THE EFFECTS OF DIFFERENTIAL ROLE-TAKING EXPERIENCES ON EMPATHY AND ALTRUISM IN PRESCHOOL CHILDREN

by

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The Effects of Differential Role-Taking Experiences On Empathy and Altruism in Preschool Children

The desirability of behavior reflecting concern for the welfare of others has been an assumption of many recent researchers in social psychology (e.g., Batson, Darley, & Coke, 1979). In accordance with this assumption, relationships among individuals can be said to ideally involve active helpfulness which is unhesitatingly expressed by each individual. This ideal state is, however, far from the general rule in the current social milieu--even in cases in which another's need is readily apparent (Mussen & Eisenberg-Berg, 1977). Consequently, the research literature of the past 10 to 15 years has reflected heightened interest in altruistic behavior with particular emphasis on those factors which may have the potential to influence helpfulness (e.g., Bryan, 1972; Feshbach, Note 1; Rosenhan, Note 5).

This project was an attempt to further our understanding of the degree to which altruistic behaviors may be increased among preschool-aged children, still obviously in the early stages of the socialization process. A model has been proposed herein to describe the process of young children's helping in response to another's distress. It was anticipated that application of this model (via differential role-taking experiences with the child) might demonstrate a means of positively influencing helpfulness among preschoolers. The model follows from prior theory and research along two major themes, empathy and instrumentality.

Empathy and Altruism

According to Hoffman (Note 2), empathy is a concept which has been defined in two broad ways: (1) as the cognitive awareness of another's

feelings and (2) as the vicarious affective response to another's feelings. Empathy has been suggested as an important motivator for helping behavior, particularly by proponents of the second, or affective, definition. Feshbach (1975) has contended that while both cognition and affect are necessarily involved in empathy, the second is the crucial mediator of helping. Evidence for the existence of both cognitive and affective empathy and their relation to helpfulness will now be examined.

Cognitive Empathy

Understanding another's affective state may often be enhanced by understanding that individual's physical perspective. Borke (1975) has demonstrated physical perspective taking among 3- and 4-year-olds by utilizing a modification of Piaget and Inhelder's (1956) three-mountain task. The children were asked to identify out of ten "mountain" scenes the one scene which showed a display as it would appear from a perspective discrepant from the child's view of the "mountains." The accuracy of 3-year-olds was 79% and of 4-year-olds was 93%.

Borke (1973) has also verbally and pictorially presented situations to 3- to 6-year-old Chinese and American children who typically made accurate distinctions between the happiness and the unhappiness of the characters depicted. This capacity for discrimination of another's affect is still, however, cognitive in nature. It is also possible that the accuracy found may be a reflection of the child's simply knowing the appropriate response for a given social situation (Chandler & Greenspan, 1972) rather than his/her actively taking on the perspective of the other. It seems, however, that such a process of "projection" might be a logically valid step in the transitional development from egocentrism to empathy. Such projection may facilitate the child's preliminary understanding of the range of situations in which one (particularly another) might experience different feelings.

One recent empirical study (Buckley, Siegel, & Ness, 1979) has reported a significant relationship between cognitive empathy and altruism in children. The child's discrimination of the appropriate facial affect (happiness, sadness, anger, or fear) experienced by children in 12 stories determined her/his cognitive empathy score; physical perspective-taking ability was measured in a manner similar to that of Borke (1975) which was previously described. Those 3½- to 9-year-old children who either helped another child pick up spilled puzzle parts or shared a cookie with a peer had both higher cognitive empathy scores and higher physical perspective-taking scores than those children who did not help or share.

It seems apparent from these studies that children as young as 3 have at least adequate cognitive role-taking capacities. While such cognitive understanding of a situation seems essential to interpretation of available affective information and has been associated with increased helping, cognitive empathy alone appears to be insufficient to account for helping behavior (e.g., Coke, Batson, & McDavis, 1978; Feshbach, 1975; Hoffman, 1975). Furthermore, some of the cognitive measures used may have (inadvertently) tapped an affective component as well.

Affective Empathy

Affective empathy (vicariously experiencing another's affective state) may be especially salient or "attention-getting" and, thus, seems likely to provide the necessary motivation for the expression of altruistic behaviors. By helping another in distress, one may reduce not only the other's distress but one's own vicarious distress as well.

Feshbach (1975) has set forth a model of empathy as having the following three essential components: (1) the ability to discriminate and label affective states of others, (2) the ability to assume the perspective and

role of another person, and (3) the evocation of a shared emotional reaction, or emotional responsiveness. The first two components are predominantly cognitive. Feshbach stresses the remaining affective component as empathy's distinctive feature.

Aronfreed (1970) views affective empathy as being very closely related to altruism. He suggests that empathic responses may become classically conditioned to external affective cues and in turn serve as internalized motivating mediators of altruistic behaviors. Hoffman (Note 2) also has posited empathy as a motivational factor for altruism. He describes empathy from a broad developmental perspective, indicating that it changes progressively from a primitive emotional response devoid of a cognitive component to a more sophisticated arousal of affect which is synthesized with cognitive representations of the other's "life experience."

Adolescent and adult studies. Whereas theories concerning affective empathy are relatively abundant, systematic research in the area is in the early stages. Mehrabian and Epstein (1972) demonstrated correlationally that adults who were high in empathy (as determined by their questionnaire measure) gave less shock to a confederate than subjects low in empathy when the confederate's cries of pain were highly salient. In a correlative study involving high school students, Eisenberg-Berg and Mussen (1978) found that individuals with high scores on Mehrabian and Epstein's (1972) measure of affective empathy were more likely than low empathic individuals to help the experimenter with a boring task. Similarly, Barnett, Howard, King, and Dino (in press) found that high school students with high Mehrabian and Epstein (1972) empathy scores put together more "activity booklets" for handicapped children than those with low empathy scores.

With adult subjects, Krebs (1975) has found that altruism was positively associated with the intensity of empathic response. Specifically, subjects who empathized most with their partners (as measured physiologically) sacrificed more money to their partners and took more shock themselves in order to avoid shocks for their partners than did less empathic subjects. Also, empathy and helping increased with perceived degree of similarity between the subject and her or his experimental partner.

In addition to examining the relationship between a dispositional measure of empathy and helping, Barnett, Howard, King, and Dino (in press) also explored the effects of an experimental manipulation of empathy on helping. Subjects who were shown a brief videotaped presentation designed to elicit empathic arousal prior to the opportunity for charitable action (i.e., compiling booklets for handicapped children) were more charitable than those who viewed an affectively-neutral presentation.

Coke, Batson, and McDavis (1978) have proposed a model of helping behavior which combines cognitive perspective taking and empathic emotion as a functionally related process. That is, taking the perspective of a distressed person increases affective empathy which consequently increases helping. In their study, some subjects were given a placebo which they were told would arouse them while others were given the same placebo but were told it would relax them. Before viewing a "newscast" depicting the unhappy circumstances of a stranger in need, instructions were given either to take on the perspective of the subject of the newscast or to observe technical aspects of the film. Instructions to take on the perspective of the other (the experimental manipulation of cognitive empathy) were insufficient in and of themselves to significantly increase subsequent volunteering to help the needy stranger. The group of subjects who were

both told that the placebo would relax them and who were instructed to take on the other's perspective apparently attributed feelings of arousal to a concern for the other (rather than to effects of a drug) and consequently helped the needy other more than the remaining three groups.

Child studies. The studies of affective empathy discussed thus far have used adult and adolescent samples. A few investigations have focused instead on children. Eisenberg-Berg and Neal (1979), for example, have suggested that preschoolers display "a primitive empathic orientation" (p. 229) in their reasoning about their own spontaneous prosocial behavior. When observed and questioned in a naturalistic setting, the children frequently responded with reasoning related to the psychological or physical needs of the person helped. Such moral reasoning appears to represent at least some degree of empathic concern directly involved in young children's helpfulness.

Feshbach and Roe's (1968) Affective Situations Test has frequently been used to measure young children's dispositional empathy. This measure consists of four pairs of narrated slide sequences showing young children in situations designed to elicit happiness, sadness, anger, and fear. Following each slide sequence the child is asked, "How do you feel?" Each response is rated as to the degree to which it matches the affect of the child featured in a slide sequence. Correlational studies exploring the relationship between Feshbach and Roe empathy scores and helping indices have yielded inconsistent results, however (see Eisenberg-Berg & Lennon [1980] for a detailed review and discussion). The influence of social desirability on young children's verbal responses and the need for relatively advanced verbal comprehension and expressive skills are among the major criticisms of the measure.

Furthermore, Sawin (1979) has found nonverbal empathy measures (i.e., ratings of tone of voice and facial expression after witnessing another's distress) to be more closely associated with helping than were verbal responses.

Leiman (Note 4) also measured dispositional empathy by rating the sadness expressed by a child's facial response to another's sadness. His helping measure was the extent to which a child used a "marble machine" to produce marbles that would be given to another individual whom the child had seen suffer the loss of his/her marbles. He found that the highly empathic group (i.e., children rated as showing sad expressions) used the machine more (i.e., helped more) than the less empathic group of children.

Barnett, King, and Howard (1979) manipulated the focus (self- or other-directed) of children's affect to determine the differential effects of self concern and empathy on subsequent generosity to needy others. Those 7- to 12-year-old children who were asked to relate a sad story about a peer (Sad/Other Group) shared significantly more prize chips with less fortunate others than those requested to tell of a sad personal experience (Sad/Self Group). Children who told about positive experiences or provided affectively neutral information about themselves or others did not differ significantly from one another; the degree of sharing by these groups fell approximately midway between the Sad/Other and Sad/Self Groups. The importance of other-directed negative affect in influencing helping among young children is further supported by Howard and Barnett (in press). In this study preschoolers through second graders who were encouraged to imagine the feelings of needy others, which presumably aroused empathy, shared more prize chips with those others than did children instructed only to think about the less fortunate others.

Training Studies

Intervention in the form of empathy training has been examined with regard to its influence on prosocial behavior in children. Detailed attention will be given to these training studies as the current project involved a training paradigm.

Staub (1971) trained kindergarteners in two training sessions to understand and express the feelings both of those in distress and of those who were helpers by having them act out both roles (victim and helper) in a total of five contrived situations. Observations made both one day and approximately one week following this training revealed that girls responded to (recorded) cries of distress of another child in an adjoining room significantly more frequently than control subjects without training. Also, boys in the experimental group exhibited greater sharing in comparison with controls, despite a lack of special training with respect to sharing.

In a series of role-taking sessions conducted by Ianotti (1978), 6- and 9-year-old boys were directed to experience the cognitive perspective and the feelings of a character in an imagined situation. Two experimental groups differed in that subjects in one enacted the role of a single character throughout the sessions whereas subjects in the other group experienced role taking from several different perspectives in the situation (i.e., role switching). A control group discussed the stories but did not practice role taking. Among the 6-year-olds, sharing of candy was greater for the experimental groups than for the control, but, contrary to predictions, role switching did not yield greater sharing than training in only one role. While the same effect was not found for the 9-year-olds, Ianotti did not offer an explanation to account for this difference between the two age groups.

Kameya (Note 3) conducted a role-training study with kindergarten boys in which he contrasted the effects of two different types of role-training experiences--one condition in which training and testing situations were very similar to each other and one in which training and testing situations were relatively dissimilar to each other. Each child took part in a series of six sessions along with four or five other children. Not unexpectedly, role training with situations similar in content to the postmeasure had a greater positive effect on a variety of subsequently measured prosocial behaviors (e.g., direct aid to an experimenter who dropped a box of paper clips) than did role training lacking in similarity to the postmeasure. In addition, both role-taking groups exhibited more helpfulness than controls who had no role-taking experience.

Feshbach (Note 1), whose emphasis on the affective component of empathy was pointed out earlier, has recently undertaken a rather ambitious empathy training project. In a pilot study with 60 third- and fifth-graders, two differing types of empathy training were examined. During a 10-week period, groups of six children met with an experimenter for one hour, three times a week. For some of these children both cognitive and affective empathic skills were stressed during the sessions (e.g., focusing on causes of behavior and on feelings involved). This type of training yielded a more marked increase in prosocial behavior (and a greater decrease in aggressive behavior) than did the other training condition in which only cognitive aspects were emphasized. Little change was found for a group of control subjects, students in the same school who did not participate in training of any kind.

The empathy training studies cited have each achieved some positive effects on one or more forms of helpfulness. They have done so by directing children to experience both the cognitive and the affective perspectives of the other. (This strategy is logically consistent with Coke, Batson, and McDavis' [1978] model which posits that taking the cognitive perspective of another promotes affective empathy which in turn increases helpfulness.) The magnitudes of the effects achieved thus far have not been very impressive, however. Also, the effects of empathy training have been assessed with the use of ecologically valid measures of spontaneous helping in only one case (Feshbach, Note 1) thus far. Feshbach employed naturalistic observations of children's behavior in a school setting; other investigators have evaluated their intervention strategies with measures that were nonspontaneous and indirect (e.g., donation of prize chips or candy to unknown others as in Staub [1971] and Ianotti [1978]) and/or highly contrived (e.g., simulated "rescue" situations which might elicit fear as well as empathy [Staub, 1971] and helping a rather bumbling experimenter who stuck his thumb with a pin, bumped his knee on a table, dropped paper clips, etc., within a span of a few minutes [Kameya, Note 3]).

While cognitive and affective role-taking procedures have had some success in increasing helping, perspective-taking dimensions (cognitive and/or affective) seem necessary but not sufficient to explain the expression of prosocial behaviors. The basic link which appears to be missing is one that can account for the transition from motive to action. One must obviously be able to translate the cognitive and, theoretically more motivating, affective information into appropriate, constructive behavior. This "translation" skill will be referred to here as

instrumentality. The theoretical background for this component and the empirical evidence available at this time to support its existence and its influence will now be discussed.

Instrumentality and Altruism

Schwartz (1970) has discussed the cognitive aspects of arriving at a moral decision in combination with personality and situational variables. In so doing, he suggests three distinctive "attributes" of moral decisions: (1) Moral decisions necessarily lead to interpersonal actions having consequences for the physical or psychological welfare of others; (2) The decision maker must be a responsible agent, i.e., a person who both knowingly and willingly has chosen an action over other alternatives; (3) The resulting actions are evaluated as good or bad according to their consequences for the welfare of others.

Each of these implies a dimension along which the decision-making situation may vary. For the first attribute, for example, the extent to which an individual realizes the dependence of another on her or his actions will affect the decision-making process. It is implicit, as well, that the chosen instrumental act will be the one most pertinent to the situation at hand.

Concerning the second component, the decision-making process is further dependent on the degree to which one ascribes responsibility for action to himself/herself. Related to the last dimension, the process of arriving at a decision about taking action will vary with the range of norms and reasoning on which one bases his or her evaluations as to goodness or badness.

If, as Schwartz contends, these attributes of moral decisions are accurate, the moral responsibilities and norms (of steps two and three)

with which one identifies cannot initially be translated into action without an awareness of interdependence in relationships and a willingness to initiate consequences for another (step one). In a later work, Schwartz (1975) has provided a more detailed breakdown of the first step in the decision-making process, emphasizing the potential helper's "perception of need and responsibility" (p. 115). Categorized under this area are (a) "awareness of a person in a state of need, lacking some desired resource" (p. 115) and (b) "perception that this state of need can be relieved if certain actions are taken" and "recognition of own ability to make one or more of the responses which could alleviate consequences for the needy" (p. 115). We might assume that (a) above corresponds to empathy (although this definition does not necessarily imply an affective component), whereas (b) is involved in instrumentality, which is seen here as the utilization of one's own ability to enact the appropriate type(s) of behavior to relieve another's need. The instrumentality link between empathy and helping has been largely ignored by previous investigators. It was the purpose of this study to include this factor and to propose a two-step process of empathizing (vicariously experiencing another's distress) plus instrumentalizing (enacting consequences perceived by the actor to be positive for the other) as a model to explain young children's helping in response to another's distress.

Latené and Darley (1970) have posited a theoretical account of helping in rescue situations which is similar to Schwartz's speculations. Their framework may be applied as well to other more generalized situations in which empathic distress is evident. In order for an appropriate helping response to occur, according to Latané and Darley, the witness must (1) notice what is happening to the "victim," (2) interpret this event as

one in which another is in need, (3) decide that it is his/her personal responsibility to take action, (4) determine what form of assistance he/she is able to give, and (5) decide how to implement this assistance. The first two steps of the series involve an understanding of social situations similar to that involved in empathic arousal, although they may not necessarily be affective in nature. The final three steps entail instrumentalizing as it has been previously described.

Lois Murphy (1937) suggested, on the basis of extensive work with nursery school children, that instrumentalizing develops with increasing age (although Murphy simply described the process without ascribing to it a specific label such as "instrumentalizing"). She proposed the following developmentally-linked sequence of responses to the distress of others: "(1) staring (paying attention to the distress of another child); (2) asking about, commenting on, and so forth (except in the case of markedly nonverbal children); (3) active responses of comfort, help, defense, and the like" (p. 152). While this developmental progression may well be the general trend, Hoffman (1975) provides anecdotal evidence, however, that children as young as 1 to 1½ years of age can assess and respond to another's needs. For example, Hoffman described a 15-month-old boy who observed a peer's crying and offered his own teddy bear. When the other child's crying continued, he retrieved that child's own security blanket and gave it to him. Yarrow and Zahn-Waxler (1977) have noted similar examples as reported by mothers who recorded their children's responses to opportunities to help. In one such instance, a girl of 18 months looked concerned and attempted to help a crying 6-month-old baby by retrieving a cookie he had thrown, patting his head, bringing her own

mother to him, and offering him toys. Not only did this very young child make the effort to help, she was apparently persistent and inventive. It seems plausible on the basis of these anecdotal examples that such capacities for empathizing and instrumentalizing may be present even in young preschool children and could, therefore, possibly be tapped by appropriate intervention strategies.

Schwartz (1968) has attempted to empirically support what he refers to as awareness of consequences. This factor is analagous to a realization of one's potential to alleviate another's distress (which is essential to purposeful instrumentalizing). In a study with college males, he investigated the relationships among a projective story-completion questionnaire measure of awareness of consequences and peer ratings of considerateness, helpfulness, and reliability towards peers. He found that awareness of consequences was positively correlated with the other three factors. Schwartz (1975) has further suggested that as the intensity of the perceived need increases (and, presumably, as empathic cues increase), there is also an increase in the likelihood that norm activation will lead to behavioral responsiveness (helpfulness). He mentions a related suggestion by Aronfreed (1968) that empathic arousal may motivate the individual to help the person in need in order to eliminate one's own vicariously experienced discomfort (while simultaneously eliminating the other's discomfort).

Keller, Ford, and Meacham (1978) have demonstrated that preschool-aged children are quite capable of thinking in terms of self-initiated actions. Such actions are central to directive, instrumental behavior. In a study designed to determine the salient dimensions of self-concept among 3-, 4-, and 5-year-olds, they administered several self-concept measures. For all three age levels, the largest percentage of responses to two open-ended

measures were in an action statement category (e.g., I can pick up things). A measure requiring the child to choose between a body-referent and an action-referent self-description yielded significantly more action-referent selections. Yet another measure gave each child the opportunity to complete statements beginning "I can" (action-related), "I am" (body-image-related), or "I have" (possession-related). Action-referent statements were again the most frequently elicited, although body-image statements were well-represented also. A young child's capacity for action is apparently an important dimension by which she/he characterizes herself/himself. This seeming state of affairs could be used to advantage towards increasing awareness of ability to enact consequences for others.

One further empirical study relevant to the issue of instrumentality in children was conducted by Barrett and Yarrow (1977). Assertive and prosocial behaviors of 5- to 8-year-old children at a day camp were naturalistically observed, recorded, and subsequently related to scores on a measure of social inferential ability. The authors' definition of assertiveness--attempts to incluence another's activity--is akin to what is presently being termed instrumentality. The cognitive inferential factor was scored on the basis of the child's capacity to infer the impact of an affect-laden change in an interpersonal situation on the main character's subsequent behavior (e.g., a boy's marked decline in performance on a manual task following his overhearing an argument between his parents). An interaction of inferential ability and assertiveness was indicated such that for highly assertive children, inferential ability was positively related to prosocial behavior (interpersonal sensitivity led to responsiveness), but for relatively less assertive children, there was no significant relationship between inferential ability and prosocial behavior.

This finding is congruent with the current suggestion that empathizing will culminate in altruistic action for those with the skills to instrumentalize their arousal effectively, whereas helpful behavior will not be the result of empathizing by those lacking in instrumental inclinations.

Summary of Problem and Proposed Model

In their review of altruism in children, Bryan and London (1970) asserted that cognitions concerning charity may be necessary for the act of sharing, but that they fall short of being sufficient for it. Similarly, Hoffman (Note 2) has criticized Kohlberg's theory of moral reasoning for "neglecting motivation, which may be needed for translating abstract moral concepts into moral action" (p. 306). It is contended from the research and theoretical speculations presented that "motivation" can be interpreted as empathy, "translating abstract moral concepts" as instrumentalizing, and "moral action" as altruistic behavior. Whereas Kohlberg overlooked the motivational factor (affective empathy), empathy theorists have to this point largely neglected the "transitional" factor of instrumentality in the helping process.

Mussen and Eisenberg-Berg (1977) addressed the need for consideration of this missing factor following their review of the research and theory on cognitive and affective factors relevant to prosocial behavior:

" ...empathic responses are a necessary, although not sufficient, precondition for prosocial behavior. The question of how empathy, once it is aroused, becomes translated into prosocial action has not yet been adequately answered" (p. 138).

The study undertaken, thus, had as its basis the following model. A child's tendency to actively help another may be viewed as a function of two

components--(1) the ability to recognize and vicariously experience the distress of another, i.e., to feel empathic arousal, and (2) the capacity to instrumentalize this affective arousal by generating and performing what she/he perceives to be a helpful action. Such action is both adaptive and reinforcing in that it alleviates the distress of the other child and of the empathically aroused child. The current training project was designed to test this two-component postulation for altruistic behavior. In order to clarify the specific predictions for this investigation, a brief overview of the procedure will first be provided.

Overview of Procedure

The study was conducted in two major phases. A series of four sessions of role-taking experiences which took place on different days constituted the first phase. These "training" sessions were followed on another day by a final session designed to assess the primary dependent measures of empathy and altruism.

During the brief role-taking sessions, individual children were read introductions to stories relevant to prosocial behavior. The primary investigator encouraged and participated in the acting out of these stories with hand puppets in four role-taking conditions, as follows: (1) Empathy (E) Condition: An empathic concern for the plight of the other child was stressed; (2) Instrumentality (I) Condition: The child was encouraged to generate specific helpful actions, although feelings were not discussed; (3) Empathy + Instrumentality (EI) Condition: The empathic emphasis of the E Condition was incorporated along with an attempt to increase the child's awareness of her/his potential to instrumentalize that arousal by generating specific helpful actions, thereby alleviating the mutually experienced

distress; and (4) Control (C) Condition: The children were involved in role-playing activities but with no special emphases on empathy and/or helping.

During the individual assessment session the child became acquainted with an unfamiliar confederate adult, viewed the confederate as she responded with distress to the loss of desired toys, and for a short time was left alone with the confederate and an identical set of toys. The child had been told to do whatever she/he wished with the toys. Videotapes were made of the subject (a) at the time of the confederate's loss and (b) during the subsequent free period with the confederate. The tapes were later coded, and the resultant ratings served as the dependent measures of (a) empathy and (b) altruism. Four separate measures of altruism--latency (in seconds) to initial helping, sharing, involvement, and overall helpfulness--were derived from the videotapes made during the free period with the confederate. A post-experimental questionnaire was administered to each child at the end of the assessment session to determine his/her understanding and feelings with respect to the events of the session. Also, teachers' ratings of each child's empathy and helping behavior in the preschool classroom were obtained both preceding and following the experiment.

Predictions

The major predictions for this study followed from the earlier discussion of the theory and research on empathy and instrumentality as they relate to helpfulness.

Empathy Measure

As the results of the empathy training studies previously outlined (Ianotti, 1978; Staub, 1971; Feshbach, Note 1; Kameya, Note 3) have implied,

children in the Empathy Condition (Group E) and the Empathy + Instrumentality Condition (Group EI) were expected to obtain higher empathy ratings than children in the Instrumentality Condition (Group I), who were not exposed to empathy training, and children in the Control Condition (Group C), who received no helping-relevant training. Children in Groups E and EI were not expected to differ significantly from each other on this measure.

Helping Measures

Following primarily from Schwartz's (1970, 1975) theory, children in Group EI were predicted to receive higher ratings on the four dimensions of helpfulness investigated than children in Groups E and I. Children in Groups E and I, in turn, were anticipated to rate higher on these same dimensions than children in Group C. Whether or not Group E and Group I would differ from one another could not be predicted. It was hypothesized that these two groups would be more helpful than Group C due to their role-taking experience with helping-relevant situations (which Group C lacked). While analyses of the effects of Sex, Age, Experimenter, and Preschool were planned for both empathy and helping measures, no significant effects involving these factors were anticipated.

Post-Experimental Questionnaire

No predictions were made for differences among the training groups on reponses to three of the items which were included as manipulation checks to assess each child's comprehension of the critical events of the session. It was predicted, however, that, when asked how they felt when they witnessed the confederate's distress, children in Groups E and EI would answer with higher (i.e., sadder) ratings than would Groups I and C, which would not differ significantly from one another. It was felt that the prior

training of Groups E and EI in vicariously experiencing another's negative affect would produce this effect. Due to the findings of earlier investigators (e.g., Borke, 1973, 1975; Chandler & Greenspan, 1972), all children were expected to recognize the affective perspective of the other (i.e., to give high ratings of sadness in response to the question "How did the confederate feel?") regardless of Training Condition.

Teachers' Ratings

For each child, the averages of two teachers' ratings of both empathy and helpfulness (explained in more detail later), obtained approximately one to two weeks following intervention and assessment, were analyzed to explore differences which might have been reflected in the everyday preschool setting. It was anticipated that these differences would parallel those of the primary dependent measure. That is, Groups E and EI were not expected to differ from one another on ratings of empathy but should have been higher on these ratings than Groups I and C. Group EI was expected to obtain higher helpfulness ratings than Groups E and I which, in turn, were expected to be rated as higher in helpfulness than Group C.

METHOD

Subjects and Experimenters

Forty-six (22 male and 24 female) middle-class children ranging in age from 37 to 70 months ($\bar{X}$ = 54.35 months) participated in the study. One girl was black; two girls and one boy were of Oriental descent; the remainder were Caucasian. Forty-one children who participated in the study were enrolled during the spring or summer terms of 1979 in one of four preschool sessions conducted by the Department of Family and Child Development of Kansas State University; five children attended a private preschool operating in the same

community (Manhattan, Kansas) during the summer of 1979. A sample of the parental explanatory letter and permission form obtained from a parent of each participating child is presented in Appendix A.

The children were divided into four groups of approximately equivalent n. The groups were matched as closely as possible prior to training on teachers' ratings of empathy and helping behavior (see Appendix B for a copy of this questionnaire). The questionnaire was completed for each child by two teachers familiar with her/him.[1] The average of the two teachers' ratings on the combined empathy and helping scale was used as the child's total score by which he/she was assigned to condition. Roughly equivalent proportions of children with similar scores comprised each group. Table 1 presents the means and standard deviations of these scores by Training Condition.

Teachers' ratings were also obtained on the same questionnaire approximately one to two weeks following the child's participation in the study.[2] These second ratings were included in the design to provide a measure of the generalizability of training effects to the regular preschool classroom. Teachers were instructed to be alert for differences in empathy and helping behavior from the first to the second rating, but they had no knowledge as to the child's treatment condition.

The primary investigator, a female graduate student, served as the experimenter for all role-taking training sessions. Three undergraduate female experimenters conducted assessment sessions with 9, 10, and 27 children, respectively. (The discrepancies in number of subjects per experimenter were due solely to scheduling constraints.) The experimenters for the assessment session were not associated with the role-taking phase

Table 1

Means and Standard Deviations
of Preliminary Total Prosocial Behavior Ratings
by Training Condition

Total Prosocial Behavior Rating	Training Condition C	E	I	EI
$\bar{X}$	35.73	34.96	36.41	35.19
SD	4.01	4.14	3.06	3.78

Notes. Maximum score on the preliminary total prosocial behavior scale = 50. Higher scores indicate greater prosocial behavior.

The n for the C, E, and I groups = 11; n for the EI group = 13.

A one-way ANOVA by Training Condition on preliminary total prosocial behavior ratings yielded no significant difference among the groups, F (3, 42) < 1, ns.

of the study. Each of the training and assessment session experimenters had previously taken part in routine preschool activities with the children for a total of approximately four hours over a span of one to two weeks. This prior exposure to the children was in accordance with research guidelines established by the preschool administration and seemed to enhance the children's comfort in interacting with the adult experimenters. The confederate for the assessment session, a female graduate student, had no previous experience with the children, thereby avoiding possible effects of differential prior experiences with the children. She was dressed in a manner which was not blatantly masculine or feminine, childlike or adult for all of the individual assessment sessions.

Setting and Apparatus

The training sessions were conducted in a small room in the children's regular preschool. The only materials used during these sessions were three simple hand puppets, one representing the child and the others representing characters in the role-taking stories.

Two adjoining rooms in one of the preschools were used for the assessment session. One of these rooms is an observation room equipped with a one-way mirror.[3] A television monitor and a videotape recorder were located in this small observation room, and a camera and portable videotape recorder were behind a partition (along with a camera operator) in this same room. The only other materials involved at this time were two baskets of toys which will be described in the procedure section.

Procedure

Training Sessions

As previously mentioned, Group E took part in role-taking training in which the experimenter directed the child to focus on the feelings of

the other. The role-taking training of Group I involved encouragement to generate helpful actions for the other with no mention of feelings. Group EI participated in role-taking training in which the experimenter both (1) directed the child to focus on the feelings of the other and (2) encouraged the child to turn this empathic arousal into constructive behavior (i.e., helping) so as to alleviate both the distress of the other and his/her vicarious distress. Group C took part in role-taking activity relatively devoid of empathic or altruistic content.

Children in all four groups participated individually over successive days in four role-taking sessions, each of which lasted approximately five minutes. For all four conditions, the beginning of a simple story was read to the child. (Some of these stories were patterned after those used by Kameya [1976].) The child and the experimenter then acted out the story with hand puppets.

Experimental groups. The experimenter's specific instructions for the initial sessions with the children in Groups E, I, and EI were as follows:

> We are going to spend a few minutes today using these puppets to act out different stories that I will tell you about. You'll wear this puppet, and I'll wear this one. (The experimenter gave the child a puppet and had her/him try it on.) But first listen to the story we'll be acting out and try to imagine what I tell you. After you've heard the story, we'll act it out with the puppets. (Groups I and EI only: Let's see, too, if we can act out what happens next and how the story might end.)

> Remember, while we're acting it out, you will get to pretend that this puppet is you. (Groups E and EI only: Also, really try to think about how the other puppet in the story [the experimenter held up the puppet on her hand] thinks and feels.) Do you have any questions?

The experimenter answered any questions and emphasized the importance of paying close attention to the story as it was read. The experimenter repeated these instructions at the beginning of each role-taking session.[4]

At this point in each session for Groups E, I, and EI, the experimenter read the introduction to a story in which one of the two major characters (the experimenter's role) was in some obvious distress and helping was, thus, appropriate and constructive behavior for the other major character (the subject's role). The subject's own name was read in the story as that of the potential helper. Pre-testing of the role-taking procedure indicated that using the child's name as the name of the character to whom she/he was assigned greatly facilitated the child's tendency to actively take on the role of that character. The name of the person in distress, however, was not the experimenter's actual name but a non-sex-stereotyped name (e.g., Pat) which varied over the different sessions to help avoid specificity of training to a single character. Pronoun referents to this person were masculine or feminine in accordance with the sex of the child.

As an example, the first of the four stories used in the E, I, and EI training sessions was as follows:

> (Child's name) and a boy/girl named Jackie play with blocks together often. They both like to build things with the really big wooden blocks. One afternoon when the two

of them are playing and the teacher is not around, Jackie trips on a big block and falls down and hurts his/her leg. (Child's name) sees Jackie try to stand up, but his/her leg hurts too much so he/she falls back down again, almost starting to cry.

Listed in their order of presentation, the three remaining story beginnings used for Groups E, I, and EI may be found in Appendix C.

After reading the beginning of the story, the experimenter initiated the acting out of the story. During this enactment, the experimenter asked discussion questions appropriate to the subject's condition. These varied slightly, of course, with the child's degree of participation and types of responses; for example, encouragement to speak and redirection to the story topic were given when needed to accomplish relevant role taking. The following two sample discussion questions were used with the preceding story for children in Group E: How do you think Jackie feels now? How do you feel when you see Jackie starting to cry? Those in Group I were asked: What could you do about that? What would be the best thing for you to do now? For children in Group EI, the questions for Group E and Group I were employed; the following additional questions were also appropriate: If Jackie is unhappy and you're unhappy because he/she is unhappy, what could you do? If you help Jackie, how does he/she feel then? And how do you feel then?

The experimenter concluded each session for Group E with a statement to the effect that when the other person was sad, it made the child feel sad, too. In the case of Group I, the experimenter restated the actions that the child had taken to resolve the situation. For Group EI, the

experimenter summarized by noting that when the other person was unhappy, the child was unhappy, too, but that when the child had taken some appropriate action (i.e., acted in a helpful manner), that distress had been alleviated for them both. It was also stressed to Group EI that actions specific to the other's distress (e.g., getting a band-aid for someone with a cut finger) are most beneficial. In only one case did a child (a member of Group E) consistently (i.e., across all training sessions) refute the summary statements made by the experimenter; this subject's scores were included in subsequent analyses.

Control group. At the beginning of the sessions with children in Group C, the experimenter said:

> We are going to spend a few minutes today using these puppets to act out stories about things that people do. You will wear this puppet, and I'll wear this one. (The experimenter gave the child a puppet and had her/him try it on.) But first listen to the story we'll be acting out and try to imagine what I tell you. After you've heard the story, we'll act it out.
>
> Remember, while we're acting it out, you will get to pretend that this puppet is you. Do you have any questions?

The experimenter answered any questions before proceeding and asked the child to pay close attention to the reading of the story. These instructions were repeated at the beginning of each role-taking session.

Descriptions of events roughly parallel to those presented to the experimental groups, although a potential helping situation was not obvious in the story content, were read. The Group C subjects were instructed to subsequently act them out with the experimenter. The first story used was as follows:

(Child's name) amd a boy/girl named Jackie often build things with really big wooden blocks. One afternoon when the two of them are playing, they decide to build a bridge with some of the really big wooden blocks. First they gather together as many big blocks as they can find. Then they line the blocks up next to each other and push them very close together. When they're finished, they use the bridge to walk from one side of the room to the other.

The three remaining story beginnings used with Group C are listed in Appendix D in their order of presentation. Role training with the control group took place for time periods equivalent to those allotted for the experimental groups (i.e., approximately five minutes).

Assessment Session: Empathy and Helping

The second phase of the study consisted of a single individual session which took place within one to eight days of the final training session. The average duration of the delay from final training session to assessment session was 2.35 days; only eight children had a delay of over three days. During the assessment period, a videotape was made of each child's facial (empathy measure) and other behavioral (helping measure) responses to the sadness of a confederate. The session was conducted in an identical manner for children in all four conditions. The experimenter opened the session as follows:

(Child's name), I want you to meet Geri. Geri, this is (child's name). (Geri said hello.) Geri is going to be playing in here today, too. Let's all sit down over here for a few minutes before we start. Geri, did you know that (child's name) goes to (name of preschool) all the time?

Geri then said:

> Really? That looks like a nice school. Tell me what you do at school, (child's name).

Geri followed up on whatever the child discussed and, when necessary, made further attempts to initiate a dialogue (asked what she/he liked to do best at school, etc.), attempting to develop a friendly relationship with the child. Following the approximately two minute "get acquainted" period, the experimenter gave the following directions:

> What I'm going to do now, (child's name) and Geri, is give you each a basket of toys. Both baskets have the very same toys in them. (The experimenter presented two baskets and showed them to the child and Geri, demonstrating that their contents were identical. She handed each of them a basket.) You may each use your toys in any way that you want while you're here today. There are several different things in the baskets. (The experimenter listed the items, which included an Etch-A-Sketch, a "Magic Slate," a plastic dog, a small pin ball game, a toy car, a ball, and Play-Dough.[5])

Looking at the toys, Geri said:

> These toys look like fun. I especially like playing with toys like the Etch-A-Sketch.

The experimenter continued:

> Geri, you may play out here, and, (child's name), I'd like for you to come with me for a few minutes to another little room where you may play.

The experimenter then took the child (with his/her basket of toys) into the next room where she told the child that he/she could now play with

the toys. The experimenter explained that she was interested in how much the child liked each of the toys and gave him/her an opportunity to play uninterrupted for an interval of about 90 seconds. If the child had not used each of the toys within this time period, she suggested that she/he try the remaining items. After the child had played with all the toys, she requested and recorded the child's response to the question, "How did playing with the toys make you feel?" This affect rating was obtained by using a "smiley face" affect scale shown and described in Appendix E.[6]

The experimenter's next instructions were:

> Now that you've had a chance to play with the toys for a while, I want to show you something else. This TV (the experimenter pointed to the television monitor in the room) is just like TV sets you've seen before except that it can do one special thing that most TV's don't do. With this set we can watch Geri playing with her basket of toys. It will show us what Geri is doing right now in the next room while she is doing it. Let's take a look at what Geri is doing now with her toys.

The experimenter then turned on a prerecorded videotape three minutes and 40 seconds in duration which initially depicted Geri playing with the items from her basket. Geri talked to herself about the toys, commenting on how much she enjoyed them, especially the Etch-A-Sketch for which she had earlier indicated a preference. Within 90 seconds of the start of the tape, Geri said:

> These toys are really neat. I know something else I could do with them, too, that would be fun. I'll pull them

all around in the little wagon I saw down the hall. The lady said it's o.k. for me to do whatever I want with the toys so I'm sure it's all right if I go look for the wagon.

Geri left the room at this point and while she was gone, an unfamiliar male adult came into the room, commenting that he was looking for some toys. He spotted Geri's unattended basket and said, "These are nice toys. Nobody seems to be using them right now. I guess it's all right if I take them." He then picked up the basket and left.

In a few seconds Geri came back into the room saying, "Oh, well. I couldn't find the wagon, but the toys are really fun to play with by themselves anyway . . ." She then noticed that the basket was missing and continued, "Oh, no! My toys are gone! Now I don't have anything to play with. What am I going to do? I don't have my favorite Etch-A-Sketch." Geri's feelings were clearly sad, as evidenced by her tone of voice and a lengthy close-up of her facial expression. (She expressed no anger, only sadness and distress, at the toys' removal.)

At this point the subject's facial expression was recorded on videotape for a period of 15 seconds. (The camera and its operator were concealed behind a partition.) The experimenter stood out of the subject's immediate view and expressed no obvious affect, facially or verbally, during this interval. The tape was subsequently coded by two trained independent raters[7]; the average of the two ratings of facial affect matching served as the measure of empathy (similar to Leiman [Note 4]). The coding guidelines for these tapes may be found in Appendix F.

The experimenter turned off the television set and told the child that the camera on Geri was then off. Escorting the child back to the room where

the confederate was waiting, she mentioned that she had some other work to do for a few minutes and told the child to take the basket along and do whatever he/she wanted while waiting. The child was also cautioned at this time not to go back into the experimenter's room because she would be very busy there.

The confederate was seated during this time at the opposite side of the room on the floor, looking downward, saying only "I don't have anything to play with. I don't have my favorite Etch-A-Sketch" at intervals of approximately 15 seconds. She said "thank you" if the child offered to share with her but discontinued her regularly timed remark about her favorite toy only if the child offered the favorite toy. The child's behavior during this two-minute interval was videotaped for later assessment. These assessments served as the dependent measures of helping.

In order to obtain a maximum of information in these assessments, the tapes were rated on four measures representing various components of the broad dimension of helpfulness. These components included latency (in seconds) to the child's first helpful response, sharing, involvement with the other, and overall helpfulness; the corresponding rating scales are located in Appendix G. The instructions for raters' use of the scales, patterned after those used by Singer (1973) for dimensions of play behavior, are included with the descriptions of the scales.[8]

Following the two-minute videotaping session, the experimenter returned to the area, thanked and dismissed the confederate, and finally asked the subject a brief series of manipulation check questions. The specific content of this postexperimental interview is provided in Appendix H. After the answers to these questions had been recorded, the experimenter

concluded the session by thanking the child and returning him/her to the regular preschool activities. If a child had not shared with Geri, the experimenter explained at this time that Geri was in another room where she was sure her toys were being returned to her. Following completion of the study, the parents of participants were informed of the specific purposes and results of the study and were invited to discuss any aspect of the project with the primary investigator.

RESULTS

Primary Dependent Measures: Empathy and Helpfulness

As the previously outlined predictions pertained only to Training Condition, the initial analyses performed were one-way analyses of variance by Training Condition on the primary dependent measures (facial empathy scores, latency to helping in seconds, sharing ratings, involvement ratings, and overall helpfulness ratings).[9] Mean empathy and helping scores for each Training Condition are provided in Table 2. Facial empathy ratings were analyzed with a univariate analysis of variance which is summarized in Table 3. Contrary to expectations, Training Condition failed to achieve a significant main effect.

The four helping measures were first tested in combination via a one-way multivariate analysis of variance. Again unexpectedly, Training Condition did not attain significance, $F(12, 103) < 1$, ns. As a nonsignificant MANOVA might have obscured significant effects on individual dependent measures, a separate univariate ANOVA was also performed on each of the four helping measures. These one-way analyses on the helping measures are summarized in Table 3 along with the analysis of facial empathy scores. All resultant F values again were nonsignificant.

Table 2

Means of the Primary
Empathy and Helping Dependent Measures
by Training Condition

Primary Dependent Measure	Training Condition C	E	I	EI
Facial Empathy	2.41	2.45	2.86	2.69
Latency (in seconds)	65.45	66.91	58.23	83.31
Sharing	2.86	3.05	3.23	2.31
Involvement	2.00	2.27	2.45	1.69
Overall Helpfulness	2.45	2.73	2.86	1.88

Notes. Facial empathy and sharing ratings ranged from 1 to 6; maximum latency = 120 seconds; involvement and overall helpfulness ratings ranged from 1 to 5. Higher facial empathy, sharing, involvement, and overall helpfulness ratings are associated with greater prosocial tendencies.

The n for the C, E, and I groups = 11; n for the EI group = 13.

Table 3

Summaries of One-Way ANOVA's
by Training Condition on the Primary Dependent Measures

Facial Empathy

Source	df	MS	F	p
Training Condition	3	0.50	< 1	ns
Error	42	1.06		
Total	45			

Latency to Helping

Source	df	MS	F	p
Training Condition	3	1374.51	< 1	ns
Error	42	2355.16		
Total	45			

Sharing

Source	df	MS	F	p
Training Condition	3	1.93	< 1	ns
Error	42	3.23		
Total	45			

Involvement

Source	df	MS	F	p
Training Condition	3	1.32	1.09	ns
Error	42	1.22		
Total	45			

Overall Helpfulness

Source	df	MS	F	p
Training Condition	3	2.29	1.20	ns
Error	42	1.92		
Total	45			

Although no specific predictions with respect to sex and age were set forth in the proposal of this project, it was planned at that time to analyze for any potential effects of these factors on the major dependent variables. It was further speculated that one or both factors might qualify effects of Training Condition in some manner; any such interaction with Training Condition would obviously not have been revealed by one-way analyses. Thus, separate 4 (Training Condition) X 2 (Sex) X 2 (Age Level) analyses of variance were conducted on the primary dependent variables. For the purpose of these analyses, the children were divided by median split into two Age Levels--young (n = 24, range: 37-55 months, $\bar{X}$ = 47.63 months) and old (n = 22, range: 56-70 months, $\bar{X}$ = 61.61 months). There were approximately six subjects in each Sex/Age Level combination.

No significant main or interaction effects were found with the 4 (Training Condition) X 2 (Sex) X 2 (Age Level) univariate analysis on facial empathy scores; in fact, F values for all main and interaction effects were less than 1. A summary of the analysis is contained in Table 4.

With Sex and Age Level added as independent variables, a multivariate analysis of variance was again performed on the four measures of helpfulness. While no main or interaction effects involving Training Condition were Found to be significant with this 4 (Training Condition) X 2 (Sex) X 2 (Age Level) MANOVA, an unexpected significant interaction of Sex and Age Level was revealed, $F = (4,27) = 2.82$, $p < .05$. Mean scores on each of the helping measures are shown as a function of Sex and Age Level in Table 5.

To allow for clarification of effects on the individual helping measures, separate 4 (Training Condition) X 2 (Sex) X 2 (Age Level) univariate analyses

Table 4

Summary of the
4 (Training Condition) X 2 (Sex) X 2 (Age)
ANOVA on Facial Empathy Ratings

Source	df	MS	F	p
TC	3	.44	< 1	ns
S	1	.56	< 1	ns
A	1	1.15	< 1	ns
TC X S	3	.76	< 1	ns
TC X A	3	1.05	< 1	ns
S X A	1	.16	< 1	ns
TC X S X A	3	.02	< 1	ns
Error	30	1.23		
Total	45	1.02		

Note. TC = Training Condition
S = Sex
A = Age

Table 5

Means of the Primary Helping Dependent Measures
by Sex and Age

Latency to Helping (in seconds)

Sex	Age: Young	Old	(Total)
Male	82.45	75.55	(79.00)
Female	86.46	28.86	(60.06)
(Total)	(84.63)	(52.20)	

Sharing Ratings

Sex	Age: Young	Old	(Total)
Male	2.36	2.64	(2.50)
Female	2.27	4.18	(3.15)
(Total)	(2.31)	(3.41)	

Involvement Ratings

Sex	Age: Young	Old	(Total)
Male	2.09	1.77	(1.93)
Female	1.65	2.91	(2.23)
(Total)	(1.85)	(2.34)	

Overall Helpfulness Ratings

Sex	Age: Young	Old	(Total)
Male	2.14	2.27	(2.20)
Female	1.92	3.59	(2.69)
(Total)	(2.02)	(2.93)	

Notes. Maximum latency = 120 seconds; sharing ratings ranged from 1 to 6; involvement and overall helpfulness ratings ranged from 1 to 5. Higher sharing, involvement, and overall helpfulness ratings are associated with greater prosocial behavior.

The n for the young/male, old/male, and old/female groups = 11; n for the young/female group = 13.

of variance were subsequently performed on each of the four helping measures. Summaries of these univariate analyses are located in Tables 6, 7, 8, and 9. Post hoc analyses of significant interactions were carried out with the Newman-Keuls test.

As with all prior analyses reported, the originally predicted main effect of Training Condition repeatedly failed to reach statistical significance.[10] Significant main effects of Age Level were found for three of the four dependent variables; for involvement ratings, the effect of Age Level reached only marginal significance. In each case, older children were rated as interacting more prosocially than were the younger children. These main effects were qualified by significant Sex X Age Level interaction effects on two of the dependent measures. The pattern of this interaction was such that the older females responded helpfully in fewer seconds and received higher ratings on the involvement scale than did the remaining three groups, which did not differ significantly from each other. While the interaction for sharing ratings and overall helpfulness ratings attained only a borderline level of significance, the pattern of findings for these indices paralleled that of the other two measures.

An interesting additional effect on involvement ratings--and the only effect involving Training Condition to approach significance--was the Training Condition X Sex interaction, which reached a borderline level of acceptance. Mean involvement ratings for each Training Condition/Sex combination are provided in Table 10. There is certainly no indisputable pattern shown by the means to account for this "suggestion" of an effect. Simple observation of the relationships among the means, however, does lead to a possible explanation of the source of the "interaction": There may have been a tendency for girls in Group I to receive higher involvement

Table 6

Summary of the 4 (Training Condition) X 2 (Sex) X 2 (Age) ANOVA on Latency to Helping

Source	df	MS	F	p
TC	3	1431.63	< 1	ns
S	1	4894.78	2.58	ns
A	1	12737.79	6.72	.02
TC X S	3	1399.17	< 1	ns
TC X A	3	761.61	< 1	ns
S X A	1	9552.64	5.04	.03
TC X S X A	3	3816.99	2.01	ns
Error	30	1894.99		
Total	45	2289.77		

Note. TC = Training Condition
S = Sex
A = Age

Table 7

Summary of the 4 (Training Condition) X 2 (Sex) X 2 (Age) ANOVA on Sharing Ratings

Source	df	MS	F	p
TC	3	1.86	< 1	ns
S	1	5.34	1.95	ns
A	1	14.28	5.04	.03
TC X S	3	1.81	< 1	ns
TC X A	3	.64	< 1	ns
S X A	1	9.28	3.28	.08
TC X S X A	3	5.80	2.05	ns
Error	30	2.84		
Total	45	3.15		

Note. TC = Training Condition
S = Sex
A = Age

Table 8

Summary of the 4 (Training Condition) X 2 (Sex) X 2 (Age) ANOVA on Involvement Ratings

Source	df	MS	F	p
TC	3	1.26	1.27	ns
S	1	1.09	1.10	ns
A	1	2.74	2.75	.11
TC X S	3	2.40	2.41	.09
TC X A	3	.87	< 1	ns
S X A	1	7.18	7.22	.01
TC X S X A	3	.26	< 1	ns
Error	30	.99		
Total	45	1.23		

Note. TC = Training Condition
S = Sex
A = Age

Table 9

Summary of the 4 (Training Condition) X 2 (Sex) X 2 (Age) ANOVA on Overall Helpfulness Ratings

Source	df	MS	F	p
TC	3	2.17	1.27	ns
S	1	3.10	1.81	ns
A	1	9.64	5.64	.02
TC X S	3	1.38	< 1	ns
TC X A	3	.33	< 1	ns
S X A	1	6.99	4.09	.06
TC X S X A	3	1.89	1.10	ns
Error	30	1.71		
Total	45	1.94		

Note. TC = Training Condition
S = Sex
A = Age

Table 10

Mean Involvement Ratings
by Training Condition and Sex

Sex	Training Condition			
	C	E	I	EI
Male	2.33 (6)	2.20 (5)	1.50 (5)	1.67 (6)
Female	1.60 (5)	2.33 (6)	3.25 (6)	1.71 (7)

Notes. Range: 1-5. Higher ratings reflect greater involvement.

Number in parentheses indicates the n upon which each mean is based.

scores than girls in the other three groups, whereas boys showed little variation across Training Conditions.

Post-Experimental Questionnaire

Three items on the post-experimental questionnaire (see Appendix H) were included solely as manipulation checks of the assessment session procedure. All children indicated that they were aware that the confederate was the person they had watched on television (Question 1) and that they had seen on the television that the confederate's toys were taken away (Question 2). Two "young" girls and one "young" boy, one from each experimental condition, gave inappropriate responses to Question 5 (What did I tell you you were supposed to do while I was in the other room and you and Geri were in here?") but were retained in subsequent analyses. It was suspected that these children might have had difficulty understanding the question due to its comparatively complex wording.

As with the primary dependent measures, one-way analyses of variance were conducted on responses to Question 3 ("How did you feel when you saw Geri find out that her toys were gone?") and to Question 4 ("How do you think Geri felt when she found out that her toys were gone?") of the post-experimental questionnaire. Mean scores on these questions are given for each level of Training Condition in Table 11; Table 12 presents the summaries of these two separate ANOVA's. Neither analysis revealed a significant effect of Training Condition.

Similar to the procedure for analysis of the primary dependent measures, separate 4 (Training Condition) X 2 (Sex) X 2 (Age Level) univariate analyses of variance were subsequently conducted on responses to Question 3 and to Question 4; these analyses are summarized in Table 13 and Table 14,

Table 11

Mean Responses to Post-Experimental Question 3 and Question 4 by Training Condition

Questionnaire Item	Training Condition			
	C	E	I	EI
Question 3	4.00	4.55	4.55	4.31
Question 4	4.82	4.91	4.91	4.85

Notes. Range: 1-5. Higher ratings reflect greater sadness.

The n for the C, E, and I groups - 11; n for the EI group = 13.

Table 12

Summaries of One-Way ANOVA's
by Training Condition on Question 3 and Question 4

Question 3

Source	df	MS	F	p
Training Condition	3	.73	< 1	ns
Error	42	1.43		
Total	45			

Question 4

Source	df	MS	F	p
Training Condition	3	.02	< 1	ns
Error	42	.12		
Total	45			

Table 13

Summary of the 4 (Training Condition) X 2 (Sex) X 2 (Age) ANOVA on Responses to Question 3

Source	df	MS	F	p
TC	3	.69	< 1	ns
S	1	.91	< 1	ns
A	1	.25	< 1	ns
TC X S	3	.39	< 1	ns
TC X A	3	1.24	< 1	ns
S X A	1	1.50	< 1	ns
TC X S X A	3	1.34	< 1	ns
Error	30	1.63	< 1	ns
Total	45	1.39		

Note. TC = Training Condition
S = Sex
A = Age

Table 14

Summary of the 4 (Training Condition) X 2 (Sex) X 2 (Age) ANOVA on Responses to Question 4

Source	df	MS	F	p
TC	3	.02	< 1	ns
S	1	.13	1.17	ns
A	1	.73	6.72	.02
TC X S	3	.15	1.37	ns
TC X A	3	.02	< 1	ns
S X A	1	.16	1.49	ns
TC X S X A	3	.12	1.14	ns
Error	30	.11		
Total	45	.12		

Note. TC = Training Condition
S = Sex
A = Age

respectively. For Question 3, no main or interaction effects attained significance in this three-way ANOVA. An unexpected significant main effect of Age Level was found for Question 4. Older children ($\overline{X}$ = 5.00) reported that the confederate was significantly sadder than did younger children ($\overline{X}$ = 4.75). No other effects were significant for this item.

Teachers' Ratings

Preliminary ratings. Inter-rater reliabilities computed on preliminary teachers' empathy and helping subscales and on the total prosocial behavior scale were quite low (see footnote 1). These indications of low reliability suggest that these ratings do not provide adequate measures of empathy and helping; the following brief discussion of results obtained with them is, thus, highly tentative.

In light of the interaction effects obtained for Sex and Age Level on the primary helping dependent measures, it was deemed appropriate to explore the effects of these two factors on teachers' preliminary ratings of empathy, helping, and overall prosocial behavior as well. A 2 (Sex) X 2 (Age Level) analysis of variance was conducted on each subscale and on the total scale. Table 15 contains mean ratings on each scale by Sex and Age Level, collapsing across Training Condition; Table 16 summarizes these analyses. Main effects of Sex were obtained on both the helping subscale and on the total scale. Girls (helping $\overline{X}$ = 18.52, total $\overline{X}$ = 36.79) received higher ratings than did boys (helping $\overline{X}$ = 16.98, total $\overline{X}$ = 34.20). No effects were shown to be significant on the empathy subscale.

Follow-up ratings. Inter-rater reliabilities on the teachers' ratings following testing were also at very low levels (see footnote 2). Again, these very low reliabilities render findings on these measures questionable.

Table 15

Mean Preliminary Teachers' Ratings
by Sex and Age

	Subscale		Total Prosocial Behavior Scale
	Empathy	Helping	
Young			
Male	15.5	16.5	34.1
Female	17.7	18.7	37.3
Old			
Male	13.6	17.5	34.3
Female	15.5	18.3	36.2
Overall	15.7	17.8	35.6

Notes. Maximum score on each subscale = 25; maximum total scale score = 50. Higher scores indicate greater prosocial behavior.

The n for the young/male, old/male, and old/female groups = 11; n for the young/female group = 13.

Table 16

Summaries of 2 (Sex) X 2 (Age) ANOVA's
on Preliminary Teachers' Ratings
of Empathy, Helping, and Total Prosocial Behavior

Empathy

Source	df	MS	F	p
A	1	.48	1.94	ns
S	1	.48	1.94	ns
S X A	1	.01	< 1	ns
Error	42	.24		
Total	45	.25		

Helping

Source	df	MS	F	p
A	1	.80	< 1	ns
S	1	27.70	5.90	.02
S X A	1	6.47	1.38	ns
Error	42	4.70		
Total	45	5.15		

Total Prosocial Behavior

Source	df	MS	F	p
A	1	3.10	< 1	ns
S	1	75.41	6.01	.02
S X A	1	4.56	< 1	ns
Error	42	12.55		
Total	45	13.59		

Note. S = Sex
A = Age

Whereas all prior analyses reported (with the exceptions of those discussed in Footnote 8) were based on an N of 46, analyses of follow-up teachers' ratings were based on an N of 32. (Fourteen cases are missing due to the closing of one preschool prior to collection of teachers' follow-up ratings.) As a result of this reduction in N, some cells for the three-way analysis were empty; consequently, a 4 (Training Condition) X 2 (Sex) X 2 (Age Level) ANOVA was considered inappropriate. Thus, teachers' follow-up ratings on the subscales of empathy and helping as well as on the total scale of prosocial behavior were analyzed with separate one-way analyses of variance (1) by Training Condition, (2) by Sex, and (3) by Age Level. Means for each level of Training Condition, of Sex, and of Age Level are shown for the two subscales and the total scale in Table 17; the analyses are summarized in Table 18.

Of the nine resulting ANOVA's, eight were nonsignificant. The main effect of Sex on the empathy subscale did attain significance, however. As with the results of preliminary teachers' ratings of helping and overall prosocial behavior, girls ($\bar{X}$ = 18.33) received higher ratings than did boys ($\bar{X}$ = 16.76). Although a main effect of Training Condition had originally been predicted, given the lack of an effect of Training Condition on the primary dependent measures, it would have been surprising at this point to have attained a "generalized" training effect in the everyday preschool setting.

Inter-Relationships Among the Dependent Variables

Inter-correlations were computed among the dependent variables to clarify the relationships among them. The complete matrix of these correlations is provided in Table 19.

Table 17

Mean Follow-up Teachers' Ratings
by Training Condition, By Sex, and By Age

Factor	n	Empathy Subscale	Helping Subscale	Total Prosocial Behavior Scale
Training Condition				
C	7	17.29	17.64	34.93
E	7	17.50	17.71	35.21
I	9	18.28	18.28	36.56
EI	9	16.89	17.28	34.17
Sex				
Male	17	16.76	17.53	34.29
Female	15	18.33	17.97	36.30
Age				
Young	14	17.29	17.32	34.61
Old	18	17.67	18.06	35.72

Note. Maximum score on each subscale = 25; maximum total scale score = 50. Higher scores indicate greater prosocial behavior.

Table 18

Summaries of One-Way ANOVA's
by Training Condition, by Sex, and by Age
on Follow-up Teachers' Ratings

Empathy

Source	df	MS	F	p
Training Condition	3	3.04	< 1	ns
Error	28	3.28		
Total	31			

Source	df	MS	F	p
Sex	1	19.61	7.24	.05
Error	30	2.71		
Total	31			

Source	df	MS	F	p
Age	1	1.14	< 1	ns
Error	30	3.33		
Total	31			

Helping

Source	df	MS	F	p
Training Condition	3	1.53	< 1	ns
Error	28	3.60		
Total	31			

Source	df	MS	F	p
Sex	1	1.52	< 1	ns
Error	30	4.07		
Total	31			

Source	df	MS	F	p
Age	1	4.25	1.26	ns
Error	30	3.37		
Total	31			

Total Prosocial Behavior

Source	df	MS	F	p
Training Condition	3	8.88	< 1	ns
Error	28	11.62		
Total	31			

Source	df	MS	F	p
Sex	1	32.06	3.01	ns
Error	30	10.66		
Total	31			

Source	df	MS	F	p
Age	1	9.79	< 1	ns
Error	30	11.41		
Total	31			

Table 19

Correlation Matrix of the Dependent Measures

Dependent Measures	Dependent Measures (Numbers identified on vertical axis)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Facial Empathy													
Latency to													
2. Helping	-.13												
		***											
3. Sharing	.12	-.95											
		***	***										
4. Involvement	.15	-.70	.69										
Overall		***	***	***									
5. Helpfulness	.12	-.94	.94	.83									
Post-Experimental				*									
6. Question 3	.08	-.07	.08	.29	.19								
Post-Experimental													
7. Question 4	-.12	-.04	.07	.03	.08	.17							
Pre-Empathy													
8. Ratings	.11	-.16	.21	.13	.17	-.02	.25						
Pre-Helping							*	***					
9. Ratings	.16	-.27	.27	.26	.29	.05	.35	.59					
Pre-Total							*	***	***				
10. Ratings	.15	-.24	.27	.23	.26	.02	.34	.87	.91				
Post-Empathy								***	**	***			
11. Ratings	.32	-.06	.11	.05	.10	-.17	.23	.65	.53	.65			
Post-Helping								*	***	**	***		
12. Ratings	.22	.02	.05	.17	.09	-.06	.24	.37	.55	.52	.70		
Post-Total								***	***	***	***	***	
13. Ratings	.29	-.02	.09	.12	.10	-.12	.25	.55	.58	.63	.92	.93	

* $p < .05$
** $p < .01$
*** $p < .001$

Note. Correlations involving post-empathy, post-helping, and post-total ratings are based on n of 32; all other correlations are based on an n of 46.

Facial empathy ratings were not significantly correlated with any other measure. The correlations among the four helping indices (highlighted by a triangle in Table 19) were extremely high (all p's < .001), suggesting that these separate helping-related ratings may all have measured a common "helpfulness" dimension. The apparent similarity in the Sex X Age Level pattern of results for these individual helping measures appears largely attributable to this finding of high inter-relatedness of the measures, both statistically and conceptually.

The involvement scale was also significantly positively related to children's responses to post-experimental Question 3 ("How did you feel when you saw Geri find out that her toys were gone?"); i.e., the sadder the children reportedly became, the greater the involvement with the sad other during the helping session. It cannot be determined from this result if greater sadness produced increased involvement or if greater involvement resulted in subsequent self report of greater sadness for the other. Responses to post-experimental Question 4 ("How do you think Geri felt...?") and preliminary teachers' ratings on the helping subscale and the total prosocial behavior scale were significantly correlated in the positive direction. In other words, teachers' reports of prosocial tendencies were related to children's recognition of the distress of another. The import of this finding is rather doubtful, however, in light of the inadequate inter-rater reliabilities previously given (in footnote 1) for these teachers' ratings.

Intercorrelations among teachers' preliminary empathy, helping, and total scales were all positive and significant, as were those among teachers' corresponding follow-up ratings. Thus, mutual measurement by

these scales of a common dimension is suggested. Furthermore, each of the three preliminary ratings was significantly positively associated with each of the three follow-up ratings at an acceptable level of test-retest reliability.

DISCUSSION

Along with several secondary items, two primary issues must be addressed with respect to the results for this study: (1) the lack of a significant effect of Training Condition and (2) the obtained interactive effect of Sex and Age Level on the helping measures. Possible explanations concerning the failure of Training Condition to affect empathy and/or helpfulness in this experiment will first be thoroughly explored.

Perhaps it is most logical initially to reexamine the theoretical background which lead to the present design. As the introductory section elaborated, empathy, defined as vicariously experiencing another's arousal, has repeatedly been suggested as a motivator of helping behavior. The theoretical view that an emphasis on empathizing increases prosocial behavior has, furthermore, previously received some empirical support. The "instrumentality" component, as this investigator has termed it, has received far less experimental attention, at least within the context of children's helpfulness. No prior attempts to directly influence it via training have been made. The potential for successfully training this skill, thus, involved more unknowns than that for successful empathy training. Children in their preschool years might be capable of benefiting readily from encouragement to identify with others cognitively and affectively but not from having the relationship between another's state

and self-initiated actions stressed. Empirical findings related to instrumentality (e.g., Keller, Ford, & Meacham, 1978) have indicated, however, that even very young children do think of themselves in terms of their capacities for effective actions. Furthermore, even if instrumentality were not amenable to training with young children, we would still have expected to see an effect of empathy training for Groups E and EI over Groups I and C. Such an effect was not obtained, however. All in all, inappropriateness of the underlying theoretical concepts does not seem to be an obvious explanation for the lack of significant differences due to training.

With respect to facial empathy ratings and teachers' ratings of prosocial behaviors, low inter-rater reliabilities and, consequently, questionable validity of the measures may have contributed to the failure to find significant training effects on these measures. The absence of significant training effects on the helping measures suggests, however, that the following aspects of the design of the study may also be suspect: (1) age of the subjects, (2) age of the confederate, (3) duration and number of training sessions, (4) duration of the delay from final training session to assessment session, and (5) manner of presentation of training.

The subjects chosen for study were obviously quite young for this type of experiment, the youngest being only 3 years and 1 month of age. It was at least implicit in the earlier presentation of the proposed two-step model (empathy + instrumentality), however, that the addition of the instrumentality component within a training situation might be <u>particularly</u> effective with such a young age level. This speculation was made on the basis of the very young child's relative inexperience in social situations

and resulting potential to benefit more dramatically from relevant training. Therefore, the selection of this particular age level is not considered to have been erroneous. The possibility remains, however, that the chosen methods of training and assessment (yet to be discussed) were not ideally suited to very young children.

The age of the confederate who suffered the loss of desired toys could also be problematic in a design such as this. If the confederate had appeared to be an obviously competent, mature adult, she would indeed have been markedly discrepant from the potential training "recipients," who were portrayed as peers of the subjects. Although the actual confederate was an adult (23 years of age), her dress, grooming, and manner were ambiguous as to age (and sex). Indeed, several children were reported by classroom teachers to have later referred to the confederate as a "boy" or a "girl." Furthermore, during the assessment session no child displayed an attitude that the confederate's behavior was in any way inappropriate; they apparently thought it natural that she enjoyed playing with toys and subsequently became quite distressed at her loss of them--not typical behaviors for competent, mature adults.

Features of the training procedure which involved the timing and/or spacing of sessions--e.g., duration and number of individual sessions--could have altered the impact of the training itself. Individual training sessions in all conditions lasted approximately five minutes; this period of time seemed very "comfortable" for the children as well as for the experimenter during both pretesting of the training procedure and the actual experiment. Sufficient discussion of the training story (with particular emphases dependent upon condition) was possible within this time span without boring or tiring the children. While the duration of the individual training sessions

appears to have been appropriate to the story completion task of the training sessions and to the subjects' age level, the total number of these sessions might have been insufficient to produce the desired effects. Some studies (e.g., Feshbach, Note 1) have used extensive cognitive and affective empathy training involving many more individual sessions to achieve significant results. Increasing the number of training sessions might, thus, have augmented the likelihood of finding significant effects in this case as well.

This likelihood might have been further increased by a shorter delay from training to assessment or by having the assessment session immediately following training. Providing for immediate assessment in future studies could reveal if training were effective in influencing immediate behavior, regardless of whether longer term or more generalized effects were present. (The possible disadvantage of demand characteristics, often problematic in an immediate measure, would, of course, require attention.) Perhaps numerous brief sessions and/or a very short delay from training to assessment would be especially advantageous with very young children due to their limited attention spans (Mussen, Conger, & Kagan, 1979). These issues obviously demand empirical attention before further speculations can be made.

The final aspect of the design to be considered is the manner of presentation of training. The use of symbolic roleplaying with puppets as opposed to more realistic, live roleplaying could have limited the effects. Symbolic roleplaying was the chosen strategy due to its adaptability to varying helping-related situations, the need for minimal props, and the assumption that the use of puppets might heighten the preschoolers'

interest and participation in an imagined situation. (Incidentally, children in the study did show interest in the use of puppets to act out the hypothetical situations.) Despite these apparent advantages, symbolic roleplaying did not affect helping as predicted in the "live" assessment session. Perhaps if an assessment which involved a similar symbolic acting out of helping were used with this symbolic training, or if live roleplaying during training were paired with the live assessment, the predicted effects of Training Condition would have been obtained. In fact, within the present study, there are data to provide some support for the former position (symbolic training might increase helping in a symbolic assessment). Ratings of empathic and instrumental expression, which are described in greater detail in footnote 10, were made for each training session with every child. Two separate one-way within-subjects analyses of variance were carried out on these ratings, using Session (Days 1-4) as the independent variable. The analyses revealed that: (a) for children in Groups E and EI (N = 24), empathy ratings did indeed significantly increase across successive sessions, F (3,69) = 5.96, $p < .01$, whereas (b) for children in Groups I and EI (N = 24), instrumentality ratings improved significantly over training sessions, F (3,69) = 4.34, $p < .01$. As noted earlier, these ratings were somewhat subjective, but they do provide tentative support for the potential effectiveness of both empathy and instrumentality training. However, the study was not designed to focus upon changes in such ratings across training sessions due to their relative conservativeness as an indicant of change compared with a measure involving behavior in a new and "real life" situation (i.e., one involving a live confederate).

The final issue to be discussed is the unexpected interaction of Sex and Age Level on the primary helping measures. For latency to helping and involvement ratings a significant Sex X Age Level effect was found. On these measures, older girls obtained scores indicating greater helpfulness than the remaining groups. While sharing and overall helpfulness ratings achieved only borderline levels of acceptance ($p < .08$ and $p < .06$, respectively), the pattern of results for these measures was identical to that of the other two helping dependent variables. The literature relevant to sex and age differences will be briefly outlined to provide a context for our understanding of this effect.

While several investigators (e.g., Ianotti, 1978; Rushton & Weiner, 1975; Staub, 1970; Whiting & Whiting, 1975) have found age to be positively associated with altruistic acts, the nature of the developmental increase is somewhat unclear. Explanations of age effects have centered on increases with age in the level of moral reasoning about prosocial behavior (Eisenberg, 1976), competence for initiating helpful actions (Staub, 1970), and experience with the norm of social responsibility (Krebs, 1970). In addition, the tendency to experience empathic arousal has been frequently suggested as an important mediator of altruistic behavior (as discussed in the introduction) and has been found to increase during childhood (Hoffman, 1977).

Of these potential mediators of the developmental increase in helping, a sex difference has been strongly indicated for empathy alone. In his recent review, Hoffman (1977) concluded that females tend to empathize to a greater extent than do males. Teachers involved in the present investigation rated females as higher in both empathy (follow-up ratings) and helping (preliminary ratings). With respect to sex differences in actual

helping, a recent review (Mussen & Eisenberg-Berg, 1977) revealed that while females tend to be somewhat more helpful than males, the effects of sex on prosocial behavior have been relatively inconsistent. This inconsistent pattern may be related to the use across studies of contrasting helping *situations* and measures to which boys and girls may be differentially responsive.

In the present study, older females responded more quickly to the needs of a distressed confederate and received higher ratings on sharing, involvement, and overall helpfulness scales than did males or younger females.[11] Another recent observational study (Abramovitch, Corter, & Lando, 1979), exploring the expression of prosocial behaviors between young same-sex siblings, has yielded a similar pattern of findings. In naturally occurring dyadic interactions, wherein each sibling's affective state was presumably quite salient, older females demonstrated higher rates of sharing, helping, and comforting than males or younger females. The results of the Abramovitch et al. and present studies suggest a developmental progression from lesser to greater helpfulness for young girls, but not for young boys, in *situations in* which the other's affective state is salient. Moreover, these findings suggest that it may not be until the later preschool period that girls begin to demonstrate the heightened empathic tendency, relative to their male counterparts, that is associated with enhanced helping.

Further replications and clarifications of the sex X age effect on helping within the preschool age range are, of course, needed. To directly assess the influence of empathy on prosocial behaviors in young boys and girls, reliable and valid measures of empathy are greatly needed for this age level (Sawin, Note 6). Moreover, future investigations should systematically vary helping situations as to their salience of empathy cues; the

findings of such studies could serve to further clarify the role of empathic arousal in sex and age differences in young children's helpfulness.

Concluding Comments

Despite the current failure to alter helpfulness with empathy and/or instrumentality training, attempts to positively influence helping behavior via these strategies should be continued. Future studies with very young children might attempt training with live roleplaying among peers, perhaps in combination with symbolic roleplaying with puppets. Increasing the number of brief training sessions may improve training effectiveness. Also, incorporating an immediate assessment measure (in addition to later assessments) would provide information about short-term training effects which may or may not be apparent following a greater delay. Furthermore, given the Sex X Age Level effect on helpfulness which was revealed in the present project, further investigations might explore whether preschool boys and girls at younger and older age levels are differentially influenced by varying emphases on empathy and/or instrumentality. Future efforts will hopefully clarify these issues for possible application in classroom and parental attempts to enhance prosocial behavior.

Reference Notes

1. Feshbach, N.D. Empathy training: A field study in affective education. Paper presented at the American Educational Research Association Meetings, Toronto, Canada, March 1978.

2. Hoffman, M.L. A three component model of empathy. Paper presented at the meetings of the Society for Research in Child Development, New Orleans, March 1977.

3. Kameya, L.I. The effect of empathy level and role-taking training upon prosocial behavior. Unpublished doctoral dissertation. University of Michigan, 1976.

4. Leiman, B. Affective empathy and subsequent altruism in kindergarteners and first graders. Paper presented at the meeting of the American Psychological Association, Toronto, Canada, August 1978.

5. Rosenhan, D. Studies in altruistic behavior: Developmental and naturalistic variables associated with charitability. Paper presented at the meeting of the Society for Research in Child Development, Los Angeles, 1969.

6. Sawin, D.B. Assessing empathy in children: A search for an elusive construct. Paper presented at the biennial meeting of the Society for Research in Child Development, San Francisco, March 1979.

References

Abramovitch, R., Corter, C., & Lando, B. Sibling interaction in the home. Child Development, 1979, 50, 997-1003.

Aronfreed, J. Conduct and conscience: The socialization of internalized control over behavior. New York: Academic Press, 1968.

Aronfreed, J. The socialization of altruistic and sympathetic behavior: Some theoretical and experimental analyses. In J. Macaulay & L. Berkowitz (Eds.), Altruism and helping behavior. New York: Academic Press, 1970.

Barnett, M.A., Howard, J.A., King, L.M., & Dino, G.A. Helping behavior and the transfer of empathy. Journal of Social Psychology, in press.

Barnett, M.A., King, L.M., & Howard J.A. Inducing affect about self or other: Effects on generosity in children. Developmental Psychology, 1979, 15, 164-167.

Barrett, D.E., & Yarrow, M.R. Prosocial behavior, social inferential ability, and assertiveness. Child Development, 1977, 48, 475-481.

Batson, C.D., Darley, J.M., & Coke, J.S. Altruism and human kindness: Internal and external determinants of helping behavior. In L. Pervin & M. Lewis (Eds.), Internal and external determinants of helping behavior. New York: Plenum, in press.

Borke, H. The development of empathy in Chinese and American children between three and six years of age: A cross-cultural study. Developmental Psychology, 1973, 9, 102-108.

Borke, H. Piaget's mountains revisited: Changes in the egocentric landscape. Developmental Psychology, 1975, 11, 240-243.

Bryan, J.H. Why children help: A review. Journal of Social Issues, 1972, 28, 87-105.

Buckley, N., Siegel, L., & Ness, S. Egocentrism, empathy, and altruistic behavior in young children. Developmental Psychology, 1979, 15, 329-330.

Chandler, M.J., & Greenspan, S. Ersatz egocentrism: A reply to H. Borke. Developmental Psychology, 1972, 7, 104-106.

Coke, J.S., Batson, C.D., & McDavis, K. Empathic mediation of helping: A two-stage model. Journal of Personality and Social Psychology, 1978, 36, 752-766.

Eisenberg, N. The development of prosocial moral judgment and its correlates (Doctoral dissertation, University of California, Berkeley, 1976). Dissertation Abstracts International, 1977, 37, 4753B. (University Microfilms No. 77-4444, 184)

Eisenberg-Berg, N., & Lennon, R. Altruism and the assessment of empathy in the preschool years. Child Development, 1980, 51, 552-557.

Eisenberg-Berg, N., & Mussen, P. Empathy and moral development in adolescence. Developmental Psychology, 1978, 14, 185-186.

Eisenberg-Berg, N., & Neal, C. Children's moral reasoning about their own spontaneous prosocial behavior. Developmental Psychology, 1979, 15, 228-229.

Ekman, P., & Friesen, W.V. Unmasking the face: A guide to recognizing emotions from facial clues. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1975.

Feshbach, N.D. The relationship of child-rearing factors to children's aggression, empathy and related positive and negative social behaviors. In J. Dewit & W.W. Hartup (Eds.), Determinants and origins of aggressive behavior. The Hague, Netherlands: Mouton, 1975.

Feshbach, N.D., & Roe, K. Empathy in six- and seven-year-olds. Child Development, 1968, 39, 133-145.

Hoffman, M.L. Developmental synthesis of affect and cognition : Implications for altruistic motivation. Developmental Psychology, 1975, 11, 607-622.

Hoffman, M.L. Personality and social development. In M. Rosenzweig & L. Porter (Eds.), Annual Review of Psychology. Palo Alto, California: Annual Reviews, Inc., 1977.

Hoffman, M.L. Sex differences in empathy and related behaviors. Psychological Bulletin, 1977, 84, 712-722.

Howard, J.A., & Barnett, M.A. Arousal of empathy and subsequent generosity in young children. Journal of Genetic Psychology, in press.

Ianotti, R.J. Effect of role-taking experiences on role taking, empathy, altruism, and aggression. Developmental Psychology, 1978, 14, 119-124.

Keller, A., Ford, L., & Meacham, J. Dimensions of self-concept in preschool children. Developmental Psychology, 1978, 14, 483-489.

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

Krebs, D.L. Empathy and altruism. Journal of Personality and Social Psychology, 1975, 32, 1134-1146.

Latane´, B., & Darley, J.M. The unresponsive bystander: Why doesn't he help? New York: Appleton-Century-Crofts, 1970.

Mehrabian, A., & Epstein, N. A measure of emotional empathy. Journal of Personality, 1972, 40, 525-543.

Murphy, L.B. Social behavior and child personality: An exploratory study of some roots of sympathy. New York: Columbia University Press, 1937.

Mussen, P., Conger, J., & Kagan, J. Child development and personality. New York: Harper and Row, 1979.

Mussen, P., & Eisenberg-Berg, N. Roots of caring, sharing, and helping. San Francisco: W.H. Freeman & Company, 1977.

Piaget, J., & Inhelder, B. The child's conception of space. London: Routledge & Kegan Paul, 1956.

Rushton, J.P., & Weiner, J. Altruism and cognitive development in children. British Journal of Social and Clinical Psychology, 1975, 14, 341-349.

Schwartz, S. Awareness of consequences and the influence of moral norms on interpersonal behavior. Sociometry, 1968, 31, 355-368.

Schwartz, S. Moral decision making and behavior. In J. Macaulay & L. Berkowitz (Eds.), Altruism and helping behavior. New York: Academic Press, 1970.

Schwartz, S. The justice of need and the activation of humanitarian norms. Journal of Social Issues, 1975, 31, 111-136.

Singer, J.L. The child's world of make-believe: Experimental studies of imaginative play. New York: Academic Press, 1973.

Staub, E. A child in distress: The influence of age and number of witnesses on children's attempts to help. Journal of Personality and Social Psychology, 1970, 14, 130-140.

Staub, E. The use of role-playing and induction in children's learning of helping and sharing behavior. Child Development, 1971, 42, 805-816.

Whiting, B.B., & Whiting, J.W.M. Children of six cultures: A psycho-cultural analysis. Cambridge, Massachusetts: Harvard University Press, 1975.

Yarrow, M.R., & Zahn-Waxler, C. The emergence and functions of prosocial behaviors in young children. In R. Smart & M. Smart (Eds.), Readings in Child Development and Relationships (2nd ed.). Macmillan, 1977.

Footnotes

[1]Inter-rater reliabilities computed on preliminary teachers' empathy and helping subscales and on the total prosocial behavior scale were .15 (ns), .35 ($p < .05$), and .22 (ns), respectively.

[2]Inter-rater reliabilities on the teachers' ratings following testing were .09 for the empathy subscale, -.11 for the helping subscale, and -.03 for the total scale (all ns).

[3]The limited availability of this special equipment necessitated the transportation of some of the children from their regular preschool. All but five of the transported children were familiar with the preschool where the assessment session was carried out. None of the children who were transported expressed concern about the change in surroundings.

[4]During pretesting sessions, children from the same preschool system as most of the children in the actual study had no difficulty in following these instructions and procedures.

[5]Pretesting of these play items (with the children mentioned in footnote 4) indicated that they were of approximately equivalent attractiveness to preschoolers.

[6]Training the child as to the use of this scale at this point eliminated the delay such training would have imparted at a more crucial point, i.e., immediately following the manipulation of affect and the opportunity to help and prior to the answering of manipulation check questions.

[7]The two raters for the facial empathy measure, a professor and a graduate student in the Department of Speech and Communication at Kansas State University at the time of rating, were experienced researchers in the area of communication of affect via facial expressions. Despite the

raters' familiarity with this area of research, the inter-rater reliability for this 7-point scale reached a significant but unacceptable level, $r = .51$, $p < .001$.

[8]The two raters for the helping measure were a professor and a senior undergraduate in the Department of Psychology at Kansas State University. Their inter-rater reliabilities on these measures were: Latency to Helpful Response, $r = .99$; Sharing Scale, $r = .94$; Involvement Scale, $r = .83$; Overall Helpfulness Scale, $r = .90$ (all p's $< .001$).

[9]An a priori assumption was that the results obtained would not be related to (1) the experimenter assigned to the child for the assessment situation or (2) the preschool attended by the child. To substantiate this assumption, the effects of Experimenter (3) and of Preschool (5) were tested by separate one-way analyses of variance on each of the empathy and helping measures. In no case was a significant effect of either factor obtained. These two factors were not assessed as part of the higher order analyses due to the relatively small sample size.

[10]Although the predicted effects of Training Condition were not found in analyses of the total sample, it was speculated that certain factors might have attenuated training effects for some members of the sample. If this had indeed been the case, analyses of the data without those subjects might yet have revealed significant effects of Training Condition. Consequently, such analyses on partial samples were carried out with respect to each of two potentially attenuating factors. These two factors were (1) duration of delay from final training session to assessment session and (2) the subject's responsiveness to training over sessions.

With respect to the first factor, it was felt that a very lengthy delay between the final training session and testing could have obscured any shorter term effects of training. To explore effects of Training Condition without the influence of an inordinately lengthy delay to assessment, eight children whose delay from final training to assessment exceeded three days were excluded from analyses. Three children were members of Group C; two, of Group E; and three, of Group I. Even with these subjects eliminated, a significant Training Condition effect was not found on any of the primary dependent measures.

The second speculation was that children who were relatively unresponsive throughout the course of the training sessions might not be as likely to change their subsequent helping behavior as a function of Training Condition. Responsiveness to training procedures was assessed via ratings made by the major experimenter following each training session. Ratings reflected (on 1 to 5 scales) both (1) the child's degree of involvement in roleplaying and (2) the child's apparent understanding of the concept(s) stressed (i.e., empathy and/or instrumentality) in his/her condition. These ratings were admittedly somewhat subjective in nature. However, the rater did keep in mind some objective guidelines. For example, a child received the highest rating for understanding of the concept(s) stressed only if he/she spontaneously--without having first been questioned by the experimenter--gave an obviously appropriate empathic or instrumental response to the story situation. The lowest rating was reserved for those children who did not supply an answer on their own, merely nodding in agreement to a suggestion finally provided by the experimenter.

Looking at the pattern of ratings over four sessions, a male rater blind to the children's assessment behavior made a judgment for each child in the experimental groups as to the effectiveness of training. Five children were subsequently eliminated from analyses on the basis of consistently low ratings across sessions on both (1) involvement in role-playing and (2) understanding the training dimension(s) involved in their respective conditions. Of the five, two were in Group E, one in Group I, and two in Group EI. Analyses of the 41 remaining children yielded, once more, no significant effects of Training Condition on any primary dependent measure.

[11]It is possible, of course, that sex of the confederate was an influential factor in this result; had the confederate been male rather than female, different results might have been obtained. In light of teachers' reports that the children referred to the confederate both as a "girl" and as a "boy," her sex is assumed to have been ambiguous and, consequently, this is not considered to have been a critical factor in the present findings.

KSU
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Department of Psychology

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Dear Parent:

The staffs of Child Development Laboratory, Infant and Child Care Center, and Stonehouse Preschool have agreed to cooperate during the next few weeks with the faculty of the Psychology Department at Kansas State University in studying aspects of children's social development. Now we are asking for your help, as well, by allowing your child to participate.

Each three-and-a-half- to five-year-old child will be asked to help by giving us a total of about 45 minutes of his or her time during the next several weeks. Every child taking part in the study will be read brief stories about children similar to themselves and will then "act out" the stories with puppets. In a final session the child will be given an opportunity to play with another individual. At this time observations will be made of the extent to which the child initiates play and conversation with the other. It is hoped that the findings obtained will increase our understanding of interpersonal behavior in very young children.

The great majority of preschool children who have participated in studies we have conducted in the past have found them quite enjoyable. The names of the children will not be used in reporting the results of the study.

Please indicate on the form below whether you will or will not allow your child to take part in this study and return the permission slip to the classroom. If you have any questions about the nature of this study, please feel free to telephone Dr. Mark Barnett or Laura King (graduate student) at 532-6850 (Psychology Department, Kansas State University).

Thank you for your assistance.

PERMISSION SLIP

☐ I <u>will</u> allow my child, _____ (child's name)

☐ I <u>will not</u> allow my child,

to participate in the study outlined above.

_____ (signature)

APPENDIX B

Child's Name_____ Birthdate_____

Rater_____

This rating scale is designed to assess some specific aspects of a child's behavior. Please mark how well each statement characterizes the child, in your opinion, using the scale below.

Your responses are strictly confidential and will be seen only by the Kansas State University Department of Psychology personnel conducting this study. Thank you for your assistance.

1	2	3	4	5
extremely uncharacteristic	uncharacteristic	neutral	characteristic	extremely characteristic

(E-) 1. This child acts as though people who cry are being silly.

1 2 3 4 5

(E+) 2. This child appears sad when he/she sees another child who does not have anyone to play with.

1 2 3 4 5

(H+) 3. When other children are unhappy, this child tries to make them feel better.

1 2 3 4 5

(F) 4. When this child does not do weel on something, he/she gives up right away.

1 2 3 4 5

(H-) 5. This child interacts with other children in a selfish manner.

1 2 3 4 5

(E+) 6. This child seems unhappy when something unpleasant happens to some other child.

1 2 3 4 5

(E-) 7. This child acts as though it's funny when someone else gets picked on by a bigger child.

1 2 3 4 5

(H+) 8. This child gives help or assistance to another child without being asked.

1 2 3 4 5

(F) 9. This child seems organized in his/her manipulation of play materials.

1 2 3 4 5

(H+) 10. This child shares materials and play objects with other children.

1 2 3 4 5

(H-) 11. This child is hesitant to offer help to another child who is in need.

1 2 3 4 5

(E+) 12. This child expresses concern for other people's feelings.

1 2 3 4 5

Note: The letter in parentheses to the left of each item indicates whether the item was used to indicate empathy (E) or helping (H) or was simply used as a filler (F) item. The signs paired with the letters E and H denote the direction of scoring ("+" meaning positive and "-" meaning negative); positively scored items received the value of the number circled, whereas the scale was reversed to assign values for negatively scored items (i.e., a circled "1" received an actual score of "5"; a "2" received a score of "4"; etc.).

APPENDIX C

Role-Taking Training Stories for Experimental (E, I, and EI) Conditions

(2) Pat has just moved to town with his/her family. Since they got here, he/she has met no one his/her own age. He/she tells his/her parents that he/she misses the friends he/she knew before. His/her new school is much larger than his/her old one. On his/her first day there, Pat doesn't know where to find anything, and he/she has no one to talk to. The teacher gives him/her a seat beside (child's name), a boy/girl in Pat's class. (Child's name) has gone to this school for a long time.

(3) (Child's name) and Terry are good friends. They go to the same school together, and they live in the same neighborhood. One day Terry gets very sick. The doctor who comes to see Terry says that he/she must stay home for at least a week. When (child's name) goes to school that day and asks for Terry, the teacher tells him/her that Terry is sick and has to stay home for a long time.

(4) (Child's name) and Jamie are two boys/girls who play together often. One afternoon they decide to take some snacks outside for a little picnic. (Child's name) and Jamie both like picnics, and they love cookies. They take the last of the cookies that they have and go outside. Just as Jamie is unwrapping his/her cookies, he/she accidentally drops them all in the dirt and they are ruined.

APPENDIX D

Role-Taking Training Stories for Control (C) Condition

(2) Pat and (child's name) do lots of things every day in school. They come to school at the same time every morning. They sit in a big circle with the other children when it's time to listen to stories. They draw pictures of the people and things they hear about in stories. Sometimes Pat and (child's name) paint the pictures that they have drawn. They paint pictures of animals and people and buildings.

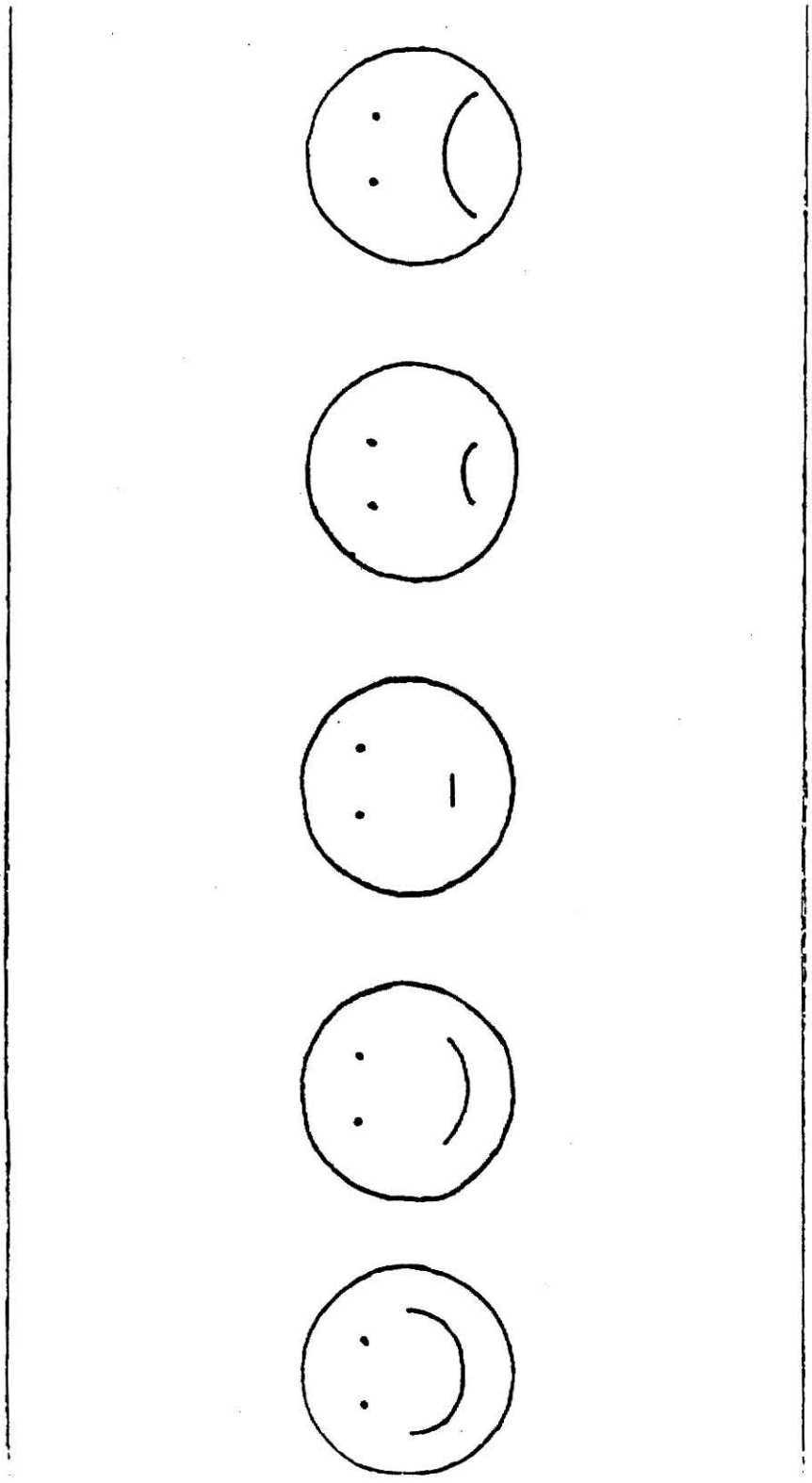
(3) (Child's name) and Terry are classmates. One day in school they decide to make puzzles. Each of them takes a piece of cardboard and draws a picture on it. Then they use their paint to paint the pictures in different colors. When the paint dries, they get a pair of scissors to cut their pictures into large pieces that are different shapes. Finally, they put together the puzzles that they have made.

(4) (Child's name) and Jamie are two children who do things together often. One afternoon they decide to go for a walk. They go outside and walk to a park in their neighborhood. They follow the path that goes by a small lake. (Child's name) and Jamie watch the ducks swimming on the lake. They they notice that it is just starting to get dark so they turn around and follow the same path back to their houses.

APPENDIX E

Smiley Face Affect Scale

The experimenter presented a card on which were depicted line drawings of five faces whose expressions varied along a happy-sad continuum. These faces are shown in the actual size used on the following page. The experimenter explained what each of the faces expressed (e.g., "This face with the really big smile is very happy") and then asked the child to answer some questions by putting his/her finger on the appropriate face. The experimenter had the child answer two practice items (How would you feel if today were your birthday and your friends were giving you a birthday party? How would you feel if you were running outside and you suddenly fell down and hurt your knee?) prior to soliciting responses to questions of interest.



(reduced 30% of actual size)

APPENDIX F

Facial Affect Rating Scale

Prior to the rating of each child's filmed facial expression, the primary investigator briefly explained the assessment session procedure to the raters (see footnote 7) who were then shown the videotape of the confederate at the time of the loss of her toys. (This tape was the stimulus for the children's filmed facial responses.) As a basis for the ratings of each child's facial affect matching, raters were instructed to observe the following components of a sad facial expression (Ekman & Friesen, 1975):

(1) The inner corners of the eyebrows are drawn up.

(2) The skin below the eyebrow is triangulated with the inner corner up.

(3) The upper eyelid inner corner is raised.

(4) The corners of the lips are down or the lip is trembling.

The raters were further directed to assign a value from 1 (does not apply, or absence of evidence for matching the confederate's sadness) to 7 (strongly applies, or extremely sad) to each child, taking into consideration the combinative influence of Ekman and Friesen's components.

Three "practice tapes" were independently rated and thoroughly discussed prior to rating of actual subject tapes. The average of the two raters' judgments was used as the child's empathy score. Ratings were collected in two one-hour sessions on the same day.

APPENDIX G

Helping Scales

Raters (see Footnote 8) were given the following instructions for rating each child and discussed the content of the scales prior to making any judgments. After the rating procedure was explained, two "practice tapes" and five verbal scenarios were independently rated and then discussed in detail. The helping ratings were completed in five sessions over a period of approximately two weeks.

Instructions to raters. Please view each videotape carefully. On the basis of its content, rate the child on each of the following scales. The scale points generally range from 1 to 5 (or 1 to 6) with 5 (or 6) representing the high or positive end of the scale. As you view the videotape, look for examples of each level of the dimensions. Naturally, the child may change from time to time. We are interested in your evaluation of the overall pattern and predominant direction of the child's behavior. Select the rating most descriptive of the child. Do not be afraid to use a full range of scores rather than sticking conservatively to the middle. After rating a few videotapes you may want to go back and revise earlier ratings based on broader experience with more children in the group. Your ratings must be completely independent. If you do have any strong reservations after you have done your ratings, make a note of these concerns on your coding sheet.

Latency to Helping Measure

The length of time (in seconds) to the child's first clearly helpful response, either verbal or nonverbal, should be observed and recorded. Each rater was given a stop watch for this purpose.

Sharing Scale

(1) The child makes no effort to share any of his/her toys with Geri.

(2) The child shows evidence of contemplating sharing with Geri (e.g., picks up or looks at toy(s) and looks at or moves toward Geri) but does not explicitly offer to share.

(3) The child offers a toy or toys following Geri's first "reminder" (that she doesn't have any toys) but does not specifically offer the favorite toy.

(4) The child specifically offers the favorite toy (by itself or with others) following Geri's first "reminder."

(5) The child spontaneously offers a toy or toys (i.e., before Geri's first "reminder") but does not specifically offer the favorite toy.

(6) The child spontaneously and specifically offers the favorite toy (i.e., before Geri's first "reminder").

Involvement Scale

(1) The child makes no attempt to involve Geri in conversation or play (but may respond to questions asked by Geri).

(2) The child talks to Geri (not only in response to questions).

(3) The child talks to Geri and suggests things that Geri could do instead of sitting and being unhappy. (These other alternatives do not involve the child's participation with Geri.)

(4) The child participates in or inquires about Geri's play.

(5) The child makes suggestions for mutual play.

Overall Helpfulness Scale

Taking into consideration the combinative influences of the components of helpfulness assessed separately with the preceding scales, rate each child on a 1 (not at all helpful) to 5 (extremely helpful) scale of general helpfulness. A high rating on any other individual measure does not necessitate an equally high rating on this scale. For example, a child might share Geri's favorite toy but fail to make any apparent attempts to ascertain Geri's feelings or insure her subsequent happiness, and thereby receive only an average rating of overall helpfulness.

APPENDIX H

Post-Experimental Questionnaire

The experimenter explained the post-experimental questionnaire by telling the child that she had a few questions that she would like to ask before concluding the session. She then asked the following questions and recorded the answers made by the child. (Questions 3 and 4 were answered with the smiley face scale described in Appendix E. As Footnote 4 explains, the children had experience using this scale earlier in the assessment session to avoid the need for training as to its use at this time.)

(1) Who did we watch on TV?

(2) Can you tell me what happened on the TV?

(3) How did you feel when you saw that Geri didn't have any toys to play with?

(4) How do you think Geri felt when she found out that her toys were gone?

(5) What did I tell you you were supposed to do while I was in the other room and you and Geri were in here?

  (a) Did I tell you that you had to keep your toys and play by yourself?

  (b) Did I tell you that you had to share your toys and play with Geri?

  (c) Did I tell you that you could do whatever you wanted with your toys?

  (d) Or can you not remember?

ILLEGIBLE DOCUMENT

THE FOLLOWING DOCUMENT(S) IS OF POOR LEGIBILITY IN THE ORIGINAL

THIS IS THE BEST COPY AVAILABLE

APPENDIX I

Data

SUBJECT NUMBER	TRAINING CONDITION	SEX	AGE	FACIAL EMPATHY	LATENCY TO HELPING	SHARING	INVOLVEMENT	OVERALL HELPFULNESS	QUESTION 3	QUESTION 4	PRE-TEACHERS' EMPATHY	PRE-TEACHERS' HELPING	PRE-TEACHERS' TOTAL	POST-TEACHERS' EMPATHY	POST-TEACHERS' HELPING	POST-TEACHERS' TOTAL	TRAINING ROLETAKING DAY 1	TRAINING ROLETAKING DAY 2	TRAINING ROLETAKING DAY 3	TRAINING ROLETAKING DAY 4	TRAINING EMPATHY DAY 1	TRAINING EMPATHY DAY 2	TRAINING EMPATHY DAY 3	TRAINING EMPATHY DAY 4	TRAINING INSTRUMENTALITY DAY 1	TRAINING INSTRUMENTALITY DAY 2	TRAINING INSTRUMENTALITY DAY 3	TRAINING INSTRUMENTALITY DAY 4
01	1	1	2	2.0	15.0	4.0	2.0	3.0	1	5	15.5	18.0	33.5	16.0	16.0	32.0	5	4	4	5								
02	3	1	1	2.5	48.0	3.0	2.5	3.5	5	5	16.5	17.0	33.5	17.0	18.0	35.0	3	5	3	4					2	5	1	3
03	4	1	2	3.0	120.0	1.0	1.0	1.0	5	5	15.5	20.0	35.5	16.0	18.5	34.5	1	3	4	3	2	4	5	5	3	2	5	5
04	2	1	2	2.0	77.5	4.0	2.0	2.5	5	5	14.5	15.0	29.5	16.0	17.0	33.0	2	3	3	3	3	5	5	5				
05	4	1	1	4.5	24.5	4.0	2.0	3.0	5	4	14.0	15.0	29.0	14.5	15.0	29.5	2	2	1	4	5	2	2	2	1	2	3	5
06	1	1	2	1.5	41.5	3.5	2.5	4.0	5	5	15.5	16.5	32.0	15.5	17.5	33.0	3	3	4	5								
07	3	1	2	1.5	120.0	1.0	1.0	1.0	5	5	15.0	16.5	31.5	16.0	17.5	33.5	2	3	2	3					2	4	5	4
08	4	2	1	3.5	120.0	1.0	2.0	1.0	2	5	18.5	21.0	39.5	20.0	20.0	40.0	1	3	4	3	2	4	4	4	2	4	4	4
09	2	2	2	3.5	8.0	6.0	4.0	5.0	5	5	19.5	21.0	40.5	19.0	20.5	39.5	2	4	5	4	4	5	5	4				
10	1	2	1	2.0	120.0	1.0	1.0	1.0	3	5	20.5	21.5	42.0	19.0	18.5	37.5	2	3	4	4								
11	1	1	2	3.0	49.5	3.5	4.0	3.5	5	5	15.5	19.0	34.5	17.5	18.0	35.5	4	2	5	4								
12	4	2	2	3.5	18.0	4.0	2.0	3.0	5	5	17.5	18.5	36.0	18.0	18.0	36.0	1	2	2	4	4	5	4	4	4	4		5
13	3	2	1	1.5	120.0	1.0	1.0	1.0	5	5	18.0	17.5	35.5	18.5	18.0	36.5	1	2	3	3					2	4	3	4
14	2	2	2	2.0	23.0	3.5	4.0	4.0	5	5	17.5	21.0	38.5	15.5	16.5	32.0	2	3	3	3	2	3	3	4				
15	1	2	1	3.0	120.0	1.0	1.0	1.0	3	4	17.5	15.5	33.0	19.5	18.0	37.5	2	3	3	4								
16	3	1	1	5.0	120.0	1.0	1.5	1.0	5	5	20.5	19.0	39.5	19.5	19.0	38.5	4	4	3	4					4	5	4	4
17	3	2	1	4.0	33.0	4.0	3.5	4.0	5	4	19.0	21.5	40.5	19.5	20.0	39.5	2	3	5	4					3	4	4	4
18	2	2	2	3.0	26.0	4.0	2.0	3.5	4	5	16.0	18.0	34.0	19.5	17.0	36.5	2	2	3	4	3	5	4	4				
19	3	2	2	2.5	46.0	3.5	4.0	3.5	5	5	18.0	18.0	36.0	19.0	17.5	36.5	3	3	4	4					5	4	4	4
20	2	1	1	2.5	120.0	1.0	1.0	1.0	4	5	17.0	17.0	34.0				2	2	2	3	4	4	4	5				
21	2	2	1	1.0	73.0	3.0	2.0	2.5	5	5	19.0	16.5	35.5				2	2	2	2	1	1	2	3				
22	1	2	1	4.0	28.0	4.0	2.0	3.0	5	5	19.5	20.0	39.5				4	3	4	4								
23	2	2	1	4.0	120.0	1.0	1.0	1.0	5	5	18.0	19.5	37.5				3	2	2	3	3	4	2	4				
24	4	1	2	3.0	120.0	1.0	1.0	1.0	1	5	19.5	18.0	37.5				1	3	2	2	2	2	3	4	1	3	2	3
25	2	2	2	2.5	120.0	1.0	1.0	1.0	3	5	15.5	16.5	32.0	18.5	19.5	38.0	2	1	2	3	3	2	2	2				
26	4	2	1	2.5	120.0	1.0	1.0	1.0	5	5	15.0	12.5	27.5	13.0	12.0	25.0	2	3	3	3	3	4	4	3	4	4	4	4
27	1	1	1	2.0	120.0	1.0	1.5	1.0	3	4	15.0	13.0	28.0	16.0	17.0	33.0	2	4	3	3								
28	4	2	2	2.5	29.5	4.0	1.0	3.0	5	5	20.5	19.0	39.5	19.5	15.5	35.0	3	4	4	4	4	4	4	4	4	4	3	4
29	4	1	1	1.5	25.0	4.0	3.0	3.0	3	4	18.5	17.5	36.0	15.0	16.5	31.5	2	3	3	4	4	4	4	4	4	4	3	4
30	3	1	2	2.0	11.5	6.0	1.0	3.5	1	5	20.0	17.5	37.5	19.5	19.0	38.5	3	4	3	4					4	4	4	4
32	4	2	1	2.5	120.0	1.5	1.5	1.0	5	5	17.5	18.0	35.5	18.0	19.5	37.5	3	3	3	3	4	3	4	4	3	4	3	3
33	4	1	2	2.5	120.0	1.0	1.0	1.0	5	5	16.0	16.5	32.5	18.0	20.5	38.5	1	2	3	3	3	4	4	4	2	4	4	4
34	3	2	2	3.5	3.0	5.0	3.5	4.5	4	5	17.5	15.5	33.0	18.5	19.0	37.5	4	4	5	5					5	4	5	5
36	1	2	2	2.0	3.5	5.5	3.0	3.5	5	5	18.0	18.5	36.5				3	4	4	5								
37	4	1	1	3.0	120.0	1.0	2.0	1.0	5	5	18.5	14.5	33.0				3	1	2	3	1	3	2	4	3	2	1	2
38	4	2	1	1.0	120.0	1.0	1.0	1.0	5	5	19.0	20.0	39.0				2	3	3	4	3	4	4	4	3	5	4	4
39	4	2	2	2.0	26.0	5.5	3.5	4.5	5	5	19.0	18.0	37.0				2	2	3	3	3	3	4	3	4	5	4	4
40	2	1	1	1.5	12.5	6.0	4.0	5.0	5	5	19.5	20.5	40.0				2	3	3	3	2	2	2	4				
41	1	1	2	1.5	120.0	1.0	1.0	1.0	5	5	19.0	18.5	37.5	17.5	18.5	36.0	4	4	4	4								
42	2	1	2	2.5	36.0	3.0	3.0	3.5	5	5	18.5	17.0	37.5	18.5	19.0	37.5	2	3	3	3	2	3	2	4				
43	1	2	1	2.0	25.5	4.0	1.0	3.0	4	5	19.5	20.0	39.5				2	3	4	3								
44	3	2	1	5.5	4.5	6.0	3.5	4.5	5	5	20.5	20.0	40.5				4	4	5	5					4	4	3	4
45	3	2	2	2.0	14.5	4.0	4.0	4.0	5	5	18.0	17.0	35.0				5	4	4	4					4	4	4	5
46	1	1	1	1.5	77.0	3.0	1.0	3.0	5	5	19.5	17.5	37.0				5	5	5	4								
47	3	1	1	1.5	120.0	1.0	1.5	1.0	5	5	20.0	18.0	38.0	17.0	16.5	33.5	1	1	1	1					1	1	1	1
49	2	1	1	2.5	120.0	1.0	1.0	1.0	4	4	15.5	12.0	27.5	15.5	14.5	30.0	1	1	1	2	2	2	2	3				

Note. Training ratings of empathy and instrumentality are shown only for subjects for whom they are condition-relevant (i.e., empathy ratings are provided for Groups E and EI; instrumentality ratings are given for Groups I and EI).

THE EFFECTS OF DIFFERENTIAL ROLE-TAKING EXPERIENCES ON EMPATHY AND ALTRUISM IN PRESCHOOL CHILDREN

by

LAURA M. KING

B. A., University of Arkansas, 1977

AN ABSTRACT OF A MASTER'S THESIS

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Helping behavior may be viewed as a two-step process: (1) recognizing and vicariously experiencing the distress of another, i.e., empathizing, and (2) instrumentalizing this affective arousal by generating and performing an appropriate action with anticipated positive consequences for the other. The current training project was designed to test this two-component model of altruistic behavior with preschool-aged children; more specifically, differential role-taking experiences were examined as to their effects on the expression of empathy and subsequent prosocial activity.

Role-taking experiences varied as to whether (1) empathic concern, (2) instrumentality, (3) both empathic concern and instrumentality, or (4) neither was stressed to individual children during roleplaying with puppets. Subsequent individual assessment sessions yielded the primary dependent measures of empathy and helpfulness. Empathy ratings were determined on the basis of the child's videotaped facial response to a confederate's obvious sadness; four aspects of helpfulness, including latency to initial helping, sharing, involvement, and overall helpfulness, were rated on the basis of videotapes of the child's behavior during private interaction with the confederate.

Contrary to predictions, no significant effects of Training Condition were found on any measure, although ratings of empathy and instrumentality made during training sessions did improve across four individual training sessions for conditions in which those aspects were emphasized. Several aspects of the design which might be altered in future investigations to increase the likelihood of achieving significant effects of training on subsequent helping were discussed in detail. These aspects included number of training sessions, duration of delay from training to assessment, and manner of presentation of training.

An unexpected interaction of Sex and Age Level was revealed ($p < .05$ on latency to helping and involvement ratings, $p < .10$ on sharing and overall helpfulness ratings) such that older females responded more quickly to the needs of the distressed confederate and received higher ratings on sharing, involvement, and overall helpfulness scales than did males or younger females. It was suggested that these findings indicate a developmental progression from lesser to greater helpfulness for preschool girls, but not for preschool boys, in a situation wherein the needy other's affective state is salient.