

INDUCTION, RECIPIENT DESERVINGNESS  
AND PERSONALITY ATTRACTIVENESS:  
EFFECTS ON CHILDREN'S HELPING BEHAVIORS

by

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### Abstract

The purpose of this study was to determine if induction (explaining and reasoning with children so as to be altruistic), children's perception of a potential recipient's deservingness of help and personality attractiveness influenced their helping behavior in the form of pledged and actual donations, and pledges to contribute written stories.

These three variables were chosen for study because they represent influences from two distinct sources - a third party (person delivering the induction) and the potential recipient. Specifically, induction represents a direct attempt from a third party to influence the child while deservingness and personality attractiveness are characteristics of the potential recipient that might be expected to exert influence on the child. Studying these three variables together permitted one to discern the unique and the interactive effects of these sources of influences.

A total of 195 boys and girls in grades five and six were randomly assigned to one of eight treatment conditions - each subject was randomly given one of eight "stories" to respond to - while the study was being conducted in their classrooms. Each story was a systematic combination of induction (induction vs. non-induction), deservingness (high vs. low), and personality attractiveness (high vs. low) treatments.

Nine questions, designed to engage children's attention in the story and to serve as manipulation checks (process measures) and outcome/criterion (dependent) measures, were inserted in the appropriate locations of the story.

Subjects' scores from the Comprehension Test of the Gates-MacGinitie Reading Tests and their responses to 10 relevant pre-experimental questions were obtained as possible covariates prior to treatment.

Subjects first were paid 50 cents for doing some art work for a "foster-parent agency". They then read a "story" about an elderly person and later were given an opportunity to anonymously donate earnings to help and to contribute written stories to entertain that person.

Multidimensional contingency table analyses of the process measures (manipulation checks) showed that the recipient deservingness and personality attractiveness treatments were functioning as expected and that: 1) a person with an attractive personality was liked and a person with an unattractive personality was disliked by children; and 2) children perceived deservingness in terms of personality attractiveness such that regardless of deservingness, a person with an attractive personality was perceived as more deserving than a person with an unattractive personality.

A 4-way (induction x deservingness x attractiveness x gender) MANCOVA with subjects' indications as to how much they enjoyed writing stories as a covariate measure showed no reliable multivariate main or interaction effects but two reliable univariate main effects. They are: 1) main effect of personality attractiveness on subjects' pledge to donate earnings (recipient with an attractive personality received more pledged donations than recipient with an unattractive personality); and 2) main effect of gender on subjects' pledge



to contribute stories (girls pledging more than boys).

The findings are discussed in terms of 1) "concrete" thinking of children and their liking and helping behaviors; 2) "cost" of helping as it influences the helping behavior of children; 3) children's perception of deservingness in terms of personality attractiveness; 4) "discrepancy" between "attitude" and "behavior" in children; 5) "saliency" of stimulus objects in research involving children; and 6) previous research findings on sex differences in helping behaviors. The implications of the results for education and for research and the limitations of this study are also discussed.

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## CHAPTER I

### Introduction and Statement of Problems

The purpose of the present study was to assess the extent to which altruistic behavioral disposition (i.e., altruism) can be induced in children in conjunction with a recipient's personality attractiveness and deservingness of help as perceived by children offering help.

The helping behaviors in the present study (i.e., the dependent measures) consist of children's 1) pledge to contribute written stories; 2) pledge to donate earnings; and 3) actual donations of earnings.

These three measures of helping behaviors were chosen for study because each of them appears to have a distinctively different nature. Specifically, pledge to contribute stories is not monetary but involves personal commitment in the form of time and effort. Pledge to donate earnings and actual donations of earnings, on the other hand, are monetary and involve little, if any, personal commitment in terms of time and effort. In addition, the two monetary measures are distinct from each other because one involves "verbal" while the other involves "actual" donations. These three dependent measures thus may be expected to tap different aspects of helping behaviors in children.

Research literature on the psychological aspects of children's altruistic (helping) behaviors abounds but studies lack in the potential use of data that would allow for the derivation of specific implications for educational practices. The primary focus of the present study is on the possibility of inducing children to become altruistic, at least in a contrived

(experimental) situation.

In the research literature, large numbers of studies tend to deal mostly with a recipient's characteristics as they influence subjects' helping behaviors. The important question "How to promote the development of altruism in children through induction?" has been studied by relatively few researchers, most notably Hoffman (e.g., 1970a; 1975a; 1977). Nevertheless, it would be useful to know the extent of "induceability" of altruism, that is, the effects of induction {This term is used here in the same sense as by Hoffman (1970a, p.286) to mean, in a general sense, explaining and reasoning with children so as to be altruistic.}, in conjunction with a recipient's characteristics, namely, personality attractiveness and deservingness of help.

From a practical point of view, these three variables were chosen for study because they have important implications for education. Specifically, induction is a means for changing children's behaviors that can be used easily in everyday situations. In fact, in a general sense, a significant part of education consists of "inducing" children to change in a manner that is consistent with the goals and values of a society (e.g., to be altruistic). To be more specific, many of the values, attitudes and behaviors of a person are acquired through reading printed materials. Studying induction that takes the form of written passages would add to our current knowledge about this means of behavior change, thereby making it possible for people to use it more effectively.

From a research point of view, these three variables were



chosen for study because research findings on their effects are inconclusive. Further, these three variables represent influences from two distinct sources - a third party (person delivering the induction) and the potential recipient. More specifically, induction represents a direct attempt from a third party to influence the child while deservingness and personality attractiveness are characteristics of the potential recipient that might exert influence on the child as well. By studying these three variables in combination, one can discern the unique as well as the interactive effects of these distinct sources of influence.

Also, the two characteristics of the potential recipient, deservingness and personality attractiveness, have different levels of "abstractness." While deservingness may be considered a relatively more abstract variable in the sense that it cannot be observed readily, personality attractiveness is relatively more "concrete" and can be observed more readily. In addition, these two variables seem to differ in a cognitive-affective dimension in that deservingness is more cognitive while personality attractiveness is more affective. By studying these two variables together, one can determine how recipient characteristics differing in abstractness and cognitive-affective properties influence children's helping behaviors.

### Definitions

Conceptually, not all helping behaviors are altruistic and/or moral. Indeed, helping behaviors may be described from both moral (moral vs. immoral) and altruistic (altruistic vs. nonaltruistic) perspectives such that a helping act may be

a) moral and altruistic; b) moral and nonaltruistic; c) immoral but altruistic; and d) immoral and nonaltruistic. The examples for the above four combinations would be a) giving money to help a needy friend without any selfish intentions; b) giving money to help a needy friend with selfish intentions; c) getting money to help a needy friend by robbing a bank; and d) stealing the money that his sick friend saved for paying the doctor's bills.

The present study was addressed to helping behaviors that are both moral and altruistic although evidence to show that they are moral and altruistic may well be only indirect. The reason is that the experimental situations in which the helping behaviors will be elicited may not be truly representative of those moral and altruistic situations that occur in everyday living. Nevertheless, in the context of the present study, morality is used to refer to "conformity to ideals of right human conduct" (Webster's New Collegiate Dictionary), and altruism is used to refer to "unselfish regard or devotion to the welfare of others" (Webster New Collegiate Dictionary). It should be noted, however, that in the research literature, altruism has been used interchangeably with helping (donating) behaviors (and is, therefore, used likewise in this study) and has been defined in different ways by different writers. For example, altruism has been defined as "behavior carried out to benefit another without anticipation of rewards from external sources" by Macaulay and Berkowitz (1970, p.3) and "behaviors intended to benefit another but which appear to have a high cost to the actor with little possibility of material or social reward" by Bryan and London (1970, p.200). Leeds (1963), on the

other hand, suggested that an act is altruistic only if it is an end in itself without regard for self-gain and is performed voluntarily and also results in good. According to Severy (1974), however, an act is altruistic if it is designed to be helpful and is performed in immediate response to the recognition of another's need without prior consideration of external reinforcement.

One can easily see here that the definitions noted above all take intentions behind the acts into account. But, as Rushton (1976) pointed out, the intentions behind children's actions have not been directly investigated and, as Krebs (1970) suggested, this could be a problem since it is usually the intention behind the acts that determines the altruistic or moral values of the acts.

The reason why the intentions behind altruistic acts have not been investigated is probably not difficult to understand: It is not easy to measure objectively and, as Krebs and Wispe (1974) noted, it is difficult to decide whether human beings are able to act without expectations of gain.

A less restrictive definition of altruism has been adopted by Hoffman (1975a; 1976). His notion of altruism as "purposive action on behalf of someone else that involves a net cost to the actor" (Hoffman, 1975a, p.937) appears to be relatively more concerned with the observable and may hence be regarded as a more objective definition of altruism. This is the preferred definition of altruism for the present study.

### Origins of Altruism

Different explanations exist for the origin of altruism and

discussions of them may lead to the controversial issue of human nature. While available evidence seems to indicate that man is innately capable of altruistic acts, it also appears that this innate capacity does not program man to help or even to be motivated to help (Miller, 1981). These latter processes, according to Miller (1981), and Shaffer (1979), are dependent on a host of factors, including behavioral (e.g., learning), cognitive (e.g., moral reasoning and role-taking), and affective (e.g., empathy) variables. In addition, evidence suggests that altruism also is influenced by such factors as age levels, sex, and personality of the actor as well as the recipient, the relationship between the helper and his resources, and whether the helping situation is public or anonymous (Bryan, 1975; Miller, 1981; Rushton, 1976).

It is perhaps partly because of these multiple determinants of altruism in children (and in adults) that it has been a major focus of research. Other reasons underlying the untiring research effort are the potential implications for an understanding of the socialization process (Krebs, 1970; Rushton, 1976). The apparently increasing brutal acts of individual citizens towards one another (Bryan, 1972; Wispe, 1972) and the concern by many to produce a better society (Bryan, 1975) have also provided the needed impetus for researchers to engage in studies on altruistic behavior. In addition, altruism is studied because of its significance as an important personality trait and as a challenge to some important theories of human behavior such as the reinforcement and psychoanalytic theories (Krebs, 1970). Also, the success of a

number of charitable programs such as the United Way, the Crippled Children's Fund depends on the altruistic support of the general public. Answers to the question "What factors influence people's altruistic behavior?" are therefore of much significance for those concerned with eliciting people's altruistic responses. The present study was conducted in recognition of the importance of altruistic behavior, particularly in children.

Another motivation for the present study was that many, if not most, experiments on altruism in children do not in themselves provide an educational experience to the children participating in the studies. In one experiment (Grusec, Kuczynski, Rushton, & Simutis, 1978), for example, children were asked to "help test some new toys" supposedly manufactured by a toy company. For their help, the children earned some marbles, which could later be exchanged for prizes. They were then given an opportunity to donate these marbles to another child. While the experiment might be fun for children, it does not seem to have taught the children anything educational. The study reported here improved on this situation by directly offering an educational experience (through the induction treatment manipulated in this study) to the children participating in this experiment. Specifically, this study attempted to provide an educational experience to the subjects while seeking to determine if induction, recipient deservingness and personality attractiveness influenced children's helping behaviors toward a needy elderly person in the form of pledge to contribute stories, pledge to donate earnings, and actual donations of

earnings.

These three variables (induction, recipient deservingness and personality attractiveness) were chosen for this study because they represent influences from two distinct sources - a third party (person delivering the induction) and the potential recipient. Specifically, induction represents a direct attempt from a third party to influence the child while deservingness and personality attractiveness are characteristics of the potential recipient that might exert influence on the child as well. By studying these three variables in combination, one can discern the unique as well as the interactive effects of these two distinct sources of influence.

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## CHAPTER II

### Review of Literature and

### Formulation of Research Hypotheses

As noted in Chapter I, children's altruistic behavior is influenced by a number of factors and the present study sought to determine whether induction, recipient deservingness and personality attractiveness influenced their helping behaviors. In this chapter, the rationale behind the choice of each of these three factors and the review of pertinent literature are discussed in some detail and research hypotheses will be formulated.

#### INDUCTION AND CHILDREN'S HELPING BEHAVIORS

##### INDUCTION IN NATURAL SETTINGS

Induction, that is, reasoning with children in the form of explaining to them why their actions are wrong and why they should act in certain ways, has been emphasized by many researchers. Sears, Maccoby, and Levin (1957), Aronfreed (1968) and Hoffman (1970a) all regard reasoning as an important means for "internalized" control of behavior and moral values. Aronfreed (1968), for example, suggested that reasoning "can expand the child's own cognitive resources for internalized control of its behavior" (p.316). Hoffman (1970a), on the other hand, suggested that induction in the form of pointing out the harmful consequences of the child's undesirable behavior on others (how people are hurt, disappointed, etc. by the child's actions) is important for the development of internalized moral values and moral behavior. In a series of writings (e.g., Hoffman & Saltzstein, 1967; Hoffman 1970a, 1970b, 1975a, 1975b),

he suggested that, in disciplining children, the use of induction in the form of explaining and reasoning with children as to what not to do has a number of advantages over the use of techniques involving power-assertion (e.g., physically punishing the child) or love-withdrawal (e.g., telling or showing the child that he is not loved anymore). Specifically, he noted that the superiority of inductive techniques rests on their ability to provide for the child a non-aggressive model as well as an opportunity for learning and role-taking (Hoffman & Saltzstein, 1967) and to help foster in the child a "positive image of the parent as a rational, non-arbitrary authority" and to furnish the child with "cognitive resources" needed to control his future behavior (Hoffman, 1970a, p.331; 1975b).

The findings from a number of studies tend to support these views. Baumrind (1967, 1971), for example, found that explanation and reasoning with pre-school children by their parents contributed significantly to the development of socially responsible behavior (e.g., following rules in school, being trustworthy) in them.

In the longitudinal study by Sears et al. (1957) with kindergarten children, it was found that the use of explanation and reasoning by parents was related to children's internalized moral values (e.g., their tendency to confess and feeling miserable after wrongdoing).

In another study with older (fifth to eighth grade) children by Dlugokinski & Firestone (1974), subjects who reported that their mothers frequently reasoned (i.e., used induction) with them were perceived as more considerate by their



classmates from sociometric ratings. They were also found to donate more money, which they earned in the experiment, to a charitable organization than those who reported that their mothers frequently used power assertion (e.g., physical punishment) with them.

The above findings thus indicate that induction tends to influence the development of moral behavior in children. But there are indications to show that the effects of induction might be dependent on other disciplinary variables. For example, in one study by Hoffman (1963), considerate nursery school children (as measured by such index as giving direct and unsolicited help to another child in distress) were found to have parents practice explaining and reasoning with them (i.e., using induction) and were low in power assertion (e.g., using physical punishment). No relationship, however, was found between induction and positive behavior in children whose parents were high in power assertion.

This finding thus suggests that, for induction to be effective, one needs to be careful in the concurrent use of other disciplinary techniques, such as parental power assertion.

In the study by Hoffman (1963) noted above, it could be that power assertion by the parents served as an aggressive model for the children and hence offset whatever positive influence that induction might have on them.

The effects of induction might interact with other variables as well. In a study by Hoffman and Saltzstein (1967), it was found that the use of induction techniques (emphasizing the negative consequences of children's transgressions on the

victims) by either the father or the mother tended to enhance seventh-grade girls' consideration of their peers, as measured by peer sociometric ratings. The use of power assertion (frequent use of physical punishment and deprivation of material objects or privileges) by either parent, on the other hand, tended to enhance seventh-grade boys' consideration for others, as measured by sociometric ratings from peers. These findings thus indicate that induction, while effective with seventh-grade girls, was not effective with seventh-grade boys and thus suggests the possibility of interaction with the sex variable at other age levels.

In any case, induction appears to have the kind of strength that is absent in other forms of disciplinary control. As Hoffman (1970a) indicates, induction helps the child to focus his attention on the consequences of his action and communicates to him that he is responsible for the distress of the victim. Specifically, he noted that induction affects children through two mechanisms. First, it directs the child's attention to the distress of others and explains the nature of such distress when it is not clear to the child. This may elicit empathic responses from the child and help the child learn to recognize the feelings of others and to anticipate the consequences of his behavior for others. It may also enhance the child's role-taking ability which, in turn, might lead to a greater likelihood for the child to display empathic reactions. Second, induction indicates to the child that he is responsible for the distress of others. This may help the child develop a sense of responsibility for the welfare of others, or at least a notion

of how his behavior can affect others.

Seen in this light, then, induction serves to provide an opportunity to stimulate not only the child's cognitive development, but the development of his affective role-taking ability as well.

One should note here that the inductions discussed above tend to be those occurring naturally. That is, they involve parental reasoning with and explaining to the child as the demand arises in everyday living. Further, in the process of naturally-occurring induction, more than one influential factor might be operating simultaneously. Specifically, it might communicate to the child adult (parental) nurturance and moral values, offer adult models and opportunity to him for role-taking, provide him with reinforcement for the behavior desired of him, and assigning responsibility to him for the welfare of others, each of which has potential influence on children's helping behavior. Indeed, studies in the above areas have shown that each of these factors can significantly enhance children's helping behavior. Further, induction is likely to involve all of them, particularly parental warmth. They are, therefore, briefly discussed below.

#### Parental Warmth

Findings from a number of studies have shown that parental warmth and nurturance are related to altruism in children. Rutherford and Mussen (1968) reported that 4-year-old boys who indicated in a doll play that their fathers were warm, nurturant and sympathetic shared more candy with their friends, and were rated as being kinder by their teachers, than those who claimed

their fathers to be non-nurturant. The investigators suggested that these findings can be interpreted in terms of the boys' identification with their fathers.

Using interviews with workers in the civil rights movement of the late 1950's and early 1960's, Rosenhan (1969, 1970) found major differences in parent-child relationships between the "fully committed" workers - those remained active in the movement by helping in voter registration, teaching the underprivileged, etc., for at least a year - and the "partially committed" workers - those who occasionally participated in freedom rides. The fully committed workers were found to have a close (positive, cordial, warm, and respecting) relationship with at least one of their parents since their formative years. The partially committed workers, on the other hand, were found to have a much less close relationship with their parents. They tended to use negative terms (e.g., hostile, avoidant) in describing their relationship with at least one of their parents.

As Miller (1981) suggests, warm, nurturant and affectionate parents may encourage altruistic behavior in children in several ways. First, children may learn to develop expectations of other people on the basis of their experience with their parents. Children of warm and affectionate parents may learn to expect warm and rewarding interactions with others as a result of their warm and nurturant interactions with their parents. Second, the nature of parent-child relationship may help to determine how well parents are perceived and accepted by their children. A warm and affectionate parent-child relationship may increase the

child's receptivity to the parents' verbal and behavioral influences, while a cold and hostile one may have the opposite effects. Third, nurturant and affectionate parents are more likely to help children develop a positive self-concept than non-nurturant parents; and children who think highly of themselves may be more inclined and feel more competent in helping others than children who do not think highly of themselves. Lastly, nurturant and affectionate parents may be more accepting of the child's expression of feelings and distress than non-nurturant, non-affectionate parents. As Lenrow (1965) showed, when one's expression of distress is accepted by others, one's responsiveness to the expression of distress by others is also increased.

Granted that the above reasonings are correct, one can expect parental nurturance and warmth to play an important role in the development of altruistic behavior in children. These discussions by Miller (1981) on the role of parental warmth and nurturance in the moral development of the child are consistent with those of Staub (1979).

According to Staub (1979), parental warmth and nurturance may have four significant consequences on the development of moral behavior in children. First, parental warmth and nurturance may help children feel secure and thus help minimize their concern for the self in their interaction with other people. This may enable the child to be more open to the needs of others and more willing to initiate helping actions.

Evidence supporting this claim was found in one study by Staub (1971a). In this study, kindergarten children's helping

behavior (showing signs of concern) in response to the sounds of distress (crying, sobbing) of a child in an adjoining room was significantly increased following an 8 to 10 minutes of interaction with a nurturant (smiling, verbally rewarding) adult than with a non-nurturant (matter-of-factly) adult. This finding was also replicated in a study by Weissbrod (1976).

Second, an affectionate relationship between parents and children may help create a positive orientation toward other people and a cold, hostile relationship, a negative one. Evidence supporting the latter claim has come, for example, from a study by Bandura and Walters (1959). These investigators found that boys who were aggressive toward people outside the home tended to have a hostile relationship with their parents, particularly their fathers. This hostile relationship at home seemed to have at least two consequences: It led to the displacement of aggression (i.e., contributing to the development of aggression outside the home) and it led to the child's rejection of parental requests and guidance.

Third, the positive emotional environment created by parental warmth and nurturance may increase the child's receptivity to the socialization influences of their parents and thus facilitate learning by the child.

Finally, parental warmth may facilitate children's acquisition of a prosocial orientation exhibited by their parents through the mechanism of identification.

Empirical findings (e.g., Rutherford and Mussen, 1968) and the discussions by Miller (1981) and Staub (1979) thus suggest that parental warmth and nurturance are important variables

influencing children's moral development and behavior.

In the above discussions, the focus was on the role of parental warmth and nurturance in the development of moral behavior in children. Another focus of research in the moral development of the child has been the influence of parental moral values.

### Parental Moral Values

Studies with college students have shown that their moral development tended to be influenced by their parents' moral values and moral behavior.

In one study, McKinney (1971) proposed what was called a prescriptive-proscriptive value dimension. He suggested that parents differ in this dimension in that some parents tend to emphasize the rewarding of good behavior and punishing for its absence (prescriptive) while others tend to emphasize the punishment of bad behavior and rewarding for its absence (proscriptive). This difference in parental practice was assumed to reflect differences in parental value orientations with regard to their expectation of children. The findings from the study show that college students did differ in this prescriptive-proscriptive dimension, and students with a prescriptive value orientation perceived their parents as more rewarding than those with a proscriptive orientation.

In a subsequent study by Olejnik and McKinney (1973) with 4-year-olds, it was showed that parents who used a prescriptive value system (emphasizing to the child what he should do) tended to have more generous children, as measured by willingness to donate candy to poor children, than parents who used a

proscriptive value system (emphasizing to the child what not to do).

The above findings thus suggest that, to help children in their moral development, teaching children what to do probably is just as important, if not more so, as teaching children what not to do. This is of particular importance in light of the observations made by Staub (1971b), who noted that children's prosocial behavior is attenuated because parents tend to be more concerned about what their children should not do than what they should do.

The roles of parental values on children's helping behavior were also studied by Berkowitz and Friedman (1967) with 13- to 16-year-old boys. The investigators made comparisons between children from two kinds of families: the middle-class bureaucratic (fathers were wage earners) and middle-class entrepreneurial (fathers were owners of business, salesmen, or professionals working for themselves or in partnership). In the experiment, the subjects first received what was described to them as either "high" or "low" help (someone worked very hard/did not work hard on his behalf in a geometric figure task) when they were in need of help. Later they were given an opportunity to help someone else.

The findings showed that the help given to the other person was more influenced by the amount of help received earlier among the entrepreneurial than among the bureaucratic children. The entrepreneurial children were more likely to help only to the extent they had been helped.

The investigators indicated that these findings seem to



suggest that the helping behavior of children from bureaucratic homes tends to be governed by a sense of responsibility for the welfare of others. The helping behavior of children from entrepreneurial homes, on the other hand, tends to be governed by a sense of reciprocity, that is, their helping behavior is more contingent upon the prior receipt of help from others.

### Modeling

The precise mechanism by which parental values and behavior influence children's helping behavior is still far from being fully understood. Probably, parental values and behavior are communicated to children by means of the process of modeling and children learn from these parental models. This reasoning is consistent with the findings from a number of studies (e.g., Grusec, 1972) which showed that the generosity of the model was effective in eliciting donations from children of both sexes ranging in age from seven to 11 years.

The modeling effect was also found in the study by Rosenhan (1969, 1970), discussed earlier. The investigator found that the "fully committed" civil rights workers in the early 1960's also had at least one parent who tended to both preach and practice moral concern for people, thereby acting as a model.

The effects of parental values and modeling are found in still another study by Hoffman (1970b). In the study, preadolescent boys with what was called a "humanistic-flexible" moral orientation were found to have fathers whose moral judgment responses showed "open empathy" with people in distress.

The above findings thus seem to indicate that altruistic

parents are effective models for their children by, perhaps, as Hoffman (1975a) suggests, making altruism salient to the child and by providing the child with guidelines for altruistic behavior.

One explanation advanced to account for the effects of modeling (Berkowitz & Daniels, 1964; Krebs, 1970) is that the behavior of a model reminds the observing child of the standard, or norm, of social responsibility which the child has already learned. This means that the model reminds the observer by means of his action that they should help those who are in need and are dependent on them (the social responsibility norm). Seen in this light, the observing child's altruistic behavior is therefore a response to this reminder. This reminder function of modeling is reminiscent of the "response facilitation" function of modeling suggested by Bandura (1977), a major proponent of the social learning theory of human behavior.

In response facilitation, according to Bandura, the model does not teach the observer anything new but merely prompts, and thus facilitates, the behavior already existing within the behavioral repertoire of the observer.

In addition to this response facilitation function, Bandura (1971, 1977) also suggested that modeling enables the observer to acquire new patterns of behavior and hence performs a "learning" function. Thus, in altruistic situations where the appropriate response may not be clear to the child, the child may learn the appropriate altruistic response by observing what the model does.

These theoretical modeling accounts, together with the

available empirical findings, some of which were discussed earlier, thus argue for the desirability of providing children with altruistic models in order to promote the development of altruistic behavior in them.

Some aspects of the model appear to be of special importance in influencing children's imitation of helping behavior. These include the emotional response and the power of the model.

The emotional response of the model has been found to influence children's imitation of both generous and selfish behavior. In a study by Midlarsky and Bryan (1972), it was found that fourth and fifth grade children imitated a model who showed positive affect immediately following his generous/selfish act more than a model who did not show such positive affect. Specifically, they found that children who observed a selfish model who expressed satisfactions about keeping his earnings donated least, while children who observed a generous model feeling happy about his donations gave the most.

One explanation underlying this finding is that people tend to perform acts that will bring them satisfactions. Since the model displayed positive feelings after he kept/donated the money, the observer might likewise expect himself to experience similar positive feelings, and hence imitated the model.

The educational implication here is that to enhance modeling effects, the model should express to the child positive feelings about his helping behavior. This may help the child generate expectations about positive feelings of his own helping behavior, thereby enhancing the likelihood for him to engage in

such behavior.

The power of the model, defined in terms of control over rewards and punishment, also has been found to influence children's altruistic behavior. In a study by Grusec (1971), two adult male models were presented to a group of seven to 11-year-old children. One of the models was described to the children as one who would be selecting a child from the school for a special prize while the other was not so described. The results showed that children were more likely to imitate the model who would be choosing a child for a prize than the model without this power.

This finding has important educational implications for both parents and teachers. For they have direct control over the child in terms of the dispensation of both rewards and punishment and are therefore powerful models. This suggests that parents and teachers should be conscious of the potential influence of their behaviors on children.

Studies have also provided evidence to suggest that assigning children responsibility for the welfare of others enhances their helping behavior.

In one study by Staub (1970a), it was found that there were significantly more attempts to help a child apparently in distress in an adjoining room among first grade subjects who were left "in charge" by the experimenter than among subjects who were not assigned this responsibility.

In a cross-cultural study by Whiting and Whiting (1975), children who were assigned responsible duties (e.g., taking care of younger siblings, tending animals) were found to be more helpful (e.g., offering help and support to infants) than those

who had no such responsibilities.

Mussen, Rutherford, Harris, and Keasey (1970) found that children, particularly boys, who were rated considerate by their peers on such statements as "bawling someone out" for hurting another child had mothers who encouraged the development of responsibility in them through their emphasis on "high standards of behavior."

In a series of experiments, Staub (1970b, 1971a, 1971d) also found that older siblings were more helpful, as evidenced by their indication of concern and attempts to help, than younger siblings in their response to the sounds of distress emitted by a child in an adjoining room.

One explanation underlying these findings is that typically older siblings are more likely to be called upon to help take care of younger siblings and to help with household chores. It is possible that through this experience, they develop a sense of responsibility by being able to observe that fulfillment of their responsibility results in enhanced welfare of others. As a result, they tend to be more helpful than their younger brothers and sisters.

### Reinforcement

Studies have also showed that the use of reinforcement, both material and social, tend to enhance children's helping behavior. In a study by Fischer (1963), 4-year-old children were found to share more marbles when reinforced with candy, and less when reinforced with social approval ("That's good; That's nice"). That material reinforcement was found to be more effective than social reinforcement in the study should not be a

surprise. It is consistent with the theory of moral development proposed by Kohlberg (e.g., 1976). According to the theory of Kohlberg, children of this young age are more concerned about the physical, rather than social, consequences of their actions.

Social approval, however, has been found to be effective with older children. In one study, Midlarsky, Bryan, and Brickman (1973) found 12-year-old girls made more donations of token chips (which they won in a game and were exchangeable for prizes) to a local needy children's fund when given social approval (e.g., smiling and saying "Boy, you're really nice to do that") from a generous adult model than when no such approval was given. Social approval from a selfish model, however, was found to decrease subjects' donations in the study.

One explanation for the lack of social approval effect from the selfish model here is that subjects may interpret such approval as being sarcastic and the approval thus takes on aversive properties. Approval from a generous model, on the other hand, was not so perceived and thus takes on reinforcing properties.

In still another study by Gelfand, Hartmann, Cromer, Smith, and Page (1975), the subjects were kindergarten and first grade children. The researchers found that both instructional prompts ("Maybe it would be nice if you help that other boy/girl get his/her marble back once or twice") and social praise (e.g., "Very good. Think how that girl/boy must feel now; Good thing you helped her/him") increased subjects' donations of pennies they won in a game to help enable another child to play in the game.

These findings thus indicate that reinforcements, both material and social, are a potent factor influencing children's helping behavior.

According to Bandura (1977), reinforcement can be defined in terms of response consequence and can influence children's behavior in two ways: by imparting information and by serving as a motivational agent. According to Bandura, reinforcement bestows information as to what kind of response is appropriate in a given situation. The information thus obtained by the child may become a valuable guide to him for future actions. Reinforcement is also seen as a motivational agent of action because the response consequences experienced by a person in the past can generate expectations. Such expectations for consequences of actions can motivate an individual to engage in behavior designed to reproduce the expected consequence. These theoretical considerations, along with the empirical findings on the effects of reinforcement, thus suggest that reinforcement can be used effectively to promote the development of helping behavior in children.

### Summary

The above findings, which showed the effects of parental nurturance, parental values and modeling, and induction, are corroborated by findings from a more recent study by Hoffman (1975a). In this study with a group of middle-class first-born fifth-grade children of above average IQ, it was found that altruistic children, as determined by peer nomination, had at least one parent, usually of the same sex as the child, who communicated altruistic values to them. They also were found to

have at least one parent, usually of the opposite sex, who used victim-centered discipline (directing the child's attention to the consequences of his action for the victim). In addition, it was found that the son's altruistic behavior was significantly influenced by the mother's affection (e.g, praising, hugging, kissing the child). The author suggested that these findings could be a result of the child's identification with the same-sex parent, who thus serves effectively as a model.

The findings discussed above thus indicate that childrearing experiences/parental practices play an important role in the development of altruism in children. As Hoffman (1975a) indicates, parents are models, disciplinarians as well as suppliers of the child's affectional needs. This suggests that parents may influence the development of altruistic behavior in children through a number of mechanisms. These mechanisms may include, as discussed above, the expression of parental affection and nurturance, disciplinary contacts, and parental modeling and encouragement, all of which may be involved in the process of induction.

In summary, then, the findings from a number of studies indicate that the development of altruistic behavior in children is influenced by a variety of factors. These factors may be involved simultaneously in naturally occurring inductions (i.e., explaining and reasoning with children as the demand arises), which have been found to correlate positively with children's moral development and behavior as measured by a variety of indices. These indices include peer nominations, expressed feelings of guilt following transgression, use of moral



judgment, willingness to confess and accept responsibility for misdeeds, and consideration for others (e.g., Hoffman & Saltzstein, 1967; Hoffman, 1970a, 1975a).

#### Implications for Education and Research

It should be noted here, that, although the above discussions have been presented largely through a parent-child framework, the educational implications should be clear to school teachers. For, in fact, children spend a significant portion of their waking time in school with their teachers who, in many ways, function like parents and could therefore be expected to exert considerable influence over them. The extent to which this is so raises empirical questions. Among these questions are the hypotheses examined in this study.

Also, it should be noted that in natural induction, parental warmth, reinforcement, moral values and modeling can all contribute to the effectiveness of the parent, making the child more receptive to his/her influence. Seen in this light, the effectiveness of natural induction seems to suggest that neither reinforcement nor psychoanalytic theory alone can adequately explain the development of altruistic behavior in children.

#### EXPERIMENTAL INDUCTION

One should note here that the inductions discussed thus far tend to be global, summary measures of behavior across a variety of situations. They were usually obtained from interviews and self-reports, and the findings were based on correlational analyses. Also, the inductions tend to focus on the negative consequence of the child's "transgressive" behavior and to

emphasize to the child what not to do. Emphasis to the child on what to do and why one should do it seems to have been largely ignored. It would therefore be of interest to see how these findings compare with those from experimental studies, especially those emphasizing to the child as to what to do.

In one study by Staub (1971d), positive induction in the form of pointing out the positive consequences of the child's helping behavior, i.e., the increased welfare and positive feelings of other people as a result of help rendered by the child, was studied. The subjects were kindergarten children and the stimulus situation consisted of the sounds of a crash followed by sounds of crying and sobbing from a "distressed" child in an adjoining room and, in a separate situation, a poor child whose sick parents could not afford to buy him a birthday present.

The results showed that positive induction was not effective in increasing the subjects' helping behavior, as measured by their indications of concern (e.g., going to the next room to see what was happening) for the two "distressed" children.

One should note, however, that children at this age might be still very egoistic and are therefore less able to see the needs of others. Further, the stimulus situation in the case of the "distressed child in the adjoining room" might have proved uncertain and ambiguous to the subjects. For example, the child might be unsure whether he should stay in the room where he was or go to the next room and take a look at what was happening there. The sounds of crash and those of crying and sobbing

emitted by the "distressed" child might even have elicited fear and, therefore, frightened the subjects. Under such circumstances, it is possible that the subjects might find it safer to remain inactive than active.

In the case of the child without a birthday present, the experimenter's remark "There is some candy in there for him already" might have attenuated the subjects's helping responses. Also, the subjects might have felt that a birthday present was something nice to have but not that important. Granted this to be true, then one might expect the subjects' helping responses to be attenuated and the effects of induction adversely influenced.

A number of other experimental studies have also been conducted to determine the effects of positive induction on children's helping behavior. The induction usually takes the form of preaching and/or moral exhortation. The results, though more positive than negative, are by no means conclusive.

In a study by Bryan and Walbek (1970a) with third, fourth, and fifth grade children, generosity preachings consisting of the following statements were used:

1. If I win any money today, I am going to give some to those poor children;
2. She (the experimenter) said we didn't have to, but I think it would be a good idea - it would make them happy;
3. I won three cents;
4. I won another three cents;
5. Yes sir, I think that we should give some of our money to poor children;
6. If I win any more money, I am going to give some away;
7. It is really good to donate to poor children;
8. Children should help other children;
9. Yes sir, people ought to share with other people.

These statements were verbalized singly by an adult model,

who either donated or did not donate, among the trials in a bowling game. The effects of these generosity preachings were compared with those of selfish preachings and neutral preachings. The selfish preachings consisted of such statements as "If I win any money today, I am not going to give any to the poor children; She said that we didn't have to; No sir, why should we give any of our money to other people? If I win any more money, I am going to keep it all to myself; It is not good to donate to the poor people; Children don't have to help other children; Yes sir, people don't need to share with other people." The neutral preachings consisted of such statements as "I hope that I win some money today; I hope I win some more."

The results showed that children's donations (coupons which they won in the bowling game and were exchangeable for prizes) were not differentially influenced by these three kinds of preachings.

In a separate study by the same authors (Bryan & Walbek, 1970b) with second, third, and fourth grade girls, generosity preachings consisting of the following five statements were used:

1. I think that we should give to the crippled kids. I hope the kids watching will;
2. It's good to give to those kids. I hope the other boys and girls will give their money away;
3. It's a nice thing to give to the crippled children;
4. I hope the person watching does give;
5. You should give to others.

These statements were verbalized by a video-taped adult model, who was either generous or selfish, one per trial following each non-winning trial in a bowling game.

The effects of these generosity preachings were, again,

compared with those of selfish preachings - the negative version of the above statements (e.g., I don't think that we should give to the crippled kids, I hope the kids watching don't) and neutral preachings (This game is fun; I like the game; I hope I win again; This is a good game; This is a good game) delivered in the same manner as the generosity preachings.

The findings, again, showed that children's donation of earned coupons, which were exchangeable for prizes, was not differentially influenced by these three kinds of preachings.

In another study with children 8 to 10 years of age by Rushton and Owen (1975), the effects of generosity preaching (We should share our tokens with Bobby) were compared with those of selfish preaching (We should not share our tokens with Bobby) and neutral preaching (This is really fun). These preachings were made during a bowling game by a video-taped generous or selfish model of the same sex of the child. The findings, again, showed no differential effects on children's donations of winnings won in the bowling game.

An examination of the preachings used in the above three studies showed that they all tended to emphasize the norm of social responsibility and/or the virtue of being generous. It is conceivable that repeated verbalization of such preachings may be perceived by the subjects as arbitrary, external pressure to conform (donate) and, as Grusec, Saas-Kortsak and Simutis (1978) indicate, this may generate psychological reactance in children. Also, since the induction statements were made among the bowling trials, children's attention might have been captured more by the outcome of the bowling effort than by the

model's verbalizations.

Given these considerations, and the fact that the model was someone unknown to the child and had no power or control over him, it appears that the induction manipulations in the above studies were weak and they hence failed to produce the expected effects.

In contrast to the above findings, which failed to show the effects of induction on children's donating behavior, Grusec and Skubiski (1970) and Grusec (1972) found some success with their experimental inductions.

In the Grusec and Skubiski (1970) study, the subjects were third and fifth grade children. The following exhortation was made by a same-sex model (who was either nurturant or non-nurturant and donating or simply verbalizing the exhortations) before he/she started playing the bowling game:

"Well, I guess they expect us to share our marbles with those poor children. Probably that's what one had better do. I guess if I give one out of every two marbles I win to the poor children that would be fair. So that means whenever I get a score of 70 or 80 I would get two marbles. I'd take two from the box, put one in the poor children's blue bowl and put one in my yellow bowl. If I got any other score I wouldn't win anything, so I really ought to hope I get a lot of 70s and 80s. Then there would be a chance to give away some of the marbles to the poor children." (p.355).

The subjects watched the model play and was then given the opportunity to play and win some marbles.

The results showed that exhortation, as compared to modeling (the model's actual acts of donating), were effective only for girls assigned to a nurturant female model with whom the subjects had warm, friendly and rewarding interactions.

It should be noted here that the above preaching may have

appeared complicated and therefore may have confused the child. Specifically, a portion of the exhortation (e.g., If I got any other score I wouldn't win anything, so I really ought to hope I get a lot of 70s and 80s) appeared to have the effect of distracting rather than directing children's attention to the proper focus of giving. Further, when the preachings were delivered, the model was not talking directly to the child but "musing slowly to himself and taking care not to look at the child." (p.354). Given these considerations, several possibilities existed that might account for the above finding.

First, girls have been found to be more verbally competent than boys until about the age of 10 (Maccoby, 1966). This suggests that girls might have comprehended the message better than boys.

Second, nurturant (i.e., warm, friendly, rewarding) adults might have made the girls feel more comfortable and hence more at ease with the situation. This might have facilitated the girls' attention, comprehension, and retention of the message.

Third, according to the identification theory of sex-role development (e.g., Kohlberg, 1966), girls identify more with female models and boys with male models. This suggests that the finding noted above could have been accounted for, at least in part, by the identification theory of sex-role development.

Finally, the possibilities just discussed might have operated jointly to produce the finding noted above. That is, exhortation, as compared to modeling, was effective only for girls who had a warm, friendly, and rewarding interaction with a nurturant female model.

In another study by Grusec (1972), 7- and 11-year-old boys and girls served as subjects. The procedures and induction statements were comparable to those in the Grusec and Skubiski (1970) study. The findings showed that induction, as compared to modeling, was effective with all subjects except the 7-year-old boys.

The author suggested that two possibilities existed to account for this finding. The first is that the desire for social approval is stronger for 7-year-old girls than 7-year-old boys. The second is the finding by Maccoby (1966) that girls are more verbally competent (and thus may comprehend the message better) than boys until about the age of 10.

In another study by Rushton (1975) with 7- to 11-year-old children, tokens exchangeable for prizes, a bowling game, and an adult model, who was either generous or selfish, were again used. The following preaching statements were verbalized by the model among the bowling trials:

1. We should share our tokens with Bobby;
2. It's good to give to kids like him;
3. It's right to share counters with Bobby;
4. You should give to kids like him.

The effects of these generosity preachings were compared with those of selfish preachings (the negative version of the above statements, e.g., We should not share our counters with Bobby; It's not good to give to kids like him) and those of neutral statements (This is a nice game; I really like playing this game; This is really fun; I like this game).

The results showed no differential preaching effects on children's donations on the immediate test but a significant preaching effect on a re-test two months later. Also, in the re-



test, a significant preaching x model generosity interaction effect was found such that the generous model preaching selfishness induced subjects to donate the least in the generous model condition while the selfish model preaching generosity produced the most giving in the selfish model condition. Further, in the generous model condition, the generous model preaching neutral messages induced more donations than the generous model preaching generosity.

The author suggested that the model might not have provided a "neutral" preaching. Instead, he might have served as a source of positive affect previously found by Bryan (1971) to be effective in increasing children's imitative generosity. This then could have accounted for the interaction.

He also suggested that the lack of preaching effects in the immediate test was probably due to children's paying more attention to the "perceptual attributes" of the situation (i.e., the model's donating behavior) than to the symbolic attributes (i.e., the preachings). At the re-test, on the other hand, the subjects by necessity had to rely more on the symbolic process and semantic memory. This different mode of cognition thus produced different findings between the two tests.

One might also add here that the above preaching consists mainly of the repeated verbalization of a social responsibility norm. This repeated reference may have threatened the child's feelings of autonomy by having appeared to him as arbitrary, external pressure to conform (donate). This may again, as Grusec, Saas-Kortsaak, and Simutis (1978) suggested, generate psychological reactance. Also, since the model was a stranger to

the child with no power or control over him, the child might feel that he could resist the pressure without any fear for negative consequences. On the re-test, however, when this reactance had dissipated and the child's feelings of autonomy restored, simply recalling the norm of social responsibility on the part of the child may be sufficient to induce him/her to donate.

To recapitulate, it may be noted that the induction findings discussed thus far tend to suggest that experimental inductions were either totally unsuccessful or else they were met only with limited success. An examination of their preaching contents indicate that the major emphasis was on the verbalization of the social responsibility norm, the virtue of generosity, a simple exhortation to help, or some combinations of them. Other considerations such as appealing to the child's personal feelings about helping and the effects of their help on the person being helped, i.e., the recipient, have been mostly, if not totally, ignored.

In contrast to the above findings, however, there are studies which showed that induction did influence donating behavior in children.

In a study by Midlarsky and Bryan (1972) on grade-four and grade-five children, a generous or selfish adult model and a bowling game were again used as part of the experiment.

The generosity preaching of the model consisted of the following:

"I think that I'll like this game. It seems like fun. I hope that I'll win some money because I'd really like to give some to needy children. She said that any money left here would buy them some presents - and if I were a needy

child, I would feel important just knowing that other children like you and even young adults cared about me enough to leave money for me." (p.198).

Also, the following five statements were made on five non-winning trials of the game:

1. It's a fine thing to give to needy children;
2. I know that I don't have to give, but it would make some children very happy, wouldn't it?
3. We really should share what we are lucky enough to win;
4. Children should help other children;
5. It's a good thing to give, especially when you know that it will make others happy.

The effects of these generosity preaching were compared with those of greedy preaching, which took the following form:

"I think that I'll like this game. It seems like fun. I hope that I win some chips, because I could really use some spending money this week. Of course, she said that we could leave some money for the needy children. But this little bit of money couldn't buy anything important. And if I were a needy child, I would be very hurt to think that other children pity me enough to offer this kind of help. I think that getting charity can make someone feel very bad." (p.198).

In addition to the above preachings, the following five statements were made on the five non-winning trials:

1. It's not so good to give to needy children;
2. We don't have to give, and anyway, it wouldn't make the children very happy;
3. I don't think that it is so important to share what we win here;
4. Children do not really need to share with other children;
5. It's not so good to give, especially when you realize that it makes some children feel pretty bad to get charity.

The results showed that generosity exhortations induced significantly more donations of chips (which the subjects won in a game and could be exchanged for prizes) than greedy exhortations.

As can be seen, one feature of the exhortations used in the above study is that it contains substantive reasons for giving

(and for non-giving). Also, the exhortations tend to capitalize on several factors simultaneously. These factors include reference to the affective state of the potential recipients, the virtue of generosity, the norm of social responsibility, personal autonomy, and the consequence of donations. Further, the manipulation of affect occupied a central position throughout the exhortation. And, finally, all the statements in the exhortation tend to share a clear focus on giving and all appear quite concise. These features of exhortations thus contrast sharply with those discussed earlier, which were found to be ineffective in inducing donations from children.

In another study by Rice and Grusec (1975) with grade-three and grade-four children, verbal exhortation by a same-sex model (who either donated or simply verbalized the exhortations) also was found to be effective, as compared to a control condition, in inducing donations of marbles won in the bowling game to poor children in both an immediate test and a follow-up test four months later. The exhortation consisted of the following statements:

"Well now, I guess they expect us to give some to the poor children. Probably that's what one had better do. One should keep half for himself in the yellow bowl and put half in the blue bowl for the poor children. That way a person would have the same number for himself as he gave to the poor children..... Yes, that's....."(p.586).

It can be seen here that the above exhortation tends to be highly prescriptive. It indicates clearly and concisely what is to be done. Further, the statements all tend to focus on the same behavior (i.e., giving) such that the possibility to distract the attention of the subjects (as was likely the case in the 1970 study by Grusec and Skubiski) was at a minimum. The

exhortation used in this study thus shares some of the characteristics of those used in the Midlarsky and Bryan (1972) study, which found generous, as compared to selfish, inductions to be effective in inducing donating behavior in children.

In a more recent study on the effects of preaching on children's generosity, Eisenberg-Berg and Geisheker (1979) have found that empathic preachings, as compared with "normative" preachings (emphasizing sharing and donating as a good thing and a right thing to do and urging subjects to share and donate) and a control condition, significantly enhanced children's generosity, as measured by the amount of money donated, regardless of the power status of the preacher. The study used grade-three and grade-four students as subjects and the content of the preaching, delivered by the children's school principal and a stranger, took the following form:

"Well now, I think that people should share with the poor children. They would be so happy and excited if they could buy food and toys. After all, poor children have almost nothing. If everyone would help these children maybe they wouldn't look so sad."

As can be seen, the exhortation here again shares some of the characteristics of the exhortation used in the Midlarsky and Bryan (1972) study. It consists of manipulations of the affective state of the recipient, a description of the positive consequences that might result from the subjects' donations, and reference to the norm of social responsibility.

An examination of the exhortations used in the studies by Midlarsky and Bryan (1972), Rice and Grusec (1975), and Eisenberg-berg and Geisheker (1979) thus suggest that exhortations that

1. stress the reasons for helping;
2. are designed to arouse the empathic response of the subjects;
3. are prescriptive, i.e., indicating clearly to the subjects what the situation is and what the appropriate behaviors are;
4. do not repeat the norm of social responsibility;
5. are delivered in one single dose rather than being broken up into several parts delivered one at a time at different points in time

tend to produce the expected effect. The present study was, in part, an attempt to collect further evidence to strengthen the indication of these findings.

Since only subjects of grade three through grade five were used in the above studies, it remains to be determined whether preaching contents emphasizing empathic reactions would be effective with subjects of higher grade levels. Moreover, as can be seen from the exhortations used in the above studies, the contents tend to focus on the feelings of the potential recipients - poor children, the feelings of the subjects themselves (e.g., how they themselves felt when they were helped) were not directly introduced into the treatment. Also, since poor children were the potential recipients in all the above studies, it would be interesting to see how preaching contents designed to elicit children's empathic reactions toward a needy elderly person by appealing to the subjects' own feelings in addition to those of the potential recipients would influence children's donating behavior.

#### Treatment Manipulations and Hypothesis

Because of the above considerations, it was therefore decided to examine further the effects of exhortation, i.e., induction, in the present study. In addition, the content of induction used in the present study was designed to integrate,

extend, and also replicate the features of those used in the studies by Midlarsky and Bryan (1972), Rice and Grusec (1975), and Eisenberg-Berg and Geisheker (1979). Specifically, the affective role-taking ability of the subjects and the feelings (affective response) of both the potential recipient and the subjects themselves were taken into account, two specific reasons for helping the elderly in need (they are lonely and less fortunate than children are) were emphasized, and an exhortation to help was then made. In addition, pressure on the subjects to help was minimized in the present study by avoiding the verbal repetition of the norm of social responsibility.

The content of the induction is reproduced in Appendix A. The non-induction statements used to replace the induction in the control (i.e., non-induction) condition is reproduced in Appendix B.

These two "levels" of induction permitted a comparison to be made between the effects of induction and the effects of the absence of induction.

Following from the findings of previous studies (e.g., Eisenberg-Berg & Geisheker, 1979), and assuming that the induction would generate its intended effects, it was therefore predicted that children exposed to the induction condition would be more helpful than children exposed to the control (non-induction) condition.

The above discussion has been focused on induction as a source of influence on children's helping behaviors. Specifically, it may be regarded as a concerted effort to influence the child by a third party. As discussed in Chapter I,

two variables that represent characteristics of the potential recipient (deservingness and personality attractiveness) would be examined in this study. In the following sections, the educational relevance and research findings on these two variables will be discussed.

#### CHILDREN'S FEELINGS AND HELPING AND COOPERATIVE BEHAVIORS:

##### THE CASE OF DESERVINGNESS

##### Discipline

Reflecting the concern of pre-service teachers for classroom disciplines, many textbooks on educational psychology (e.g., Good & Brophy, 1981; Kagan & Lang, 1978; Lefrancois, 1979) have devoted at least one chapter to the discussion of classroom management problems. In addition, many books (e.g., Stainback & Stainback, 1977; Welch & Hughes, 1977; Tanner, 1978) dealing specifically with classroom discipline have appeared. All these seem to indicate that classroom discipline is a major concern for educators. Classroom discipline, however, does not occur in the absence of a social context. It entails the cooperation between the teacher and children. From the teacher's point of view, "help" from children is required if classroom discipline is to be maintained. Yet some teachers inadvertantly behave in ways that provoke children's resistance and misbehavior. The following incident, recorded by Kounin (1970) during a classroom teacher's transition from a spelling to an arithmetic lesson, is a case in point:

1. All right, everybody, I want you to close your spelling books.
2. Put away your red pencils.
3. Now close your spelling books.
4. Put your spelling books in your desks.
5. Keep them out of the way.



6. Take out your arithmetic books and put them on your desks in front of you.
7. That's right, let's keep everything off your desks except your arithmetic books.
8. And let's sit up straight. We don't want lazybones, do we?
9. That's fine. Now get your black pencils.
10. Open your books to page sixteen.

### Feelings of Deservingness

According to Ginott (1972), teachers' orders and commands such as those noted above invite resentment and defiance from children while statements showing respect for children's feelings and autonomy (e.g., "Now it's time for arithmetic; the assignment is on page sixteen." - Ginott, 1972, p.79) are more likely to elicit children's cooperation and compliance. Indeed, in a series of writings on adult-child relationships, Ginott (1965, 1969, 1972) has consistently stressed the importance of keeping in mind children's feelings when dealing with their behavioral problems. One overriding theme throughout this series is that actions on the part of adults that take children's feelings into account are more likely to be successful in gaining children's cooperation and compliance than those that do not. Thus, in response to the protest "Everyone had more chances than I. I'm always gypped." by a student when the basketball game had to be stopped at the end of a P.E. class, the teacher might say: "To change your feelings about this situation, take three more shots. I'll wait for you." (Ginott, 1972, pp.36-37) rather than saying something like "How come you are always complaining? Everybody had a fair chance."

Granted that children's feelings about their teacher influence their behavior toward the teacher, one might expect that, in an altruistic situation, children's feelings about a

potential recipient will influence their behavior toward that recipient. One purpose of the present study was, therefore, to determine how children's feelings influence their behavior in an altruistic situation. Specifically, the study attempted to determine if children's feelings of the potential recipient's deservingness of help influence their helping behaviors.

Although this study was concerned, in part, with children's helping behaviors as influenced by the deservingness of the recipient, the findings would have educational implications. For example, if children's helping behaviors were, indeed, found to be influenced by recipient deservingness, then one implication is to emphasize the "deservingness" of teachers as a means to gain children's "helping" behaviors.

Children as young as four years of age appear to have a notion of deservingness, defined in terms of worthiness of help, reward, and the like. In one study with nursery school children, Nelson and Dweck (1977) found that 4-year-old children allocated more reward to someone who did more work than someone who did less work.

A recent review of research by Hook and Cook (1979) suggests that findings on the allocation of rewards, as it relates to the notion of deservingness, are consistent, especially across studies with children between 6 to 12 years of age.

While the above discussion is concerned with children's feelings of deservingness of reward and their reward allocation behavior, the relationship between children's feelings of deservingness of reward and their helping behaviors has also

been studied.

In one study by Long and Lerner (1974), fourth-grade children were assigned to help test a toy and were paid a certain amount of money for their help. They were told either a) the payment they received was proper payment for children of their age; or b) it was proper payment for better qualified, older children, but since the experimenter could not find older children to help with the task, the subject were paid that amount anyway. The findings showed that subjects who were told they were given proper payment, and presumably felt that they deserved the money, subsequently donated less of their money to a poor orphan than subjects who were told that they were overpaid and presumably felt less deserving of the money.

In a more recent study, conducted by Willis, Feldman, and Ruble (1977), the generosity of 48 first and third grade children as it was influenced by their own deservedness of reward and the age of a crippled recipient was examined. The researchers found that children's generosity was unaffected by their own deservedness of reward: Children in the earned reward condition (paid to participate in the experiment) donated as much as children in the windfall reward condition (incidentally given money that nobody wanted to carry around when they came to participate in the experiment). The authors, however, suggested that their deservedness treatment conditions might have failed to generate the intended effects in the children and, as a result, no difference was observed between the donations of children in the two treatment groups. Nevertheless, children were found to donate more to crippled children than crippled

adults, and the authors suggested that children's conception of need, deservedness, as well as the extent to which perceived similarity between the children and the recipients be examined.

### Deservingness of Recipients

The few studies that have been conducted to determine the relationship between children's feelings of deservingness and their helping behavior have been largely confined to children's feelings of their own deservingness of reward. Until recently, children's feelings of the deservingness of reward, help, etc. of the potential recipient as they affect their helping behaviors had been largely ignored.

Taking this into account, Miller and Smith (1977) conducted a study to examine not only the effects of children's own deservingness of reward on their donating behavior, but the effects of the deservingness of the recipients as well. The subjects were 90 fifth-grade children. Each subject was asked to help "test" a game made by a toy company and was paid 70 cents for his service. The children's deservingness was manipulated by leading them to feel that they were either overpaid, properly paid, or underpaid for their assistance. The recipients' deservingness was manipulated by telling the subjects that a group of five children would not be paid for their service in testing the game because of insufficient money (the non-responsible condition) or by telling the subjects that this group of children, who were paid for their service, had been careless and lost their money and now wanted their lost money reimbursed (the responsible condition).

The results showed a main effect of subject deservingness -

the overpaid subjects donated significantly more than the properly-paid subjects who, in turn, donated more than the underpaid subjects. These findings are thus consistent with those of Long and Lerner (1974), indicating that children do appear to have a notion of deservingness - they donate more earnings when it appears that they do not deserve the earnings than when they deserve them.

Miller and Smith (1977) also found the main effect of recipient deservingness to approach statistical significance and a significant interaction between subject deservingness and recipient deservingness - the overpaid subjects donated approximately equal amounts to the responsible and the nonresponsible victims while the properly paid and the underpaid subjects donated more to the nonresponsible victims than the responsible victims.

This pattern of findings, with properly paid and underpaid subjects donating more to the nonresponsible than the responsible victims, seem to suggest that subjects, at least those in the two payment conditions mentioned, displayed a notion of recipient deservingness. The overpaid subjects, who did not discriminate between responsible and nonresponsible victims in their donations but nevertheless donated more than the properly paid and underpaid subjects, might be experiencing what is termed "equity distress" (Adams, 1965; Walster, Berscheid, & Walster, 1973), as the authors suggested. This means that their indiscriminated donations to the two categories of victims might have reflected their desire to reduce equity distress rather than an absence of the notion of recipient deservingness.

Because of the above considerations, the present study attempted to further examine the effects of recipient deservingness on children's donating behavior.

Also, it should be noted here that the stimulus situation in the Miller and Smith (1977) study had potential negating influence on children's donating behavior. Because being careless and losing money could conceivably occur frequently among children, particularly among younger children. Presenting their peer victims as responsible for their fate because of their carelessness and losing money may serve to conjure up children's empathic reactions to the responsible victims, thereby influencing their generosity. This suggests that the effect of victim deservingness in the study risked the possibility of being negated by the effects of children's empathic response. Because of this consideration, the present study attempted to test children's perception of victim deservingness in a stimulus situation that would appear to be relatively remote from such personal experience of children as losing money.

Further, in contrast to the studies by Long and Lerner (1974), Willis et al. (1977) and Miller and Smith (1977), in which subjects' own deservingness was varied, the present study deliberately sought to induce uniform feelings of own deservingness among the subjects by offering a standard amount of cash payment for an identical amount of work to be performed by each subject. This manipulation permitted the children's donating behavior to be assessed from, hopefully, the same base level of the subjects' own deservingness.

Finally, it should be noted that the studies by Long and Lerner (1974), Willis et al. (1977), and Miller and Smith (1977) have focused mainly on the "product" measures of the experimental treatments. What is termed "process" measures have been largely ignored. This means that there had been no procedures other than the dependent measures to monitor and check if the experimental treatments were, indeed, functioning as intended. The present study improved on this by means of manipulation checks that would be made following the experimental treatments.

#### Treatment Manipulations and Hypothesis

As the primary interest of this study was in comparing the effects of high vs. low deservingness (deservingness vs. non-deservingness) on children's donating behavior, only two levels of deservingness, i.e., high and low, were included in this study. In the high deservingness condition, a certain senior citizen by the name of Mr. Brown was described to the subjects as having worked hard for two years in order to save enough money to buy his own refrigerator. But the refrigerator was damaged beyond repair two weeks after it was bought because of an error made by an apparently careless electrician who had moved out of town and could not be reached. In the low deservingness condition, Mr. Brown was described to the subjects as having been given a new refrigerator for free by a wealthy neighbor. But the refrigerator was damaged beyond repair two weeks later because Mr. Brown did not pay careful attention to the wiring instructions.

A complete description of these two levels of recipient

deservingness is reproduced in Appendix C.

These two treatment levels of recipient deservingness appeared to be able to represent a well-defined and yet relatively realistic dichotomous situation. It also appeared to be relatively free from children's personal experience that could have potential negating influence on treatment manipulations such as used in the Miller and Smith (1977) study.

Because findings from previous studies (e.g., Miller & Smith, 1977) suggested that the effects of recipient deservingness were not clear and since children's feelings (perceptions) were considered an important factor influencing their behaviors (e.g., Ginott, 1965, 1969, 1972), it was therefore predicted that subjects would be more generous in their donating behavior towards someone they perceived as deserving than towards someone they perceived as undeserving.

#### GINOTT'S IDEA OF CONGRUENT COMMUNICATION

#### AND THE EFFECTS OF PERSONALITY ATTRACTIVENESS

##### Congruent Communication

In his writings on adult-child relationships, Ginott (1965, 1969, 1972) has emphasized the importance of what is called "congruent communication," i.e., language that fits feelings and situations, between adults and children in adults' attempts to deal with children's behavioral problems or gaining their cooperation. According to Ginott, when children have done something contrary to adults' expectations, adults should avoid giving critical messages, judging children's personality or character, or shaming, blaming, or insulting them. To gain a child's cooperation, they should, instead, take the child's



feelings into account, speak to the child about the situation he is in and attack the problem created by the child rather than the child himself. While dealing with the problem, they should demonstrate respect, dignity and sympathy for the child. Instead of using threats or attacking the child's personality, adults should attack the event, the problem, or the situation by describing what they see, how they feel, what they expect, and what needs to be done. Thus, when two boys mess up the classroom by making "bullets" out of bread and throwing them at each other, the teacher could say "I get angry when I see bread made into bullets. Bread is not for throwing. This room needs immediate cleaning." rather than "You two slobs! Clean it up now! You are not fit to live in a pigsty. I want to talk to your parents about your disgusting behavior!" (Ginott, 1972, pp.73-74).

In short, Ginott's idea emphasizes the adult's demonstration of understanding and acceptance of the child while at the same time he is attacking the event or problem created by the child. Adult communication that attacks the child's personality or character, that shames, blames, insults, or threatens, according to Ginott, will be ineffective in gaining children's cooperation or changing their behavior.

The present study was, in part, an attempt to test the viability of this idea in view of its important educational implications. Specifically, this study attempted to determine whether an adult whose speech communicated understanding and acceptance of a child in a conflict situation would be better liked by, and subsequently elicit more cooperation in the form

of helping behaviors from, children participating in this study than an adult whose speech did not communicate understanding and acceptance of the child.

It should be noted here that individuals who demonstrate understanding and acceptance of other people are more likely to be seen as "nice" and better liked by children, or for that matter, by adults as well. They are more likely to be described as having an "attractive personality," i.e., to be pleasant, agreeable, and so on. The term "nice" therefore is used in this and subsequent chapters to mean "having an attractive personality."

#### Personality Attractiveness

The effects of personality attractiveness or liking on peoples', especially children's, helping behavior have been largely ignored. From the little research that has been reported in this area, however, there is evidence to suggest that help is more readily given to someone who has an attractive personality, or is liked, than to someone who has an unattractive personality, or is disliked.

In one study, Regan (1971) had college students waiting with a confederate in what was supposed to be a study of art appreciation. The confederate, upon hearing a telephone call, answered either in a pleasant or an unpleasant manner ("Look, I don't work here, lady, for chrissake..... just call back later.....") as he hung up in the middle of the conversation. This treatment presumably left the subjects with someone who was either pleasant or unpleasant. The experimenter then appeared and had the subjects and the confederate rate various paintings.

During what appeared to be a pause in the experiment, the confederate either did a favor for the subject (bought him a coke) or did nothing. As a control in a third group, the experimenter performed the favor by bringing cokes. Following another task with the paintings, there was a second pause in the experiment during which the confederate made a request - asking the subjects to buy raffle tickets to help his home town high school build a gym. Supposedly, if he managed to sell the most tickets, he would win a \$50 prize.

The results showed that there was a tendency for the pleasant confederate to obtain more compliance from the subjects than the unpleasant one, although the greatest effect came from the favor manipulation - subjects bought significantly more raffle tickets from the confederate who had previously performed a favor.

If performing a favor by a person can be used to influence one's perception of the personality attractiveness of that person, then the confederate who did a favor in the study might be perceived by the subjects as having a nice personality and hence was helped more.

In another study, Kriss, Indenbaum and Tesch (1974) investigated subjects' helping behavior towards a driver stranded on the highway. Presumably, the car broke down and the driver called the subject. He mentioned to the subject that he called "Ralph's Garage" but got the wrong number. He told the subject that he had just used his last dime and asked the subject to call the garage for him. He made the request either in a straightforward manner (Would you please call my garage for

me?) or in a slightly obnoxious manner (Look, think how you feel if you were in a similar position and you weren't helped. So please call my garage for me).

The results showed that the driver was more likely to be left stranded if he made an "obnoxious" request than if he made a "straightforward" request.

One explanation for this finding is that the obnoxious request reflected the unattractive personality of the driver and hence induced less helping behavior from the subjects.

It should be noted, however, that in both the Regan (1971) and the Kriss et al. (1974) studies, the relationship being studied can be regarded as between personality attractiveness and helping behavior. The popular notion that people who have an attractive personality are better liked was not examined there because no measures of liking, as it was influenced by personality attractiveness, was undertaken. This means that while the findings seem to indicate that personality attractiveness influences helping behavior, the relationship between personality attractiveness and liking remains to be determined.

The relationship between liking and helping behavior was investigated in one study by Baron (1971). In that study, liking toward a confederate was manipulated by telling subjects that the confederate had attitudes either similar or dissimilar to the subjects and had rated the subjects as either high in intelligence and maturity and had written a flattering description of them, or rated them negatively and had written an unflattering description of them. Presumably, liking was

introduced in the subjects such that they either liked the confederate (similar attitude, positive evaluation) or disliked her (dissimilar attitude, negative evaluation). At this point, the experimenter left the room, leading the subjects to believe that the experiment was over. The confederate then made one of three requests to the subjects: a) Small request - she asked the subject to return a notebook to a girl who lived in the subject's dormitory; b) Moderate request - she asked the subject to return several books to the library for her; and c) Large request - she asked the subject to return several books to the library and then check them out in her own name, and hold them until she came by to get them.

The results were quite clearcut: the "liked" confederate was helped by all but one subject. The "disliked" confederate, on the other hand, was helped only when the request was small, one requiring little effort. These findings are consistent with the idea that one tends to help those whom one likes more than those whom one dislikes.

One could argue here, however, that in this study there was no direct measure indicating that liking was, indeed, successfully induced in the subjects (i.e., whether subjects indeed liked one confederate and disliked the other).

Nevertheless, the findings discussed above suggest that both personality attractiveness and liking tend to influence peoples' helping behavior although the relationship between personality attractiveness and liking has not been explicitly investigated and thus remains to be determined.

Also, it should be noted here that the findings discussed

above were all based on studies using adult subjects. Further, the "recipients" in the studies all shared, in some way, what appears to be a rather contrived relationship with the subjects (as, for example, partners in an experiment or in a telephone conversation). Whether this relationship holds up among children with regard to more natural recipients (e.g., a needy person unknown to the subjects), however, remains to be seen.

To date, very few studies with children in this area have been reported. Two published studies that come close to this topic both appeared to have manipulated liking or personality attractiveness only indirectly. Thus, in their study with 9-year-olds, Staub and Sherk (1970) found that the subjects shared a crayon with their friends longer than with their "nonfriends" (those who were not close friends of the subjects). Further, it was found that subjects were more willing to share their crayons with nonfriends who had previously given some candy to them than with nonfriends who had refused to give candy to them.

In another study, Masters (1971) found nursery school children also tended to give more valuable tokens (which they won in a game and could be exchanged for prizes) to an absent friend than to another absent child who had previously worked as his partner in the game.

If friends, or persons who are generous, can be regarded as better liked, or more "attractive", than nonfriends or those who are selfish, then the findings appear to indicate that liking, or personality attractiveness, influences helping behavior in children as well.

One should note, however, that in both of the above two

studies, liking, or attractiveness, was manipulated only indirectly. It was largely inferred from the children's personal relationship with the recipients, who were people already known to them as friends or partners. Further, these two studies, along with the ones conducted by Baron (1971), Regan (1971), and Kriss et al. (1974), which were discussed earlier, had made no explicit attempts to determine if the subjects indeed "liked" the apparently "attractive" recipient and disliked the apparently "unattractive" recipient.

#### Treatment Manipulations and Hypothesis

Because of the considerations just noted, it was, therefore, decided to examine further whether personality attractiveness, indeed, influences liking and helping behaviors in children in the case of an elderly person totally unknown to them. In addition, the viability of Ginott's idea of congruent communication was put to test as well. To accomplish this dual objective, two levels of understanding and acceptance (personality attractiveness) were manipulated in this study. In the high understanding and acceptance condition, Mr. Brown was described to the subjects as a "nice" person who talked to a child who broke his window while playing baseball on the street and to another child who forgot to deliver his paper in an understanding and accepting manner. In the low understanding and acceptance condition, Mr. Brown was described to the subjects as a "mean" person who talked to the same two children in an unsympathetic and threatening manner.

A complete description of the two (high vs. low) levels of understanding and acceptance (personality attractiveness) is

reproduced in Appendix D and Appendix E, respectively.

These two levels of treatments permitted a comparison to be made between the effects of an understanding and accepting speech and those of an incompassionate and threatening speech.

If Ginott's idea of congruent communication is correct, in other words, if personality attractiveness influences children's helping behaviors, then one would expect some observable differences in children's response to the treatment to emerge. On the basis of this reasoning and the findings, discussed earlier, on personality attractiveness and liking and helping behaviors, it was therefore predicted that subjects would be more helpful and would also indicate more liking toward the "attractive" Mr. Brown, who was described as having high understanding and acceptance, than toward the "unattractive" Mr. Brown, who was described as having low understanding and acceptance.

To simplify subsequent labeling, the term "understanding and acceptance" will be replaced hereafter by the term "attractiveness." Henceforth, "high attractiveness" is to mean high understanding and acceptance and "low attractiveness" low understanding and acceptance.

#### INTERACTION OF VARIABLES

As can be seen from the discussions presented above, findings from studies indicate that induction, recipient deservingness and personality attractiveness all appeared to influence children's helping behaviors though the evidence is by no means conclusive. It should be noted, however, that while all three variables are related to children's helping behaviors,



they have different characteristics. As discussed earlier in this chapter and also in Chapter I, deservingness and personality attractiveness are characteristics of the potential recipient while induction is a direct attempt from a third party to influence the child. Given induction is a concerted effort to influence the child and has been found to influence children's helping behaviors while deservingness and personality attractiveness are not concerted efforts, one might have somewhat different expectations about the effects of these three variables. Specifically, one might expect that induction would not only influence children's helping behaviors regardless of the deservingness and/or personality attractiveness of the potential recipient, but would also interact with these two variables such that children who were given induction would be more helpful to an undeserving and/or "unattractive" recipient while those without induction would be more helpful to a deserving and/or "attractive" recipient.

With regard to deservingness and personality attractiveness, on the other hand, one would expect the former to be relatively more influential than the latter given the former specifically defines worthiness of help, reward, etc. while the latter is a more general characteristic of a person. On the basis of this reasoning and the discussions presented in Chapter I, the following expectation was made: Both deservingness and personality attractiveness would not only influence children's helping behaviors singly but also would interact with each other such that children would be equally helpful to an "attractive" and an "unattractive" person given

high deservingness but would be more helpful to an "attractive" than an "unattractive" person given low deservingness.

Since participants in this study included children of both sexes, gender of subjects was included as a classificatory variable. Interactions involving gender, however, were not predicted because there was no clear evidence to justify such predictions.

#### RATIONALE FOR USING AN ELDERLY PERSON AS RECIPIENT

Since the recipients in most studies on children's altruistic behavior have been children and since studies (e.g., Willis, Feldman, & Rubble, 1977) have found children to be more generous toward recipients perceived to be agewise similar to themselves (i.e., other children) than toward those perceived to be dissimilar to themselves (adults), the present study attempted to determine what form children's responses would take when the beneficiary of their altruistic actions was a senior citizen. Also, because this study attempted to test Ginott's idea of "congruent communication" between adults and children, it appeared that an adult - a senior citizen in the present case - would be a proper choice for the role of the recipient. Moreover, a senior citizen was introduced into the treatment conditions because the difficulties encountered by many elderly people do not appear to be well-understood by younger people, and their needs and rights often seem to be ignored (AVER, 1978a). By having an elderly person as the recipient and by relating the induction content to the circumstances of needy senior citizens, it was hoped that at least some of their difficulties and needs were brought to the attention of the

participating children who otherwise might not have an opportunity to gain this understanding.

Conceivably, the sex and ethnicity of the potential recipient could differentially influence children's helping behaviors. But since the present study was not designed to examine these differential effects, it appeared best to hold the sex and ethnicity of the potential recipient constant. The potential recipient - Mr. Brown - was, therefore, described to all subjects as an elderly Caucasian man both verbally and by means of a picture. To enhance the saliency and psychological reality of Mr. Brown, the children were told that Mr. Brown lived in the neighborhood of one of the experimenters.

#### RATIONALE FOR USING CHILDREN AS SUBJECTS

The present study was concerned with altruistic behavior in children rather than adolescents or adults partly because it appears that our present level of knowledge about the ways in which children respond to social influence is still quite scanty and partly because it seems that the moral thinking of today's children will, to a large extent, determine the moral outlook of society in the future. Indeed, as Papalia and Olds (1975) put it, it is only by learning how children respond to the influences around them can we offer them a better education, a better home environment, and a better start in life. This, in turn, will better equip them to fulfill their individual potential and to help them fulfill the potential of society by creating a better world.

Intermediate (grades five and six) children were used in this study for two reasons. First, they were the only ones

available to the investigator at the time the study was conducted. Second, given the verbal tasks featured in this study, children of younger age levels might have difficulty comprehending them and making the appropriate responses, and they were therefore not used in this study.

#### HYPOTHESES REGARDING GENDER AND AGE EFFECTS

Findings on the effects of gender and age on children's altruistic behavior have been generally consistent, though by no means conclusive. Reviews by Bryan (1975) and Rushton (1976) showed that older children tended to be generally more altruistic (donate, share, and help more) than younger children and that the gender of children generally did not influence their altruistic behavior. When gender differences did emerge, however, they were usually found to favor the female gender. These observations are supported by findings from more recent studies (e.g., Grusec, Kuczynski, Rushton, & Simutis, 1978; Grusec, Saas-Kortsak, & Simutis, 1978; Eisenberg-Berg & Geisheker, 1979). Since participants in this study included children of both sexes, it was therefore decided to include gender as a classificatory factor in the study.

Age was not included as a factor in the data analysis for two reasons. First, subjects available for the study were from the adjacent grades of five and six in private schools. This suggests that they were too close in age for developmental differences to be meaningfully analysed. Second, it seemed possible that many children in adjacent grades in private schools were of the same age (school records for the subjects were not available to the investigator). If so, this would

further reduce the age difference among the subjects even though they were from two different grades. Because of these considerations, age was not included as a factor in the data analysis.

With regard to the effects of gender, then, the present study hypothesized, in accordance with the general finding reported in the literature, that there would be no gender differences in the dependent measures among the subjects in this study.

#### SUMMARY AND RESEARCH HYPOTHESES

The above introduction, reviews of research, and discussions of problems to be addressed in the present study may be summarized into the following five major questions and issues.

First, given the available findings on the "induction" literature, what kind of methodological improvements could be made in order to obtain more definite information as to whether experimental induction influence children's helping behaviors? The second issue revolved around the notion of deservingness in children. In particular, the question was raised as to whether children's feelings of recipient deservingness of help influence their helping behaviors. The third question was concerned with the viability of Ginott's idea of congruent communication and the effects of personality attractiveness on children's liking and helping behaviors. The fourth question dealt with the effects of gender of the subjects on their helping behaviors. The fifth question was focused on the possible interactions among the four variables being examined in the present study.

This last question was formulated because earlier discussions in this chapter and in Chapter I suggest that the effects of induction might interact with characteristics (deservingness and personality attractiveness) of the potential recipient.

These five major questions/issues can be translated into the following research hypotheses on the basis of discussions presented earlier in this chapter and in Chapter I:

1. Induction, i.e., reasoning with children, would increase their helping behaviors toward people;
2. Children would be more helpful toward people they perceive to be deserving of their help than toward people they perceive to be undeserving of their help;
3. Children would be more helpful toward people who have an attractive personality than toward people who have an unattractive personality;
4. The gender of subjects would not make a difference in their helping behaviors;
5. Children who were given induction and those who were not given induction would be equally helpful toward deserving people while children who were given induction would be more helpful than those not given induction toward undeserving people;
6. Children who were given induction and those who were not given induction would be equally helpful toward people with an attractive personality while children who were given induction would be more helpful than those not given induction toward people with an unattractive

personality;

7. Children would be equally helpful to "attractive" and "unattractive" people given high deservingness but would be more helpful to "attractive" than "unattractive" people given low deservingness.

To test these hypotheses, taking into account the various theoretical and methodological issues raised earlier, the research methodology to be described in the next chapter was used.

## CHAPTER III

### Method

Design. A 2x2x2x2 factorial design was used for this study. The factors included: induction (induction vs. control, i.e., induction statements being replaced by non-induction statements); deservingness (high and low); and personality attractiveness (high and low). These three treatment variables are described in Appendices A through E.

In addition to these three experimental variables, gender (boys vs. girls) also was defined to be a factor so that results from this study might be compared with those from other studies pertaining to this variable. Thus, a total of 16 groups were defined.

Subjects. Children in the grade five and grade six classes from five Roman Catholic parish schools in the Greater Vancouver, British Columbia, area served as subjects in the study. This particular sample of subjects was all that were available to the investigator at the time of the experiment.

All children participating in the study were from residential districts in the greater Vancouver, British Columbia area with "median total income per family" between \$8175 and \$9591 (Statistics Canada, 1970).

There were 104 grade five children (52 boys and 52 girls) and 94 grade six children (41 boys and 53 girls) in the study. These children were randomly assigned to one of eight treatment conditions.

Materials. Each treatment condition was presented as a "story" and was printed on two sheets of letter-sized paper. Each story



began with "This story is about old people. By old people, I mean those who are at least 70 years old, like the ones you saw in the big picture." At this point, the treatment conditions were introduced into the story. The induction/non-induction treatment came first, followed by the personality attractiveness and deservingness treatments. This order of presentation of treatments permitted the story to be presented in a smooth and logical manner.

It should be noted that the deservingness and attractiveness portions of the story were first developed and later refined over a series of "interviews" and "pilot studies" with grades five and six children. The version being used in the present study represented the latest revision that managed to elicit from the "pilot" subjects variance in the scores and a pattern of responses satisfactory to the investigator.

There were nine questions embedded in each story. These nine questions, designed to engage children's attention in the story, to serve as process measures, (manipulation checks), and to provide outcome, or criterion, measures (dependent variables), were interspersed in the appropriate locations of the story. These nine questions are reproduced in Appendix F.

Two complete sample stories as exemplar texts for treatments, each with the nine questions embedded in it, are reproduced in the appendices. Appendix G shows a description of the treatment story combining induction, high personality attractiveness, and high deservingness. Appendix H shows a description of the treatment story combining non-induction (i.e., control), low personality attractiveness, and low

deservingness. The two pages of story were stapled together as a single booklet.

Two pictures, one showing two elderly men and two elderly women sitting in a couch and the other, another elderly man, were shown to the children during the course of the experiment. The size of the "group" picture was 11x14" and the size of the "single-man" picture, 8x7". These pictures were used because both the induction and non-induction treatments in the study were concerned with old people and the two pictures were designed to help the children focus their attention to the relevant stimulus aspects.

Pre-experimental (Covariate) Questions. To statistically control for any possible pre-experimental differences among subjects that might have been related to the outcome/criterion measures (dependent variables), 10 pre-experimental questions were administered to the subjects. These 10 questions seemed to be most related to the altruistic acts under study and subjects' responses to them were therefore used as covariate measures. Specifically, children's indications as to

1. How much 50 cents means to them;
2. How much five dollars means to them;
3. How much they enjoy writing stories;
4. How much they enjoy reading comic strips;
5. Whether we should be helpful to the elderly (people 70 years or older) who need our help;
6. Whether we should be helpful to poor children;
7. Whether we should be generous to the elderly (people 70 years or older) who need our help;
8. Whether we should be generous to poor children;
9. Whether their grandparents live with them;
10. Whether they visit with or work for elderly people

were obtained as covariate measures. Subjects' answers to these 10 covariate questions were obtained by means of a questionnaire containing these 10 questions. Four questions, namely, Questions

2, 4, 6 and 8, were included to make the intent of the other six questions, all concerned with elderly people, less obvious to the subjects. These 10 questions, reproduced in Appendix I, were administered to the subjects immediately before the treatments were applied. In addition, each child's reading level was also obtained at the beginning of the experiment by means of the Comprehension Test of the Gates-MacGinitie Reading Tests (Survey D, Form 1).

This reading comprehension test has a reported split-half reliability of .94 at the grade four level; .96 at the grade five level; and .95 at the grade six level. In addition, it has a reported correlation of .60, .76, and .72 with the Lorge-Thorndike Verbal IQ for the grade four, grade five, and grade six level, respectively (Gates & MacGinitie, 1965).

This comprehension test of three pages was stapled to the page containing the 10 covariate questions noted above, as one single booklet.

Testing Environment. The study was conducted using intact classes because there was no practical possibility for individual, or even small-group, administration of the tasks. The experiment was conducted in the subjects' classrooms. This was done partly to minimize the time required to transfer the students from one location to another, to provide a more natural and familiar environment to the subjects, to minimize the disruptions that might occur within and outside the classroom, and finally because other rooms in the schools suitable for the experiment were not available.

At the beginning of the experiment, the desks were

rearranged into rows so that the children would sit as far apart from one another as was possible. This was done to minimize any possible influence that might arise from the physical proximity of the subjects' classmates and/or their friends.

Procedure. The study was conducted using a group-administration procedure. After the two experimenters entered the subjects' classroom, Experimenter A, a Caucasian woman in her early thirties, introduced herself as Mrs. Mac and Experimenter B, a non-Caucasian male graduate student, to the class. She (Experimenter A) told the class that they had come to request their help on some projects and asked experimenter B to talk to the class first. Experimenter B then told the subjects that he went to school at The University of British Columbia and was a good friend of Mrs. Mac's. Since Mrs. Mac told him sometime ago that she would be coming to the schools, he thought it would be a good idea for him to come along so that he could ask for the children's help with a project he had been working on. He told the subjects that his project had nothing to do with Mrs. Mac's and because his project took more time, Mrs. Mac had agreed to let him do the first part of his project with the children before she would talk to them about hers. She would then let him finish his project with the children. He told the class that they would be there for about an hour.

Experimenter B told the children that it would be best for his project if they could sit as far apart from one another as possible and therefore he would like to rearrange the desks into rows. Having rearranged the desks, he told the subjects to clear their desk tops and have only a pencil and an eraser on the

desk. He then told the subjects that his project had two parts. The first part was to find out how children feel about certain things and how well they could read and understand stories. He, with the help of Experimenter A, then passed out the booklet containing the four pages of covariate measures - the covariate information sheet (page 1) and the Comprehension Test of the Gates-MacGinitie Reading Tests (pages 2 to 4) - to the children. The children were instructed to circle B if they were boys and circle G if they were girls at the bottom right-hand corner of the covariate information sheet. He told the children not to write their names down since he did not need to know who answered what. He told them that all he needed to know was how different children feel about certain things. He told the children to read the questions on the first page to themselves silently while he read them out loud to them and underline the answer that showed how they felt. He reminded the children that different people might have different feelings about the same thing and asked them to therefore answer the questions completely on their own without looking at another person's answers.

When the first page of the booklet (i.e., the 10 covariate questions) was completed, the children were instructed to turn to the second page of the booklet. They were told that on this and the next two pages, he would like to find out how well children could read and understand stories. They were told to write their names at the top of the second page and were then administered the reading comprehension test, a task of 25 minute's duration.

Following the completion of the reading comprehension test, Experimenter A took over. She told the subjects that her project was more fun and had to do with coloring. She told the children that she worked for a "foster-parent agency" and this year they decided to send personally colored greeting pictures to the homeless children under their care in Africa, Asia and South America at Christmas. She told the subjects that she needed some Canadian children to help with the coloring. She then showed a sample of the pictures to the class and told them to be careful with the pictures when they got them. The children were told not to write anything on the pictures but could color them with felt pens, pencil crayons, whatever they wanted. She, with the help of Experimenter B, then passed out the pictures and urged the children to do a good job.

After the pictures had been passed out, the children were told that for their assistance, they would each be paid 50 cents. She showed them a roll of 50 cents wrapped in aluminum foil and apologized that the money was all in nickels because that was what the bank gave her. She told the subjects to check that each should have 10 nickels when they got their money and then proceeded to distribute the rolls of nickels, with Experimenter B helping out. The subjects were explicitly told that they could buy candies or do whatever they like to do with the money since it was their money and they earned it by help coloring the pictures. The subjects were told that they could start coloring the pictures immediately but she would come back Monday to collect them so that everybody would have plenty of time to do the work. While the children were coloring,

Experimenter A walked around the classroom, checking them out.

After about eight minutes of coloring, she told the subjects that she had to be on her way, thanked the subjects for their help, and left the room.

At this point, Experimenter B took over and told the subjects:

"Children, may I have your attention please. The coloring probably will take a while to finish. Since I don't have much time to be with you and since Mrs. Mac would be collecting the pictures on Monday, would you please put them aside for just a little while so that I can finish my project with you?

"This, the last part of my project, is concerned with old people. By old people, I mean those who are at least 70 years old, like the ones in this picture (show group picture to class). Can you all see it? I'll put it here so that you can see it. (put picture in the front of the room). What I would like to find out is how school children feel about old people. Also, I want to find out how school children feel about an old person who lives in my neighborhood. This elderly person is Mr. Brown, and I have brought along a picture of him to show you (show single-man picture to class). This is Mr. Brown. He lives in my neighborhood. Can you all see him? I'll put the picture here. (put picture next to the one shown earlier).

"What I would like you to do is read a story about old people and about Mr. Brown very carefully and then show me how you feel about the story by answering some questions. The story, the questions, and the answers are all in this booklet (show booklet to class). I will pass out these booklets in just a

minute.

"Please don't write your name down since I don't need to know who answers what. All I need to know is how different children feel about the story.

"All you have to do is read the story very carefully and then answer the questions by drawing a line under the answer that shows how you feel.

"Remember, different people may have different feelings about the same thing, so, please answer the questions completely on your own without looking at another person's answers.

"Is this clear? Are there any questions?

"Please answer all the questions and be very careful with your answers. You cannot change your answers later when I say stop.

"You may begin as soon as you get the booklet. When you finish, please put your booklet upside down like this (show class) and then you may continue with your coloring. Are there any questions?"

Experimenter B then passed out the 2-page booklet containing the treatment story and the nine questions which were embedded in it.

As noted before, each story began with the induction treatment, followed by the personality attractiveness and deservingness treatments. The nine questions, reproduced in Appendix F, were embedded in the appropriate locations of the story. This format and order of presentation of treatments permitted the story to be presented in a smooth and logical manner. It also was designed to actively engage the children's



attention throughout the entire story.

After all children had finished with the story, Experimenter B then gave an 8 1/2 x 11" envelope to each child in the class, telling the class to put their donations in the envelope if they felt like giving money to help Mr. Brown. After the donations were placed in the envelope, Experimenter B then told the subjects that he had to match the story which they just finished with the one they had read earlier and they were therefore asked to write their name at the top of the back page of the story and put their story into the envelope as well. The envelopes were then collected.

At this point, Experimenter B asked the children not to talk to one another or to the other children in the school about the story that they just read because it was "confidential." He then thanked the subjects for their help and left the room.

The instructions as used by Experimenters A and B are reproduced in Appendix J.

The entire experimental procedure was designed to make the study appear as natural, uncontrived and as psychologically real to the children as was possible. The eight minutes of picture-coloring, in particular, was introduced into the experiment to help the subjects develop the feeling that they were actually earning the 50 cents given to them earlier for their service.

A total of 10 experimental sessions were held in the five schools during the regular school hours, with two sessions being held in each school in the same morning. The entire experiment was completed in five consecutive mornings, barring from the weekend interruptions.

The order as to whether grade five or grade six class within each school received the treatments first was randomly determined in advance.

Because of the nature of the study and teacher opinions, it was decided that the subjects would not be debriefed about the purpose of the study and that the teachers would collect the pictures and the stories pledged by the subjects on behalf of the experimenters on the day due. The pictures and the stories were subsequently returned to the investigator.

Outcome/Criterion (Dependent) Measures. Children's answers to the last two questions embedded in the treatment story (Appendix F) served as outcome/criterion (dependent) measures. Specifically, children's answers to Question 8 (i.e., the average number of stories they pledged to write) and to Question 9 (i.e., the average amount of money they pledged to donate) as well as the actual amount of donations they made were the outcome measures.

Subjects' pledge to donate and their actual donations were used for outcome measures because they represent different aspects of helping behavior. Specifically, pledging to donate involves "verbal" help while actual donations involve "actual" help although both are monetary in nature.

Cash money rather than tokens exchangeable for prizes was used in the present study because it was felt that money would be psychologically more real for the subjects and would approximate real-life helping (donating) situations more closely than other forms of tokens.

The amount of 50 cents was chosen for the present study

because an amount below 50 cents may be of very little value to intermediate grade children and an amount above it may give them the impression that it is not commensurate with the amount of work required of them.

To take into account the possibility that subjects might donate more than 50 cents (i.e., donating personal money), it was decided in advance that any amount in excess of the 50 cents given to them would be excluded from the data analysis. This means that the maximum possible amount of donations in the data analysis was 50 cents. This decision was made to control for a possible source of error variance.

The number of stories pledged by the subjects was included as an outcome measure because it would be interesting to see whether the experimental treatments in the study have any effects on a measure of helping that is not monetary in nature.

The number of stories the subjects actually turned in (see Question 8, Appendix F) was not used as an outcome measure, however. This decision was based on two considerations. First, there was some discussion about the nature of the study between the teachers and the children in one school (but not others) soon after the experiment was completed. This discussion was unexpected by the investigator and it raised the question whether a meaningful analysis can be performed on the number of stories the subjects actually turned in for the experiment. Second, there was no guarantee that the subjects in the other four schools did not discuss with one another about the story they had read after the experiment was completed. Had this occurred, their discussion would certainly have influenced their

decision to write the stories that they pledged during the experiment. These considerations thus suggested that it would be best to exclude, as an outcome measure in the data analysis, the number of stories actually turned in by the subjects.

Process Measures (Manipulation Checks) subjects' answers to Questions 1, 2, 3, 4, 5, 6, & 7, which were embedded in the treatment story (Appendix F), were also analysed. This set of process measures (i.e., answers to the seven questions noted above) was used to check on the degree of successful manipulation of the three experimental variables (induction, recipient deservingness and personality attractiveness) being examined in this study.

## CHAPTER IV

### Results

The results are described in this chapter in terms of two categories of measures, process measures, which represent results from the manipulation check questions, and outcome/criterion measures (dependent variables), which formed the criteria against which the research hypotheses were tested.

#### PROCESS MEASURES: MANIPULATION CHECKS

To determine whether or not induction, recipient deservingness, personality attractiveness, and gender influence subjects' responses to the seven manipulation check questions embedded in the treatment story (Questions 1 through 7 in Appendix F), multidimensional contingency table - The log-linear model - analyses were performed.

Because of the nature of subjects' responses to the questions, a constant of .5 was added to the data for the analyses, in accordance with the suggestions of the BMDP program (Dixon & Brown, 1979).

#### Induction

The distribution of subjects' responses to manipulation check Question 1 (Should we be helpful to the elderly who need our help?) and Question 2 (Should we be generous to the elderly who need our help?) - which were designed to gauge the effectiveness of the induction treatment - is shown in Table 1.

Insert Table 1 about here

Results from the multidimensional contingency table (MCT) analyses showed that subjects' responses to Questions 1 and 2

were not influenced by any of the four independent variables individually or in combination with one another. These results therefore indicate that regardless of the gender of the subjects or the experimental condition to which they were exposed, the subjects felt equally strongly that one should be helpful and generous to the elderly who need help.

Specifically, it should be noted that there is no difference between boys and girls and between subjects exposed to the induction and non-induction (control) conditions in their expressed feelings about being helpful and generous to the elderly who need help.

#### Personality Attractiveness

Manipulation check Question 3 (Do you think children will like Mr. Brown?) and Question 4 (Do you think you will like someone as nice/mean as Mr. Brown?) were designed to gauge the effectiveness of the personality attractiveness treatment.

The distribution of subjects' responses to these two questions is shown in Table 2.

Insert Table 2 about here

Results from the MCT analyses on these two questions showed a statistically reliable interaction between subjects' responses to Question 3 and personality attractiveness of the potential recipient, likelihood ratio chi-square=153.54,  $df=2$ ,  $p<0.001$ ; and between subjects' responses to Question 4 and personality attractiveness of the potential recipient, likelihood ratio chi-square=171.16,  $df=2$ ,  $p<0.001$ . These are shown in Table 3.

Insert Table 3 about here

The statistically reliable interaction between subjects' responses to Question 3 and personality attractiveness, as shown in Table 3, shows that subjects' responses to this question were reliably influenced by the personality attractiveness treatment. Specifically, it indicates that the recipient described as having an attractive (i.e., nice) personality was regarded by the subjects as reliably better liked by children than the recipient described as having an unattractive (i.e., mean) personality. This also suggests that the attractiveness treatment in the present study was noticeable and regarded by the subjects in the manner expected.

The statistically reliable interaction between subjects' responses to Question 4 and personality attractiveness of the potential recipient, as shown in Table 3, shows that subjects' responses to this question were reliably influenced by the personality attractiveness treatment. Specifically, it indicates that the recipient described as having an attractive (nice) personality was reliably better liked by the subjects than a recipient described as having an unattractive (mean) personality.

Subjects' responses to Question 4 thus serve as further evidence to indicate that the personality attractiveness treatment in the present study has achieved its intended effect.

Taken together, subjects' responses to Questions 3 and 4 indicate that the personality attractiveness treatment in the present study was functioning according to expectations. In addition, they provide clear experimental evidence to show that

people who have an attractive personality, at least as operationalized in this study, are liked and people who have an unattractive personality are disliked by children.

#### Recipient Deservingness

Manipulation check Question 5 (How did Mr. Brown get his refrigerator?), Question 6 (Who damaged the refrigerator?), and Question 7 (Does Mr. Brown deserve another refrigerator?) were designed to gauge the effectiveness of the deservingness treatment.

The distribution of subjects' responses to these three questions is shown in Table 4.

Insert Table 4 about here

Results from the MCT analysis for Question 5 showed a statistically reliable interaction between subjects' responses to this question and recipient deservingness, likelihood ratio chi-square=185.79,  $df=1$ ,  $p<0.001$ . This is shown in Table 5.

Insert Table 5 about here

The statistically reliable interaction between subjects' responses to Question 5 and recipient deservingness, as shown in Table 5, indicates that all but seven of the subjects in the study correctly identified how Mr. Brown obtained his refrigerator. This result is, therefore, consistent with treatment expectations.

Results from the MCT analysis of Question 6 showed a statistically reliable interaction between subjects' responses



to this question and recipient deservingness, likelihood ratio chi-square=75.89,  $df=1$ ,  $p<0.001$ .

This statistically reliable interaction between subjects' responses to Question 6 and recipient deservingness, as shown in Table 5, thus indicates that 158 of the 195 subjects participating in this study correctly identified the person who damaged the refrigerator. This, again, is consistent with treatment expectations.

Results from the MCT analysis of Question 7 showed a statistically reliable interaction between subjects' responses to this question and recipient deservingness, likelihood ratio chi-square=60.52,  $df=2$ ,  $p<0.001$ ; between subjects' responses to this question and personality attractiveness, likelihood ratio chi-square=36.80,  $df=2$ ,  $p<0.001$ ; and among subjects' responses to this question and recipient deservingness and personality attractiveness, likelihood ratio chi-square=7.79,  $df=2$ ,  $p<0.02$ .

The interaction between subjects' responses to Question 7 and deservingness is consistent with treatment expectations. It shows that subjects' responses to this question were reliably influenced by the deservingness treatment. Specifically, it indicates that the recipient described as deserving or undeserving in the present study was perceived accordingly by the subjects, as can be seen from the data in Table 6.

Insert Table 6 about here

The interaction between subjects' responses to Question 7 and recipient personality attractiveness, as shown in Table 6, is interesting. It shows that subjects' responses to this

question were reliably influenced by the personality attractiveness treatment. Specifically, it indicates that when a person had an attractive personality, as operationalized in this study, he was seen as deserving, and when he had an unattractive personality, he was seen as undeserving. This, therefore, suggests that subjects' perception of the deservingness of help of a potential recipient is influenced by the personality attractiveness of that potential recipient.

The interaction among subjects' responses to Question 7 and recipient deservingness and personality attractiveness, shown in Table 6, indicates that subjects' responses to this question were jointly influenced by the deservingness and personality attractiveness treatments such that regardless of the deservingness of a person, the one with an attractive personality was perceived as more deserving than the one with an unattractive personality.

The results described above thus indicate that subjects' perception of deservingness of help varied as a function of not only the deservingness of the potential recipient but also the personality attractiveness of that potential recipient.

By and large, results from the above MCT analyses on the process measures, which were carried out as manipulation checks, indicate that gender of the subjects did not reliably influence their responses to the seven manipulation check questions embedded in the treatment story and the experimental treatments (deservingness and personality attractiveness) in the present study were functioning according to expectations.

### DEPENDENCE/INDEPENDENCE AMONG PROCESS MEASURES

To determine the consistency with which subjects responded to the seven manipulation check questions embedded in the treatment story, that is, the extent of dependence/independence among the process measures, likelihood ratio chi-square statistics were computed. The results are presented in Table 7.

Insert Table 7 about here

As can be seen from Table 7, highly reliable dependence existed between subjects' responses to Questions 1 and 2, likelihood ratio chi-square=77.52,  $\underline{df}=9$ ,  $p<0.001$ ; between Questions 3 and 4, likelihood ratio chi-square=180.79,  $\underline{df}=4$ ,  $p<0.001$ ; between Questions 3 and 7, likelihood ratio chi-square=25.44,  $\underline{df}=4$ ,  $p<0.001$ ; between Questions 4 and 7, likelihood ratio chi-square=28.49,  $\underline{df}=4$ ,  $p<0.001$ ; between Questions 5 and 6, likelihood ratio chi-square=88.77,  $\underline{df}=1$ ,  $p<0.001$ ; between Questions 5 and 7, likelihood ratio chi-square=63.22,  $\underline{df}=2$ ,  $p<0.001$ ; and between Questions 6 and 7, likelihood ratio chi-square=56.89,  $\underline{df}=2$ ,  $p<0.001$ .

These indices of dependence indicate that there was great "consistency" among subjects in their response to questions designed to gauge the effectiveness of specific variables manipulated in the present study. They also indicate that the three sets of questions - Questions 1 and 2; 3 and 4; 5, 6, and 7 - which were designed to gauge the effectiveness of three different variables, were all functioning according to expectations.

The statistically reliable dependence between Questions 3

and 7 and between Questions 4 and 7 (likelihood ratio chi-squares=25.44 and 28.49, respectively,  $df=4$ ,  $p<0.001$  for both cases - see Table 8 for the exact distribution of responses) deserves special attention.

Insert Table 8 about here

These two indices of dependence and the data in Table 8 suggest that subjects who answered Questions 3 or 4 favorably also tended to answer Question 7 favorably. Conversely, if they answered Questions 3 or 4 unfavorably, they also tended to answer Question 7 unfavorably. This means that if they felt Mr. Brown was personally attractive, they also tended to feel that he was deserving. And if they felt that Mr. Brown was personally unattractive, they also tended to feel that he was undeserving.

These findings are reminiscent of the results, discussed earlier, from the MCT analyses for Question 7, which was designed to measure subjects' perception of deservingness. In the MCT analyses, subjects' responses to Question 7 were found to be reliably influenced by the personality attractiveness treatment.

These findings thus suggest that subjects tend to perceive the recipient's deservingness of help from the perspective of the recipient's personality attractiveness. If the recipient has an attractive personality, he is seen as deserving. If the recipient has an unattractive personality, he is seen as undeserving.

(Since "correlation" is not causation, one might, of course, argue from the opposite direction. However, given the

context of the present study, one might find the latter argument less convincing.)

#### OUTCOME MEASURES: RESEARCH HYPOTHESES

The independent variables in the present study were induction, recipient deservingness and personality attractiveness, as manipulated in the treatment stories (see Appendices G and H). In addition, the gender of the subjects was used as a classification variable. The outcome/criterion measures (dependent variables) in the present study were subjects' responses to the last two questions (see Questions 8 and 9 in Appendix F) embedded in the treatment story. Specifically, subjects' responses to these two questions and their actual donations were used as outcome measures. (Their responses to Questions 1 through 7 were used as process measures, i.e., manipulation checks, as already discussed).

Subjects' reading comprehension scores on the Gates-MacGinitie Reading Tests and their responses to the 10 pre-experimental questions (Appendix I) were used as covariate measures.

As discussed in Chapter III, these covariate measures were considered to be most related to the altruistic acts under study and were used to statistically control for any possible pre-experimental differences among subjects' that might have been related to the outcome/criterion measures.

To test for homogeneity of regression coefficients (i.e., lack of interaction between the independent variables and the covariates), a 3-way (induction x deservingness x attractiveness) MANCOVA (Multivariate Analysis of Covariance)

with all 11 covariates was performed using the MULTIVARIANCE program developed by Finn (1977).

A 3-way rather than a 4-way (i.e., including gender as a factor) MANCOVA was performed because some cell sizes in the latter were smaller than expected (less than 11 - the total number of covariates) and hence did not meet the requirements for a regression parallelism test.

(Prior to the regression parallelism test, Bartlett-Box tests of homogeneity of variances were performed on the three dependent measures and the results showed that the variances among the eight groups can be regarded as homogeneous:  $F$ 's(7,187)=0.38, 0.59, 0.87,  $p$ 's<0.92, 0.78, 0.54, respectively, for pledged stories, pledged donations, and actual donations).

The regression parallelism test showed that there was no interaction between the 11 covariates and the three independent variables,  $F$ 's(77,99)=1.03, 1.31, and 1.06,  $p$ 's<0.45, 0.10, and 0.39, respectively, for pledged stories, pledged donations, and actual donations; multivariate  $F$ (231,292)=0.97,  $p$ <0.61.

Also, results from this 3-way MANCOVA analysis showed that covariate 3 (How much do you enjoy writing stories?) and covariate 6 (Should we be helpful to poor children?) were the only statistically reliable covariates for children's pledged stories,  $F$ 's(1,176)=4.40, 5.71,  $p$ 's<0.04, 0.02, respectively. Covariate 3 was also found to covary reliably with subjects' actual donations,  $F$ (1,176)=4.28,  $p$ <0.04. None of the 11 covariates, however, was found to covary statistically reliably with the subjects' pledge to donate earnings.

The means and the error mean squares from this 3-way

MANCOVA analysis are presented in Table 9.

Insert Table 9 about here

These findings thus indicate that with the exception of subjects' indications as to how much they enjoyed writing stories (covariate 3) and whether one should be helpful to poor children (covariate 6), all other covariate measures, including reading ability, did not reliably influence subjects' responses to the three outcome measures.

The finding that subjects' reading level was not a statistically reliable covariate measure should be noted especially given the heavy reliance of the present study on student's reading ability. This finding alleviates one's concern for the possible influence of subjects' reading levels on their responses to the treatment manipulations.

For the final presentation of data, a 4-way (induction x deservingness x attractiveness x gender) MANCOVA was performed with subjects' indications as to how much they enjoyed writing stories (covariate 3) and whether one should be helpful to poor children (covariate 6) as covariate measures. (Bartlett-Box tests for homogeneity of variances in the three outcome measures were performed among the 16 groups resulting from the factorial combinations of the four independent variables. The results indicated homogeneity of variances among the 16 groups' pledge to contribute stories, to donate earnings, and actual donations of earnings:  $F's(15,179)=1.13, 0.43, 0.57, p's<0.32, 0.98, 0.90$ , respectively.) This 4-way MANCOVA could not be completed as the error message (Error Message No. 128) from the MULTIVARIANCE

program (Finn, 1977) indicated a dependency between the two covariates. A subsequent inspection of the raw data showed that one of the 16 groups had zero variance (i.e., same scores) in covariate 6 (Should we be helpful to poor children?). Because the program error message suggested that one of the covariates be removed or observations be added to destroy the dependency between these two measures, it was decided to remove subjects' responses to covariate question 6 (Should we be helpful to poor children?) from the analysis. This covariate was removed while subjects' indications as to how much they enjoyed writing stories (covariate 3) was retained for analysis because of dependency (i.e., no variance) considerations.

Results from this final 4-way MANCOVA analysis with subjects' indications as to how much they enjoyed writing stories as a covariate measure are discussed as follows.

The means and error mean squares from this 4-way MANCOVA analysis are presented in Table 10. Other related statistics (e.g., mean squares,  $F$ -ratios) for the three dependent measures are presented in the summary table in Appendix K.

Insert Table 10 about here

### Induction

The hypothesis concerning the effects of induction was not supported as no reliable multivariate or univariate main or interaction effects involving induction were observed.

The related statistics (e.g., means,  $F$ -ratios) can be seen in Table 10 and Appendix K.



### Personality Attractiveness

As no reliable multivariate main or interaction effects involving personality attractiveness were observed, an examination of the univariate effects was undertaken. This examination revealed a reliable univariate main effect of personality attractiveness on subjects' pledge to donate earnings,  $F(1,178)=4.00$ ,  $p<0.05$ .

This univariate main effect of personality attractiveness, with the "nice" Mr. Brown receiving reliably more pledged donations from the subjects ( $M=25.41$  cents) than the "mean" Mr. Brown ( $M=19.64$  cents), can be attributed to the "nice" Mr. Brown being perceived as more personally attractive than the "mean" Mr. Brown.

To determine the proportion of variance accounted for by personality attractiveness of the recipient in subjects' pledge to donate earnings, the omega-square statistic (Hays, 1981) was computed. The result was 0.02. This means that personality attractiveness of the potential recipient accounted for only two percent of the variance in the subjects' pledge to donate earnings. This suggests that although personality attractiveness was found to be a statistically reliable variable that influenced subjects' pledge to donate earnings, the actual amount of influence, as indexed by the omega-square statistic, is quite small. Specifically, this suggests that although a recipient described as having an attractive personality received statistically reliably more pledged donations from the subjects than a recipient described as having an unattractive personality, personality attractiveness itself, at least as

manipulated in the present study, can predict only a small percentage of the variance in the donations of earnings pledged by children.

Other related statistics for the effects of personality attractiveness can be seen in Table 10 and Appendix K.

#### Recipient Deservingness

The hypothesis concerning the effects of recipient deservingness was not supported as no reliable multivariate or univariate main or interaction effects involving recipient deservingness were observed.

Statistics related to the deservingness treatment can be seen in Table 10 and Appendix K.

#### Gender

As no multivariate main or interaction effects involving gender were observed, an examination of the univariate effects was undertaken. This examination revealed a reliable univariate main effect of gender on subjects' pledge to contribute stories,  $F(1,178)=3.86$ ,  $p<0.05$ .

This main effect of gender can be attributed to girls being more generous than boys: girls pledging to contribute more stories than boys ( $M=2.20$  vs.  $M=1.62$ ).

To determine the proportion of variance accounted for by gender of the subjects in their pledge to contribute stories, the omega-square statistic was computed. The result is 0.01. This means that gender of the subjects accounted for only one percent of the variance in their pledge to contribute stories. This suggests that although gender was found to be a statistically reliable variable that influenced subjects' pledge

to contribute stories, the actual amount of influence, as indexed by the omega-square statistic, is quite small. In other words, although girls were found to pledge to contribute reliably more stories than boys, gender itself can only predict a small percentage of the variance in the number of stories pledged by children.

Other related statistics can be seen in Table 10 and Appendix K.

#### Interaction Effects

As is clear from the above discussions, no multivariate or univariate interaction effects involving any of the four independent variables were observed.

The related statistics can be seen in Appendix K.

#### CORRELATIONS AMONG OUTCOME MEASURES

To determine the extent of correlation among the three outcome (dependent) measures in the study, pledged stories, pledged donations, and actual donations, Pearson product-moment correlation coefficients were computed. The results showed that these three measures, after adjusting for the effects of covariate 3 (How much do you enjoy writing stories?), which was included in the 4-way MANCOVA analysis, correlated positively with one another. Specifically, the correlations between pledged stories and pledged donations, between pledged stories and actual donations, and between pledged donations and actual donations are  $r$ 's=0.33, 0.34, and 0.86, respectively,  $p$ 's<0.01. (The error correlation coefficients for these three sets of correlations are  $r$ 's=0.35, 0.35, and 0.86, respectively,  $p$ 's<0.01).

These positive correlations, which are statistically reliably different from zero, suggest that these three dependent measures tend to share the same common variance - helping behaviors. The correlations between pledged stories and pledged donations ( $r=0.33$ ), and between pledged stories and actual donations ( $r=0.34$ ), in particular, are consistent with the finding of Rushton (1976). In his attempt to determine the generality of altruistic behavior in children, Rushton found that the correlation among different measures of altruistic behavior in children tended to have a magnitude of about 0.30.

A principal component analysis of the three dependent measures was undertaken and the results are shown in Table 11.

Insert Table 11 about here

As can be seen from the data in Table 11, the first component appears to primarily reflect monetary donations relative to story contributions, which does not involve any monetary cost to the contributor. This first component accounted for about 93 percent of the total variation. This means that the total variance in the dependent measures can be largely accounted for by subjects' pledge to donate earnings and their actual donations.

The second component seems to reflect the distinction between subjects' pledge to donate earnings and their actual donations of earnings.

The above findings thus suggest that the three dependent measures used in the present study may be considered to be distinct from one another, and to tap three different aspects of

helping behavior, as intended.

## CHAPTER V

## Discussion and Conclusions

INDUCTIONManipulation Checks for Induction Treatment

Results from the multidimensional contingency table (MCT) analyses reported in Chapter IV indicate that subjects' responses to Question 1 (Should we be helpful to the elderly who need our help?) and Question 2 (Should we be generous to the elderly who need our help?) in the treatment story were not reliably influenced by any of the variables being examined in the present study, including gender of the subjects.

To determine the extent of dependence/independence between subjects' responses to these two questions before and after the treatment, their responses to Question 1 in the treatment story were "correlated" with their responses to Question 5 on the pre-experimental covariate question sheet {Should we be helpful to the elderly (70 years or older) who need our help?}. The same was done for Question 2 in the story and Question 7 on the pre-experimental covariate question sheet {Should we be generous to the elderly (70 years or older) who need our help?}. The likelihood ratio chi-squares for these two measures of dependence/independence are 75.11 and 44.71, respectively,  $df's=9$ ,  $p's<0.001$ . This indicates that there was great consistency among the subjects in their responses to the same questions before and after the treatment.

The Cramer's V's (ranging from 0 to 1) for the above two sets of "correlations" were observed to be 0.70 and 0.34, respectively, which represent a high and a moderately high

degree of consistency between subjects' responses to the two sets of "pre" and "post" measures.

Also, the above finding suggests that, by the age of about 11, children have already acquired the ability to express social value of helping the elderly, and they indicate this value in response to questions in an anonymous situation.

Also, in terms of subjects' responses to Questions 1 and 2 in the treatment story (see Table 1), which tapped children's "attitude" toward helping the elderly in need, it seems clear that children are quite altruistic toward elderly people, at least verbally. This may be one reason why the lack of a reliable induction effect in this study.

As a speculation, this altruistic attitude may have resulted from their experiences with the mass media that encourage respect and consideration for the elderly (e.g., courtesy seats on the bus). Also, expression of helpfulness and being helpful, especially to the elderly, is something that is socially valued generally.

Children may have acquired this value through a variety of experiences by this age. This may have accounted for the induction, as compared to the non-induction, treatment failing to produce statistically reliable effects either in their response to these two questions or to the outcome measures (i.e., pledge to contribute stories, to donate earnings, and actual donations).

The subjects' indication that one should be helpful and generous to the elderly who need help is probably only one aspect of the larger body of helping responses that they have

already acquired by this age. Thus, it is likely that they probably have also learned that one should help the poor, the sick, the handicapped, etc. When faced with the question whether these "stigmatized others" should be helped, one might expect their responses to be uniformly positive because of the influence of social values and social pressures.

Reviews of research (e.g., McTavish, 1971; Bennett & Eckman, 1973; Bennett, 1976) consistently showed that widespread prejudice against the edlerly existed among the young. Their prejudice includes the presumption that the old have serious problems of insufficient money, poor health, loneliness, inadequate medical care, etc. One might speculate that the altruistic responses of subjects in the present study grew out of this "prejudiced" notion of the elderly. Whether this is true can be determined perhaps by comparing their responses made here with those made in a situation in which the recipient is a younger adult or a peer of theirs.

Also, one might note that the subjects in the study all attended Roman Catholic schools and most, if not all, of them had a Catholic background. Given the traditional teachings of the Catholic Church on love and charity, these values may be more salient for them than for other children of their age who do not have similar backgrounds and do not attend religious schools. Perhaps further research might be undertaken to ascertain possible differences in altruistic responses between children who attend church-sponsored schools and those who attend public schools.



### Effects of Induction

The lack of a main effect of induction is contrary to expectations. Given that the induction statements in the present study incorporated the features of those that have been used successfully in previous studies (e.g., Midlarsky & Bryan, 1972; Eisenberg-Berg & Geisheker, 1979), one would not conclude here that induction is not effective in promoting children's helping behavior. Because in previous studies (Midlarsky & Bryan, 1972; Eisenberg-Berg & Geisheker, 1979), the recipients associated with the induction were needy children while the recipient in the present study was an elderly needy person, it might be that the age of the recipient moderated the effects of induction.

Specifically, the possibility seems to exist that the stimulus object (i.e., the elderly person) in the study might have been so salient, perhaps because of his old age and hence the imagined dependency conditions, that it operated to boost the responses of subjects in the non-induction (control) condition beyond what it might otherwise have been. In other words, the subjects in the non-induction condition might have provided their own "induction".

Evidence supporting this view came from subjects who were queried at the end of the experiment. Many subjects indicated that they felt sorry for Mr. Brown because he was old and without a refrigerator and they therefore pledged and donated to help him. This would suggest that subjects in the non-induction condition might have perceived Mr. Brown in a way similar to those in the induction condition because of his old age. As a result, they decided to help him more than they otherwise would

have. This would then effectively served to reduce the difference that might otherwise would have occurred between subjects in the two induction conditions.

Given this possible explanation for the absence of a reliable main effect of induction, the implication appears to be that factors other than contents of induction must be taken into consideration when the effects of induction are being evaluated. These factors seem to include, at least, the nature of the stimulus object itself. If the stimulus object is not chosen from the proper perspective of the subjects, it runs the risk of confounding any effects that induction might otherwise produce. This, in a way, seems to echo the view of Buckley, Siegel, and Ness (1979). These researchers suggested that subjects' altruistic response may be a function of the age of the potential recipient. They suggested that children may assume "adults" to be competent and self-sufficient. As a result, they may not be as likely to help or share with them as they would with another child. In the present study, on the other hand, the subjects in the non-induction (control) condition may well have focused on the old age (and therefore the imagined dependent conditions) of Mr. Brown (who was pictured and described to the subjects as a senior citizen) and they reacted favorably towards him.

The above account is corroborated by subjects' favorable responses to the two questions (manipulation check Questions 1 and 2) asking whether one should be helpful and generous to the elderly who need help, as discussed earlier.

Granted that the possibilities discussed above exist,

further studies using induction with emphases similar to those of this study and children or younger adults as potential recipients may be conducted. This will offer opportunities to further determine the effects of induction with characteristic features emphasized in this study.

It should be noted that the lack of an induction effect is, of course, subject to more than one interpretations. In terms of subjects' responses to Questions 1 and 2 in the treatment story (see Table 1), which tapped children's "attitude" toward helping the elderly in need, it was suggested in earlier discussion that children were already quite altruistic toward the elderly, at least verbally.

Additional evidence supporting this view came from subjects' responses to pre-experimental (covariate) question 5 {Should we be helpful to the elderly (70 years or older) who need our help?} and question 7 {Should we be generous to the elderly (70 years or older) who need our help?}. Analysis of these responses for the 195 subjects show that for question 5, 170 subjects chose "ALWAYS", 25 chose "SOMETIMES" and none chose "RARELY")@ OR "never"; AND FOR QUESTION 7, 159 CHOSE "always", 35 CHOSE "sometimes", AND ONLY ONE CHOSE "rarely".

Given this pattern of responses and the fact that these pre-experimental (covariate) questions were administered anonymously by a stranger totally unknown to the subjects, it appears that the subjects tended to be already altruistic, at least verbally, prior to the experimental treatment.

The above is, of course, one interpretation for the lack of an induction effect. Other interpretations are possible. For

example, another interpretation for the lack of an induction effect would be that the dependent measures were not sensitive enough to the induction treatment. An examination of the unadjusted grand means and averaged standard deviations shows that for pledged stories, pledged donations, and actual donations, the unadjusted grand means and averaged standard deviations are, respectively, 1.93, 1.42; 22.51, 18.66; and 21.21, 18.52. These data suggest that neither "ceiling" nor "floor" effect could be held responsible for the lack of an induction effect. This, therefore, suggests that it is the insensitivity of the measurement units that might have masked the effects of induction.

Another interpretation would be that induction in the form of a reading passage is not an effective way to induce altruism towards elderly people in children. In other words, reading a passage alone may not be sufficient to induce generosity or helping behaviors toward elderly people simply because the subjects may not be persuaded by the content of the written passage. (It should be noted here that reading comprehension was not a problem as it was not found to be a significant factor (covariate) influencing subjects' responses to any of the outcome, i.e., dependent, measures.)

An additional interpretation for the lack of an induction effect would be that generosity and helpfulness towards elderly people simply cannot be induced among children regardless of the methods used.

Of these four interpretations, the first two appear to be more likely than the last two. This is so because there are no

empirical bases for judging the validity of the last two interpretations, although they may well prove to be valid by further research.

### PERSONALITY ATTRACTIVENESS

#### Manipulation Checks for Personality Attractiveness Treatment

The interaction between subjects' responses to Question 3 (Do you think children will like Mr. Brown?) and personality attractiveness and between subjects' responses to Question 4 (Do you think you will like someone as nice/mean as Mr. Brown?) and personality attractiveness, as indicated in Table 3, are consistent with expectations. They showed that the treatment in the study was functioning as intended. Also, they indicated that liking was shown toward a "nice" person and disliking was shown toward a "mean" person. This is, therefore, evidence to indicate that persons with an attractive personality are liked and persons with an unattractive personality are disliked by children, at least within the context of the present study.

#### Effects of Personality Attractiveness

The finding that the "nice" Mr. Brown received more pledged donations than the "mean" Mr. Brown is consistent with expectations. It also corroborates the findings of Baron (1971), Kriss et al. (1974), and Regan (1971), who used adult subjects and found that "nice" persons were "helped" more. The finding from the present study also corroborates those of Masters (1971), and Staub and Sherk (1970), who found children to be more helpful toward those who were "liked", though liking was not manipulated there directly.

The fact that a main effect of personality attractiveness

was found on pledged donations but not on pledged stories or actual donations needs to be reconciled, however. This inconsistency may have been a result of the "cost" of writing stories. From the subjects' point of view, writing stories may involve a greater degree of personal commitment than simply pledging and making donations of money earned in the experiment. Writing stories involves more time and effort and it is perhaps not a particularly enjoyable activity for the subjects given their experience with writing assignments. Granted this to be plausible, it might be that subjects in the high attractiveness condition wanted to be more helpful but were held back in pledging stories because of this "cost" consideration. If this is true, then one might expect the difference in the number of stories pledged by the two groups of subjects to diminish, perhaps to the point of no difference.

This inconsistency between subjects' pledge to donate earnings and to contribute stories (i.e., main effect of personality attractiveness on pledged donations but not on pledged stories) may perhaps be illustrated with the following example: One would very much like to treat a visiting friend to a nice dinner and decides to dine at a restaurant instead of cooking at home to avoid the troubles involved in cooking.

The inconsistency between subjects' pledged donations and their actual donations, however, is not immediately understood. It might have resulted from children's carelessness, a change of mind, etc. This inconsistency, however, is not unlike those found among adults in everyday situation in which actual donations are almost always exceeded by pledged donations.

The finding that the "nice" Mr. Brown received more pledged donations than the "mean" Mr. Brown is supportive of the approach to teacher-student, more generally, adult-child, relationships advocated by Ginott (1965, 1969, 1972). In dealing with the behavioral problems presented by children, Ginott (e.g., 1972) places the emphasis on attacking the event or problem created by children while demonstrating understanding and acceptance of them. Attacks on children's personality and character are discouraged. This approach to adult-child disciplinary encounter apparently helps to present a much more acceptable (attractive) image of the adult to the child and is hence more likely to elicit cooperative behavior from him.

It should be noted that although personality attractiveness accounted for a rather small proportion of variance (as indexed by the omega-square statistic) in children's pledge to donate, as described in Chapter IV, its implications for education should still be discussed.

First of all, recipient personality attractiveness is more important than induction or recipient deservingness, at least within the context of the present study, in influencing children's helping behavior, as indicated by their pledge to donate earnings. One implication here seems to be that the helping behavior of grade-five and grade-six children may be more easily influenced by relatively concrete, or "surface", and affective variables (such as personality attractiveness) than by abstract and cognitive variables (such as recipient deservingness). This suggests that to encourage children's helping behavior, it might be important to emphasize the

desirable personal characteristics of the potential recipient. These desirable characteristics, which may be crucial for interpersonal attraction, should be easily perceived by children.

A second implication of this finding is that since children of this age level tend to focus on the relatively concrete and affective variables in their helping behavior, it is necessary to discuss with them the more abstract and cognitive variables that elicit and justify helping behaviors. These abstract variables include, for example, the consideration of equality and justice.

A further implication is that teachers who are "nice" may be more readily accepted by children (i.e., they are more likely to obtain "cooperation" from them) than teachers who are "mean". This would suggest that children may be more open to the influence of "nice" than "mean" teachers.

That personality attractiveness influences helping behavior and/or liking is not unique to children. It seems to apply in the world of adults as well. A salesman, or a doctor, who appears to be "nice" (friendly, sympathetic, etc.) is likely to attract more clients than one who is not so perceived. And a football coach who is well-liked by his players is likely to invite more "cooperation" from them in the form of greater genuine motivation to play well in a game.

Social psychologists (e.g., Wrightsman, 1977) have indicated that the ability to satisfy another person's needs and a pleasant or agreeable (i.e., nice) personality are important factors influencing interpersonal attraction, or liking. This



conclusion, however, was largely, if not exclusively, derived from studies on adults. Findings from the present study indicate that interpersonal attraction between children and adults seems to follow a pattern paralleling that of adults. They seem to be more attracted to (i.e., displaying more liking toward) adults who are pleasant, agreeable, understanding and accepting than to adults who lack these qualities.

One can often notice from casual observations and interactions with children that they have a tendency to label adults on the basis of their perception of adults' behavior. Adults who appear to be understanding and accepting are more likely to be labeled "nice" by children than those who do not appear to be understanding and accepting. The findings from this study would suggest that adults who are labeled "nice" by children also may be liked by them, and are more likely to receive help from them than adults who are labelled "mean".

If physical attractiveness can be conceptualized in terms of producing liking, then the finding of the present study also corroborates the finding of Gross, Wallston, and Piliavin (1975). These researchers showed that adults helped attractive recipients more than unattractive recipients.

Few, if any, studies have been conducted to determine the effects of teacher influence on children's helping behavior. This may reflect the belief of the general public that teachers are primarily responsible for the intellectual, rather than moral, development of the child. Considering the amount of time students spend with their teachers and the esteem in which teachers are held, one can expect that teachers may serve as an

important source of influence on children's moral development generally and altruistic behavior in particular.

As previously indicated, the nurturance (understanding and acceptance, friendliness, sympathy, etc.) of adults, particularly parents, has been found to contribute to the development of helping behavior in children. While most, if not all, of the studies on the effects of nurturance on children's helping behavior focused on parental nurturance, it seems likely that nurturance of teachers in the form of an attractive personality may also influence children's moral development and behavior.

Researchers (see, e.g., Staub, 1978 for a review) have found that self-concern inhibits helping behavior. Conceivably, the classroom is a place where evaluations, and therefore self-concern, occur very frequently. It seems plausible that a teacher's "nurturance" could help alleviate children's self-concern in the classroom and hence enable them to become more open to the needs of others.

The notion of self-concern also seems to apply in the context of Ginott's notion of adult-child relationships (Ginott, 1965, 1969, 1972). By showing understanding and acceptance (i.e., being nurturant) of the child, the teacher frees the child from concern about being rejected. This could conceivably help the child become more open to the needs of others and make it more likely for him to exhibit cooperative and helping behaviors.

In addition, in displaying an attractive personality, the teacher performs an important educational function by setting a

good model for children to emulate.

#### RECIPIENT DESERVINGNESS

##### Manipulation Checks for Recipient Deservingness Treatment

The implication of the finding that subject's responses to manipulation check Question 5 (How did Mr. Brown get his refrigerator?) were reliably influenced by the deservingness treatment, as shown in Table 5, is very clear. It indicates that all but seven of the subjects in the study were aware as to how Mr. Brown obtained his refrigerator.

The subjects' response to manipulation check Question 6 (Who damaged the refrigerator?) as a function of deservingness (see Table 5), though statistically reliable at the 0.001 level, does not show "numerically" the same clear-cut pattern as in their response to Question 5. This means that there is a relatively high proportion of subjects (14/98 in the high and 23/97 in the low deservingness condition) who responded incorrectly as to who damaged the refrigerator.

The reason for this high proportion of incorrect responses is not immediately clear. Perhaps it is that while both Questions 5 and 6 are factual, Question 6 is more open to subjective judgment and interpretation than is Question 5. It is likely that, in responding to Question 6, some subjects might have attributed the responsibility for having damaged the refrigerator on a basis different from what was intended in the story. They might have, for example, felt sympathetic towards Mr. Brown (perhaps because of his old age) and attributed the responsibility for having damaged the refrigerator to the electrician. This may then result in the observed "discrepant"

pattern of response.

The subjects' responses to manipulation check Question 7 are interesting on five counts. First, their responses were influenced by the deservingness treatment in the present study in accordance with expectations. As can be seen from Table 6, the proportion of subjects who felt that Mr. Brown deserved another refrigerator was reliably greater when he was described as deserving than when he was described as undeserving (68/98 vs. 20/97).

The second interesting point about the subjects' responses to Question 7 is that their responses were also reliably influenced by the personality attractiveness of the recipient. As can be seen from Table 6, the proportion of subjects who felt that Mr. Brown deserved another refrigerator was reliably greater when he was described as "attractive" than when he was described as "unattractive" (61/97 vs. 27/98).

The third interesting point is that their responses to Question 7 were influenced jointly by the deservingness as well as the personality attractiveness of the recipient. As can be seen from Table 6, the proportion of subjects who felt that Mr. Brown deserved another refrigerator (i.e., choosing the "YES" response) decreased steadily from when he was described as "deserving and attractive" (45/48) to "deserving but unattractive" (23/50), to "undeserving but attractive" (16/49), and finally, to "undeserving and unattractive" (4/48).

The above pattern of "YES" responses to Question 7 complements well the pattern of "NO" responses given by the subjects. This is particularly true when one considers the

proportion of subjects who felt that Mr. Brown did not deserve another refrigerator under the four combinations of deservingness and personality attractiveness. The proportion of "NO" responses rose from when he was described as "deserving and attractive" (0/48) to when he was described as "undeserving and unattractive" (24/48).

The fourth interesting point centers around the distribution of "NOT SURE" responses across the four deservingness x personality attractiveness treatment conditions. As can be seen from Table 6, the proportion of "NOT SURE" responses is smallest (3/48) when Mr. Brown was described as both "deserving and attractive." The proportion of "NOT SURE" responses increased to 25/50 when he was described as "deserving but unattractive", to 28/49 when he was described as "undeserving but attractive", and finally reverted to 20/48 when he was described as "undeserving and unattractive". This pattern of "NOT SURE" responses seems further to attest to the interacting effects of deservingness and personality attractiveness on subjects' response to the question of deservingness.

The above finding therefore suggests that children's perception of the deservingness of a recipient is influenced by the personality attractiveness of that recipient, at least as operationalized in this study. Thus, even when two persons are equally deserving (or non-deserving), the person with an attractive personality tends to be perceived more favorably from the perspective of deservingness by the subjects than a person with an unattractive personality.

Because this interpretation is based on what may be termed "correlational" analysis, one might wish to argue from the reverse direction that children's perception of the "attractiveness" of a recipient is influenced by his/her deservingness of help. That is, even when two persons are equally "attractive" (or "unattractive"), the person who is more deserving tends to be perceived more favorably from the perspective of personality attractiveness than a person who is not deserving. However, given that subjects' responses to manipulation check Questions 3 and 4 (which were designed to measure the effects of personality attractiveness) were not reliably influenced by the deservingness treatment while their responses to manipulation check Question 7 (which was designed to measure the effects of deservingness) were reliably influenced by the personality attractiveness treatment, the interpretation that personality attractiveness influenced the perception of deservingness appears more likely.

Given this interpretation, one speculation to be drawn seems to be that personality attractiveness may influence children's perception of other aspects of reality. Thus, one might speculate that "wrong" ideas taught by a "nice" teacher may be more readily accepted as "right" by children than the same ideas taught by a "mean" teacher. Perhaps future research may be undertaken to test this conjecture.

Also, if this deservingness and personality attractiveness "interaction" effect can be generalized to school situations, then one implication here seems to be that a "nice" teacher may be seen as deserving of children's cooperative/helping behaviors

and a "mean" teacher may be seen as undeserving of children's cooperative/helping behaviors. Future research can perhaps test this hypothesis more directly in the classroom setting by means of more rigorous behavioral measures. In the meantime, these findings seem to suggest that it might be worthwhile for teachers to develop their capacity for understanding and acceptance of children (i.e., personality attractiveness).

The last interesting point about subjects' responses to manipulation check Question 7 is that there was a relatively large proportion (76/195) of "NOT SURE" responses, as can be seen, for example, from Table 6.

The reason for this large number of "NOT SURE" responses is not clear. It might reflect the "interaction" effects between the deservingness and personality attractiveness treatments, or the subjects' "sympathetic" perception of Mr. Brown perhaps because of his old age, or both.

With regard to manipulation check Question 7, then, the overall picture is that subjects' response to the question of deservingness was influenced by the deservingness as well as the personality attractiveness treatments.

The finding that subjects' responses to manipulation check Question 7 were jointly influenced by the deservingness and personality attractiveness treatments (see Table 6) requires further discussion. This interaction indicates that regardless of whether Mr. Brown was described as deserving or undeserving, the "attractive" Mr. Brown was perceived as more deserving than the "unattractive" Mr. Brown. This seems to suggest that there exists a deservingness component of personality attractiveness.

Indeed, given the data in Table 6, it might even be argued that for the subjects, "attractiveness" is analogous to deservingness such that if a person is "attractive", he is deserving, and if he is "unattractive", he is undeserving.

On the basis of this argument, it can be further argued that the "attractiveness" treatment in the present study is not as pure an experimental treatment as deservingness, and future research, therefore, should be conducted to determine whether personality attractiveness can exist independent of deservingness (i.e., whether children can perceive a person as "attractive" without being deserving or vice versa).

Also, as discussed earlier, personality attractiveness was found to have a reliable effect on the outcome measure pledged donations. But given the finding that subjects' responses to manipulation check Question 7 were jointly influenced by the deservingness and personality attractiveness treatments, as the data in Table 6 indicate, one might question whether this effect is due to personality attractiveness per se or the deservingness component that is considered a part of personality attractiveness. In other words, the interaction among subjects' responses to Question 7 and personality attractiveness and deservingness makes the interpretation of the effects of personality attractiveness on the outcome measure pledged donations somewhat ambiguous. The reason here seems to be that personality attractiveness in the present study may then be interpreted as one kind of deservingness that is distinct from the deservingness manipulated in the study. This kind of deservingness results from an attractive personality such that a



person with an attractive personality is automatically bestowed with deservingness and a person with an unattractive personality is deprived of deservingness.

Given this interpretation, the question, again, seems to be whether personality attractiveness can be isolated from deservingness for children. Future research should perhaps examine this problem.

The discussion presented above also suggests that fifth and sixth grade children still have difficulty distinguishing personality attractiveness from deservingness. They seem to confuse personality attractiveness with deservingness in such a way that being "attractive" is deserving and being "unattractive" is undeserving. This is less likely the case for adults as they can see more clearly the distinction between personality attractiveness and deservingness such that one can be "attractive" without being deserving or vice versa. The question "At what age do children begin to differentiate between deservingness and personality attractiveness?" therefore seems to be another question worthy of research.

#### Effects of Recipient Deservingness

The lack of a main effect of deservingness on the three outcome measures is contrary to expectations. This is especially surprising in view of subjects' responses to the three manipulation check questions embedded in the story: Question 5 (How did Mr. Brown get his refrigerator?), Question 6 (Who damaged the refrigerator?), and Question 7 (Does Mr. Brown deserve another refrigerator?). Subjects' responses to these three questions indicated that they had a notion of

deservingness, as discussed previously. Also, a notion of deservingness in children was demonstrated in a number of studies conducted by Miller and his colleagues (e.g., Miller & Smith, 1977; Miller & McCann, 1979; Lerner, Miller, & Holmes, 1976).

The discrepancy between subjects' responses to these three "deservingness" manipulation check questions (process measures) and to the three outcome measures is therefore interesting.

The reason for this discrepancy challenges explanation. It is possible that while subjects felt that the "undeserving" Mr. Brown did not deserve help (as indicated by their responses to the three "deservingness" manipulation check questions in the story), they decided to respond to the helping appeal (the outcome measures in the form of pledge to donate earnings, actual donations, and pledge to contribute stories) from a larger context of deservingness than was anticipated in this study. Specifically, as discussed earlier, being old like Mr. Brown in the picture they saw might have presented an image that indicates dependency (e.g., loneliness, poor health, cannot take care of oneself) and invites sympathy. It is plausible that subjects took this notion of dependency into account while making their pledges to donate earnings or to contribute stories. This suggests that they might be very sympathetic toward senior citizens and, in the case of the "undeserving" Mr. Brown, they might have felt that his "undeservingness" should have been excused because of his old age.

Results from informal interviews with subjects at the end of the experiment supported this view. As already mentioned in

earlier discussions, some subjects indicated that they pledged and donated because they felt Mr. Brown was old and without a refrigerator and therefore would like to help him. Others indicated that they were aware that Mr. Brown was "mean and undeserving" but would like to help him anyway just because he was old. In other words, some subjects were responding to the helping appeal from a larger context of deservingness than was anticipated in this study. To determine the effects of recipient deservingness, therefore, the use of potential recipients of younger age (e.g., college students) might be necessary.

One implication to be drawn from this discrepancy between subjects' responses to the process measures (the three "deservingness" manipulation check questions) and their responses to the outcome measures (pledge to contribute stories, to donate earnings, and actual donations) is that there might be a clear distinction between "attitude" and "behavior" in children.

Social psychologists (e.g., Freedman, Sears, & Carlsmith, 1978; Middlebrook, 1980) agree that attitude has a behavioral component, and may serve to guide a person toward certain behavior (Middlebrook, 1980). However, since inconsistency is often found between attitude and behavior among adults (see, e.g., a review by Wicker, 1969), it is possible that such inconsistencies may also exist among children perhaps because of their less developed cognitive structures. In the context of the present study, the inconsistency between subjects' attitude (responses to the process measures) and behavior (responses to the outcome measures) might have occurred because of their

possible "unique" conception of deservingness of the elderly recipient in this study. As noted earlier, subjects might have responded to the outcome measures (pledge to contribute stories, to donate earnings, and actual donations) from a larger context of deservingness than when they were responding to the process measures (the three manipulation check questions) assessing their "attitude" toward deservingness. This seems to suggest that there may not be a direct correspondence between behaviors supposedly reflecting an underlying attitude and the behavioral component (and whatever guiding force that it might have) of that attitude. In other words, because of "intervening variables", behavior may not necessarily reflect children's true attitude and that attitude may not necessarily dispose children to behave in a manner consistent with that attitude. Perhaps further research can be undertaken to determine the exact conditions under which this hypothesis is true for children.

As discussed earlier, the lack of a recipient deservingness effect may be due to subjects' responding to the helping appeal from a larger context of deservingness than was anticipated in this study. This, of course, is just one interpretation. Other interpretations are possible. For example, one interpretation would be that the measurement units used in the present study are not appropriate, as discussed earlier.

Another interpretation would be that describing the deservingness of an elderly person in the form of a reading passage is not an effective way for manipulating this variable (i.e., deservingness of an elderly person), at least when the dependent measures are pledges to contribute stories, to donate

earnings, and actual donations of earnings. In other words, in terms of the three dependent measures just described, subjects are not able to determine the deservingness of an elderly person simply by reading a passage.

A further interpretation would be that regardless of the methods used, one simply cannot manipulate the deservingness of an elderly person.

Of these four interpretations, the first two appear to be more likely than the last two because there are no empirical bases for judging the validity of the latter, although they might prove to be valid by further research.

#### EFFECTS OF GENDER

As may be recalled from the MCT analyses discussed earlier, gender was not found to have any reliable influence on subjects' responses to the seven manipulation check questions embedded in the story. However, a main effect of gender on subjects' pledge to contribute stories was found.

The finding that girls were more generous than boys in their pledge to contribute stories is consistent with sex differences (when they were found) in helping behavior reported in the literature (see, e.g., Bryan, 1975; and Rushton, 1976 for a review).

That the main effect of gender occurred for pledged stories but not for pledged donations is interesting. An examination of the unadjusted mean scores for pledged donations showed that girls did pledge more than boys ( $M=25.72$  cents vs.  $M=18.85$  cents). This difference, however, is statistically reliable only at the seven percent level of confidence. The mean scores for

these two outcome measures thus indicate that there is a consistent trend for girls to be more generous than boys in this study, particularly in a measure that demands more personal commitment in the form of time and effort.

As discussed earlier, writing stories involves more commitment than simply donating earnings won in the experiment. The finding here thus suggests that girls may be more willing than boys to commit themselves in endeavors involving sustained effort.

This speculation seems consistent with the finding that sex differences in favor of girls occurred in yet another dimension - that of stability. White (1972) found that donating behavior of girls tend to be more stable over time than that of boys.

Sex differences in favor of girls once again have been found in a recent study (Weissbrod, 1980) on the effects of adult nurturance and instructions on children's donating behavior. The subjects in the study were second and fifth grade children and the dependent measure was the sharing of subjects' winnings from a game with a younger, "less fortunate" child. The results show that sex of the subjects and experimenter nurturance and instructions all exerted reliable influence on subjects' donating behavior. In particular, girls were found to donate reliably more winnings than boys.

The reasons why girls tend to be more generous than boys (when a difference is found) are still not as clear as they might be. In a study by Yarrow, Scott, and Waxler (1973), it was found that boys seeking help were more likely than girls to

receive negative or rejecting responses from either nurturant or non-nurturant adults. As Bryan (1975) noted, this experience of interactions with more nurturant, and therefore more helpful, adults for girls, but less so for boys, probably helps them develop a greater tendency to be helpful and generous. Also, as Bryan (1975) noted, being helpful and nurturant may be more sex-appropriate for girls than for boys. These considerations may make it more "natural" for girls than for boys to be more helpful and generous.

The difference in generosity in favor of girls may also be a result of identification with parents of the same sex exhibited by children. For example, it has been noted that girls tend to identify with their mothers, who have been found to be more "internalized and humanistic" than are fathers, with whom boys tend to identify (Hoffman, 1975c).

The findings from a recent study (Barnett, King, Howard, & Dino, 1980) on empathy in 4- to 6-year-old girls seem to offer further support to this identification interpretation.

Differences in helping behavior in favor of girls may also result from parental child-rearing practices. It has been observed (e.g., Hoffman, 1970a, 1975c, 1979; Hoffman & Saltzstein, 1967; Zussman, 1978) that the combination of frequent use of maternal affection, induction, and infrequent use of power-assertion tend to foster the development of "moral internalization". This combination works especially well with girls because mothers have been found to express more affection to girls, use more induction and less power assertion with them (Hoffman, 1975c). Also, induction may have been more effective

with girls than boys because girls tend to be more "empathic" than boys at an early age (Feshbach & Feshbach, 1969; Levine & Hoffman, 1976). These differences may make girls more open to influences of induction and therefore show more empathic responses (Hoffman, 1963; Hoffman & Saltzstein, 1967).

The sex difference in generosity may also be a result of differential social pressure on the two sexes for achievement striving. It has been suggested (e.g., Hoffman 1975c, 1979) that there is more pressure for males than for females to develop "instrumental" character traits and skills needed for occupational success. This pressure for achievement and success may conflict with the male's "humanistic moral concerns" for the welfare of others.

In contrast to males, females traditionally have been more likely to be encouraged to develop an "expressive" skill - to be able to give and receive affection, to be responsive to the needs of others - (Johnson, 1963). This encouragement that girls receive may serve to equip them well to develop morally.

The sex difference in generosity, with girls being more generous than boys, raises one question: Should people accept this difference as it is or should efforts be made to help boys become more generous? If the answer is the latter, one might ask what can be done to help improve the generosity of boys.

One suggested answer to this question seems to be that emphasis on achievement in boys should be balanced with the emphasis on concern for the welfare of others. Children, for example, can be taught both by teachers and parents that it is important not to maximize one's personal gain at the expense of



the well-being of others. Efforts should be made to help boys realize and accept the notion that being helpful is an important achievement in its own right and therefore should be valued for its own sake.

A second suggestion is to focus more attention on promoting equitable child-rearing practices. It seems important that adults, particularly parents and teachers, should treat both boys and girls in an equally warm and nurturant manner, thereby offering both boys and girls an equally helpful example (model) to identify with. Also, in dealing with boys, there probably should be an increase in the use of induction and affection rather than the use of power.

It should be noted that the above discussion has been focused on the gender of the subjects as it influenced helping behaviors. The possibility for the gender of the potential recipient to influence subjects' helping behaviors has not been explored here. Given that the recipient in the present study was an elderly male, it would be worthwhile to see whether the gender differences observed in this study can be replicated when the potential recipient is an elderly female.

Also, it should be noted that although no sex difference was found in pledged donations and actual donations, an interesting observation concerning these two measures should be reported. The observation is: five of the 16 groups of subjects actually donated more than they pledged, and these five groups of subjects were all boys. Further, four of these five groups were in a treatment condition involving low deservingness. While the implications of this finding are not clear, the finding,

with 11 of the 16 groups pledging more than they donated, and the five groups of subjects whose actual donations exceeded their pledges were all boys, is interesting on two counts. First, it is consistent with the everyday situation in which pledged donations almost always exceed actual donations. Second, it raises the question as to why all those subjects who donated more than they pledged were boys. This last question suggested the possibility that when it comes to real actions in contrast to promises, boys might very well be more helpful than girls. Perhaps, future research can be conducted to examine this speculation.

#### INTERACTION EFFECTS

The finding that none of the interactions predicted at the beginning of the study was confirmed is contrary to expectations. While the exact reasons for this finding are not clear, one speculation for this lack of interaction is that it might be a result of the "saliency" of the stimulus object in the study - the elderly Mr. Brown. As discussed earlier, subjects might have focused on his old age and, therefore, the imagined dependency conditions, thereby influencing their responses. This, of course, is a speculation. To further test the interactions predicted in this study, it appears that the use of a younger potential recipient (e.g., college student) might be the first necessary step.

Also, the above speculation is just one interpretation for the lack of an interaction effect. Other interpretations are possible. For example, the lack of interactions among the three experimental variables may be due to the specific manner in

which the experimental variables were operationalized. Also, it may be that the predictions of interactions made at the outset of the study were simply wrong. In other words, there are simply no interactions among the three variables being examined. The validity of these interpretations can only be determined by further research.

#### GENERAL CONCLUSIONS

Generally, the findings of this study can be summarized as follows. The process measures indicate that induction was not reliably induced but the personality attractiveness and deservingness treatments were reliably induced. Also, the process measures indicate that children like people who have an attractive personality and dislike people who have an unattractive personality, at least as operationalized in this study. In addition, the process measures show that children tend to perceive deservingness in terms of personality attractiveness such that regardless of deservingness, a person with an attractive personality is perceived as more deserving than a person with an unattractive personality, as least as operationalized in this study.

The outcome measures, on the other hand, indicate that both induction and recipient deservingness have no reliable influence on subjects' pledge to contribute stories, to donate earnings, or their actual donations. Personality attractiveness, however, was found to have a reliable influence only on subjects' pledge to donate earnings. The gender of subjects was found to have a reliable effect only on their pledge to contribute stories.

From an adult's point of view, more help should be given to

a potential recipient who is perceived as deserving of help than to one who is not so perceived. The present study, however, has not been able to provide confirming evidence for this notion with children. Perhaps, as Piaget (e.g., 1970) theorized, the thinking of adults is more "formal" or "logical" than that of children. Granted this to be true, it would follow that one might expect adults to offer help more as a function of relatively abstract and cognitive considerations, such as deservingness of help, than more concrete and affective considerations, such as personality attractiveness. The same, however, may not necessarily be true with children. Findings from the present study are consistent with this thinking and also with Piaget's theory. They indicate that children's thinking is different from that of adults - they seem to focus more on concrete, or "surface", and affective variables such as recipient personality attractiveness than abstract and cognitive ones such as recipient deservingness, as operationalized in this study.

The implication here is that to elicit helping behaviors in children, it appears that it might be important to place emphasis on concrete, or surface, and affective variables that children can perceive readily. To promote moral maturity, on the other hand, it seems important that children be guided towards the use of progressively more "abstract" reasoning.

Hetherington and Parke (1979) noted that the use of reasoning and explanation in disciplinary encounters with children would enhance their social development. According to these authors, "warm" parents who frequently use reasoning and

explanations with their children not only help them "internalize social rules and identify and discriminate situations in which a given behavior is appropriate", but also may lead them to show "more concern with the well-being of others" (p.430). It might be noted here that reasoning, in contrast to the use of power and love-withdrawal, may also present a more attractive image of the adult to the child. This assertion, together with the finding from the present study on personality attractiveness and deservingness, suggests that reasoning with children should include a discussion of the desirable characteristics of the potential recipient. This may help to promote children's understanding and acceptance of the notion of deservingness of human respect, consideration, etc. and further enhance the effects of induction. In this way, adults themselves may also benefit as potential recipients of children's "helping" behaviors.

As discussed in the review of literature in Chapter II and also earlier in this chapter, parental moral values and child-rearing practices such as modeling, reinforcement and nurturance have influence on children's moral development and behavior. The fact that these variables were not controlled in the present study might have "explained" why the lack of an induction effect. This, admittedly, is one limitation of the present study. It should be noted, however, that these "variables" were not controlled because of lack of available research logistics. For example, there was a limit as to the extent of cooperation one could expect from the school authority--the school principals and teachers were not particularly enthusiastic about

attempts to involve parents in the study with a view to having their moral values and child-rearing practices discussed. Further, there was a limit as to the time and other resources available to the investigator. The 10 pre-experimental questions and the reading comprehension test used to control for individual differences prior to treatment were the best the investigator could do at the time of the experiment. Nevertheless, to ensure that findings of the present study were not systematically biased one way or the other, parental moral values and child-rearing practices were treated as a "random variable." In other words, random assignment of subjects, whose parental moral values and child-rearing practices were unknown to the investigator, to the treatment conditions was studiously implemented. This, hopefully, would alleviate one's concern about the influence of parental moral values and child-rearing practices on the outcomes of this study.

One major concern of this study was to reduce "demand characteristics" (Carlsmith, Ellsworth & Aronson, 1976; Christensen, 1980; Cozby, 1981) of the present investigation. One step included in the present study was keeping anonymity at an optimum and the influences of social desirability at a minimum. The fact that some subjects pledged and also made no donations seems to indicate that the study was successful in its attempt to assure subjects that they would remain anonymous. Those who pledged to donate and actually donated later, on the other hand, seemed to indicate that they were genuine in their desire to help. This seems to be especially true when responses from subjects who chatted with the investigator after the

experiment are taken into account. Some of the subjects who pledged and donated all 50 cents and spoke to the investigator after the experiment indicated that they donated all 50 cents because they just liked to help and felt donating little was "cheap". Others indicated that they donated because they felt Mr. Brown was old and without a refrigerator and therefore would like to help him. Still some others indicated that they were aware of the characteristics of Mr. Brown but were concerned with the fact that he was old and would like to help him. All these responses seem to show an underlying altruistic motive in the subjects.

In everyday situations, the concern of people seems to be focused more on helping behavior per se rather than the motivation behind the behavior. In future research on donating behavior in children, it seems important to explicitly ask the subjects to describe the reasons why they make or do not make donations. This may help to more clearly ascertain the motivational differences between the donors and the non-donors.

In conclusion, the present study has been conducted to determine whether induction, children's perception of the deservingness of help and personality attractiveness of a potential recipient influenced their helping behaviors. The findings and their implications for education and for research have been described. To recapitulate and to summarize, the major contributions of the present study can be described as follows, subject to any limitations placed on the generality of the dependent measures and the operationalization of the independent variables (recipient deservingness and personality

attractiveness) being examined: It

1. provides clear experimental evidence that children like people who have an attractive personality and dislike people who have an unattractive personality;
2. indicates that children perceive deservingness in terms of personality attractiveness such that a person with an attractive personality is perceived as more deserving than a person with an unattractive personality;
3. indicates that children's helping behavior is influenced more by relatively "concrete" and affective variables such as personality attractiveness than "abstract" and cognitive variables such as deservingness of help;
4. shows that children are more generous toward people with an attractive personality than those with an unattractive personality;
5. shows that "discrepancy" may exist between "attitude" and "behavior" in children.

One should note here, however, that although no statistically reliable effects of induction and recipient deservingness on the three outcome measures were observed, one would not conclude that these two variables were not important in influencing children's helping behaviors, thereby rejecting, for example, the assertions of Saltzstein (1976) and Hoffman (e.g., 1977, 1979) on the effects of induction. These findings could have been a result of the "saliency" of the stimulus object, i.e., the elderly person in the study. For the subjects might have responded to the imagined dependency condition of Mr. Brown and reacted to him favorably regardless of induction and



deservingness considerations.

The lack of an induction and recipient deservingness effect also could be accounted for by the other interpretations discussed earlier in this chapter. In view of the important educational implications of induction, as discussed in Chapters I and II, the need for further research is indicated. Such research, hopefully, will expand our current knowledge of induction, thereby enhancing its usefulness as a means of behavior change.

The finding that the "nice" Mr. Brown was better liked and received more pledged donations than the "mean" Mr. Brown, on the other hand, supports the notion of adult-child relationships proposed by Ginott (1965, 1969, 1972). It suggests that it might be worthwhile for teachers to develop their capacity for understanding and acceptance, thereby enhancing the likelihood of eliciting children's cooperative and helping behaviors.

This study is, of course, a small effort towards the understanding of helping behaviors in children and towards moral education more generally.

If the volume of recent publications on moral/values education (e.g., AVER 1978a, 1978b, 1979; Williams, 1979; Williams & Wright, 1980) is any indication, then it appears that the importance of moral education in public schools is beginning to gain the recognition that it deserves. One may question, however, whether moral education is complete without considering ways to help foster the development of altruism in children. The implications of the findings from the present investigation, discussed earlier in this chapter, may be seen as a small

contribution of this study towards moral education.

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## Appendix A

### Induction Statements

This story is about old people. By old people, I mean those who are at least 70 years old, like the ones you saw in the big picture. We all know that it is good to be helpful and generous to people. But I think we should be especially helpful and generous to the elderly people who need our help. They would feel so happy if we help them.

Just imagine how good you feel when you are thirsty and someone gives you a drink or when you don't have a pen or pencil for your assignment and somebody loans you one. The old people in need of our help will feel good too if we help them.

After all, old people are not as fortunate as we are. For example, if we need money for school supplies, we can get it from our parents. But many elderly people, especially those who don't have any relatives or friends, have no one to turn to when they need something but cannot afford it. Even if they try to look for a job, chances are no one will hire them because they are old. They would be so happy if we help them.

Many elderly people are very lonely because they are living by themselves without a relative or a friend. Just imagine how lonely you would feel if you were living by yourself, without a relative or a friend. Wouldn't you feel good if people do something nice for you, say by bringing you some comic strips to read? The lonely old people will feel good too if we do something nice for them. So let's try our best to be helpful and generous whenever we know they need our help.



## Appendix B

### Non-Induction Statements

This story is about old people. By old people, I mean those who are at least 70 years old, like the ones you saw in the big picture. There are many good things about being old.

When we are old, we have more time to relax. Old people do not have to go to school, have no homework, and don't have to go to work. They can spend their time travelling, sightseeing, gardening, or just taking a nice walk. They can do whatever they enjoy doing. This is one good thing about being old.

Compared with younger people, like our parents, old people do not have as much responsibility. Our parents have to raise the family, take care of the children, and go to work. Old people do not have these responsibilities. They have already fulfilled them. Instead of having to look after and teach their children, they can now simply enjoy their company, and/or the company of their grandchildren. It is nice to be free.

The government takes care of the elderly people too. Knowing that old people generally do not work at jobs, the government provides a number of special services for the elderly. These include the retirement pension plans, the old age security plans, and the Pharmacare program. These programs make sure that the elderly, though no longer employed, will still have a minimum level of income.

Elderly people also enjoy other social benefits like reduced bus fares and special admission rates for movies. So, overall, being old is not so bad.

## Appendix C

## Two Levels of Deservingness: High vs. Low

HIGH:

Mr. Brown enjoys cooking. He had been working very hard in order to earn enough money to buy his own refrigerator. After working hard for two years, he finally saved enough money and bought his new refrigerator three weeks ago. Unfortunately, because of an electric wiring problem, the refrigerator was damaged beyond repair last week. The electrician who did the wiring has moved out of town and there is no way to reach him.

LOW:

Mr. Brown enjoys cooking. He has met a number of rich neighbours in the area where he is now living. One of his neighbours gave him a new refrigerator for free three weeks ago after making a big fortune in business. Unfortunately, because of an electric wiring problem, the refrigerator was damaged beyond repair last week. Mr. Brown should not complain, however, since he did not pay careful attention to the wiring instructions.

## Appendix D

## Personality Attractiveness: High

Like many other elderly people, Mr. Brown is 70 years old. He is living by himself.

Mr. Brown is a very nice person. Here are just two examples to show how nice he is.

One day, two boys were playing baseball on the street and accidentally broke his window. Mr. Brown was very unhappy and caught hold of one of the boys. Instead of being angry at him, however, he said to the boy nicely:

"The window is broken. To fix it will take money and you obviously do not have that kind of money. I don't want to tell your mother about this because she will probably be very upset. This means that you and I should try to find out what can be done about this broken window. In any case, remember: Baseball is not to be played on the street."

Mr. Brown and the boy then talked about what needed to be done.

On another day, Mr. Brown did not get his evening newspaper. He was disappointed and when he saw the newspaper boy, he told him nicely:

"My paper has been forgotten many times. I am disappointed when I expect something and then never get it. Everybody forgets something sometimes, no one is perfect, and I am not expecting you to be perfect. But people should do what they are supposed to do. Please keep this in mind and I expect you not to forget my paper again."

## Appendix E

## Personality Attractiveness: Low

Like many other elderly people, Mr. Brown is 70 years old. He is living by himself.

Mr. Brown is a very mean person. Here are just two examples to show how mean he is.

One day, two boys were playing baseball on the street and accidentally broke his window. Mr. Brown was very unhappy and caught hold of one of the boys. Instead of being nice to him, however, he said to the boy angrily:

"What is your name, my boy? Look what you have done! Why must you be such a pest? You are going to pay for this. Do you know how much this will cost? Call your mother up and tell her that I want to talk to her. You are going to stay here until she comes over to see me. This will teach you not to play baseball on the street again."

Mr. Brown then kept the ball and made the boy phone his mother.

On another day, Mr. Brown did not get his evening newspaper. He was disappointed and when he saw the newspaper boy, he told him angrily:

"How many times have you forgotten my paper? Can't you remember anything? Tell me what you did with my paper, give it to someone else? Do you expect me to pay for the paper that I didn't get? If you do this again, you know what you will get when you come to collect the money. You had better be more careful from now on."

## Appendix F

## Manipulation Checks and Outcome Measures

1. Should we be helpful to the elderly who need our help?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

2. Should we be generous to the elderly who need our help?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

3. Do you think children will like Mr. Brown?

	2	1	0
	-----		
Answer:	certainly yes	not sure	certainly no

4. Do you think you will like someone as nice/mean as Mr. Brown?

	2	1	0
	-----		
Answer:	certainly yes	not sure	certainly no

5. How did Mr. Brown get his refrigerator?

Answer:	1. He bought it with money he earned.	2. He got it for free from a rich neighbor.
---------	---------------------------------------	---

6. Who damaged the refrigerator?

Answer:	1. An electrician	2. Mr. Brown
---------	-------------------	--------------

7. Does Mr. Brown deserve another refrigerator?

	2	1	0
	-----		
Answer:	certainly yes	not sure	certainly no

8. Mr. Brown is living by himself. He enjoys reading stories written by children. How many short stories (any story, about half-a-page long each) would you be willing to write for Mr. Brown? (They will be collected along with the coloring pictures next Monday).

Answer:      0      1      2      3      4      5 or more

9. If you would like to give money to help Mr. Brown buy another refrigerator, you are welcome to do so. Please circle below the amount you would like to give. You will be given an envelope to put your donations in later. If you don't feel like giving anything, please circle 0¢ below.

Answer:      50¢      45¢      40¢      35¢      30¢      25¢  
                 20¢      15¢      10¢      5¢      0¢

## Appendix G

## Treatment Condition: Illustration 1

This story is about old people. By old people, I mean those who are at least 70 years old, like the ones you saw in the big picture. We all know that it is good to be helpful and generous to people. But I think we should be especially helpful and generous to the elderly people who need our help. They would feel so happy if we help them.

Just imagine how good you feel when you are thirsty and someone gives you a drink or when you don't have a pen or pencil for your assignment and somebody loans you one. The old people in need of our help will feel good too if we help them.

After all, old people are not as fortunate as we are. For example, if we need money for school supplies, we can get it from our parents. But many elderly people, especially those who don't have any relatives or friends, have no one to turn to when they need something but cannot afford it. Even if they try to look for a job, chances are no one will hire them because they are old. They would be so happy if we help them.

Many elderly people are very lonely because they are living by themselves without a relative or a friend. Just imagine how lonely you would feel if you were living by yourself, without a relative or a friend. Wouldn't you feel good if people do something nice for you, say by bringing you some comic strips to read? The lonely old people will feel good too if we do something nice for them. So let's try our best to be helpful and generous whenever we know they need our help.

1. Should we be helpful to the elderly who need our help?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

2. Should we be generous to the elderly who need our help?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

Like many other elderly people, Mr. Brown is 70 years old. He is living by himself. Mr. Brown is a very nice person. Here are just two examples to show how nice he is.

One day, two boys were playing baseball on the street and accidentally broke his window. Mr. Brown was very unhappy and caught hold of one of the boys. Instead of being angry at him, however, he said to the boy nicely:

"The window is broken. To fix it will take money and you obviously do not have that kind of money. I don't want to tell your mother about this because she will probably be very upset. This means that you and I should try to find out what can be done about this broken window. In any case, remember: Baseball is not to be played on the street."

Mr. Brown and the boy then talked about what needed to be done.

On another day, Mr. Brown did not get his evening newspaper. He was disappointed and when he saw the newspaper boy, he told him nicely:

"My paper has been forgotten many times. I am disappointed when I expect something and then never get it."



Everybody forgets something sometimes, no one is perfect, and I am not expecting you to be perfect. But people should do what they are supposed to do. Please keep this in mind and I expect you not to forget my paper again."

3. Do you think children will like Mr. Brown?

	2	1	0
	-----		
Answer:	certainly yes	not sure	certainly no

4. Do you think you will like someone as nice as Mr. Brown?

	2	1	0
	-----		
Answer:	certainly yes	not sure	certainly no

Mr. Brown enjoys cooking. He had been working very hard in order to earn enough money to buy his own refrigerator. After working hard for two years, he finally saved enough money and bought his new refrigerator three weeks ago. Unfortunately, because of an electric wiring problem, the refrigerator was damaged beyond repair last week. The electrician who did the wiring has moved out of town and there is no way to reach him.

5. How did Mr. Brown get his refrigerator?

Answer:	1. He bought it with money he earned.	2. He got it for free from a rich neighbor.
---------	---------------------------------------	---

6. Who damaged the refrigerator?

Answer:        1. An electrician                      2. Mr. Brown

7. Does Mr. Brown deserve another refrigerator?

	2	1	0
	-----		
Answer:	certainly yes	not sure	certainly no

8. Mr. Brown is living by himself. He enjoys reading stories written by children. How many short stories (any story, about half-a-page long each) would you be willing to write for Mr. Brown? (They will be collected along with the coloring pictures next Monday).

Answer:        0        1        2        3        4        5 or more

9. If you would like to give money to help Mr. Brown buy another refrigerator, you are welcome to do so. Please circle below the amount you would like to give. You will be given an envelope to put your donations in later. If you don't feel like giving anything, please circle 0¢ below.

Answer:	50¢	45¢	40¢	35¢	30¢	25¢
	20¢	15¢	10¢	5¢	0¢	

## Appendix H

## Treatment Condition: Illustration 2

This story is about old people. By old people, I mean those who are at least 70 years old, like the ones you saw in the big picture. There are many good things about being old.

When we are old, we have more time to relax. Old people do not have to go to school, have no homework, and don't have to go to work. They can spend their time travelling, sightseeing, gardening, or just taking a nice walk. They can do whatever they enjoy doing. This is one good thing about being old.

Compared with younger people, like our parents, old people do not have as much responsibility. Our parents have to raise the family, take care of the children, and go to work. Old people do not have these responsibilities. They have already fulfilled them. Instead of having to look after and teach their children, they can now simply enjoy their company, and/or the company of their grandchildren. It is nice to be free.

The government takes care of the elderly people too. Knowing that old people generally do not work at jobs, the government provides a number of special services for the elderly. These include the retirement pension plans, the old age security plans, and the Pharmacare program. These programs make sure that the elderly, though no longer employed, will still have a minimum level of income.

Elderly people also enjoy other social benefits like reduced bus fares and special admission rates for movies. So, overall, being old is not so bad.

1. Should we be helpful to the elderly who need our help?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

2. Should we be generous to the elderly who need our help?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

Like many other elderly people, Mr. Brown is 70 years old. He is living by himself. Mr. Brown is a very mean person. Here are just two examples to show how mean he is.

One day, two boys were playing baseball on the street and accidentally broke his window. Mr. Brown was very unhappy and caught hold of one of the boys. Instead of being nice to him, however, he said to the boy angrily:

"What is your name, my boy? Look what you have done! Why must you be such a pest? You are going to pay for this. Do you know how much this will cost? Call your mother up and tell her that I want to talk to her. You are going to stay here until she comes over to see me. This will teach you not to play baseball on the street again."

Mr. Brown then kept the ball and made the boy phone his mother.

On another day, Mr. Brown did not get his evening newspaper. He was disappointed and when he saw the newspaper boy, he told him angrily:

"How many times have you forgotten my paper? Can't you remember anything? Tell me what you did with my paper, give

it to someone else? Do you expect me to pay for the paper that I didn't get? If you do this again, you know what you will get when you come to collect the money. You had better be more careful from now on."

3. Do you think children will like Mr. Brown?

	2	1	0
	-----	-----	-----
Answer:	certainly yes	not sure	certainly no

4. Do you think you will like someone as mean as Mr. Brown?

	2	1	0
	-----	-----	-----
Answer:	certainly yes	not sure	certainly no

Mr. Brown enjoys cooking. He has met a number of rich neighbours in the area where he is now living. One of his neighbours gave him a new refrigerator for free three weeks ago after making a big fortune in business. Unfortunately, because of an electric wiring problem, the refrigerator was damaged beyond repair last week. Mr. Brown should not complain, however, since he did not pay careful attention to the wiring instructions.

5. How did Mr. Brown get his refrigerator?

Answer:	1. He bought it with money he earned.	2. He got it for free from a rich neighbor.
---------	---------------------------------------	---

6. Who damaged the refrigerator?

Answer:        1. An electrician                      2. Mr. Brown

7. Does Mr. Brown deserve another refrigerator?

	2	1	0
	-----		
Answer:	certainly yes	not sure	certainly no

8. Mr. Brown is living by himself. He enjoys reading stories written by children. How many short stories (any story, about half-a-page long each) would you be willing to write for Mr. Brown? (They will be collected along with the coloring pictures next Monday).

Answer:        0        1        2        3        4        5 or more

9. If you would like to give money to help Mr. Brown buy another refrigerator, you are welcome to do so. Please circle below the amount you would like to give. You will be given an envelope to put your donations in later. If you don't feel like giving anything, please circle 0¢ below.

Answer:	50¢	45¢	40¢	35¢	30¢	25¢
	20¢	15¢	10¢	5¢	0¢	

## Appendix I

## Pre-experimental (Covariate) Questions

1. How much does 50 cents mean to you?

	4	3	2	1
	-----			
Answer:	very much	much	little	very little

2. How much does five dollars mean to you?

	4	3	2	1
	-----			
Answer:	very much	much	little	very little

3. How much do you enjoy writing stories?

	4	3	2	1
	-----			
Answer:	very much	much	little	very little

4. How much do you enjoy reading comic strips?

	4	3	2	1
	-----			
Answer:	very much	much	little	very little

5. Should we be helpful to the elderly (70 years or older) who need our help?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

6. Should we be helpful to poor children?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

7. Should we be generous to the elderly (70 years or older) who need our help?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

8. Should we be generous to poor children?

	3	2	1	0
	-----			
Answer:	always	sometimes	rarely	never

9. Do your grandparents live with you?

	3	2	1	0
	-----			
Answer:	all the time	sometimes	rarely	never

10. Do you visit with or work for elderly people (70 years or older)?

	3	2	1	0
	-----			
Answer:	all the time	sometimes	rarely	never



Appendix J  
Instructions

Experimenter A:

"Good morning, I'm Mrs. Mac and this is Mr. Leung. We have come to ask for your help on some projects. Mr. Leung, would you like to talk to the children first?"

Experimenter B:

"Thank you, Mrs. Mac.

"Good morning, boys and girls, I go to school at UBC. Do you know what UBC is? I am a good friend of Mrs. Mac's. Some time ago Mrs. Mac told me that she would be coming to the schools and I thought it would be a good opportunity for me to come along so that I can ask for your help with a project I have been working on. My project has nothing to do with Mrs. Mac's. Becuase my project takes more time, Mrs. Mac has agreed to let me do the first part of my project with you before she will talk to you about hers. She will then let me finish up the rest of my project with you before we go. We will be here for about an hour.

"It would be best for my project if we can sit as far apart from one another as we can. So I would like to rearrange the desks a little bit. Please remain seated until I give you the instructions."

Rearrange desks.

"Please clear your desk top so that you have only a pencil and an eraser on your desk."

Check to see their desks are clear and have pencils and

erasers ready.

"My project has two parts. The first part is to find out how children feel about certain things and how well they can read and understand stories. Let me pass out the materials to you first. Mrs. Mac, would you please help me pass out these booklets?"

Pass out booklets.

"At the bottom right-hand corner here (show class), there are two letters, B and G. Do you all see them? Would you please circle B if you are a boy and circle G if you are a girl.

"Please don't write your name down since I don't need to know who answers what. All I need to know is how different children feel about certain things.

"When I read the questions on this page to you, please read them to yourselves also and then answer the questions by drawing a line under the answer that shows how you feel, like this (show on board).

"Remember, different children may have different feelings about the same thing. For example, some children like to play hockey a lot while others like to play something else. So, please answer the questions completely on your own without looking at another person's answers.

"Is this clear? Are there any questions? Okay, let's start at the first one."

Do the whole page with class.

"We have now finished the first page. Would you please check that you have an answer for each question?"

Wait for them.

"Okay, let's fold the first page back like this (show class) so that we have the second page facing us.

"On this page and the next two pages, I would like to find out how well children can read and understand stories. So, please write your name at the top of the page, over here (show class).

"On this page, there are many short stories with blanks in them. Let's take a look at the second last one on the left hand side, over here (show class). The story begins with 'Mother and dad had been shopping.' Do you all see it? There are two blanks in the story, blank 1 and blank 2. With these blanks in the story, the story doesn't really make sense. However, below this story, there are two lists of words, list 1 and list 2. Do you see them? What I would like you to do is fill in blank 1 with the best word from list 1 and fill in blank 2 with the best word from list 2 so that the story will make sense. Now because the blanks are small, you don't have to actually fill in the blanks. What you should do is, once you have chosen the best word from the list, just underline it like this (show on board) so that I know that's the word that goes into the blank. Is this clear? Do you all know how to mark your answers now?

"There are three pages like this to work on. If you finish all three pages before I say 'stop,' you should go back and check your work. We sometimes make mistakes. Checking over our work will help us locate our mistakes so that we can correct them. If, after checking your work and you still have time left, you may read a book or do something quietly in your seat.

"If you wish to change an answer. Erase your first mark

completely, then mark the answer you want.

"Don't spend too much time on any one question. If you find a question too difficult, go on to the next one and come back to it later when you have time.

"Are there any questions? Okay, let's start now."

Time: 25 minutes.

Check name while they are working. When time is up, say:

"Children, the time is up, may I have your booklets, please."

Collect booklets from children. Then say:

"Mrs. Mac, would you like to talk to the children now?"

Experimenter A:

"My project is more fun. It has to do with coloring. I work for a foster parent agency in Vancouver. This year, we decided to send personally colored greeting pictures to the homeless children under our care in Africa, Asia, and South America at Christmas. We want some Canadian children to help us with the coloring. The pictures look like this (show sample to class). When you get the pictures, please be careful with them, do not wrinkle them or write on them. You can use felts, pencil crayons, whatever you want. But please do a good job. I'm going to pass them out now. Mr. Leung, would you help me pass these out?"

Pass out pictures.

"For your assistance, we are able to pay you each 50 cents. The bank gave me nickels (show nickel roll to class) and you should check to see that you have 10 nickels when you get yours. It is your money. You have earned it by helping us color these

pictures. You can buy candies or do whatever you want with it. Mr. Leung, would you help me pass out the nickels?"

Pass out the rolls of nickels.

"You can start coloring now, but I won't collect the pictures until next Monday, so you have a lot of time to do it. Are there any questions?"

Walk around to check their work while they are coloring. After about eight minutes of coloring, say:

"Children, I have to be on my way. Remember, do a good job in your coloring. Thank you very much for your help."

Leave class.

Experimenter B:

After Experimenter A left, say:

"Children, may I have your attention please. The coloring probably will take a while to finish. Since I don't have much time to be with you and since Mrs. Mac would be collecting the pictures on Monday, would you please put them aside for just a little while so that I can finish my project with you?

"This, the last part of my project, is concerned with old people. By old people, I mean those who are at least 70 years old, like the ones in this picture (show group picture to class). Can you all see it? I'll put it here so that you can see it. (put picture in the front of the room). What I would like to find out is how school children feel about old people. Also, I want to find out how school children feel about an old person who lives in my neighborhood. This elderly person is Mr. Brown, and I have brought along a picture of him to show you (show single-man picture to class). This is Mr. Brown. He lives in my

neighborhood. Can you all see him? I'll put the picture here. (put picture next to the one shown earlier).

"What I would like you to do is read a story about old people and about Mr. Brown very carefully and then show me how you feel about the story by answering some questions. The story, the questions, and the answers are all in this booklet (show booklet to class). I will pass out these booklets in just a minute.

"Please don't write your name down since I don't need to know who answers what. All I need to know is how different children feel about the story.

"All you have to do is read the story very carefully and then answer the questions by drawing a line under the answer that shows how you feel.

"Remember, different people may have different feelings about the same thing, so, please answer the questions completely on your own without looking at another person's answers.

"Is this clear? Are there any questions?

"Please answer all the questions and be very careful with your answers. You cannot change your answers later when I say stop.

"You may begin as soon as you get the booklet. When you finish, please put your booklet upside down like this (show class) and then you may continue with your coloring. Are there any questions?"

Pass out booklets. When everybody is finished, say:

"Children, I am going to pass out the envelopes now. If you feel like giving money to help Mr. Brown, please put your money

into the envelope. If you don't feel like giving money to him, then you don't have to put any thing into the envelope. Remember, you cannot change your answers now (pass out envelopes)."

After they have put their money in, say:

"Children, I have to match the story you just read with the one you read earlier, so would you please write your name at the top of the back of your story, over here (show class) and then put the story into the envelope."

Collect envelopes. Then say:

"Children, there is just one last thing I want to ask of you. The story that you just read is kind of confidential. Please do not talk to one another or to the other children in the school. Would you be able to do that? Thank you very much for your help."

Leave class.

## Appendix K

Summary Table for 2x2x2x2 (Induction x Deservingness x Attractiveness x Gender) MANCOVA Analysis

Source	Multivariate Analysis*		Univariate Analysis**								
	F	p	Mean Squares			F-Ratio			p-Value		
			Story	PDona.	ADona.	Story	PDona.	ADona.	Story	PDona.	ADona.
A (Induct.)	1.11	0.35	5.06	17.15	9.44	2.50	0.05	0.03	0.12	0.83	0.87
B (Deserv.)	0.78	0.51	1.87	394.44	85.42	0.93	1.13	0.25	0.34	0.29	0.62
C (Attrac.)	1.50	0.22	2.04	1394.96	701.97	1.01	4.00	2.05	0.32	0.05	0.15
D (Gender)	2.14	0.10	7.81	1190.22	459.50	3.86	3.42	1.34	0.05	0.07	0.25
AB	0.70	0.55	0.00	327.34	30.56	0.00	0.94	0.09	0.99	0.33	0.77
AC	0.43	0.73	2.29	72.83	20.71	1.13	0.21	0.06	0.29	0.65	0.81
AD	0.95	0.42	0.99	995.43	778.42	0.49	2.86	2.27	0.49	0.09	0.13
BC	0.28	0.84	0.90	0.13	21.14	0.44	0.00	0.06	0.51	0.99	0.80
BD	0.72	0.54	0.00	74.07	406.07	0.00	0.21	1.18	0.99	0.65	0.28
CD	1.61	0.19	6.52	1.41	186.27	3.22	0.00	0.54	0.07	0.95	0.46
ABC	0.69	0.56	1.54	0.27	84.38	0.76	0.00	0.25	0.39	0.98	0.62
ABD	0.54	0.66	0.35	542.65	510.95	0.17	1.56	1.49	0.68	0.21	0.22
ACD	0.34	0.80	0.43	37.54	192.82	0.21	0.11	0.56	0.65	0.74	0.45
BCD	1.10	0.35	1.90	92.59	544.51	0.94	0.27	1.59	0.33	0.61	0.21
ABCD	1.17	0.32	1.21	465.55	630.41	0.60	1.34	1.84	0.44	0.25	0.18
Residuals			2.02	348.36	343.16						

\*Degree of freedom is 3 and 176 in all cases.

\*\*Degree of freedom is 1 and 178 in all cases.



Table 1

Subjects' Responses to Questions 1 and 2 as a Function of  
16 Induction x Deservingness x Attractiveness x Gender Conditions

Induction	Deserving.	Attract.	Gender	Questions 1 and 2 <sup>a</sup>							
				Never		Rarely		Sometimes		Always	
High	High	High	Boys	0	0	0	0	1	1	10	10
			Girls	0	0	0	0	0	1	13	12
		Low	Boys	0	0	0	0	1	1	11	11
			Girls	0	0	0	0	1	1	12	12
	Low	High	Boys	0	0	0	0	0	0	12	12
			Girls	0	0	0	0	2	2	10	10
		Low	Boys	0	0	0	0	0	2	9	7
			Girls	0	0	0	0	3	1	13	15
Low	High	High	Boys	0	0	0	0	4	3	4	5
			Girls	0	0	0	0	2	4	14	12
		Low	Boys	0	0	0	0	4	5	11	10
			Girls	0	0	0	0	0	1	10	9
	Low	High	Boys	2	2	0	0	0	2	9	7
			Girls	0	0	0	0	2	3	12	11
		Low	Boys	0	0	0	0	3	4	10	9
			Girls	0	0	0	0	1	1	9	9
				2	2	0	0	24	32	169	161

<sup>a</sup> Responses to Question 1 on left-hand column; Responses to Question 2 on right-hand column.

Table 2

Subjects' Responses to Questions 3 and 4 as a Function of

16 Induction x Deservingness x Attractiveness x Gender Conditions

				Questions 3 and 4 <sup>a</sup>					
Induction	Deserving.	Attract.	Gender	No		Not Sure		Yes	
High	High	High	Boys	0	0	1	1	10	10
			Girls	0	0	4	0	9	13
		Low	Boys	10	8	2	4	0	0
			Girls	10	5	3	7	0	1
	Low	High	Boys	0	0	2	0	10	12
			Girls	0	0	5	0	7	12
		Low	Boys	7	6	2	3	0	0
			Girls	11	9	4	6	1	1
Low	High	High	Boys	0	0	4	2	4	6
			Girls	0	0	5	4	11	12
		Low	Boys	10	10	5	5	0	0
			Girls	7	7	3	3	0	0
	Low	High	Boys	0	1	6	0	5	10
			Girls	0	0	0	0	14	14
		Low	Boys	12	7	1	6	0	0
			Girls	7	6	3	4	0	0
				74	59	50	45	71	91

<sup>a</sup>Responses to Question 3 on left-hand column; Responses to Question 4 on right-hand column.

Table 3

Subjects' Responses to Questions 3 and 4 as a  
Function of 2 Attractiveness Conditions<sup>a</sup>

Attractiveness	Questions 3 <sup>b</sup> and 4 <sup>c</sup>						Marginal Total
	No		Not Sure		Yes		
High	0	1	27	7	70	89	97
	.00	.01	.28	.07	.72	.92	
Low	74	58	23	38	1	2	98
	.76	.59	.23	.39	.01	.02	
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	74	59	50	45	71	91	195
	.38	.30	.26	.23	.36	.47	

<sup>a</sup>Second line of entry is proportion.

<sup>b</sup>Left-hand column, Likelihood ratio  $\chi^2=153.54$ ,  $df=2$ ,  $p<0.001$ .

<sup>c</sup>Right-hand column, Likelihood ratio  $\chi^2=171.16$ ,  $df=2$ ,  $p<0.001$ .

Table 4

Subjects' Responses to Questions 5, 6 and 7 as a Function of  
16 Induction x Deservingness x Attractiveness x Gender Conditions

Induction	Deserving.	Attract.	Gender	Question 5		Question 6		Question 7			
				Purchase	Gift	Electrician	Mr. Brown	No	Not Sure	Yes	
High	High	High	Boys	11	0	10	1	0	0	11	
			Girls	13	0	11	2	0	2	11	
		Low	Boys	12	0	9	3	1	7	4	
			Girls	13	0	13	0	0	6	7	
		Low	High	Boys	1	11	6	6	0	5	7
				Girls	1	11	1	11	0	10	2
	Low	Low	Boys	0	9	1	8	4	4	1	
			Girls	1	15	3	13	7	8	1	
		High	High	Boys	8	0	8	0	0	0	8
				Girls	15	1	13	3	0	1	15
		Low	Boys	14	1	10	5	1	7	7	
			Girls	10	0	10	0	0	5	5	
Low	Low	High	Boys	1	10	4	7	2	7	2	
			Girls	1	13	5	9	3	6	5	
	Low	Boys	0	13	2	11	7	4	2		
		Girls	0	10	1	9	6	4	0		
			101	94	107	88	31	76	88		

Table 5

Subjects' Responses to Questions 5 and 6 as a  
Function of 2 Deservingness Conditions<sup>a</sup>

Deservingness	Question 5 <sup>b</sup>		Marginal Total
	Purchase	Gift	
High	96 .98	2 .02	98
Low	5 .05	92 .95	97
	101 .52	94 .48	195

Deservingness	Question 6 <sup>c</sup>		Marginal Total
	Electrician	Mr. Brown	
High	84 .86	14 .14	98
Low	23 .24	74 .76	97
	107 .55	88 .45	195

<sup>a</sup>Second line of entry is proportion.

<sup>b</sup>Likelihood ratio  $\chi^2=185.79$ ,  $df=1$ ,  $p < 0.001$ .

<sup>c</sup>Likelihood ratio  $\chi^2=75.89$ ,  $df=1$ ,  $p < 0.001$ .

Table 6

Subjects' Responses to Question 7 as a Function of  
 2 Deservingness, 2 Attractiveness, and  
 4 Deservingness x Attractiveness Conditions<sup>a</sup>

Deservingness <sup>b</sup>		Question 7			Marginal Total
		No	Not Sure	Yes	
High		2	28	68	98
		.02	.29	.69	
Low		29	48	20	97
		.30	.50	.21	
		31	76	88	195
		.16	.39	.45	
<u>Attractiveness<sup>c</sup></u>					
High		5	31	61	97
		.05	.32	.63	
Low		26	45	27	98
		.27	.46	.28	
		31	76	88	195
		.16	.39	.45	
<u>Deservingness x Attractiveness<sup>d</sup></u>					
High	High	0	3	45	48
		.00	.06	.94	
	Low	2	25	23	50
		.04	.50	.46	
Low	High	5	28	16	49
		.10	.57	.33	
	Low	24	20	4	48
		.50	.42	.08	
		31	76	88	195
		.16	.39	.45	

<sup>a</sup>Second line of entry is proportion.

<sup>b</sup>Likelihood ratio  $\chi^2=60.52$ ,  $df=2$ ,  $p<0.001$ .

<sup>c</sup>Likelihood ratio  $\chi^2=36.80$ ,  $df=2$ ,  $p<0.001$ .

<sup>d</sup>Likelihood ratio  $\chi^2=7.79$ ,  $df=2$ ,  $p<0.02$ .

Table 7  
Dependence/Independence among Process Measures<sup>a</sup>  
(Manipulation Check Questions)

	1	2	3	4	5	6	7
1	-----	77.52 9 0.001	2.58 6 0.86	2.17 6 0.90	2.00 3 0.57	0.15 3 0.99	5.78 6 0.45
2		-----	4.50 6 0.61	0.48 6 1.00	1.63 3 0.65	0.09 3 0.99	6.60 6 0.36
3			-----	180.79 4 0.001	0.47 2 0.79	1.85 2 0.40	25.44 4 0.001
4				-----	0.85 2 0.65	0.84 2 0.66	28.49 4 0.001
5					-----	88.77 1 0.001	63.22 2 0.001
6						-----	56.89 2 0.001

<sup>a</sup>First line of entry is likelihood ratio  $\chi^2$ ;  
second line of entry is degree of freedom;  
third line of entry is probability level.

Table 8

Dependence/Independence between Questions 3 and 4 and Question 7

Question 7	Questions 3 <sup>a</sup> and 4 <sup>b</sup>						Marginal Total	
	No <sup>c</sup>		Not Sure		Yes			
No	19	18	8	9	4	4	31	31
	.61	.58	.26	.29	.13	.13	.16	.16
Not Sure	35	27	21	16	20	33	76	76
	.46	.36	.28	.21	.26	.43	.39	.39
Yes	20	14	21	20	47	54	88	88
	.23	.16	.24	.23	.53	.61	.45	.45
	<u>74</u>	<u>59</u>	<u>50</u>	<u>45</u>	<u>71</u>	<u>91</u>	<u>195</u>	<u>195</u>
	.38	.30	.26	.23	.36	.47		

<sup>a</sup>Left-hand column, Likelihood ratio  $\chi^2=25.44$ ,  $df=4$ ,  $p < 0.001$ .

<sup>b</sup>Right-hand column, Likelihood ratio  $\chi^2=28.49$ ,  $df=4$ ,  $p < 0.001$ .

<sup>c</sup>Second line of entry is proportion.



Cell Means of 3 Outcome Measures and 11 Covariate Measures of N=195 Subjects

Independent Variables				Dependent Measures <sup>a, b</sup>			Covariates											
Induct.	Deserv.	Attract.	N <sup>c</sup>	Story	PDona.	ADona.	Reading	Cov1	Cov2	Cov3	Cov4	Cov5	Cov6	Cov7	Cov8	Cov9	Cov10	
High	High	High	24	2.17	27.50	23.96	41.92	2.12	3.33	2.87	3.08	2.96	2.88	2.83	2.83	1.04	1.50	
				2.11	26.16	22.51												
	Low	Low	25	2.20	23.60	20.24	39.48	2.48	3.60	2.64	3.36	2.92	2.76	2.80	2.76	1.24	1.44	
				2.24	24.02	20.92												
Low	High	High	24	2.04	22.50	22.08	40.25	2.25	3.46	2.96	3.33	2.88	2.83	2.83	2.88	1.50	1.58	
				2.00	21.24	20.74												
	Low	Low	25	2.08	19.00	19.60	39.76	2.20	3.36	3.00	2.88	2.80	2.80	2.80	2.76	1.08	1.24	
				1.99	19.39	19.38												
Low	High	High	24	2.38	27.29	24.79	41.79	2.46	3.63	3.04	3.46	2.83	2.92	2.83	2.83	1.33	1.50	
				2.24	25.57	23.47												
	Low	Low	25	1.40	17.80	19.00	42.20	2.68	3.64	2.52	3.32	2.80	2.72	2.72	2.72	0.88	1.28	
				1.53	19.30	20.98												
	Low	High	25	1.64	24.40	23.00	39.60	2.36	3.32	2.48	2.88	2.92	2.84	2.84	2.84	1.16	1.36	
				1.63	24.97	23.56												
	Low	Low	23	1.52	18.04	16.96	42.04	2.35	3.35	2.43	3.00	2.87	2.70	2.83	2.83	0.91	1.35	
				1.69	19.49	18.07												
Mean Square Error				2.10	357.93	359.71												
				2.01	350.33	351.23												

<sup>a</sup> Bartlett-Box tests of homogeneity of variance were performed on the three dependent measures and the results showed that the eight within-cell variances can be regarded as homogeneous:  $F$ 's(7,187)=0.38, 0.59, 0.87,  $p$ 's<0.92, 0.78, 0.54, respectively, for pledged stories, pledged donations (PDona.), and actual donations (ADona.).

<sup>b</sup> Second line of entry adjusted for effects of 11 covariates.

<sup>c</sup> Of the 198 children who participated in this study, two grade six boys and one grade six girl did not respond to question 9 in the story (giving no response as to how much they would pledge to donate). They were thus removed, leaving 195 subjects (grade 5: 52 boys and 52 girls; grade 6: 39 boys and 52 girls) for the purpose of data analysis.

Table 10

Cell Means of 3 Outcome Measures  
and 1 Covariate Measure of N=195 Subjects

Independent Variables				N <sup>c</sup>	Dependent Measures <sup>a,b</sup>			Cov.
Induct.	Deserv.	Attract.	Gender		Story	PDona.	ADona.	
High	High	High	Boys	11	1.64 1.61	25.91 25.69	20.91 20.58	2.82
			Girls	13	2.62 2.56	28.85 28.37	26.54 25.83	2.92
		Low	Boys	12	2.25 2.38	18.75 19.91	15.92 17.65	2.25
			Girls	13	2.15 2.08	28.08 27.41	24.23 23.24	3.00
	Low	High	Boys	12	1.92 1.93	23.33 23.48	24.58 24.81	2.67
			Girls	12	2.17 2.03	21.67 20.40	19.58 17.69	3.25
		Low	Boys	9	1.78 1.82	21.11 21.53	22.78 23.40	2.56
			Girls	16	2.25 2.11	17.81 16.54	17.81 15.92	3.25
Low	High	High	Boys	8	1.75 1.68	18.13 17.46	11.88 10.89	3.00
			Girls	16	2.69 2.60	31.88 31.06	31.25 30.03	3.06
		Low	Boys	15	1.40 1.49	16.67 17.47	20.00 21.19	2.40
			Girls	10	1.40 1.41	19.50 19.57	17.50 17.60	2.70
	Low	High	Boys	11	0.91 1.12	18.18 20.18	18.18 21.16	1.91
			Girls	14	2.21 2.16	29.29 28.80	26.79 26.06	2.93
		Low	Boys	13	1.39 1.52	10.77 11.98	11.54 13.34	2.23
			Girls	10	1.70 1.71	27.50 27.57	24.00 24.10	2.70
Mean Square Error					2.07 2.02	351.17 348.36	351.85 343.16	

<sup>c</sup>See note c, Table 9.

<sup>b</sup>Second line of entry adjusted for effects of covariate.

<sup>a</sup>Bartlett-Box tests of homogeneity of variance were performed on the three dependent measures and the results showed that the 16 within-cell variances can be regarded as homogeneous:  $F(15, 179) = 1.13, 0.43, 0.57, p's < 0.32, 0.98, 0.90$ , respectively, for pledged stories, pledged donations (PDona.), and actual donations (ADona.).

Table 11

## Principal Component Analysis

<u>Variables</u>	<u>Principal Components</u>			<u>Correlations between Original Measures and Principal Components</u>			<u>Varimax Components</u>		
	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>
Story	-0.50	0.01	1.33	-0.35	0.01	0.94	0.98	-0.13	0.13
Pledged donations	-18.02	-4.86	-0.02	-0.96	-0.26	-0.00	0.16	-0.86	0.48
Actual donations	-17.86	4.90	-0.02	-0.96	0.26	-0.00	0.16	-0.49	0.86

<u>Percent of variation</u>		
<u>1</u>	<u>2</u>	<u>3</u>
92.88	6.86	0.26