Generosity in Children:
Immediate and Long-Term Effects of Modeling, Preaching, and Moral Judgment

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The differential effectiveness of a model's words and deeds has recently been found to be problematic. A $3 \times 2 \times 2$ analysis of variance design examined these effects further and also that of moral judgment on the donating behavior of 140 children aged 7 to 11 years immediately and 8 weeks later. Modeling was highly effective both in the immediate and in the follow-up study and also proved generalizable across changes in the testing situation. Thus, it was concluded that "internalization" had occurred. Preaching also proved to be highly effective in the long run although not in the short run. Some support for a moral judgment relationship with generosity was found.

There has recently been an increasing interest in the determinants of altruistic behavior in children (Bryan & London, 1970). Much of this interest has stemmed from a social learning perspective (Bandura, 1969) involving attempts to test the limits of this paradigm. Within this approach is the recent series of studies designed to assess the differential effectiveness of words and deeds upon children's subsequent sharing behavior (Bryan, 1971; Bryan & Walbeck, 1970a, 1970b; Grusec, 1972; Grusec & Skubiski, 1970).

The prototype experiment used in these studies involved a bowling game situation within which a child was able to win valued tokens, later exchangeable for prizes. At the same time he was given an opportunity to donate anonymously some of his winnings to a charity. The degree to which the child did

donate constituted the dependent variable of generosity. Just prior to the child playing the game, however, he was exposed to a model playing the same game who either did or did not donate to the charity and did or did not preach that one should donate to the charity.

The results of these studies showed that while a model's behavior was a potent source of immediate influence, his preaching was much more problematic in this respect. Bryan and Walbek (1970a, 1970b) showed that while a model's practices influenced the child's behavior, the same model's preachings did not. However, both the model's preachings and his behavior affected the child's judgments of the model's attractiveness. Grusec and Skubiski (1970) showed that while a model's behavior was a clear source of behavior change for both sexes, regardless of whether the model was nurturant or not, the model's verbalizations were only effective for females who had been exposed to a nurturant model. Grusec (1972), however, did show that a model's verbalizations could be as effective an influence on the child's subsequent behavior as a model's behavior, although not for 7-year-old boys. Clearly, there is a need to investigate further the combined and separate effects of these two methods of influence. This is what the present study was designed to do.

The differential effectiveness of preaching

vis-à-vis modeling in the studies above *may* have been due to the ineffectiveness of the *manipulation* of the preaching variable. Three ways in which the preaching manipulation in the previous studies appeared weak were in relation to (a) their timing; (b) their direction; and (c) the power of the preacher.

As regards timing, while the modeling always occurred when the model was in a "win" situation, that is, collecting tokens for himself and being presented with an actual opportunity to donate, the preachings occurred either on "non-win" trials as in the Bryan and Walbek (1970a, 1970b) studies or *before* any trials at all as in the Grusec (1972) and Grusec and Skubiski (1970) studies. It is interesting that in the Bryan (1971) study in which an interaction involving the preaching variable did reach significance, the timing of the preaching in *that* study occurred immediately *after* obtaining a winning score. The author, however, did not refer to the timing when he sought to explain his results and was unable to interpret the interaction. It is suggested that the timing of the preaching relative to that of modeling may be crucial. The current study was designed to test this.

As regards direction, in the Bryan and Walbek (1970a, 1970b) studies, the exhortations were apparently delivered more to an empty room than addressed to the child; and in the Grusec studies the manipulation required the model to take "care not to look at the child" (Grusec, 1972, p. 142). In the current study, the preaching was directed *at* the child so resembling more the natural situation in which one seeks to exert influence.

As regards power, Grusec (1971) has shown that a powerful model produces more imitation than a nonpowerful one, but none of the studies varied the powerfulness of the model when examining preaching. The present study used a more powerful model than was used in the previously mentioned studies.

Hence, the current study was designed to test the differential effectiveness of modeling and preaching, using the same experimental procedure as Bryan and Walbek (1970a, 1970b) with the preaching manipulation strengthened in the three ways outlined: timing, direction of the preaching, and power of the model.

A further issue of some importance is the question of the durability and generality of behavioral learning following exposure to a model's actions and verbalizations. Apart from a 5-day retest of exposure to different types of modeling situations (White, 1972), there is virtually no evidence that exposure to a model produces anything more than conformity to the demands of the immediate experimental situation (Krebs, 1970). Hence, the current study employed a 2-month retest of the effectiveness of the independent variables and also tested for generality across dissimilar situations.

A still further issue to be investigated is the part played in altruistic behavior by cognitive developmental variables (Kohlberg, 1969). Although social learning theorists acknowledge that observer attributes may partly determine the efficacy of modeling influences (Bandura, 1969), rarely are such attributes varied independently. This is particularly noticeable in the field of moral development where such cognitive processes as role taking and moral judgment have been postulated to account for the age difference in sharing behavior frequently reported (Bryan & London, 1970; Rosenhan, 1969). In a previous study (Emler & Rushton, 1974), it was found that children's responses to Piaget's stories concerned with distributive justice were highly significantly related to their generosity scores. If such cognitive variables are indeed *determinants* of the behavior rather than just covariates, they might be expected to interact with and affect the reception of the social learning variables. A third focus of the present study then was the effect of children's level of moral judgment on generosity under a variety of experimental conditions.

METHOD

Subjects

Subjects were 140 children aged 7 to 11 years from a predominantly working class area of London. There were 28 children of each age, divided equally between the sexes.

Design

A $2 \times 2 \times 3$ factorial design was employed for 120 of the subjects with the remaining 20 being assigned to a control condition. The factors were the child's high versus low moral judgment; a model's generous versus selfish behavior; and a model's generous versus selfish versus neutral preaching. Within each cell, subjects were equated for age and sex to permit examination of these effects on generosity, too. Each subject participated in two experimental sessions separated by 8 weeks. Within each class, a subject was sent to an experimenter in an order determined by the teacher and then randomly assigned to treatment condition. On retest, all subjects within conditions, again equated for sex and age, were divided into two equal groups and assigned to one of two conditions, one in which the retest condition was similar to the original testing situation and one in which it was dissimilar.

Procedure

Initial testing. Each subject was sent by teacher to the experimental room where an experimenter met him and established a rapport. Six stories[1] adapted from those used by Piaget (1932) were told to the subject with a standard series of questions to elicit the subject's concepts of moral justice. The order was randomized across subjects. Subjects' responses were recorded on tape for subsequent analysis on the basis of Piaget's (1932) criteria.

The experimenter then showed the subject a number of attractively arranged prizes ranging from comics and small puzzles to games suitable for both boys and girls of the age range. The subject was asked if he would like to win one of these prizes. When the subject said yes, the experimenter showed him the electronic bowling game. This was similar to that described by Rosenhan and White (1967), being about 3 feet (.91m) long with an upright panel at the end of the runway to indicate scores on each trial. Four scores were possible—5, 10, 15, and 20—the last being counted as a winning score. The predetermined sequence included eight scores of 20 in a game of 20 trials. A buzzer sounded at the termination of the game.

There were 100 tokens, in piles of 2, placed on a table beside the game. Also on this table was a bowl beneath a "Save the Children Fund" poster depicting a poorly clothed child. A caption read "Please Give." The bowl contained 10 tokens. Another bowl was provided to hold subject's winnings. The experimenter introduced the subject to

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[1] Full details of the stories and coding procedures can be found in the doctoral dissertation of the author submitted to the University of London, October 1973 entitled *Social learning and cognitive development: Alternative approaches to an understanding of generosity in 7 to 11 year olds.* Alternatively, a mimeographed sheet of the stories will be sent upon request to the author.

the same-sex model who was presented as a possible future teacher in the school (this was to make the model appear powerful) and was interested in playing the game, too.

The experimenter explained to the subject and the model how to play the bowling game, how to reward themselves with tokens, and if they wished to, how to donate to "Bobby," the child in the poster. The optional nature of giving was stressed. They were told that the more tokens they won, the better prize they could have. The experimenter suggested that the model should play the game first and instructed the subject to watch. The experimenter then left the room. The model then played the game and either donated to Bobby one of each of the two tokens he won on winning trials (generous model) or he kept both for himself (selfish model). At the same time he preached either generosity, selfishness, or provided a neutral conversation. The preaching was given on winning trials with the model looking at the subject and saying with emphasis:

Generous preaching. "We *should* share our tokens with Bobby" (winning Trials 1 and 5); "It's *good* to give to kids like him" (winning Trials 2 and 6); "It's *right* to share counters with Bobby" (winning Trials 3 and 7); "You *should* give to kids like him" (winning Trials 4 and 8).

Selfish preaching. "We *should not* share our counters with Bobby" (winning Trials 1 and 5); "It's *not good* to give to kids like him" (winning Trials 2 and 6); "It's *not right* to share tokens with Bobby" (winning Trials 3 and 7); "You *should not* give to kids like him" (winning Trials 4 and 8).

Neutral preaching. "This is a nice game" (winning Trials 1 and 5); "I really like playing this game" (winning Trials 2 and 6); "This is really fun" (winning Trials 3 and 7); "I like this game" (winning Trials 4 and 8).

When the buzzer sounded at the end of the game, the model reset it and told the subject to play the game now as it was his turn. The model then left the room, ostensibly to take his winnings out to the experimenter. When the buzzer sounded at the end of the subject's game, the experimenter reentered the room, counted up the tokens in the subject's bowl, and told the subject prizes would be given out after everyone had a turn at the game. The experimenter then asked the subject to indicate his view of the model as very nice, just okay, not so nice, or very bad and, further, how much he would like to be in the model's class if the model became teacher in that school, a lot, a little bit, don't mind, or not so much.

Two-month retest similar condition. The same male experimenter came to the class, called out the subject's name, took him back to the same experimental room as before, asked him if he liked the prize he had been given, and told him that since there were some prizes left he could have another go at the same game. The experimenter reminded the subject of how to play the game and how to win tokens saying only in passing that if the subject

wished to give any of his tokens to charity he could still do so.

Two-month retest dissimilar condition. A female experimenter the children had never seen before came to the class and called out the subject's name and took him to a *different* room in a different part of the school and reminded him how to play the game etc. In addition, the poster of "Bobby" was changed from a yellow background depicting one poorly dressed little English boy to a red one depicting three obviously starving Asian children.

Controls. There were 20 control subjects, two from each age of 7–11 divided evenly between the sexes and randomly assigned to a control condition. Subjects were administered the moral judgment stories, as in the experimental group, but were not exposed to the modeling situation. They were shown how to play the game by themselves, were told how to donate if they wished to, and then played immediately afterwards. For the retest conditions they were divided into two equal groups and divided into either the similar or dissimilar retest condition.

Experimenter bias controls. The experimenter was kept blind as to the subject's test conditions. In the immediate test this meant that it was the model who selected the treatment condition and the experimenter was blind as to which condition the subject was in while he administered the moral judgment stories and gave instructions.

In the retest condition, the experimenter simply had the subjects' names on a list with no knowledge as to which condition each subject had been run under 2 months previously or how many tokens he or she had donated. This was even more true for the experimenter in the dissimilar retest condition who had never met the children.

RESULTS

Four experimental subjects and two control subjects were dropped from the analyses due to their failure to turn up for the retesting. Of the six moral judgment stories given to subjects, only two showed the positive relationship with age necessary to be considered as a cognitive-developmental variable, $\chi^2(4)$

TABLE 1

MEAN NUMBER OF TOKENS DONATED BY AGE, SEX, AND TIME OF TESTING

Testing	Age (in years)				
	7	8	9	10	11
Immediate test					
Boy	3.8	3.9	4.2	4.0	5.4
Girl	2.0	4.5	4.8	3.9	5.1
Two-month retest					
Boy	2.6	2.8	3.6	4.4	7.3
Girl	2.9	1.7	4.7	2.9	5.8

$= 6.54$, $p < .05$; $\chi^2(4) = 14.67$, $p < .01$. Scores for the two stories were combined and subjects divided into those scoring above and those below the median. The age relationship to this combined moral judgment score was significant, $\chi^2(4) = 14.92$, $p < .01$. There were no sex differences on these moral judgment stories, either separately or combined, $\chi^2(1) = .30$, $\chi^2(1) = .30$, $\chi^2(1) = .65$.

A preliminary analysis of variance was carried out to test the effects of age and sex on immediate generosity, retested generosity, and evaluations of model. The measure of generosity consisted of the number of tokens the subject donated to the charity out of the 16 won. No significant age differences were found on the immediate generosity or upon the subject's evaluations of the model. There was, however, a highly significant age difference on donating behavior on retest, $F(4, 106) = 7.8$, $p < .001$, such that older children gave more than younger children (see Table 1).

As there were no significant sex differences nor Sex × Age interactions on immediate generosity, retested generosity, or evaluations of the model, all further analyses were collapsed over sex.

Generosity: Immediate Test

The effects of modeling, preaching, and moral judgment were then examined against the immediate generosity scores. Modeling was found to be a highly significant determiner of the subject's immediate donations, $F(1, 104) = 158.18$, $p < .001$. Preaching had no effect, $F(2, 104) < 1.00$. The subject's level of moral judgment was also significant, $F(1,104) = 7.47$, $p < .007$. The mean number of tokens donated by subjects with low and high moral judgment scores were 3.3 and 4.6, respectively. When age was introduced as a covariate, however, moral judgment had a somewhat weaker effect on donations, $F(1, 103) = 4.04$, $p < .05$. There was only one, near significant, interaction, Preaching × Modeling, $F(2, 104) = 2.74$, $p < .07$. Generous models who preached selfishness produced less donating than did generous models who had preached generosity, or who had made neutral comments. Further, selfish models who preached neutral comments pro-

TABLE 2

MEAN NUMBER OF TOKENS DONATED IN IMMEDIATE
TEST BY MODELING AND PREACHING

Model	Preaching		
	Generous	Neutral	Selfish
Generous	7.6	7.6	6.1
Selfish	1.8	.9	1.7

Note. Controls donated a mean number of 4.1 tokens.

duced less giving than selfish models who preached either generosity or selfishness. These results are shown in Table 2.

In order to test the possibility that modeling or preaching might have different effects depending on the subject's age, a further analysis of variance was computed. Neither modeling nor preaching, alone or in combination, produced significant interactions with age, $F = 1.32$, $F = 1.18$, $F < 1.00$, respectively.

Evaluations of Model

The two different measures of subject's evaluations of the model (liking rated 1–4; and desire to be in the model's class if the model became a teacher in that school rated 1–4) were virtually identical. Results are therefore shown only for the second measure, unless otherwise stated. Both the model's preaching and behavior were highly significant determiners of his judged attractiveness, $F(2, 104) = 5.62$, $p < .005$; $F(1, 104) = 21.19$, $p < .001$, respectively. The Preaching × Behavior interaction was also significant such that the selfish model who preached neutral comments but did not donate was judged more attractive than the selfish model who had preached either generosity or selfishness, $F(2, 104) = 4.49$, $p < .01$. Table 3 presents the ratings of the model. Scores are such that the higher the score, the greater the model's attractiveness.

Moral judgment had no main effect on the subject's evaluation of the model, $F(1, 104) < 1.0$, but did interact with the preaching manipulation on the *second* measurement of the model's attractiveness, $F(2, 104) = 3.32$, $p < .05$, although not on the first measure ($F < 1.00$). This relationship held when age was covaried, $F(2, 103) = 3.41$, $p < .05$. On this second measure, subjects with a high

moral judgment score rejected the selfish preacher ($\bar{X}$ rating = 2.3), while those with a low moral judgment score did not ($\bar{X}$ rating = 3.0).

Generosity: Two-Month Retest

A comparison of the dissimilar and similar retesting situations was made by carrying out an analysis of variance using the retesting condition as an independent variable in conjunction with the modeling and preaching conditions. The type of retest condition yielded no significance, either as a main effect, $F(1, 103) < 1.00$, or in interaction with modeling, $F(1, 103) < 1.00$, preaching, $F(2, 103) < 1.00$, or both $F(2, 103) = 1.55$. Thus further analyses were collapsed over retest conditions. Thus, the long-term effects of modeling, preaching, and moral judgment were able to be examined against the combined 2-month retest scores.

Even after an 8-week gap, modeling was still a highly significant, $F(1, 104) = 16.44$, $p < .001$, influence on subject's donating behavior. In addition, preaching which had no effect in the immediate test now had a highly significant overall effect, $F(2, 104) = 4.77$, $p < .01$. Models who preached selfishness produced less giving than those who preached generosity or neutral messages. Further, there was a significant Preaching × Modeling interaction effect, $F(2, 104) = 3.48$, $p < .05$, such that the model preaching selfishness but behaving generously caused subjects to donate the least number of tokens in the generous model condition, while the model preaching generosity but behaving selfishly produced the most giving in the selfish model condition. Furthermore, the model preaching neutral messages in the generous model condition produced more giving than the generous model

TABLE 3

MEAN RATINGS OF MODEL'S ATTRACTIVENESS BY
MODELING AND PREACHING

Model	Preaching		
	Generous	Neutral	Selfish
Generous	3.7	3.3	3.2
Selfish	2.5	3.2	1.8

TABLE 4

MEAN NUMBER OF TOKENS DONATED IN RETEST
BY MODELING AND PREACHING

Model	Preaching		
	Generous	Neutral	Selfish
Generous	5.2	6.8	3.3
Selfish	3.2	2.8	2.4

Note. Controls denoted a mean number of 4.2 tokens.

preaching generosity. These results are shown in Table 4.

Differences in donating behavior for subjects with high and low moral judgment found in the first test did occur on retest, but only when age was *not* covaried from the analysis, $F(1, 104) = 8.55$, $p < .004$. With age introduced as a covariate, the significant relationship between moral judgment and generosity disappeared, $F(1, 103) = 2.42$. Moral judgment did not exert any significant interaction effect.

Control subjects donated a mean number of 4.2 tokens on the retest, there being a correlation of $r = .71$ ($df = 16$, $p < .001$) between their behavior on Test 1 and that on Test 2. The consistency of behavior between the first test and retest 8 weeks later was also considerable for the experimental group, $r(114) = .51$, $p < .001$.

DISCUSSION

Modeling has been shown, in the context of this experiment at least, to be a powerful determiner of children's sharing behavior. Further, this behavior evidences both *durability* and *generality*. Thus, according to Kreb's (1970) criteria, it is reasonable to conclude that new learning or internalization of this moral behavior has occurred. It would seem that a model does more than simply induce temporary situational conformity mediated by some vaguely defined form of "demand characteristics" or "experimenter effect." If the usual demand characteristics explanation were viable, one would expect the model's preachings to work as an additional cue to the child, especially when preaching and modeling contradicted one another. This, in the immediate test, was not the case, despite our attempts to strengthen substantially

the preaching manipulation. This finding thus replicates the results reported by Bryan and Walbek (1970a, 1970b).

The effectiveness of the preaching manipulation can hardly be doubted given that (a) preaching *was* a powerful source of the child's evaluations of the model and (b) preaching did have a major effect on the 2-month follow-up study.

The finding that while preaching did not directly influence subject's behavior it *did* influence subject's evaluations of the model again replicates Bryan and Walbek (1970a). In addition, however, this study demonstrated a significant Preaching × Modeling interaction on evaluations (see Table 3) which Bryan and Walbek (1970a, 1970b) failed to find. Selfish models who said "This is really fun" were seen as more attractive than selfish models who preached generosity or selfishness. This suggests that rather than the model providing a "neutral" preaching, he provided a source of positive affect. Table 2 provides some support for this suggestion. Imitation of the model was highest, for both generous and selfish models, in the neutral condition. Table 4 provides further support. The significant Modeling × Preaching interaction on retest is partially due to the generous model preaching neutral messages producing the most donating in the generous model condition. Model affect consisting of the model saying "I am happy" *has* previously been shown to increase subsequent imitative generosity (Bryan, 1971), particularly when immediately following the model's behavior. Bryan (1971), however, failed to find that imitative measures were related to the subject's judgments of the model. Bryan also, however (Bryan & Walbek, 1970a, 1970b), failed to find the subject's behavior related to the model's preaching. The discrepancy between the findings reported here and those reported by Bryan is probably due to the increased strength of the preaching manipulation in the present study, which strengthened preaching in respect to (a) its timing; (b) its direction; and (c) the power of its deliverer.

The strength of the preaching manipulation emerged strongest in regard to the 2-month retest. This "delay effect" is highly interesting and appears to be due to the

preachings differentially affecting the decay rates of the behaviors originally induced by the modeling. Generally, when preaching was consistent with the modeling, less decay or regression to the mean occurred. On the other hand, when preaching was discrepant with the modeling, most regression to the mean occurred. The explanation for this finding is probably best sought at one or more of the component subprocesses in the information processing system governing modeling phenomena. These subprocesses include attentional mechanisms governing initial registration of modeled events; storage of the modeled events; retrieval of the events from storage after 2 months; and the motivational processes that determine whether the remembered events are activated into overt performance (Bandura & Jeffrey, 1973).

One possible explanation within this framework would be that in the initial test the perceptual dominance of the model's actions caused the subject to rely predominately upon his visual memory when playing the game himself. This is what would be expected from Bruner et al.'s (1966) work on the development of cognitive processes in children. Children of the age range used in this experiment would be expected to be more attentive to perceptual attributes of situations rather than to symbolic attributes. However, both on the 2-month retest and on the experimenter's questioning the subject of his evaluation of the model, the subject is of necessity required to rely more upon symbolic process and semantic memory either to recall the initial situation to himself or to process the meaning of the questions. Thus the model's verbalizations are perforce made more equally salient to the model's actions.

An alternative explanation in terms of the information processing system would be that inconsistencies in stimulus input would cause differential *memory loss* over a long period of time although not over a very short period due to the fact that memory loss in the long-term store appears to be primarily due to semantic confusion (Baddeley & Dale, 1966). Thus the child has greater difficulty retrieving the relevant information in the discrepant condition due to the competing memory traces that were stored canceling each other.

In this study, independent measures of the state of the information being processed at different points were not taken. Ideally, future research will attempt to elucidate the elements in the information processing system responsible for the observed regularities in the overt behavior.

That the delay effect was no chance occurrence is demonstrated by (a) the power of its statistical association, both as a main effect, and in interaction; (b) the rational patterning of that interaction; and (c) the finding that exactly the same patterns of results occurred across retest situations. Words and deeds appeared to have independent effects on the children's behavior.

It would appear that while the social learning paradigm is relatively explicit and the conditions under which models exert maximal effects are fairly well understood, the relation of verbal communications to behavior requires much more extensive investigation.

On the basis of earlier work (Emler & Rushton, 1974; Rubin & Schneider, 1973) it was expected that predictions of a child's generosity could be made with better than chance results from a knowledge of the child's level of moral judgment. This expectation was confirmed in the present study where an association was found between moral judgment and generosity both on the immediate test and on the delayed test. However when age was covaried from the analysis the strength of the relationship was weakened. Indeed on the 8-week retest, covarying age reduced the relationship to below an acceptable level of statistical significance. In some ways this is surprising. That moral judgment might show only a weak effect in the immediate test when the manipulation of modeling was having its maximum effect is understandable if it can be argued that the modeling effect was blanketing all other effects (an idea that is supported by the lack of normally expected age relationships with the immediate test of generosity). It would then have been expected that in the retest condition, when any enduring individual characteristics would reemerge (as with the age relationship to generosity), moral judgment would exert a stronger effect. However this was not found.

On the question of causality, the results *might* suggest that moral judgment did not have *causal* influences on the generosity scores of the children. This argument would rest on the assumption that if moral judgment had been a determiner of generosity, rather than just a covariate, it would be expected to interact with, and affect the reception of, other determiners of altruistic behavior. The behavior of a model, whether behaving generously or selfishly, might be expected to have had a differential effect depending on whether it was observed by a child with a high or a low level of moral judgment. Such interactions did not occur. It should be noted, however, that there was a significant Preaching × Moral Judgment interaction on the child's *evaluation* of the model's attractiveness. Children with a high moral judgment score rejected the selfish preacher while those with a low moral judgment score did not. Thus moral judgment *was* exerting *an* effect. Finally, this study demonstrates the value of examining social learning and cognitive developmental variables over time and across situations.

REFERENCES

Baddeley, A. D., & Dale, H. C. A. The effect of semantic similarity on retroactive interference in long and short term memory. *Journal of Verbal Learning and Verbal Behavior*, 1966, *5*, 417–420.

Bandura, A. *Principles of behavior modification.* New York: Holt, Rinehart & Winston, 1969.

Bandura, A., & Jeffrey, R. W. Role of symbolic coding and rehearsal processes in observational learning. *Journal of Personality and Social Psychology*, 1973, *26*, 122–130.

Bruner, J. S., et al. *Studies in cognitive growth.* New York: Wiley, 1966.

Bryan, J. H. Model affect and children's imitative altruism. *Child Development*, 1971, *42*, 2061–2065.

Bryan, J. H., & London, P. Altruistic behavior by children. *Psychological Bulletin*, 1970, *73*, 200–211.

Bryan, J. H., & Walbek, N. H. Preaching and practicing generosity: Children's actions and reactions. *Child Development*, 1970, *41*, 329–353. (a)

Bryan, J. H., & Walbek, N. H. The impact of words and deeds concerning altruism upon children. *Child Development*, 1970, *41*, 747–757. (b)

Emler, N. P., & Rushton, J. P. Cognitive-developmental factors in children's generosity. *British Journal of Social and Clinical Psychology*, 1974, *13*, 277–281.

Grusec, J. E. Power and the internalization of self-denial. *Child Development*, 1971, *42*, 93–105.

Grusec, J. E. Demand characteristics of the modeling experiment: Altruism as a function of age and aggression. *Journal of Personality and Social Psychology*, 1972, *22*, 139–148.

Grusec, J. E., & Skubiski, S. L. Model nurturance, demand characteristics of the modeling experiment and altruism. *Journal of Personality and Social Psychology*, 1970, *14*, 352–359.

Kohlberg, L. Stage & sequence: The cognitive-developmental approach to socialization. In D. A. Goslin (Ed.), *Handbook of socialization theory and research.* Chicago: Rand McNally, 1969.

Krebs, D. L. Altruism—An examination of the concept and a review of the literature. *Psychological Bulletin*, 1970, *73*, 258–302.

Piaget, J. *The moral judgment of the child.* London: Routledge, 1932.

Rosenhan, D. Some origins of concern for others. In P. Mussen, J. Langer, & M. Covington (Eds.), *Trends and issues in developmental psychology.* New York: Holt, Rinehart & Winston, 1969.

Rosenhan, D., & White, G. M. Observation and rehearsal as determinants of pro-social behavior. *Journal of Personality and Social Psychology*, 1967, *5*, 424–431.

Rubin, K. H., & Schneider, F. W. The relationship between moral judgment, egocentrism, and altruistic behavior. *Child Development*, 1973, *44*, 661–665.

White, G. M. Immediate and deferred effects of model observation guided and unguided rehearsal on donating and stealing. *Journal of Personality and Social Psychology*, 1972, *21*, 139–148.