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Same-Sex Imitation: The Avoidance of Cross-Sex Models or the Acceptance of Same-Sex Models?

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This experiment examined whether acceptance of same-sex behavior and rejection of opposite-sex behavior contribute equally to the same-sex imitation effect in both boys and girls. Third- and fourth-grade children observed four male and four female peer models display preferences toward a variety of objects. For each object, only four models were asked for their preferences. In this way, it was possible for the objects to become sex-linked depending on the sex composition of the group of models endorsing a particular item. Subsequently, children were presented with pairwise combinations of the more masculine, feminine, or neutral objects and asked their preference. Results indicated that although there is no difference between boys' and girls' acceptance of same-sex behavior, boys tend to reject opposite-sex behavior more than girls.

Maccoby and Jacklin (1974) concluded that the research to date did not support the view that children develop generalized tendencies to prefer imitation of same-sex models. Recent research by Perry and Bussey (1979) contends that Maccoby and Jacklin rejected the same-sex imitation hypothesis prematurely. Perry and Bussey's general argument is that investigators studying sex effects in imitation investigations have employed an experimental paradigm that is not only methodologically insensitive in detecting same-sex imitation effects but, more importantly, also

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conceptually remote from how imitation contributes to sex-role learning in real life settings.

Most studies of the same-sex imitation hypothesis have employed a between-subjects manipulation of sex of model, so that a given child sees only the male model or only the female model. In such cases, children are likely to show high levels of imitation because they see only one sex of model and they have little basis for perceiving that sex of model may be a relevant dimension or discriminandum for the degree of their imitation.

In contrast to the experimental setting, in which children are exposed to only one model of a given sex, in naturalistic settings children are exposed to multiple models of each sex. By watching the behavior of many boys and men and many girls and women, children notice differences between the sexes' frequencies in performing certain behaviors. In other words, they learn what is appropriate behavior for each sex in particular situations. For example, if children observe that 80% of available male models perform a particular response in a given situation, but only 5% of female models perform it, they are likely to code the response or organize it in memory as male appropriate or masculine. Furthermore, because children learn that reinforcement contingencies from the social environment tend to be similar for themselves and other same-sex persons (Bussey & Perry, 1976), boys are especially likely to perform responses coded as male appropriate, and girls to perform responses coded as female appropriate.

Although Perry and Bussey (1979) have demonstrated that children prefer to imitate same-sex models over opposite-sex models when the models are known to usually behave sex appropriately, it is not clear whether this choice reflects a preference for same-sex models or a rejection of opposite-sex models on the part of children. It is impossible in such research, as well as in real life settings, to separate the effects of a child's rejection of an opposite-sex model from his or her acceptance of a same-sex model. That is, do boys and girls copy a same-sex model because they want to be like others of their sex or because they do not want to endorse behavior appropriate for the opposite sex?

The basic issue to be explored in this experiment is rejection of a model's behavior. Many writers (e.g., Johnson, 1963) have suggested that sex roles may be more confining for boys than for girls. Furthermore, it has been speculated that sex-role behavior for boys is seldom defined positively as something the child should do, but negatively as something he should not do (Emmerich, 1959; Hartley, 1959). Therefore, although there is probably some degree of rejection of the behavior of opposite-sex models by both boys and girls, it was hypothesized to be stronger for boys.

The hypothesis was tested in the following way. Children were first exposed to a modeling phase in which a series of objects were experimentally sex-typed as either masculine, feminine, or neutral. An item

was considered masculine if all male models responded to it, and feminine if all the female models responded. A neutral item was chosen by equal numbers of male and female models. Subsequently, children were presented with slides of pairs of these objects in such a way that for one-third of the slides masculine and feminine items were paired, for another third masculine and neutral items were paired, and for the remaining third feminine and neutral items were paired. By using these three possible combinations of slides it was possible to explore the rejection issue.

If boys do reject opposite-sex behaviors more than girls, then the following results should be obtained. Specifically, when masculine and feminine items are pitted against each other, the boys are expected to prefer the masculine items, and the girls the feminine ones. When masculine and neutral items are pitted against each other, it is expected that the boys will prefer masculine to neutral items; but if it is true that boys reject feminine behavior, then the boys' masculine score in this case should be less than their masculine score when masculine items are pitted against feminine ones. It was predicted that girls would neither accept nor reject masculine items; therefore, they should endorse masculine and neutral items equally. When feminine items are pitted against neutral ones, boys are expected to reject feminine items and thereby accept or endorse neutral items. In this case girls are expected to endorse feminine items. Because it was not anticipated that girls would reject masculine behaviors to the same extent that boys reject feminine behaviors, the girls' endorsement of feminine items was expected to be the same regardless of whether feminine items were pitted against masculine or neutral items.

Another aim of this study was to vary the sex of the experimenter. Some studies (reviewed in Mischel, 1970) have produced different findings depending on the sex of the experimenter, while others have not (Borstelmann, 1961). The sex of experimenter was manipulated in this experiment to determine if it was a relevant variable in this research.

METHOD

Participants

Subjects were 24 boys and 24 girls from the third and fourth grades of a school located in a middle-class suburb of Brisbane, Australia. The average age of the children was 8 years and 11 months. Four boys and four girls with a mean age of 11 years and 9 months served as peer models, and an adult female and male served as experimenters.

Procedure Overview

Children were brought individually from their classroom to the experimental room and were instructed to watch the television. They saw a videotaped modeling display of eight models, four boys and four girls, simultaneously on the television screen. Eighteen objects were presented individually to the models and for each object four models were selected by the experimenter to indicate if they liked the object displayed or not. On one-third of the trials the experimenter called on four males, on anothr one-third of the trials she or he called on four females, and on the final one-third of the trials she or he called on two males and two females. The trials in which all males, all females, and both males and females responded occurred in a random order. Because four models were selected on each trial to indicate their preferences and because only one object was presented to them in this experiment, the models obviously had to have more than one response option available. Therefore, on half the trials the models stated they liked the object, and on the remaining trials they indicated they did not like it. This meant, for example, that a masculine item was one that all male models either liked or disliked. Obviously, when all the male models disliked an item, it was not really of a masculine nature. However, for the sake of simplicity, an item was considered masculine if all the male models liked or disliked it, as long as they all agreed. Therefore, when the subjects' response matched that of the male models either in terms of acceptance or rejection of the item, this was considered as endorsement of the masculine object. A similar procedure was adopted for feminine and neutral objects. Therefore, masculine objects were unanimously liked or disliked by all the male models, feminine objects were unanimously liked or disliked by the female models, and the neutral objects were unanimously liked or disliked by two male and two female models.

Following the modeling phase, subjects' choices were measured by presenting them with colored slides of the objects seen by the models. However, unlike the models, the subjects saw two objects together rather than each object individually. For half the slides the subjects were to indicate which object they preferred, and for the remaining slides the object they liked least. The objects were presented so that for one-third of the slides a masculine item was presented with a feminine one, another third showed a masculine and neutral item together, and the remaining third were pairs of feminine and neutral items. All subjects in the modeling condition saw each slide combination. Finally, recall of the modeled responses was measured. The no-model control group did not experience the modeling phase; its members were merely requested to indicate for half the slides their preferred object, and their nonpreferred object for the remaining trials.

Stimuli

Stimuli presented to the models consisted of 18 objects comprising 6 distinct categories. For example, a category of fruit juices (orange, pineapple, and grapefruit) and another of sweets (jaffas, minties, and milkshakes) were used. Within each category one object was sex-typed during the modeling part of the experiment as masculine, another as feminine, and a third as neutral. The stimuli presented to the subjects were 18 color slides of various pairwise combinations of the actual objects presented to the models. The presentation of both the objects and slides was randomly determined, and the same order was used for all subjects. Also, three separate tapes were made of the modeling phase so that the sex-type of each object varied across tapes.

Procedure

Each child was brought individually by the experimenter to the experimental room and seated in front of a television monitor. In the modeling group, the children saw, on the video monitor, the experimenter display each of the 18 objects and ask four models for each object to indicate if they liked or disliked the object displayed before them. For half the items the four models selected by the experimenter stated they liked the item, and for the remaining items the models indicated they disliked the item. Two sets of tapes were made, one set with models expressing a preference for the first half of the objects and disliking the latter, and another set with the models expressing their preferences in the reverse order.

The objects associated with each category were presented consecutively and were endorsed in such a way that each object was designated as either masculine, feminine, or neutral. The objects' sex-type was assigned in the following way. For each object, the experimenter explained to the models that only four out of the eight of them would be selected to indicate whether they liked the object. Consequently, an object was considered masculine if all the male models unanimously agreed that they either liked or disliked it, feminine if it was unanimously liked or disliked by the four female models, and neutral if it was unanimously liked or disliked by two male and two female models. The reason for selecting only four models to state their preference for each object was that if all eight models had been asked to respond for each object, a masculine or femine object would have resulted when the models of one sex made a different response from models of the opposite sex. The problem with using this procedure is illustrated by the following example. If the male models all

agreed that they liked the object displayed before them and the female models all agreed that they did not like the object, it would then be difficult to know what a subject's endorsement of the item meant. Would it signify agreement with the male models or rejection of the female models? Because this is the question that this study addresses, masculinity by necessity could only be operationally defined as male acceptance of a certain response, without female rejection of it being necessary. The converse holds for femininity. Therefore, by pitting objects accepted by one sex or the other against each other in the test phase of this experiment, it was hoped that an answer to this question might result.

The objects designated as masculine, feminine, and neutral varied across tapes, so that six tapes were made in all. This was because not only did each objects' sex-type vary across tapes but so did the order of the models' liking versus disliking of the objects. The stimuli were presented in a fixed but random order for all tapes, with the models taking turns to respond first and all models having an equal number of turns at responding. Following this phase, the subject was seated in another part of the room in front of a screen on which the slides were projected. Children assigned to the no-model control condition viewed the slides directly after arrival at the experimental room.

For the imitation test, subjects were shown 18 slides which depicted the 18 objects shown to the model during the modeling phase. However, this time the objects were not presented singularly, but pairwise and in such a manner that each category of stimuli had three possible pairwise combinations of the objects. The three slides for each category of stimuli consisted of one slide displaying a masculine and feminine object, another a masculine and neutral object, and the third a feminine and neutral object. In this way, it was possible to obtain 18 slides which depicted 2 objects from the 18 individual objects presented to the model.

Subjects exposed to the modeling phase and those in the no-model control group (which had no modeling phase) were shown the slides with the following instruction. For half the subjects, the experimenter requested they indicate the object they liked best for the first half of the slides and the object they liked least for the second half of the slides. The remaining subjects were instructed in the reverse order. The slides were presented in the same order for all subjects.

For the recall test, subjects were shown the same set of slides again, this time with the instructions to tell for each object if the boys liked or did not like it, if the girls liked or did not like it, or if both boys and girls liked or did not like it. Subjects were promised tokens (exchangeable for small prizes) for correct answers.

Scoring of Imitative Responses

Items were paired so that only items that were either both liked or both disliked by the models were presented together in each pair. For the 9 pairs of items that were both liked by the models, the children were asked to indicate which item they liked best. The remaining pairs of items were disliked by the models; hence, the children were asked which in the item pair they liked least. Consequently, for the items the models liked, the item the child also liked was credited as the imitative response. This could have been either a masculine, feminine, or neutral item, depending on which items were presented in the pair. Similarly, when the models disliked a pair of items, the particular item the child disliked in the item pair was taken as the imitative response. If the child liked the masculine item least, this was scored as endorsement of the masculine item.

RESULTS

Imitation Measure

For the three possible item combinations—masculine and feminine, masculine and neutral, and feminine and neutral—children received two imitation scores. As an example, take the combination in which masculine items were paired with feminine ones. Children's masculine imitation score was derived by counting the number of the child's choices that matched the choices unanimously displayed by the male models; similarly, their feminine imitation score was computed by counting the number of the child's choices that matched the choices unanimously displayed by the female models. Within the masculine plus feminine item combination, the child's masculine plus feminine imitation score, of course, totaled 6. Each child received two imitation scores for each of the three item combinations.

Because no one common item was in each of the three combination of items, the scores for the total 18 trials could not be analyzed within one analysis of variance, since there was no one common dependent measure. Therefore, three sets of difference scores were derived for each subject. The first involved the difference between the child's masculine and feminine imitation scores when masculine and feminine items were paired. The second difference score was for masculine minus neutral imitation scores, when masculine and neutral items were presented together. The third and final difference score involved the child's feminine minus neutral imitation

Table I. Masculine Minus Feminine Imitation Means for Interaction of Sex of Subject and Modeling Condition

	Modeling condition	
Sex of subject	Modeled behavior	No-model control
Boys	4.83	−.17
Girls	−4.50	.00

scores, when feminine and neutral objects were presented simultaneously. The three separate 2 × 2 × 2 analyses of variance involved three between-subject factors (sex of experimenter, sex of subject, and modeling condition).

The analysis of variance involving the masculine minus feminine difference imitation scores as the dependent measure yielded a significant main effect of sex of subject, $F(1, 40) = 43.59$, $p < .001$. The sex main effect is due to the fact that the difference scores were determined by children's imitation preferences given by the male models minus their imitation preferences given by the female models. If the dependent variable had arbitrarily been determined by subtracting children's imitation preferences of the male models from their imitation preferences of the female model, then a highly significant main effect of sex in the opposite direction would have been obtained. There was also a significant interaction between sex of subject and modeling condition, $F(1, 40) = 46.82$, $p < .001$. The means for this interaction are given in Table I.

The nature of this interaction was examined by performing t tests on the means in Table I. Boys' masculine minus feminine difference scores were significantly greater in the modeling than no-model control group, $t(40) = 5.10$, $p < .001$, indicating that boys aware of the sex-type of the objects prefer the objects chosen by the other male rather than female models. However, girls' masculine minus feminine difference score in the modeling condition was significantly less than that for girls in the comparable control, $t(40) = 4.59$, $p < .001$. Obviously, girls made aware of the sex-type manipulation during the modeling phase preferred objects chosen by the female models to those chosen by the male models. It is of interest that children in the control group showed no difference for either item, which indicates the neutrality of the objects' sex-type prior to the experiment.

The analysis of variance performed on the children's masculine minus neutral imitation scores yielded a significant main effect for sex of subject, $F(1, 40) = 4.91$, $p < .05$. Boys preferred masculine to neutral items; girls showed no preference between the two (M for boys = 1.50[2]; M for girls = −.08[3]). The only other effect to attain significance was a main effect

[2] M for modeling group = 3.00; M for control group = .00.
[3] M for modeling group = .16; M for control group = −.33.

involving the modeling condition, $F(1, 40) = 6.00, p < .05$. Children in the modeling condition preferred to imitate the items chosen by the male models rather than those endorsed equally by both the male and female models; no-model control children did not show a preference for one item type over the other.

The final analysis of variance for the imitation scores was performed on subjects' preference for feminine minus neutral items. There was a significant main effect for sex of subject, $F(1, 40) = 28.68, p < .001$. Boys preferred the items chosen by both the male and female models to those chosen by all the female models. Girls, on the other hand, preferred items chosen by all the female models to those chosen by both the male and female models. The only other effect to attain significance was an interaction between sex of subject and modeling condition, $F(1, 40) = 31.18, p < .001$. The means for this interaction are given in Table II.

Further analysis of this interaction revealed that boys in the modeling condition preferred to imitate items chosen by both male and female models rather than those chosen only by female models, $t(40) = 5.02, p < .001$; no-model control group boys showed no difference in the preference for feminine over neutral items. Girls, on the other hand, preferred the items chosen only by the female models to those chosen by both the male and female models, $t(40) = 2.90, p < .05$; there was no preference for either item for girls in the control group.

Taken together, these results suggest that both boys and girls accept same-sex models; however, boys reject behavior typical of opposite-sex models more than do girls. In the first analysis of variance, in which the differential endorsement of objects chosen by the male versus the female models was analyzed, boys preferred objects chosen by the male models and girls preferred objects chosen by the female models. And the tendency to endorse same-sex items was roughly equal for the two sexes. When the masculine minus neutral difference scores were analyzed, boys were found to prefer objects chosen by the male models to those chosen by both male and female models. Girls, however, showed no preference for the objects preferred by all the male models to those preferred by both the male and female models. Therefore, although girls did not show an acceptance of behaviors typical of members of the opposite sex they did not demonstrate

Table II. Feminine Minus Neutral Imitation Means for Interaction of Sex of Subject and Modeling Condition

	Modeling condition	
Sex of subject	Modeled behavior	No-model control
Boys	−5.17	.00
Girls	2.83	−.17

rejection of them either. Finally, from the feminine minus neutral imitation score data, which give a more complete picture of the rejection issue, it is obvious that girls prefer the objects chosen by the female models to the objects chosen by both the male and female models; the reverse is true for the boys.

In summary, girls prefer objects chosen by the female models to those chosen by both only male models and male plus female models. Furthermore, girls demonstrate no preference between the latter two groups of models. Boys similarly prefer objects chosen by the same-sex models to those chosen by opposite-sex models and models of both sexes. However, boys prefer objects endorsed by models of both sexes to those endorsed by only female models. In fact, boys' endorsement of behaviors displayed by the female models is so low as to imply counterimitation or rejection of these models' behavior.

Recall Measure

Subjects in the modeling condition were asked to recall if all the boys, all the girls, or an equal number of boys and girls endorsed each of the objects. Correctly recalled choices were subjected to a $2 \times 2 \times 3$ analysis of variance involving two between-subjects factors (sex of experimenter and sex of subject) and one within-subject factor (sex-type of modeled response—masculine, feminine, or neutral). No effect attained significance (Grand $M = 5.31$).

DISCUSSION

The results support the hypothesis that boys prefer masculine objects to either feminine or neutral ones. Boys also prefer neutral objects to feminine ones. Girls prefer feminine objects to both neutral and masculine ones, but reveal no preference between neutral and masculine objects. Thus, both boys and girls prefer same-sex objects to opposite-sex ones; but girls, unlike boys, do not give lower priority to opposite-sex objects than to ones of a more neutral nature.

Girls, then, accept feminine behavior to the same extent that boys accept masculine behaviors, but without expressing the same degree of rejection of opposite-sex behaviors as the boys. In fact, from the results of this study, it looks as though there is little or no rejection of masculine objects by girls. The results indicate equal indorsement of masculine and

neutral objects when they are pitted against each other, and no differential endorsement of the two sets of objects from the control subjects for whom the sex-type of the object was not manipulated. That is, girls demonstrated no appreciable preference or rejection of masculine objects.

Similarly, the boys preferred items congruent with their own sex; however, they also rejected objects typically associated with members of the opposite sex. Feminine items paired with neutral ones resulted in the boys expressing a preference for the neutral over the feminine objects. When neutral items were paired with masculine ones, boys evidenced a strong preference for the masculine items.

With this information, how might we consider the issue of rejection or low priority of acceptance of feminine objects by boys? Obviously, boys prefer masculine items independent of other choices available. Therefore, it is of interest to consider boys' endorsements of neutral and feminine objects depending upon the objects against which they are pitted. The data reveal the feminine objects to be the least preferred, whether paired with masculine or neutral objects. Neutral items, on the other hand, are the least preferred when paired with masculine items, but are the most preferred when paired with feminine ones. Boys, then, are flexible in their endorsement of neutral items in that endorsement of these items is dependent on the type of item with which they are paired. In contrast, independent of the other types of item in the pair, boys prefer masculine items and least prefer or reject feminine ones. Whether this results in a rejection of feminine objects or a low priority for accepting such objects is a debatable point. The fact remains that for boys opposite-sex objects are the least preferred of any type of object and also considerably less preferred than the same object presented in the control group, which also implies counter-acceptance of feminine objects.

These hypotheses were upheld independent of the sex of the experimenter. This suggests that by 7 years of age, most children's adherence to behaviors typical of their sex is difficult to undermine simply by manipulating situational variables such as the sex of the experimenter. Results from this study suggest that the reason for emulating same-sex models differs according to the sex of the observer. For boys, same-sex imitation stems from a simultaneous desire to accept masculine behavior and reject feminine behavior. Girls also accept same-sex behavior, but are less repulsed by the thought of displaying cross-sex behavior. Thus, two processes appear to occur simultaneously in boys; they both accept male behavior and reject behaviors typical of females. Girls, on the other hand, endorse items pertaining to their own sex, but without rejecting male behaviors.

REFERENCES

Borstlemann, L. J. Sex of experimenter and sex-typed behavior of young children. *Child Development,* 1961, *32,* 519-524.

Bussey, K., & Perry, D. G. Sharing reinforcement contingencies with a model: A social-learning analysis of similarity effects in imitation research. *Journal of Personality and Social Psychology,* 1976, *34,* 1168-1176.

Emmerich, W. Parental identification in young children. *Genetic Psychology Monographs,* 1959, *60,* 257-308.

Hartley, R. E. Sex-role pressures and socialization of the male child. *Psychological Reports,* 1959, *5,* 457-468.

Johnson, M. M. Sex role learning in the nuclear family. *Child Development,* 1963, *34,* 319-333.

Maccoby, E. E., & Jacklin, C. N. *The psychology of sex differences.* Stanford; Stanford University Press, 1974.

Mischel, W. Sex-typing and socialization. In P. H. Mussen (Ed.), *Carmichael's manual of child psychology.* New York: Wiley, 1970.

Perry, D. G., & Bussey, K. The social learning theory of sex differences: Imitation is alive and well. *Journal of Personality and Social Psychology,* 1979, *37,* 1699-1712.