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ABSTRACT

Children's ability to make logical generalizations when their sex stereotyped expectations are challenged was assessed. Participants were 45 elementary school children ranging in age from 84 to 122 months, with an average age of 103 months. There were 22 males and 23 females in the sample. Activities were rated by college students as more likely to be engaged in by boys or by girls. A total of 16 female pairs and 16 male pairs of activities were selected for presentation to the children. The 32 pairs of activities were arranged in four replications of eight possible combinations (sex of superior child X sex of inferior child X sex type of activity pair). Simple line drawings of children were used as stimuli during the questioning; drawings were of two same sex children or two opposite sex children, depending upon the trial. On each trial, the experimenter indicated the child on the right in the picture was better than the child on the left in performing the first activity in the pair. The child was then asked to indicate which of the two was likely to be better at the second activity. Results indicate that children's inferences about the generalizability of skills are strongly biased by their sex stereotypes. (RH)

Sex stereotype effects on children's ability generalizations

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1. Sex Stereotype Effects on Children's Ability Generalizations
2. Social Developmental
3. Problem

Children develop a sex stereotyped view of the world while still quite young. Their choices of activities, playthings, and goals are all influenced by these expectations. Recently researchers have begun to report significant impacts on children's cognitive processes which also seem traceable to the developing sex stereotypes. Children recall story characters incorrectly (Koblinsky, Cruse, & Sugawara, 1978), and make more errors on picture recall (Martin, & Halverson, 1983) and recognition tasks (Liben, & Signorella, 1980) when the stimuli violate sex typed expectations. In each of these instances, the stereotype appears to influence the child's coding of information, such that counterstereotypic stimuli are misperceived or distorted in order to create a fit with the preexisting categories. A related issue concerns the child's ability to operate on or draw inferences from information which is correctly received but which is inconsistent with the sex typed beliefs. In one study which touched on this issue, children were asked to rate the relative competence of two opposite sex individuals presented as performing in the same occupational role (Cann, & Garnett, 1984). The children consistently judged the stereotype appropriate performer as superior. This suggests that children's evaluative judgments are influenced by the stereotyped views they hold. The present study assesses children's ability to make

logical generalizations when their sex stereotyped expectations are challenged. Children will be asked to predict the relative competence of two children at a particular activity after receiving information about their competencies at a highly similar activity. In some instances, the information provided will be consistent with or irrelevant to the sex stereotype, thus creating no interference with the logical generalization. For example, if Jeff is better than Jim at wrestling, then Jeff also would be expected to be superior at boxing, given no additional information. Other stimuli will place the sex stereotyped beliefs in conflict with the logical assumptions about related interests or abilities. If Dan is better at playing nurse than Donna, then who is likely to be better at playing secretary? Can the child, once a clear statement of an exception to the stereotype has been presented, use that information to make further inferences that would seem to logically follow?

4. Subjects

The participants were 45 children from a local elementary school. The children ranged in age from 84 to 122 months, with an average age of 103 months. All children had returned signed parental consent letters prior to their participation. There were 22 males and 23 females in the sample.

5. Procedure

Development of stimuli. A set of 72 activities appropriate for young children was generated and then pairs of activities thought to be similar in terms of abilities required and interests involved were created. A sample of 30 college students (15 males and 15 females) rated these activities on a 7-point scale indicating whether an 8 to 10 year old boy or girl would be more likely to engage in the activity (the scale ranged from "boy more likely" to "girl more likely"). They also rated the pairs

of activities by judging whether an 8 to 10 year old who enjoyed and was good at the first activity would enjoy and be good at the second. The scale provided ranged from "unlikely" (1) to "likely" (8).

Based on these ratings, 32 pairs of activities (16 female pairs and 16 male pairs) were selected for presentation to the children. The pairs used averaged 5.9 on the rated likelihood of similar ability and interest, and were selected by over 67% of raters as clearly sex typed for the age of child involved.

Simple line drawings of children were used as stimuli during the questioning. Each drawing showed two children of approximately equal size and stature. The drawings were of two same sex children or two opposite sex children, depending upon the trial.

Data collection. Children were tested individually by a 27 year old female. The child was told, "We are going to play a game. I am going to tell you about some boys and girls and I want you to tell me which one you think is better at an activity. There are no right or wrong answers and this is not a test." After a few examples were given to insure that the child understood the task, the test stimuli were presented. The 32 pairs of activities were arranged in 4 replications of 8 possible combinations (sex of superior child x sex of inferior child x sex type of activity pair). On each trial, the experimenter would indicate the child on the right in the picture was better that the child on the left at the first activity in the pair. She would then ask the child to indicate which of the two was likely to be better at the second activity. After the 32 items were completed, the child was asked not to discuss the game with other children and was returned to the classroom.

6. Results

The children's responses were scored by assigning a 0 when the

initially superior child was selected or a 1 if the other child in the pair was chosen. Thus, scores could range from 0 to 4, with lower scores indicating that the logical generalization (selection of the superior child) was made with a higher frequency. These data were subjected to a 2 x 2 x 2 x 2 analysis of variance with sex of subject as a between groups factor and the others (sex of superior child, sex of other child - same sex or opposite sex, and match between sex type of task and sex of superior child - same as superior child or opposite) as within subjects factors.

The analysis revealed a significant main effect for sex type of task, $F(1, 43)=33.37$, $p<.0001$, and significant interactions involving sex type of task and sex of other child, $F(1, 43)=18.75$, $p<.0001$, and sex of child with sex of superior child, $F(1, 43)=5.07$, $p<.03$. The task main effect results from an expected preference for the superior child when the sex type of the task is the same as sex of that child ($M=1.86$ when task and child are same sex, $M=2.48$ when they are opposite sex). The interactions are depicted in Figures 1 and 2. Figure 1 shows that children tend to select a same sex superior child more often, with males demonstrating a stronger bias than females. The task by sex of other child interaction (Figure 2) confirms the major prediction. Children's inferences about the generalizability of skills are strongly biased by their sex stereotypes. When the two children are the same sex, the initially superior child is equally likely to be selected regardless of the sex type of the task. However, if the two children are not the same sex, the subjects tend to select the child who is the same sex as the task, regardless of which was initially superior. Thus, when the logical generalization conflicts with the sex stereotype, the child's responses are biased toward making stereotype consistent responses.

7. Implications

Sex stereotypes might be viewed as useful guides to one's social world. Whether they are desirable or not, there are sex differences in the ways people typically behave and the types of achievements they realize. Children, in their struggle to understand the social world, may resort to this simplified structure as a way to organize their observations. While this may not provide the most accurate picture of the world, it may be sufficient until the child's cognitive capacities mature. A second possible impact of these stereotypes, based on the assumption that children's sex stereotypes operate like other social schemas, is that they will influence the inferences and generalizations children make when operating on new information. This effect is more bothersome since it will serve to create a potentially distorted data base for future experiences. The data from the present project suggest that stereotypes do, indeed, interfere with the child's generalizations. Children made relatively logical and appropriate generalizations when sex stereotypes were irrelevant to the decision, but evidenced clear biases when stereotypes conflicted with the process. The stereotype cannot be considered merely descriptive in its impact, an evaluative distortion also is present.

8. References

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FIGURES

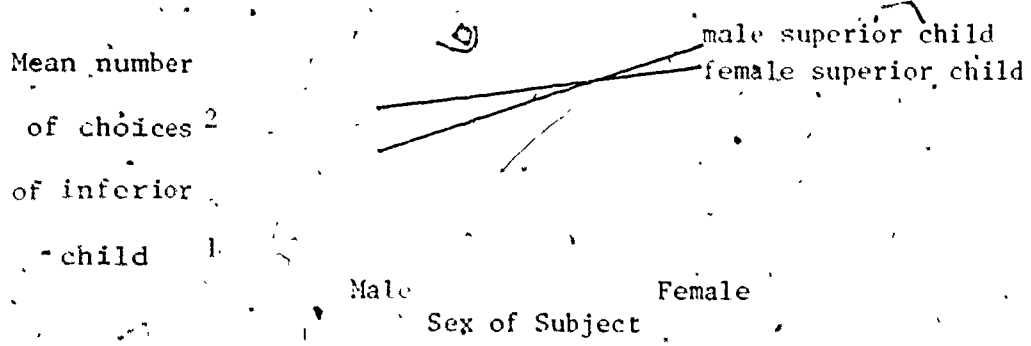

Figure 1. Interaction between sex of subject and sex of superior child

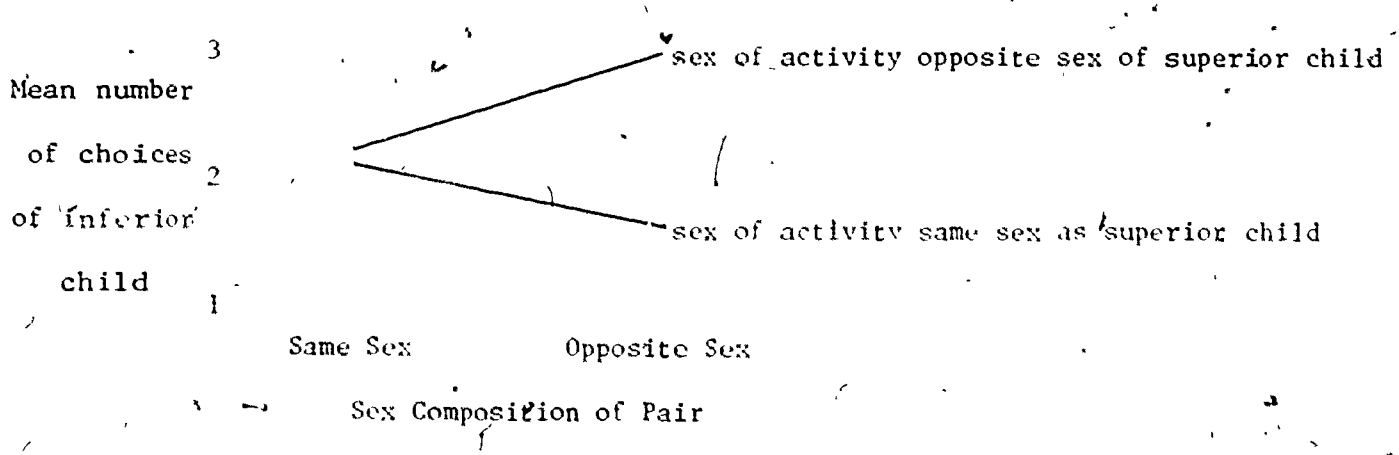

Figure 2. Interaction between sex composition of pair and match of activity sex type and sex of superior child