EFFECTS OF A MODEL'S REWARD AND DONATION MAGNITUDES ON CHILDREN'S ALTRUISTIC BEHAVIOR

by

Gail Harriet Steinsultz

A Thesis Submitted to the Faculty of the

DEPARTMENT OF PSYCHOLOGY

In Partial Fulfillment of the Requirements
For the Degree of

MASTER OF ARTS

In the Graduate College

THE UNIVERSITY OF ARIZONA

1 9 7 3

STATEMENT BY AUTHOR

This thesis has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the head of the major department or the Dean of the Graduate College when in his judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

SIGNED: Gail Steinmetz

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

G. M. White — 7-17-73

G. M. WHITE
Associate Professor of Psychology

Date

ACKNOWLEDGEMENTS

The author wishes to acknowledge the cooperation of the Superintendent of the Amphitheater School District and the staffs of both Wetmore and Donaldson Elementary Schools.

The author also wishes to acknowledge Dr. G. M. White for his continued guidance during the research of this thesis.

TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

In a social comparison situation, 72 fourth grade girls were exposed to an adult female model who earned one of three amounts of pennies during a guessing task and donated one of three amounts to a charity. Each subject was then permitted to take her turn alone at the guessing task, earning a total number of pennies that was either less than, greater than, or the same as the amount earned by the model. The amounts donated to the charity by the subjects were analyzed with a 3 x 3 fixed effects factorial analysis of variance. Neither the amount earned by the model, the amount donated by the model, nor the interaction between these two factors was statistically significant. The results were discussed in terms of changes in the design of the study which would provide for a more comprehensive evaluation of the role of social comparison in modeled altruistic behavior.

CHAPTER 1

INTRODUCTION

Each of us is frequently assailed by requests to give to one of numerous charitable organizations through media ranging from door-to-door solicitors to national telethons. Psychologists have recently become interested in the altruistic behaviors produced by such procedures, especially with regard to the development and elicitation of such behavior in children (cf. Bryan and London, 1970, for a review of this literature). Of particular interest has been the finding that the observation of an altruistic model facilitates children's altruistic behavior. Beginning with Rosenhan and White's (1967) demonstration that children who observe a model donate to a charity are more likely to donate themselves when subsequently given the opportunity to do so, numerous investigators have directed their efforts toward delineating the conditions under which a model may constitute an effective stimulus in prompting altruistic behaviors in children (eg., Bryan and Walbek, 1970a, 1970b; Grusec and Skubiski, 1970; Harris, 1970, 1971; Hartup and Coates, 1967; Liebert and Poulos, 1971; Masters, 1971; White, 1972).

Festinger's social comparison theory (1954) has been one source of hypotheses concerning the means through which a model may become an

effective eliciting agent. Bandura and Whalen (1966) applied Festinger's theory to the self-reinforcement situation by exposing children to models with either high, equal, or low standards of self-reinforcement. Masters (1971, 1972) has extended the theory's application more directly into the realm of modeled altruistic behavior. In the latest of a series of studies dealing with this issue, Masters (1972) exposed four-year-old children to a social comparison situation in which they were permitted to earn more, fewer, or the same number of rewards as an adult model at a question and answer game. The model displayed several neutral behaviors, such as building a block tower and placing a feather in a hat, and donated rewards to "poor children". Children who received more rewards than the model displayed less imitation of neutral behaviors than those in a control condition. However, due to Masters' distinction between "true altruism", that is, donating more rewards than were donated by the model, and "imitated altruism", donating exactly the same number as were donated by the model", it is difficult to determine the nature of the effect of the social comparison situation on the subjects' donations.

The present investigation was carried out in an attempt to clarify the ways in which social comparison effects children's altruistic behavior. Subjects were exposed to a model who earned either more, fewer, or the same number of pennies as the subject during a "guessing" task. The model donated one of three amounts of her pennies to a charity with the object of making it possible to distinguish whether the subject was using the absolute amount donated

by the model as a guide to the size of her own donation, or whether she was comparing the amount she earned with the amount earned by the model and using the discrepancy as the basis for determining the amount it would be appropriate to donate.

Social comparison theory (Festinger, 1954) would seem to suggest that subjects observing the model who earned the same amount at the task would donate an amount identical to that donated by the model. In the absence of an objective, non-social standard against which to evaluate their opinions or abilities, people will base their evaluations on the opinions or abilities of others. When a discrepancy exists with respect to opinions or abilities, there will be a tendency to change one's own position in order to make it more consonant with the position of those persons constituting the comparison group. In the case of the subjects who earned the same amount as the model, abilities would be assessed as similar and the opinion of how much it is appropriate to donate to the charity should tend to become more congruous. An interpretation of social comparison theory such as Master's (1972) would suggest that the children in the groups receiving more or fewer pennies would tend to cease comparison with the model and subsequently donate less than the model. However, if they compare themselves to the model with regard to the relative amounts they have earned rather than simply with regard to whether the amounts are the same or different, a different pattern of donations should appear, leading to the following hypotheses:

1. Those children earning a greater number of pennies than the model will donate a larger proportion of their earnings than those receiving the same amount.
2. Those children earning less than the model will donate a smaller proportion.
3. Those subjects viewing the model donate a larger proportion of her earnings will tend to donate more of their own than those viewing the model donate a smaller proportion.

CHAPTER 2

METHOD

Subjects and Model

The subjects were 72 fourth grade girls obtained form the Amphitheater Public School District. The mean age of the subjects was nine years, ten months with a standard deviation of six months. The subjects were randomly assigned to one of the nine experimental conditions, yielding a total of eight subjects per group.

The adult female experimenter served as the potential model.

Apparatus

The apparatus consisted of a metal box 25 cm. high, 46 cm. wide, and 27 cm. deep. On the front of the box were two response buttons 17 cm. apart, one red, the other black. A green light used to signal the beginning and end of the task period was centered above the response buttons. Pennies were dispensed into a small metal cup through an aperture in the lower right hand corner of the box. A second box contained the necessary electronic control devices. Next to the response box was a poster with the words "Tucson Orphan's Fund" printed on it. A small donation jar was placed in front of the poster. The jar was half filled with pennies covered with a

plastic bag so that additional pennies dropped into the jar would make a convincing clink.

Procedure

Upon entering the experimental room each subject was asked to sit in one of two chairs facing the response box. The experimenter sat in the remaining chair. The subject was told, "We are interested in learning about how people make guesses. To do this we are going to use this box. Sometimes the black button is correct and sometimes the red button is correct. What I want you to do is to press whichever button you think is correct. If you are right, a penny will fall into the cup. You may keep the penny. The people who made the box thought it would be nice if some of the pennies were donated to the Orphan's Fund. You may donate some of yours if you wish, but you don't have to. Before you start I'm going to take a turn to show you how it works. When the green light goes on my turn will begin and when it goes off my turn will be finished." The experimenter turned on the green light and began pressing the buttons at a slow rate. The model received a predetermined number of pennies (8, 12, or 16) on a variable ratio schedule. After she had made twenty-four responses, the green light was automatically turned off, and she mentioned that her turn was over. At this point she counted her pennies, and, turning to the charity jar, she said, "I won ___ pennies. I think I'll donate ___ of them to the Orphan's Fund." The model then donated one of three predetermined amounts (4, 6 or 8) to the charity by dropping the pennies one by one into the jar.

The subject was then instructed to take her turn. She was told that the experimenter would wait outside the room while she was taking her turn, and that she should leave when her turn was over. The number of pennies donated by the subject was counted after she left the room to return to class.

The nine experimental groups were differentiated on the basis of three levels of each of two variables. The first variable was the amount earned by the model at the guessing task. The levels were 16, 12, and 8 pennies. The subjects in all groups earned 12 pennies. The second variable was the amount donated by the model, either 8, 6, or 4 pennies.

CHAPTER 3

RESULTS

The mean number of pennies donated across groups was 2.889 with a standard deviation of 2.866. The mean amount donated by each group is shown in Table 1.

A 3 x 3 fixed effects factorial analysis of variance was performed on the amounts donated by the subjects. Neither the amount earned by the model, the amount donated by the model, nor the interaction of these two variables was found to be significant at the $p < .05$ level (see Table 2).

Table 1

Mean Amounts Donated by Subjects According to Amount Earned and Amount Donated by Model

Model's Donation	Model's Earnings			
	16	12	8	Total
8	3.125	3.375	1.625	2.750
6	2.375	2.375	4.000	2.917
4	2.375	4.625	2.000	3.000
Total	2.625	3.550	2.542	2.889

Table 2

Summary Table of Analysis of Variance

Source	df	SS	MS	F	P
Amount Earned by Model	2	13.528	6.764	0.819	>.05
Amount Donated by Model	2	0.778	0.389	0.047	>.05
Amount Earned x Amount Donated	4	48.555	12.139	1.470	>.05
Within Groups	63	520.250	8.258	-	-

CHAPTER 4

DISCUSSION

The hypotheses clearly were not supported by the data obtained in this investigation. However, before discarding the hypotheses, several points should be made with regard to the factors which may have contributed to the lack of significance of the results.

It is possible that a peer model who was presented to the subjects as being merely another subject like themselves would have been more effective than the adult experimenter model. Social comparison theory (Festinger, 1954) hypothesizes that the tendency to compare oneself with some other specific person decreases as the difference between his opinion or ability and one's own increases, particularly if the person who is divergent from one's own opinion or ability is perceived as being different from oneself on attributes consistent with the divergence. Those subjects viewing the model earn more than they earned might have perceived the adult experimenter as more competent at the "guessing" task and therefore not comparable to themselves. It is also likely that the subjects would not regard the small number of pennies earned and donated by the adult experimenter as being as important to her as they may have been to the subjects. The use of a peer model who was also a subject would have eliminated these difficulties.

The variability within groups was quite large. Two major factors could be responsible for this variability. The first is the age range covered in the investigation, from eight years, seven months to twelve years, ten months. Less variability may have been obtained by restricting the choice of subjects to those who were within six months of being exactly ten years old. The second factor is the salience of the amount of pennies used in the investigation. The economic statuses of the subjects were quite varied. Perhaps control over this variable or pretraining to establish the amount earned as a standard would reduce the variability found within groups.

Due to the factors mentioned above, the present investigation can not be regarded as a comprehensive test of the hypotheses. Future investigations into the role of social comparison phenomenon in modeled altruistic behavior would benefit from taking these factors into consideration.

REFERENCES

Bandura, A., and Whalen, C. K., "The Influence of Antecedent Reinforcement and Divergent Modeling Cues on Patterns of Self-Reward," Journal of Personality and Social Psychology, 3 (1966), pp. 373-382.

Bryan, J. H., and London, F., "Altruistic Behavior by Children," Psychological Bulletin, 73 (1970), pp. 200-211.

Bryan, J. H., and Walbek, N. H., "Preaching and Practicing Generosity: Children's Actions and Reactions," Child Development, 41 (1970), pp. 329-353. (a)

Bryan, N. H., and Walbek, N. H., "The Impact of Words and Deeds Concerning Altruism Upon Children," Child Development, 41 (1970), pp. 747-757. (b)

Festinger, L. A., "Theory of Social Comparison Processes," Human Relations, 7 (1954), pp. 117-140.

Grusec, J. E., and Skubiski, S. L., "Model Nurturance, Demand Characteristics of the Modeling Experiment, and Altruism," Journal of Personality and Social Psychology, 14 (1970), pp. 352-357.

Harris, M. B., "Reciprocity and Generosity: Some Determinants of Sharing in Children," Child Development, 41 (1970), pp. 313-328.

Harris, M. B., "Models, Norms, and Sharing," Psychological Reports, 29 (1971), pp. 147-153.

Hartup, W. W., and Coates, B., "Imitation of a Peer as a Function of Reinforcement from the Peer Group and Rewardingness of the Model," Child Development, 38 (1967), pp. 1003-1016.

Liebert, R. M., and Poulos, R. W., "Eliciting the 'Norm of Giving': Effects of Modeling and Presence of Witness on Children's Sharing Behavior," Proceedings, 79th Annual Convention, APA, 6 (1971), pp. 345-346.

Masters, J. C., "Effects of Social Comparison Upon Children's Self-Reinforcement and Altruism Toward Competitors and Friends," Developmental Psychology, 5 (1971), pp. 64-72.

Masters, J. C., "Effects of Social Comparison Upon the Imitation of Neutral and Altruistic Behaviors by Young Children," Child Development, 43 (1972), pp. 131-142.

Rosenhan, D., and White, G. M., "Observation and Rehearsal as Determinants of Prosocial Behavior," Journal of Personality and Social Psychology, 5 (1967), pp. 424-431.

White, G. M., "Immediate and Deferred Effects of Model Observation and Guided and Unguided Rehearsal on Donating and Stealing," Journal of Personality and Social Psychology, 21 (1972), pp. 139-148.