differences showed a mixed pattern of responses in the three Scenes. In Scene I, no clear-cut pattern was observed, in Scene II, sartorial responses increased with age, and in Scene III, they decreased with age. These findings may be due to the fact that the only sartorial difference in Scene I was the slight differences in the shoes which were painted on. In Scene II, which showed a definite increase of sartorial responses with age, the dolls were appropriately dressed. In this case, it could be expected that the older children would make more detailed comments concerning the differences in dress. In Scene III, the decrease in responses to clothing of the oldest children and their increase in responses to somatic differences might have been due to the fact that the reversed dress was quite obvious to them and therefore they were inclined to indicate other than clothing differences.

It was in Scene II, the appropriately-dressed doll Scene, that somatic differences showed a clear-cut relationship which holds for all three age groups. Here indicated somatic differences decreased with age. With the dolls appropriately dressed the older children responded less to somatic and more to sartorial and tonsorial differences.

Tables 26, 27 and 28 show that no statistical significance (NS) exists between sibling relationship and the first three responses to the criteria employed in sex identification in all three Scenes. Therefore, for the children in this sample, those who come from families of same-sex siblings or from families of cross-sex siblings are not predisposed to place emphasis on any specific combination of responses.

Table 26. Association of the Sibling Relationship with the First Three Responses to the Criteria Employed in Sex Identification in Scene I

Criteria	Same-sex sibs N = 38	Opposite-sex sibs N = 63	Total
Tonsorial	35	56	91
Sartorial	20	25	45
Somatic	46	79	125
Primary Sex Characteristics	42	91	133
Total	143	251	394
NS			

Table 27. Association of the Sibling Relationship with the First Three Responses to the Criteria Employed in Sex Identification in Scene II

Criteria	Same-sex sibs N = 38	Opposite-sex sibs N = 63	Total
Tonsorial	28	51	79
Sartorial	67	151	218
Somatic	34	64	98
*Primary Sex Characteristics	2	4	6
Total	131	270	401
NS			

* Last row was omitted in the computation of the chi-square.

Table 28. Association of the Sibling Relationship with the First Three Responses to the Criteria Employed in Sex Identification in Scene III

Criteria	Same-sex sibs N = 38	Opposite-sex sibs N = 63	Total
Tonsorial	31	34	65
Sartorial	50	70	120
Somatic	35	56	91
*Primary Sex Characteristics	2	5	7
Total	118	165	283
NS			

* Last row was omitted in the computation of the chi-square.

Summary

The principal goal of this chapter was an exploration of the relative importance of the criteria employed by children in sex identification. The specific criteria under exploration were tonsorial, sartorial, somatic and primary sex differences. The correlates of these criteria, namely, age, sex, and sibling relationship, were also analyzed.

In order to determine the relative importance of the criteria, the first, second and third indications used by the children in distinguishing the sexes were analyzed. Further, when the association of the correlates was made, the first, second and third responses were combined. Since each Scene presented a different set of criteria to the child, the responses to each Scene were considered separately.

The analysis showed that when the children were presented with the nude dolls, the primary sex characteristics were the most important indicators of sex differences; and when presented with clothed dolls, clothing became the most important distinguishing criterion. Tonsorial differences were the second most important criteria and somatic differences the third most important.

When the correlates of the criteria were explored, it was demonstrated that significant clear-cut associational patterns existed between age and the criteria used in sex identification for the boys only. The responses of the girls showed no statistical significance. An explanation for this was that other variables, i. e., intelligence, sibling relationship, and socialization experiences were possibly influencing the responses of the girls.

However, the responses of the boys demonstrated that in all three Scenes their responses to tonsorial differences increased with age. In Scene I, the only Scene conducive to statistical analysis including the primary sex criteria, these criteria were responded to by the older boys less frequently than the youngest boys. The suggestion was given that perhaps the older boys were also showing some inhibition with respect to the primary sex criteria.

With respect to sartorial differences, in Scene I, no clear-cut pattern of responses was observed; in Scene II, sartorial responses increased with age, while in Scene III, they decreased with age. It was suggested that a possible explanation for this difference in response to the sartorial characteristics was due to the variation of sartorial items presented in each Scene.

Only in Scene II did somatic differences show a clear-cut relationship--the older boys responded less to somatic differences than the younger boys.

The association of the sibling relationship with the combined first three responses in sex identification showed no statistical significance in any of the three Scenes.

CHAPTER VI

SUMMARY, IMPLICATIONS AND RECOMMENDATIONS

The prime focus of this study was the exploration of the pre-school child's accuracy in identifying differences in sex and the criteria he uses in making these distinctions. Specifically, the number and pattern of errors made by the children, the criteria they used and the relative importance of these criteria in sex identification were analyzed. The correlates of the criteria employed in sex identification--age, sex and sibling relationship were also considered.

Broad hypotheses which involved the association of the correlates with the number of errors, the criteria employed, and the relative importance of these criteria in sex delineation guided the study.

Three identical sets of dolls with primary sex characteristics were used as the basic instrument to measure the child's accuracy in identification of sex differences. The appearance of each set of dolls was slightly altered when presented to the child in a series of three Scenes. In Scene I, the dolls were unclothed except for shoes which were painted on by the manufacturer; in Scene II, the dolls were appropriately dressed according to the accepted fashion of the day; and in Scene III, the dress of the dolls was reversed with the "Mommy" doll wearing the "Daddy" doll's suit and the "Daddy" doll wearing the "Mommy" doll's dress.

In Chapter III, an examination was made of the number and pattern of errors made by the children in sex identification. The number of errors made by the children were surprisingly low and

from this it was concluded that the typical child in this sample population was very much aware of differences in sex. Twenty-six children made errors only when the dolls were dressed in a fashion which was inappropriate to the sex they were supposed to represent physically. There was some indication that younger children had a slightly greater tendency to make errors than the older children. However, the fewer older children who did make errors, made more errors per child than the younger ones. Although the relative number of children who made errors was small it was assumed that, at least for this sample group, the child's sex was not related to his ability to distinguish between the sexes. About the same number of boys and girls made errors.

Because the sample contained such a low number of children who actually made errors in sex identification, it was pointed out that these latter findings were highly tentative. It was suggested that studies with a larger sample may be able to test the accuracy of these findings. The association of the sibling relationship with the number of errors made shows some evidence that the children who had no brothers and sisters made more errors on the average than children with brothers and/or sisters.

In Chapter IV, the principal consideration was to explore the criteria employed by the preschool children in identification of the sexes. The criteria and the correlates of criteria employed by preschool children in sex identification were examined in detail. The criteria employed by the sample population in sex identification were classified as tonsorial, sartorial, somatic, or primary sex characteristics. When presented with the undressed dolls, the children mentioned the primary sex characteristics most frequently. When the clothed dolls were presented the children indicated sartorial differences

most frequently. The data demonstrated that a highly significant relationship existed between the age and sex of the children in the sample and the criteria employed in sex identification. In the case of boys and girls, the oldest children placed more emphasis on tonsorial sexual differences than the youngest children, and less on somatic differences. However, the oldest girls showed an opposite relationship pattern than that of the boys with respect to sartorial and the primary sex characteristics. The oldest boys placed less emphasis than the youngest ones on sartorial differences while the oldest girls placed more emphasis on this category than the youngest ones. And the oldest boys responded more frequently than the youngest ones to the primary sex characteristics, while the oldest girls actually responded less than the youngest ones to these criteria. It was suggested that the girls in this sample population demonstrated some inhibition when forced to make definitive sex distinctions. Sibling relationship was not significantly associated with the criteria indicated in sex identification.

An analysis of the total number of terms the child used in differentiating the sexes was made to determine if the findings of this study were in agreement with those which dealt with the child's developmental vocabulary. The literature supports the general finding that as the age of the child increases the number of terms he uses will also increase. However, a detailed analysis showed that a positive relationship existed between these variables for the boys only. The greater verbal inhibition of the girls was offered as an explanation for the lack of discernment of a clear-cut positive associational pattern between these variables in the analysis of their responses.

In Chapter V an exploration of the relative importance of the criteria employed by the children was made. The combined first, second and third responses of the children in distinguishing the sexes

were analyzed. The analysis showed that when the child was presented with the nude dolls, the primary sex characteristics were the most important indicators of sex differences for the children in the sample; and when presented with the clothed dolls, clothing became the most important distinguishing criterion. Tonsorial differences were the second most important criteria and somatic differences the third most important criteria. When the correlates of the criteria were explored, it was demonstrated that significant clear-cut associational patterns existed between age and the criteria used in sex identification for the boys only.

The responses of the girls showed no statistical significance. An explanation given for this was that other variables, i. e., intelligence, sibling relationship, and differences in socialization experiences were possibly influencing the responses of the girls.

The responses of the boys demonstrated the following:

1. In all three Scenes the responses of the boys to tonsorial differences increased with age.
2. In Scene I, the primary sex criteria were responded to less frequently by the older boys. The suggestion was given that perhaps the older boys were also showing some inhibition of response to these characteristics.
3. For sartorial differences, in Scene I, no clear-cut pattern of responses was observed; in Scene II, sartorial responses increased with age, while in Scene III they decreased with age.
4. Somatic differences showed a clear-cut relationship only in Scene II. The older children responded less to somatic differences and more to other differences.

Finally, the association of sibling relationship with the combined first three responses to the criteria used in sex identification by the

children showed no statistical significance in any of the three Scenes.

Implications

The symbolic interactionist approach to an understanding of the dynamics involved in the formation of the self is basic to the social psychologist whose prime training is in the field of sociology. These social psychologists maintain that an individual's conception of himself is influenced by and a result of social interaction. In turn, the self-concept guides and influences individual behavior. Put another way, the actual responses of other people to the individual are of vital importance in determining how the individual perceives himself and this will influence his conception of self which, in turn, molds his behavior.

Two theorists using the symbolic interactionist approach, in discussing the process of sex-role identification (internalizing the role of male and female) indicate that there are three stages involved in this process. These include (1) recognition of sex differences, (2) learning the meanings of male and female, and (3) the classification of oneself as male or female.¹

The first stage in this process of sex-role identification is the major concern of this thesis. The writer is in agreement with Lindesmith and Strauss when they stress the fact that the initial phase, the correct recognition of sexual differences, must occur before the complete internalization of male and female roles can take place. The findings of this study clearly show that middle class children as young as two and one-half years old have already completed this first

¹Lindesmith and Strauss, op. cit., pp. 321-329.

stage in that not one of them made a mistake in the recognition of the nude dolls or the appropriately-dressed dolls. This suggests that children are well into this initial stage before they reach the age of two and one-half years. In several pretest situations it was found that children as young as 20 months were able to indicate the correct sex identity of the dolls.

Although the child might have gone through all three phases of sex-role identification, namely, he recognizes the sex differences, he understands the meanings of "male" and "female," and he classifies himself as one or the other, he still may not prefer to be what he now classifies himself to be. It would be of some interest to establish the "normal" age at which the typical child prefers his own sex-role through the use of dolls which are similar to those employed in this study. If this could be accomplished, these dolls might prove to be a feasible technique for clinicians to use in their initial screening of children with pathological predispositions.

The findings of this study show that the relative importance of the four criteria--tonsorial, sartorial, somatic and primary sex characteristics used by the children in sex delineation--vary according to the situation.

When the nude dolls were presented, the primary sex characteristics were the most important and when the clothed dolls were shown, clothing was the most frequently used indicator of sex differences. Since the clothing used in this study was clearly definable as male or female dress, it might be of interest to the sartorial sociologist to investigate how the children's perceptions would be effected by clothing differences which are not quite as clear-cut. That is to say, what would occur if both the "Mommy" doll and the "Daddy" doll wore sport-type clothes such as slacks, sneakers, blazers, etc. ?

Methodological Recommendations

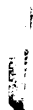
Several changes could be made to refine the basic instrument of the study--the presentations of the dolls: (1) remove the painted shoes from the nude dolls, and (2) give those children who are so inclined an opportunity to play more freely with the dolls.

Suggestions for Further Study

The sample population of this research was rather homogeneous in nature. For purposes of comparison it would be advisable to launch other studies with a more heterogeneous sample base of children with different socio-economic, ethnic, and racial backgrounds. Regional and rural-urban-suburban differences should also be included.

Since in several pretest situations it was found that children as young as 20 months were able to indicate the correct sex identification of the dolls, it is strongly recommended that a similar study should be done with an age group under two and one-half years.

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APPENDIX A

Interview Schedule

SEX _____ AGE _____
 NAME _____
 CODE _____

We are going to play a game. I have some dolls here and what I want you to do is to pick out the "Mommy" doll and the "Daddy" doll each time I show them to you.

<u>SHOW DOLLS NUDE</u>	
1. Give me the "Daddy" doll.	
2. Is this the "Daddy" doll?	
3. Why?	
4. Bring me the other doll. Is this another "Daddy" doll?	
5. Why?	
<u>SHOW DOLLS DRESSED APPROPRIATELY</u>	
6. This time give me the "Mommy" doll.	
7. Is this the "Mommy" doll?	
8. How come?	
9. Bring me the other doll. Is this another "Mommy" doll?	
10. How come or why not?	

SHOW DOLLS WITH DRESS REVERSED

11. This time give me the
"Daddy" doll.

12. Is this the "Daddy"
doll?

13. How come?

14. Bring me the other
doll. Is this another
"Daddy" doll?

15. Why not, or how
come?

SHOW ALL THE DOLLS

16. Now here are all the
dolls together. Bring
me all the "Daddy"
dolls.

17. Are there anymore
"Daddy" dolls?

APPENDIX B

Background Information Questionnaire

Presently a research project is being undertaken at Michigan State University concerning children's learning of male and female role differences. At the present time we know very little about the kinds of criteria young children use to determine appropriate sex-role behavior. Although much speculation exists, very little actual research has been done.

In order to obtain reliable data, the researchers request your assistance. It is felt that child rearing practices play a crucial role in this aspect of a child's socialization. Since this is a sensitive area all information will be kept strictly confidential. In the analysis of data no names will be used.

Thank you for your cooperation.

Sincerely,

Arthur Vener
Associate Professor
Department of Sociology and Anthropology

GENERAL INFORMATION

Child's Name _____ Age _____

Parent's Name _____

MOTHER

Age _____

Education _____

FATHER

Age _____

Education _____

Present Occupation _____

SIBLINGSNameAgeRelationshipOTHERS LIVING IN THE HOMENameAgeRelationship

Does your child have a bedroom alone? _____

Does your child have a bed alone? _____

CONFIDENTIAL QUESTIONNAIRE

Complete each of the following by placing an "X" in the appropriate column to the right of the question.

	<u>YES</u>	<u>NO</u>	<u>NO BOYS IN FAMILY</u>	<u>NO GIRLS IN FAMILY</u>
1. If there are both boys and girls in your family have they ever bathed together?	_____	_____	_____	_____
2. If there are both boys and girls in your family do they presently bathe together?	_____	_____	_____	_____
3. If there are both boys and girls in your family have they ever shared a bedroom?	_____	_____	_____	_____
4. If there are both boys and girls in your family do they presently share a bedroom?	_____	_____	_____	_____
5. Has the father ever bathed with his son?	_____	_____	_____	_____
6. Does the father presently bathe with his son?	_____	_____	_____	_____
7. Has the father ever bathed with his daughter?	_____	_____	_____	_____
8. Does the father presently bathe with his daughter?	_____	_____	_____	_____
9. Has the mother ever bathed with her son?	_____	_____	_____	_____
10. Does the mother presently bathe with her son?	_____	_____	_____	_____
11. Has the mother ever bathed with her daughter?	_____	_____	_____	_____
12. Does the mother presently bathe with her daughter?	_____	_____	_____	_____

APPENDIX C

Photographed Dolls







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