Children's Performance in a Game and Their Attraction to It as a Function of Sex-typed Labels

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Montemayor, Raymond. Children's Performance in a Game and Their Attraction to It as a Function of Sex-typed Labels. CHILD DEVELOPMENT, 1974, 45, 152-156. Children 6-8 years old played a game which was labeled either sex-appropriate, sex-neutral, or sex-inappropriate. Measures of performance and attractiveness of the game were obtained. For both boys and girls, performance was highest when the game was labeled sex-appropriate, intermediate when no sex label was given for the game, and lowest when the game was labeled sex-inappropriate. For attractiveness, the appropriate and neutral label conditions were similar and both were higher than the inappropriate condition.

Imitation of a model has been demonstrated to be a powerful mechanism in the acquisition and extinction of a wide variety of behaviors in children (Bandura & Walters 1963). Presumably, imitation of appropriate models is at least partly responsible for behavioral differences between males and females (Bandura, Ross, & Ross 1963). Yet imitation represents only one possible mechanism out of many that may operate to produce sex differences in behavior. Parents instruct their children on a wide variety of topics, one of which is surely sex-typed behavior. For example, telling a boy that an activity is for girls, or telling a girl that girls do some things and not others, appears to be the most direct method for teaching a child a sex-role standard (Kagan 1964). Surprisingly little research has been done on the direct influence of labeling an activity as sex-appropriate or sex-inappropriate on children's subsequent behavior.

In a study investigating toy preferences, Liebert, McCall, and Hanratty (1971) experimentally manipulated the sex-typed information for two groups of toys. First-grade children were told that a group of toys were preferred by their own sex and that a second group were preferred by the opposite sex. The children were then asked to choose the toys which they preferred. The data revealed that when children were told which toys their own sex preferred, they matched preferences. However, their preferences were not influenced by knowledge of what the opposite sex preferred. These data indicate that same-sex labels are more effective in influencing toy preference than opposite-sex labels.

Stein, Pohly, and Mueller (1971) examined achievement behavior in sixth-grade children as a function of the sex label of the task. The children were presented with three paper-and-pencil tasks involving words and pictures. The tasks were labeled masculine, feminine, and neutral, and each task received each label. Each child was given a total of 10 minutes to work on all three tasks. The results indicated that boys spent most of their time working on the "male" task, an intermediate amount of time working on the "neutral" task, and the least amount of time on the "female" task. Girls, however, spent about the same amount of time on each task.

Although Stein et al. (1971) found that label was a significant determinant of time spent on task for boys, they did not investigate the related issue of task performance. One would also expect a relationship between label and performance, although the nature of that relationship is unknown.

The present study was an attempt to extend the positive relationship found between sex label and choice of toy or choice of task to a behavioral index of performance level. It was predicted that children would perform at a higher level in an activity when that activity

Portions of this research were presented at the annual meeting of the Eastern Psychological Association, Boston, April 1973. Author's address: Department of Psychology, Brooklyn College, Brooklyn, New York 11210.

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was labeled sex-appropriate than when it was labeled sex-inappropriate. Additionally, it was predicted that a child’s attraction to the activity would show the same relationship—high attraction for the activity when it was labeled sex-appropriate and low attraction when it was labeled sex-inappropriate.

Method

Subjects.—The subjects were 60 boys and 60 girls drawn from a suburban, midwestern community. Subjects were first and second graders between the ages of 6 and 8 years ($X = 6.8$ years).

Apparatus.—The game for this study was “Mr. Munchie,” a commercially manufactured Canadian toy. This game was chosen because of its unfamiliarity and because it did not appear to be sex-specific. Mr. Munchie is a clown with an oval body 6 inches in diameter. Protruding from the clown’s head is a spiral-shaped rod, 12 inches long, with a clown hat attached to the top.

The game is played by pulling the clown’s head up the rod to his hat. When his head is released, it begins to spin down the rod until it is attached to the body again. This takes approximately 13 seconds. The task for the child is to throw as many plastic marbles as possible into Mr. Munchie’s body before the head descends.

Procedure.—A male experimenter, the author, took the children one at a time from their classroom to the experimental room. There, the experimenter introduced himself and explained the purpose of his visit. Subjects were then given a set of instructions appropriate for their condition.

Males in the neutral condition were told the following:

I have a toy that I would like you to play with. The name of this toy is Mr. Munchie. Have you ever seen Mr. Munchie before? [Only seven out of 120 children had ever seen Mr. Munchie before, and this had been in a local toy store. None of the children had played the game before or knew how to play it.] Well, Mr. Munchie is a brand new game, and since it is a new game, the people who made it have asked me to test it for them. So, I am asking some of the children in this school to play it a few times to make sure that the game works and that children your age can play it. Would you mind playing the game a few times for me?

Males in the boy condition were told that Mr. Munchie was a toy for boys, “like basketball,” and that the experimenter wanted to find out if boys could play it and if they liked it. Males in the girl condition were told that Mr. Munchie was for girls, “like jacks,” but the experimenter wanted to find out if boys could play it and if they liked it.

The instructions for female subjects were similar to the male instructions except that the labels were reversed in the appropriate and inappropriate conditions.

After the instructions, the child was given one practice trial and three test trials. After each trial, S’s score was recorded by the experimenter. At the conclusion of the third trial, Mr. Munchie was removed from sight and the toy’s attractiveness to the child was assessed.

The first measure of attractiveness (scale) was to ask the child to place Mr. Munchie on a scale consisting of a line divided into six equal parts drawn on a sheet of paper. At the left end of the line was a drawing of a child dressed in a raincoat. The child had a frown on its face, it was standing in the rain, and it was holding a wilted flower. At the right end of the scale was a child drawn in bright colors. The child had a smile on its face, the sun was shining, and it was holding a blooming flower. An attempt was made to make the drawings sex-neutral.

The drawing was used in the following manner. The subject was asked to name both his least favorite and most favorite toy. The child was then told that toys which were the least favorite would be placed in the space next to the sad child, while toys which were the most favorite would be placed at the opposite end of the scale in the space next to the happy child. It was explained that each of the seven spaces represented different degrees of attractiveness. Beginning from left to right, the spaces were for toys which were: “The worst in the world; very bad; bad; good sometimes and bad sometimes; good; very good; the best in the world.” In order to ascertain that the child was attending to the instructions, he was quizzed as to where toys which were very bad, good, etc., would be placed.¹ Then

¹ This scale is similar in form to the Syracuse Scale of Social Relations. It was suggested to me by John McKinney.
the subject was asked to place Mr. Munchie on the scale.

The second measure of attractiveness (rating) consisted of the following set of questions: “If you owned Mr. Munchie, would you play with him, yes or no?” If “No,” stop. If “Yes,” “Would you play with him much or a little?” If “Much,” “Would you play with him very much or just much?” If “Little,” “Would you play with him a little or a very little?” The following numerical values were assigned to each answer: no = 0; very little = 1; little = 2; much = 3; very much = 4.

Results

Performance.—Each S received a performance score which was the mean number of balls thrown into the toy over all three trials. The group means and standard deviations are given in table 1.

The results of the analysis of variance for performance revealed that the predicted interaction between sex of S and sex typing of the game was significant, \( F(2,114) = 10.60, p < .001 \). Post hoc analyses revealed that for males, performance was significantly better in the boy-label condition than in the girl-label condition. The neutral-label condition, however, was not significantly different from either the boy- or girl-label condition. For females, performance in the girl-label condition was significantly better than performance in the neutral-label or boy-label condition. However, there were no significant differences in performance between these two conditions. The first hypothesis predicted this interaction, and that prediction was confirmed for both males and females.

Attractiveness: scale.—The scale means and standard deviations are given in table 1. The analysis-of-variance summary for attractiveness (i.e., where S placed the toy on a scale of 0–6) again indicated a highly significant sex-by-label interaction, \( F(2,114) = 18.37, p < .001 \). For males, attractiveness scores in the boy- and neutral-label conditions were not significantly different from each other, but both these conditions were higher than the girl-label condition. For females, attractiveness was highest in the girl-label and neutral-label conditions. These two conditions were not significantly different from each other, and both were higher than the boy-label condition.

In addition, a significant difference was found for the effect of label, \( F = 4.97, p < .01 \). This effect was due to a depression of the scores in the boy and girl conditions as compared to the neutral condition when the male and female scores were combined (boy \( \bar{X} = 4.97 \), neutral \( \bar{X} = 5.20 \), girl \( \bar{X} = 4.30 \)).

Attractiveness: rating.—The rating means and standard deviations are given in table 1. The results of the analysis of variance for attractiveness for rating (i.e., S’s rating of the toy from 0, never play, to 4, play very much) indicate a significant effect for the sex-by-label interaction, \( F(2,114) = 11.98, p < .001 \).

| TABLE 1 |
| MEANS AND STANDARD DEVIATIONS FOR PERFORMANCE AND ATTRACTIVENESS |

<table>
<thead>
<tr>
<th>Sex Typing of Game</th>
<th>Boy</th>
<th>Neutral</th>
<th>Girl</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Performance:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>9.35ₐ</td>
<td>1.96</td>
<td>8.25ₐ</td>
</tr>
<tr>
<td>Females</td>
<td>7.90ₐ</td>
<td>2.41</td>
<td>8.90ₐ</td>
</tr>
<tr>
<td>Scale:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>5.25ₐ</td>
<td>0.97</td>
<td>5.50ₐ</td>
</tr>
<tr>
<td>Females</td>
<td>4.00ₐ</td>
<td>1.62</td>
<td>4.90ₐ</td>
</tr>
<tr>
<td>Rating:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>3.25ₐ</td>
<td>0.72</td>
<td>3.30ₐ</td>
</tr>
<tr>
<td>Females</td>
<td>2.30ₐ</td>
<td>1.22</td>
<td>3.30ₐ</td>
</tr>
</tbody>
</table>

Note.—Within each row, means with the same subscript are significantly different (\( p < .05 \)) according to the Newman-Keuls test (Winer 1962).
The patterns of scores for males and females are alike, and are similar to the one found when attractiveness was measured by scale. For both males and females, the appropriate and neutral conditions are not different from each other but both are different from the inappropriate condition. The second hypothesis was confirmed for both measures of attractiveness, scale and rating.

Relationship of dependent measures.—The three dependent measures, performance, scale, and rating, were correlated. Performance was a poor, although statistically significant \( (p < .05) \) predictor of both scale \( (r = .25) \) and rating \( (r = .23) \). The two measures of attractiveness were highly correlated \( (r = .74) \).

Given the high intercorrelation between the two measures of attractiveness, the two analyses of variance cannot be considered independent. Consequently, the degrees of freedom are overestimated. Since both scale and rating are significant beyond the .001 level, however, we can probably conclude that both measures do reach a conventional level of significance.

Discussion

One question which this study attempted to answer concerned the relationship between a label and behavior. The finding of a strong interaction between the sex of the child and the label that the child received for the game indicated that in the area of sex standards a child's behavior in an activity was consistent with his cognition for that activity as appropriate or inappropriate. It was found that performance was highest when the child received a label for the game which was appropriate for his sex, intermediate when no information was given on the sex specificity of the game, and lowest when the game was labeled as inappropriate for the child's sex. This same interaction was found for the two measures of attractiveness, although the specifics of the interaction differed slightly from the performance findings. Both hypotheses were confirmed for both males and females.

The effect of label on performance was in the same direction and of the same magnitude for both boys and girls. Scores for boys and girls were almost the mirror image of each other. These findings are in disagreement with most findings in the area of sex-role preference and seem to extend our knowledge of sex-role preference into a hitherto uninvestigated area.

Studies of sex-role preference typically ask a child to choose between male and female objects (Maccoby 1966). For example, Stein et al. (1971) found that when children were allowed to choose to work on tasks that had been labeled male, neutral, and female, boys chose to work most on the male task, less on the neutral task, and least on the female task. Girls, however, chose to spend an almost equal amount of time on all three tasks. The authors conclude that "the effects of sex-typed labels were larger and more consistent for boys than for girls, probably because boys generally have a stronger preference for the masculine role than girls do for the feminine role." In general, the findings for this type of study are that when given a choice, boys prefer the male role, while girls prefer both roles equally.

The present study, however, did not allow the child to choose between male and female tasks. Additionally, the major dependent variable was performance. Under these conditions, the performance of both boys and girls was similarly affected.

It appears, therefore, that when asked to choose between male and female objects, girls choose both male and female objects equally, while boys choose male objects and reject female objects. However, when asked to perform in an activity which is clearly labeled sex-appropriate or sex-inappropriate, both boys and girls perform consistent with their own sex. Thus, future researchers may want to consider both choice of task and task performance as two separate indices of sex-role preference.

The findings for attractiveness indicate that both boys and girls valued the game as highly with the neutral label as they did with the appropriate label. The inappropriate label, however, significantly reduced the attractiveness of the game. The results indicate that although both appropriate and inappropriate labels are important for performance, only the inappropriate label is important in determining the value that a child places on a toy.

Given the attractiveness of this particular toy, and of most toys for 6-year-olds, children may simply have a positive interest in all toys and games. Therefore, telling a child that a toy is appropriate for his sex does not appear to increase that child's already positive orientation toward the toy. However, telling a child that...
a toy is sex-inappropriate has the effect of reducing the attractiveness of that toy. This effect may be especially strong when the child is asked to state publicly to an adult his attraction for the toy.

The findings for both performance and attractiveness support the idea of a strong desire to act consistently with a classification of oneself as either male or female. The findings support Kohlberg's (1966) assertion that sex-typed labels are sufficient to influence a child's motivation and value for an activity.

Alternatively, the findings support Mischel's (1970) social-learning analysis of sex typing. In these terms the labels "for boys" and "for girls" possess positive or negative properties, having been associated with social approval or disapproval in the past. The present study, therefore, may be seen as demonstrating the continuing capacity of sex labels to affect behavior even in the absence of contingent reward and punishment. In addition, a social-learning analysis focuses attention on individual differences. The labels did not affect the children equally. One fruitful line of research could be the investigation of the differential social conditions which determine the salience of sex labels.

References


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