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ABSTRACT

Children six to eight years old each 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, 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. The IT Scale for children was used to test the hypothesis that children who were high sex-appropriate would be more influenced by the labels than children who were high sex-inappropriate. This hypothesis was not confirmed but there is some reason to doubt the ability of the IT Scale to distinguish preference, either within a sex or between sexes. (Author/WS)

Children's Performance on and Attraction to an Activity as a Function of Masculine, Feminine or Neutral Labels and Sex-Role Preference

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Kohlberg has proposed a theory of sex-typing in which the basis for adopting the appropriate sex-role standard is a desire on the part of the child to establish and maintain consistency between a classification of himself as male or female and the appropriate sex-role standard (Kohlberg, 1966). According to Kohlberg, after a child has labeled himself as either male or female he then comes to value those behaviors and objects that are consistent with this initial self-classification.

Once a child has acquired an appropriate gender identity, he should behave in a manner which he views as consistent with that identity. Therefore, one may hypothesize that a child is more likely to perform an act which has been labeled as appropriate for his sex than to perform an act which has been labeled sex-inappropriate.

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 tasks which were labeled masculine, feminine and neutral. Each child was given ten minutes and told 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. found that label was a significant determinant of choice of task they did not investigate the related issue of actual performance. One would expect that label and performance would also be related, although the nature of that relationship is unknown.

In a study investigatingtoy preferences, Liebert, McCall, and Hanratty (1971) experimentally manipulated the sex-typed information for 2 groups of toys. First-grade children were told that a goup 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 preference than opposite sex labels.

A study by Epstein and Liverant (1963) examined the effects of high and low sex-typing on the value of rewards administered by male or female experimenters. In this study boys five to seven were divided into high and low masculine groups on the basis of their score on the IT Scale (Brown, 1956). Both groups were then verbally conditioned by two experimenters, one male and the other female. The high masculine scoring boys showed more conditioning when reinforced by a male experimenter than by a female experimenter. The low masculine scoring boys showed no difference in conditioning that could be attributed to the sex of the experimenter. This study demonstrated that high masculine boys place greater value on reinforcements from a male than they do from a female. In contrast, low masculine boys value the rewards equally.

These studies add empirical support to Kohlberg's cognitive developmental theory. The data suggest that when an activity is labeled male or female, a child will behave consistent with that label. One would, therefore, expect that an individual would perform at a different level on a task which he perceived as either appropriate or inappropriate for his own sex. This leads to the first hypothesis of this study. When information on the sex-specificity of an activity is available to an individual, the individual will perform at a higher level when the activity is labeled sex-appropriate than when the activity is labeled sex-inappropriate.

In addition, and by the same reasoning, one would expect that an individual's "value" for an activity would be influenced by his belief in its appropriateness or inappropriateness. The second hypothesis is that when information on the sex-specificity of an activity is available to an individual, the individual will place a higher value on the activity when it is labeled sex-appropriate than when it is labeled sex-inappropriate.

The third and final hypothesis was concerned with potential individual differences within a sex. It was predicted that an individual who is classified as high sex-appropriate i.e., males who are high-masculine or females who are high-feminine, have incorporated their culture's standard of sexual differentiation to a significant degree. The concept of sexual differentiation is not as salient for the low scorers. Thus, the effect of an appropriate or an inappropriate label on performance and attractiveness for an activity will be greater for a high individual than for a low individual.

METHOD

Subjects

The initial subject population were 133 boys and 130 girls drawn from a rural, midwestern community. Subjects were first and second graders between the ages of 6 and 8 years ($\bar{X}$ = 6.8 years).

Design

The design for this study was a 2 x 2 x 3 factorial. Sex of subject; sex-role preference; and cognitive labeling of the game were all varied. Each cell contained 10 subjects.

Apparatus

The IT Scale for Children (ITSC) (Brown, 1956) was used to determine the sex-role preference of each child. Briefly, the test consists of having the child make choices (i.e., either boy or girl) for IT, a sexually ambiguous stick figure, from activities and objects presented on 36 picture cards.

The game for this study was "Mr. Munchy" a commercially manufactured, Canadian toy. This game was chosen because of its unfamiliarity and because it did not appear to be sex-specific. Mr. Munchy is a clown with an oval body six 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. Munchy's body before the head descends.

Procedure

The IT Scale was administered to the initial population of 133 males and 130 females. A frequency distribution was established and the top and bottom 30 Ss of each sex were selected as study Ss. Thus, the study population consisted of 30 Hi-masculine males and 30 Lo-masculine males along with 30 Hi-feminine females and 30 Lo-feminine females. The mean and range of IT scores for each group was as follows: Hi-mas. ($\bar{X}$ = 84; Range = 0); Lo-mas. ($\bar{X}$ = 62.6; Range = 0-75); Hi-fem. ($\bar{X}$ = 39.6; Range = 0-67); Lo-fem. ($\bar{X}$ = 84; Range = 0). The subjects were randomly assigned to each of the 12 cells.

About one month later, the experimenter returned to the school to begin the main experiment. The procedure was as follows. The experimenter took each child from his classroom to the experimental room. There, the experimenter introduced himself and explained the purpose of his visit. If the subject was a boy, he received one of the following set of instructions appropriate for his condition:

(Boy Condition) "I have a toy that I would like you to play with. The name of this toy is Mr. Munchy. (The experimenter shows Mr. Munchy to the child.) Have you ever seen Mr. Munchy before? (Only 7 out of 120 children had ever seen Mr. Munchy 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. Munchy is a brand new game just for boys. And since it is a brand new game just for boys, the people who made it have asked me to test it for them. So, I am asking some of the boys in this school to play it a few times to make sure that the game works and that boys can play it. Would you mind playing the game a few times for me?

"The way Mr. Munchy is played is like another game that boys play-- basketball. When I pull Mr. Munchy's head up to his hat and let it go, it will start spinning around and around until it falls back on his body. What you have to do is to throw, one at a time, as many balls as you can into Mr. Munchy's tummy before his head comes all the way down. You can get as close to Mr. Munchy as you like but you can't touch him and you can only pick up one ball at a time."

(Neutral Condition) "I have a toy that I would like you to play with. The name of this toy is Mr. Munchy. Have you ever seen Mr. Munchy before? Well, Mr. Munchy 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?"

"The way Mr. Munchy is played is like this. When I pull Mr. Munchy's head. . ."

(Girl Condition) "I have a toy that I would like you to play with. The name of this toy is Mr. Munchy. Have you ever seen Mr. Munchy before? Well, Mr. Munchy is a brand new game just for girls. And since it is a brand new girl's game, the people who made it have asked me to test it for them. So I am asking some of the girls in this school to play it a few times to make sure that the game works and that girls can play it. But I also thought that I would ask a few boys to play it just to see if boys could play it. So, even though this is a girl's game, would you mind playing it a few times for me?"

"The way Mr. Munchy is played is like another game that girls play--jacks. When I pull Mr. Munchy's head up. . ."

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. Munchy was removed from sight and the child's attractiveness for the toy was assessed.

The first measure of attractiveness (Scale) was to ask the child to place Mr. Munchy on a scale of 0 to 6 where 0 represented the least attractive toy and 6 the most attractive. It was recognized, however, that a seven-year-old child might experience difficulty in understanding the concept of a 0-6 scale. Therefore, a pictorial scale was devised which attempted to minimize, as much as possible, the difficulty of the task.

The scale consisted of a line divided into 7 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 was drawn in dark colors. It 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 experimenter then produced the drawing and explained to the child that the drawing would be used to assess his attractiveness for a group of toys that the experimenter would name. Toys which were the least

favorite would be placed in the space at the far left of the scale, 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]

The experimenter then began naming toys (e.g., "Where would you place a bicycle; a doll house; a coloring book; etc.) until the following two criteria were met: First, the subject was not making exclusively extreme responses, i.e., only using the worst and best spaces; and Second, the subject was not responding in a random manner as indicated by behaviors such as pausing before pointing to a space for a particular toy and using the same space for a toy named at two different times. When these criteria were met, the experimenter then asked the subject: "Where would you place Mr. Munchy?"

The second measure of attractiveness (Rating) consisted of the following set of questions: "If you owned Mr. Munchy 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?"

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[1]This scale is an adaptation of the Syracuse Scale of Social Relations. It was suggested to me by John McKinney.

The following numerical values were assigned to each answer: No = 0; Very little = 1; Little = 2; Much = 3; Very much = 4.

RESULTS

ITSC Distribution

It was hypothesized that sex-role preference would be a significant factor in the performance and attractiveness of an activity. This hypothesis was tested by examining the responses of males and females whose IT scores placed them i; the extreme ends of their respective distributions. An examination of these distributions, however, reveal that the pattern of scores for males and females are more similar than dissimilar and that differences between the "extremes" were only moderate.

As may be noted in Figure 1, the distributions for males and females are remarkably similar (Males, $\overline{X}$ = 77.27; Females, $\overline{X}$ = 70.97). In both groups, almost 50% of the children scored in the 80-84 category, essentially a perfect masculine score. The difference of 6.3 points between male and female means was not significant, indicating the extreme overlap of the two distributions. As indicated in Figure 1, the distribution of IT scores was greatly skewed toward the masculine end of the scale. Because so few individuals gave feminine-type responses, the groups compsed of Ss with low scores were not as clearly defined or homogeneous as the groups composed of Ss whose scores were high, i.e., masculine.

Insert Figure 1 about here

Analyses of the data revealed that the preference factor was not significant for performance or Rating. Preference was marginally related to one measure of attractiveness, Scale, ($p<.05$). Hypothesis 3 was not confirmed. No relationship was found between sex-role preference and either performance or attractiveness. However, hypothesis 3 may not have received an adequate test. On the basis of this ITSC distribution, no fair comparison could be made between High and Low groups since the difference between these groups was small.

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.

Insert Table 1 about here

The results of the analysis of variance for performance revealed a significant label by sex interaction. No other effect was significant. Subjects who received a label for the game appropriate for their own sex had a higher mean than Ss with the neutral label who were higher still than Ss with an inappropriate label, ($F(2,108) = 10.40$, $p<.001$). Hypothesis 1 predicted this interaction and the prediction was confirmed.

As may be noted in Figure 2, there is a monotonic relationship between sex and label for both sexes and all labels. The highest score for each group was in the appropriate label condition, followed by the neutral label condition and lastly by the inappropriate label condition. Hypothesis 1 was confirmed for both males and females.

Insert Figure 2 about here

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, ($F(2,108) = 20.11$, $p<.001$). In addition, significant differences were found for the effects of label, ($F=4.97$, $p<.01$), preference. ($F=4.79$, $p<.05$), and the label by sex by preference interaction ($F=5.57$, $p<.01$).

The significant label effect was due to a depression of the scores in the boy and girl condition 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 $\bar{X}=4.30$). A significant preference effect was also found (Hi X=4.97, Lo X=4.45). The significant label by sex by preference interaction was due to a reversal of positions for the High and Low groups which occurred for both males and females in the appropriate label condition. For males, the Low group rated the toy as less attractive than the High group in the inappropriate and neutral condition. In the appropriate condition, however, the Low group rated the toy as more attractive than the High group. A similar finding occurred for females. Among females, the Low group rated the toy as less attractive in the inappropriate and neutral condition but more attractive in the appropriate condition than the High group. As may be noted in Figure 3, the pattern of attractiveness scores for males and females are very similar.

Insert Figure 3 about here

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 label, ($F(2,108) = 3.32$, $p<.05$) and again for the sex by label interaction, ($F(2,108) = 12.08$, $p<.001$). Once again, the significant label effect was due to a depression of scores in the boy and girl label condition as compared to the neutral condition when males and females are combined (boy $\bar{X}=2.78$, neutral $\bar{X}=3.30$, girl $\bar{X}=2.78$). The significant label by sex interaction was found, confirming Hypothesis 2.

As may be noted in Figure 3, the pattern of scores for males and females are alike and this pattern is 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. Hypothesis 2 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, predictor of both Scale ($r=.25$) and Rating ($r=.23$). The two measures of attractiveness were highly correlated ($r=.74$).

DISCUSSION

One question which this study attempted to answer concerned he relationship between a cognition and overt behavior. The finding of a strong interaction between the sex of the child and the label

that he received for the game indicated that in the area of sex standards, a direct relationship existed between the cognition that the child received for the activity and his own behavior. 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. Hypothesis 1 and 2 were confirmed for both males and females. Hypothesis 3 predicted that the label would have a greater effect on the high-preference group than on the low-preference group. This prediction was not confirmed but there is some cause to doubt the effectiveness of the IT Scale to distinguish a high- from a low-preference individual.

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

The effect of label for both performance and attractiveness was in the same direction and of the same intensity for males and females. Scores for males and females were almost the mirror image of each other. This finding differs from most findings in the area of sex-typing. Masculine roles and attitudes are typically found to be more stereotyped and constrained than feminine roles. For example, Stein, et al. (1971) found that when children were allowed to work on tasks which had been labeled male, female or neutral, boys worked

most on the male task, less on the neutral task and least on the female task. Females, however, spent an almost equal 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."

On the basis of a great deal of empirical evidence, most researchers in the area of sex-typing have concluded that boys have a stronger preference for the male role than girls do for the female role. This conclusion is based on evidence which shows that girls choose activities and objects which are culturally defined as masculine more often than boys choose feminine activities. Although the empirical evidence is impressive, the conclusion does not necessarily follow.

A major component of the process of sex-typing is the learning of the sex-role standard for males and females in the culture of origin. Kagan (1964) defines sex-role standard as "a learned association between selected attributes, behaviors and attitudes, on the one hand, and the concepts male and female, on the other."

One would expect a child's conception of male and female to undergo a considerable change with time. A child must acquire more than a long list of behaviors and attitudes that are appropriate or inappropriate for his sex. He must learn to factor out, as it were, the essential qualities of maleness and femaleness and to apply these constructs to himself and others. As Piaget has demonstrated, (Piaget, 1947; 1952) cognitions about the non-social world change over time. One would expect that concepts such as male and female would also change over time. Thus, a child's sex-role standard may differ significantly from an adult's.

Besides this cognitive factor a second important aspect of sex-typing is a motivational one, the desire to act in accordance with the standard judged appropriate for one's own sex. It is not enough simply to know what are the appropriate standards for men and women. One must also act on those standards. Thus, any mismatch between the child's gender and his behavior may involve one of the following: First, the child does not know the appropriate standard and behaves in a manner which is judged to be inappropriate; Second, the child knows what is the correct standard but acts in a manner that is inappropriate for his sex.

Previous research in sex-typing has not separated these factors in order to investigate them individually. A child's masculinity or femininity was judged on the basis of the match between his behavior or attitudes and the cultural standard of masculinity or femininity. Any mismatch was judged to be indicative of a lack of preference for the culture's standard. An alternate conclusion is that the child has not learned the standard or has learned it in a different form.

It should be clear, then, that evidence for a mismatch does not necessarily imply a lower motivation to act consistent with the accepted standard. It may also imply a different understanding of the standard. The question of whether or not males and females differ in their desire to act consistent with their understanding of correct male and female behavior is an entirely different issue.

The evidence from this study indicates that males and females do not differ in their consistency strivings. When an activity was clearly defined as appropriate or inappropriate, both males and females approached or avoided the activity with an equal strength.

The findings for attractiveness indicate that both males and females 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 approach and avoidance gradients are operative and equally strong for performance, only the avoidance factor is important in the value that a child places on an activity. Children may have an initially positive value orientation toward all objects and this orientation may be operative at full strength, and is, therefore, difficult to increase with more information. However, children may be more sensitive to negative information, more sensitive to holding a negative value, and will devalue those activities which are clearly inappropriate.

The results of this study cast serious doubts on the sensitivity of the ITSC as an instrument for the measurement of either differences between or within sexes. There is considerable evidence to indicate that the IT Scale may have a masculine bias to it.

Thompson and McCandless (1970) compared IT scores obtained with standard instructions with scores under instructions where IT was identified as a member of the same sex as the child. Their findings indicated that labeling IT a boy did not significantly change the scores for males. However, labeling IT a girl reduced the female score by almost 25 points. These results are consistent with a considerable number of studies indicating that IT actually looks like a boy rather than a neutral figure (e.g., Sher & Lansky, 1968; Fling & Manosevitz, 1972).

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Footnotes

This paper is based upon a thesis submitted to the Department of Psychology at Michigan State University in partial fulfillment of the requirements for the degree of Master of Arts. The author expresses appreciation to John McKinney for his guidance throughout the course of this work. Portions of this research were presented at the annual meeting of the Eastern Psychological Association, Boston, April 1972. Author's address: Department of Psychology, Michigan State University, East Lansing, Michigan, 48823.

Table 1

Means and Standard Deviations for Performance and Attractiveness (Preference Factor Collapsed)

	Sex Typing of Game					
	Boy		Neutral		Girl	
	M	SD	M	SD	M	SD
Performance						
Males	9.35a	1.96	8.25b	1.80	7.35a	2.54
Females	7.90a	2.41	8.98b	2.54	10.46ab	1.92
Scale						
Males	5.25a	0.97	5.50b	0.69	3.20ab	2.02
Females	4.00ab	1.62	4.90a	1.41	5.40b	0.94
Rating						
Males	3.25a	0.72	3.30b	0.80	2.10ab	1.48
Females	2.30ab	1.22	3.30a	1.17	3.45b	0.69

Note--Within each row, means with the same subscript are significantly different ($p<.05$) according to Newman-Keuls test (Winer, 1962).

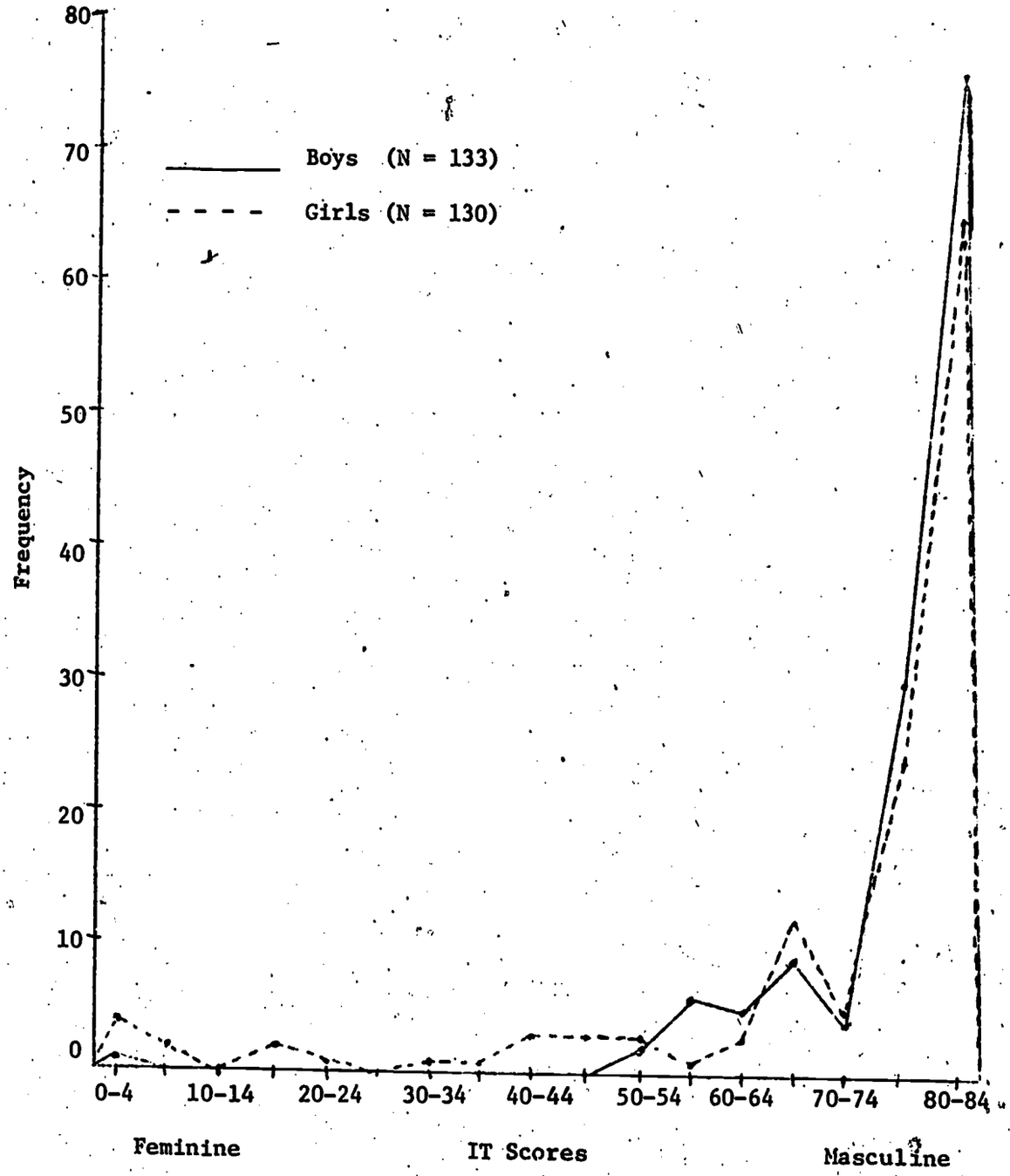

Figure 1

Distribution of Scores on the ITSC Total Sample (Males and Females)

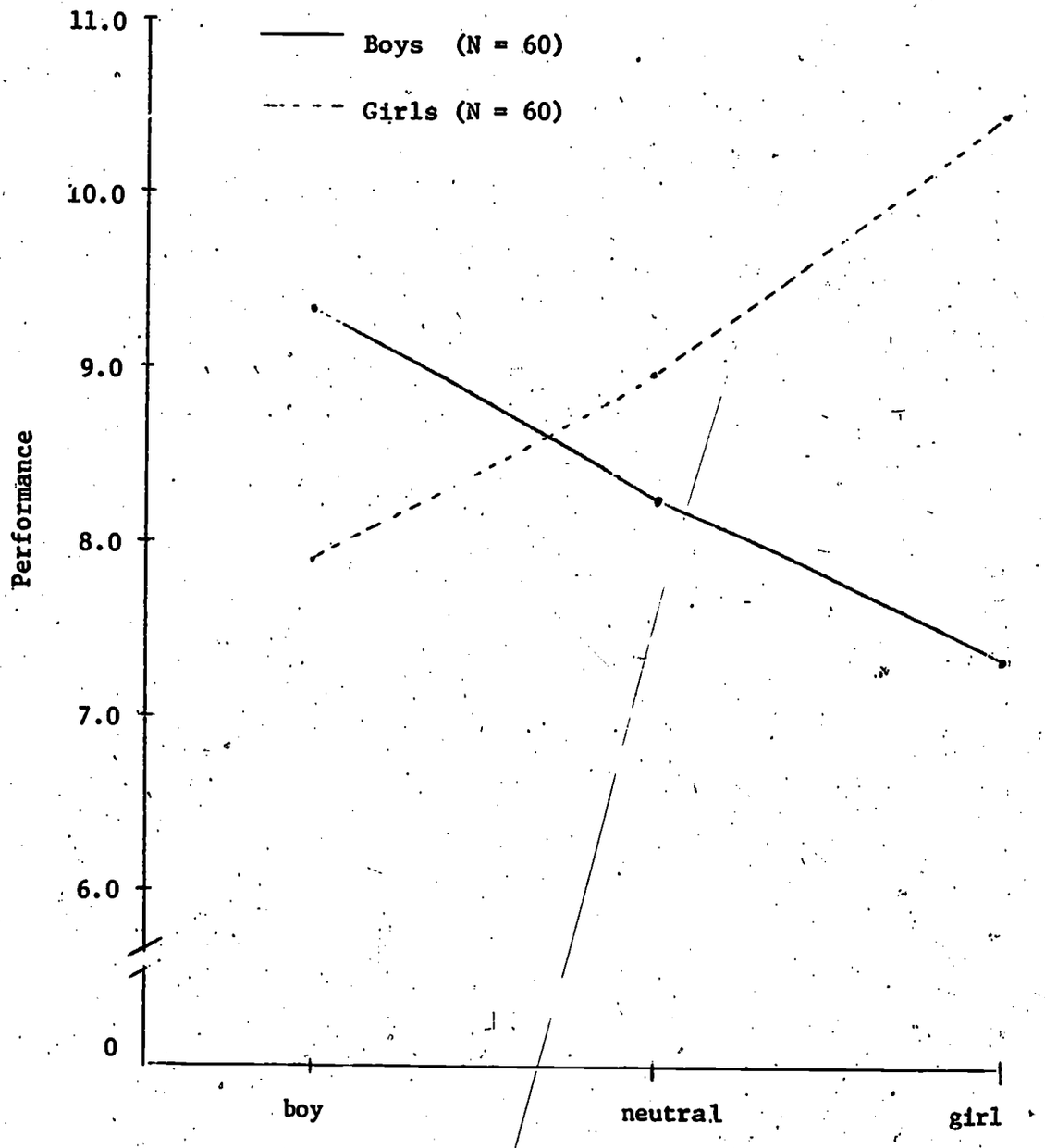

Figure 2

Mean Performance on Game as a Function of Label and Sex (High and Low Groups Combined)

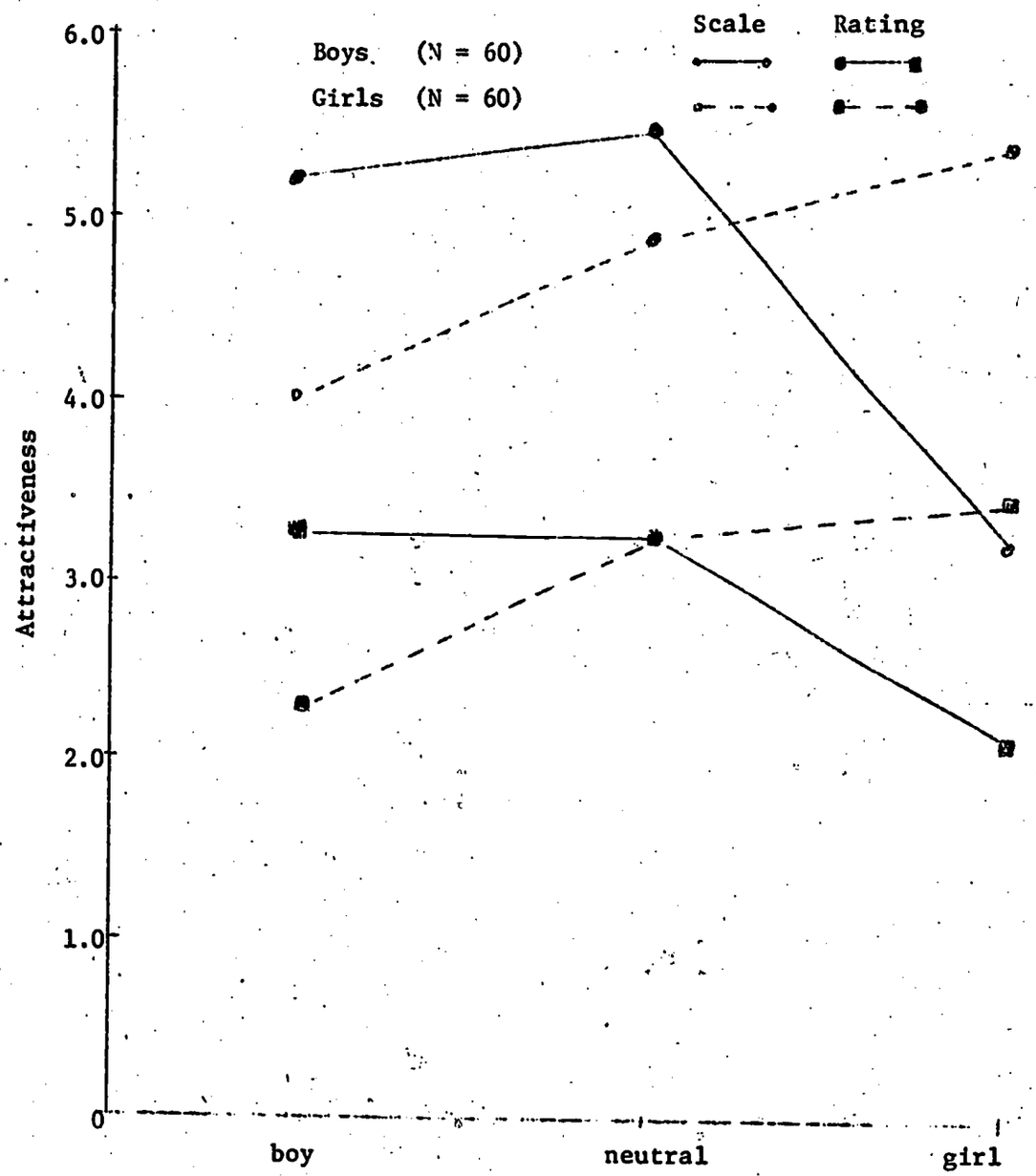

Figure 3

Attractiveness of Game as a Function of Label and Sex (High and Low Groups Combined)