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Helping in children;: the effects of recipient-centered verbalizations, the role of empathy.

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Helping In Children
The Effects Of Recipient-Centered Verbalizations,
The Role Of Empathy

A Thesis Presented
By
Michael R. Bernstein

Submitted to the Graduate School of the University of Massachusetts in partial fulfillment of the requirements for the degree of Master Of Science

September 1975
Psychology
HELPING IN CHILDREN:
THE EFFECTS OF RECIPIENT-CENTERED VERBALIZATIONS,
THE ROLE OF EMPATHY

A Thesis
By
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Abstract

The present study examined the effects of two kinds of recipient-centered verbalizations on the helping behavior of male and female seventh-grade children.

Given the opportunity to make puzzles for hospitalized children, subjects were exposed to verbalizations either stressing the individuality of these potential recipients (personification), or highlighting the distress experienced by hospitalized children (activation), or both. A control group heard neither kind of verbalization.

The results indicated that activation information presented alone depressed helping in males. Furthermore, a measure of behavioral intention demonstrated that volunteering to help exceeded the actual helping of subjects in all treatment groups.

A second purpose of the study was to develop a paper and pencil measure of children's empathic capacities. Only the test scores of females exposed to activation verbalizations alone were significantly related to puzzle-making.
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In recent years an increasing amount of research attention has been directed towards examining the positive social behavior of both children and adults (see reviews by Krebs, 1970; Bryan & London, 1970). Although there is no one generally accepted definition of altruism, most of the definitions that have been proposed have stressed such characteristics as help given to another party or group at some sacrifice to the actor without any clearly apparent motive of personal gain (Krebs, 1970).

Prosocial behavior has been of particular interest to developmental psychologists. A considerable amount of the research on children's helping behavior has been concerned with how the behavioral example of a model affects self-sacrifice. Much of this research has been guided by social learning theory (Bandura, 1971). Interest in modeling as a determinant of helping behavior was stimulated by studies demonstrating the effects of observational learning on children's generalized imitation (Baer, Peterson & Sherman, 1967; Baer & Sherman, 1964; Gewirtz & Stingle, 1968) and aggression (Bandura, Ross & Ross, 1963). The results of these studies suggested that the observation of a model might also be a potent influence on children's helping.

Almost all of the modeling-helping studies have used
a methodology involving a miniature bowling game. This apparatus was first used in a highly influential study by Rosenhan and White (1967). To play the game, a small ball is rolled down an alley about three to four feet long. The ball drops below a scoreboard at the end of the alley. Each time this happens a number of lights on the scoreboard flash, indicating a "win" or "no win" score. Although, ostensibly, it is a game of skill, the lights are actually preprogrammed so that the experimenters can control the number of times subjects win.

In the typical bowling game study subjects win either money, candy, tokens, or gift certificates which can later be exchanged for prizes (e.g. Rosenhan & White, 1967; Bryan & Walbek, 1970a; 1970b). They are also given the opportunity to voluntarily share their winnings with a charity. Just prior to playing the game, subjects observe a model play the game. Most studies have used live adult models. However, experiments by Bryan and Walbek (1970a; 1970b) have included videotape presentation of both peer and adult models. Regardless of the mode of presentation, the model either shares with charity (generous model) or does not share (selfish model). Some studies have also used controls who played the game without exposure to a model (Grusec, 1972; Grusec &
In general, the results of these studies have confirmed the hypothesis that observation of a prosocial model, which by itself provides no reinforcement, increases children's sharing. The demonstration of this phenomenon raised questions, of considerable theoretical interest, concerning how the modeling effect was mediated. Bryan and Walbek (1970a) proposed an explanation which reasoned that the model's actions served to remind subjects of prosocial norms. Other explanations asserted that the model's behavior might communicate expectancies about the demand characteristics of the experiment which designate appropriate or permissible behaviors (Aronfreed, 1968; Bryan, 1972; Flanders, 1968; Grusec, 1972; Krebs, 1970). These proposals suggested that the actual observation of the model's performance might not be a pre-requisite for eliciting self-sacrifice in children: the cues that the model conveyed should be communicable via other means.

The attempt to understand the modeling effect, therefore, led to interest in verbalizations by models and experimenters as a determinant of helping behavior. Not only is the investigation of the effects of verbalizations of interest on account of the light it sheds
on modeling effects, but it is also important in its own right. The present study was addressed to this issue.

In a series of experiments using the bowling game apparatus, Bryan and Walbek (1970a) compared the effects of practice versus preaching on the sharing behavior of third through fifth-graders enrolled in a nonremedial summer program. Boys and girls observed a same-sex model who either did or did not donate (a portion of his/her winnings) to charity. In addition to the behavioral example, the model either verbalized moral exhortations encouraging sharing (e.g. "It is really good to donate to poor children."), preached selfishness (e.g. "Yes sir, people don't need to share with other people."), or made value-neutral statements (e.g. "I hope I win.").

The results indicated that although the behavioral example did affect donations, the model's verbalizations did not. Furthermore, it did not matter whether the verbalizations were made by a live adult model or a peer model presented on video-tape. Interestingly, the model's verbalizations did affect the children's evaluations of the models' attractiveness. This finding is of particular importance because it establishes that the verbalizations were attended to.

In a follow up study, Bryan and Walbek (1970b)
exposed second through fourth-grade girls to videotapes of adult models who practiced and preached in the same six factorial combinations. In order to examine the effects of the model's power, the experimenter served as the model for half of the subjects in each group. Again, donations were unaffected by the model's verbalizations. The model's behavior had a marginally significant effect on children's donations (p .10). Whether the model was the presumably more powerful experimenter or a stranger made no difference.

In a recent study conducted in England, Rushton (1975) used procedures very similar to Bryan and Walbek's to examine the sharing behavior of seven to eleven year old children. In the test which immediately followed exposure to the live adult models, verbalizations had no effect on donating. However, two months later subjects were given a second opportunity to play the bowling game. They were reminded, by the experimenter, of the option to share. In this posttest, the model's verbalizations did have a delayed effect. After two months, subjects who had heard selfish preaching shared less than those subjects exposed to either generous preaching or neutral messages. Although verbalizations extolling charity did not increase sharing during the delayed
posttest, evidently the selfish verbalizations discouraged it.

Again, modeling was a highly effective determinant of self-sacrifice, both during the immediate test and the delayed posttest.

In a study which also used the bowling game apparatus, Grusec and Skubiski (1970) adopted somewhat different procedures. In an initial session, third and fifth-grade boys and girls had either a high or low nurturant interaction with the model. Half of the subjects in each condition then observed the model play the bowling game and donate to a charity (performance group). The remaining subjects in the high and low nurturance groups heard the model verbalize an intention to share (verbalization group). An attempt was made to equate the amount of information communicated in these verbalizations with the cues expressed by the model's actions. The verbalization model, however, was called away before having a chance to bowl. A control group was not exposed to a model.

The results showed a significant main effect for treatments favoring subjects in the performance group. However those females in the verbalization group who had interacted with a highly nurturant model were as
generous as subjects in the performance group.

In a follow up study which included somewhat older subjects, Grusec (1972) used similar procedures but eliminated the nurturance manipulation. Seven and eleven year old boys and girls served as subjects. As with the earlier study, a significant main effect for treatments favored the performance group. The main effect, however, was attributable to the low level of sharing by younger boys in the verbalization group. The treatment group means indicated that verbalizations were as effective as performance for both younger and older girls and older boys.

In a review paper which examines prosocial behavior from the point of view of learning theory, Rosenhan (1972) cites experiments which, he claims, showed that verbal information about orphans increased children's contributions to an orphan's fund. Rosenhan argued that for verbalizations to effective, they must amplify cognitions about the objects of helping behavior rather than the altruistic act itself.

An examination of the unpublished paper that described these experiments (Rosenhan, 1969) revealed, however, that all subjects exposed to verbalizations about orphans also observed the behavior of a generous model. This
confounding makes the interpretation of the result that was proposed by Rosenhan problematic.

The supposition that verbalizations should focus on recipient characteristics, nevertheless, deserves further exploration. Indeed, Midlarsky and Bryan (1972) report evidence consistent with this position. In this study, fourth and fifth-graders exposed to verbalizations emphasizing the benefits of sharing to both the recipient and the benefactor were more generous than subjects exposed to verbalizations encouraging selfishness. Unfortunately, a control group, exposed to neither generous nor selfish exhortations, was not included. For this reason, as Bryan (1972) concedes, it cannot be determined whether generous verbalizations increased sharing, or selfish verbalizations reduced it, or if the effects were in both directions.

In sum, the contention that verbalizations influence children's prosocial behavior has not received clear empirical support. Accepting the present body of evidence as decisive, however, is clearly unwarranted. Rushton (1975) has called for a much more extensive investigation of the relationship between verbalizations and helping. Bryan (1972) justifiably criticized the literature on children's helping behavior for its rather narrow focus on
the effects of modeling on sharing.

As we have seen, much of the investigation of verbalization effects has emerged directly from this modeling paradigm. In almost all of these studies the verbalizations have been in the form of moral exhortations. Staub (1975a), recognizing that such exhortations often sound directive and controlling, suggested that they might arouse oppositional tendencies or psychological reactance (Brehm, 1966), militating against their intended effect.

A review of the literature does identify a number of issues inviting further investigation. There is substantial evidence showing a developmental increase in helping behavior (see Krebs, 1970). The Grusec (1972) study suggests that verbalizations can be effective with older children. Grusec argued that this might be because older children are more likely to have internalized norms and values promoting prosocial behavior.

Also the series of studies conducted by Bryan and his associates (Bryan, 1972) have demonstrated that young children, whose behavior is not affected by verbal reminders, are nevertheless familiar with these norms and values. This finding may not be incompatible with Grusec's hypothesis. Staub (1972) makes the important distinction between being aware of a norm and having internalized that norm. Perhaps only in the latter case is familiarity
with the norm related to behavior

Other explanations of the correlation between age and helping behavior have emphasized age-related increases in such factors as cognitive development (Rosenhan, 1972; Rubin & Schneider, 1973), moral development (Kohlberg, 1969; Rubin & Schneider, 1973), empathic capacities (Bryan, 1972), and competence (Staub, 1970).

The present study further examined the relationship between verbalizations and helping behavior. Seventh-graders comprised the subject population. Concern with older children is of particular importance for reasons beyond those cited above. With very few exceptions, previous research has tended to employ younger children. If we are to broaden our understanding of altruistic behavior, it will be necessary to address ourselves to a wider age range than we have in the past. In addition, the need to increase our knowledge of early adolescence should be recognized. This is a critical age of transition which has been neglected by developmental psychologists far too long.

The nature of the helping task used in this study also contributes to broadening the scope of the literature. The dependent measure in most studies has been donating or sharing behavior. Although the importance of
sharing can hardly be questioned, there are certainly other modes of helping deserving of research attention.

Another limitation of the modeling-sharing studies is that the donating is part and parcel of the situation in which the shared resources are accumulated. This is, of course, quite different from much of the helping behavior which presumably occurs outside the experimental lab.

A noteworthy exception to these criticisms is the series of studies conducted by Staub examining children's interventions to help a distressed person in an emergency situation (see Staub, 1974).

The type of helping behavior subjects in the present study had the opportunity to engage in involved performing work on behalf of needy others. Specifically, they were able to, if they chose, make puzzles for hospitalized children. A few studies with adult subjects have used dependent measures entailing the performance of work (Berkowitz & Daniels, 1963; Bryan & Test, 1967; Schopler & Thompson, 1968; Test & Bryan, 1969). Children, in a recent series of studies by Staub and his associates, have also been given the opportunity to make toys for needy children (Staub, 1975b; Feinberg & Staub, 1975).
Another distinction of the present study was that the helping activity was performed at home rather than within the special and possibly restrictive experimental environment. It was hoped that this might provide a more meaningful measure of helping.

A major purpose of this study was to determine if particular kinds of verbalizations not used in past research could promote helping. These verbalizations involved what Rosenhan (1972) has called "amplification of cognitions about needy others." They focused on information about potential recipients of help (i.e. the hospitalized children who were to receive the toys). As discussed above, the possible influence of verbalizations related to recipient characteristics has been suggested by empirical evidence (Midlarsky & Bryan, 1972; Rosenhan, 1969) and advanced by theoretical speculations (Rosenhan, 1972; Staub, 1975b). Moreover, Bryan and London (1970) criticized the child-altruism literature for neglecting recipient characteristics.

To explore these issues, different groups of subjects were exposed to different kinds of information about "typical" hospitalized children, the recipients that they could make puzzles for. The information was of two types: personification and activation.
The personification information was person oriented. It was intended to focus on the individuality of the potential recipients of the children's help. Therefore, such characteristics as names, ages, interests, and family compositions were stressed.

Solicitations for help which describe the potential recipients only as "hospitalized children" might lack a directed impact because the referent is rather abstract and over-generalized. Representing potential recipients by identifying specific individuals might allow subjects to consider them in a more personal way, leading to a more enriched feeling of connection. This was the purpose of personification information.

The activation information aimed at highlighting the hospitalized children's needs. It emphasized the distress, inconveniences, and boredom experienced by them due to their confinement.

Although quite different in point of focus, activation shares certain similarities with a recipient-centered socialization practice, positive induction, which Staub (1975a; 1975b) suggests may be conducive to the development of prosocial behaviors in children. Positive induction involves pointing out to children the positive consequences of their actions for others (e.g.
"It will make them feel better.").

Although positive induction explicitly articulates benefits to recipients of help and activation does not, both kinds of verbalizations are addressed to the need states of potential recipients. In fact, it was assumed that activation information would be amplified by subjects, that it would lead children to engage in "self-induction," to consider the beneficial consequences of their helpful act for the recipient.

In order to examine the effects of personification and activation verbalizations, both separately and in combination, subjects were exposed to either one or both kinds of information. A control group received neither.

There are a number of theories which suggest how personification and activation might mediate helping. First of all, both personification and activation could promote empathy with needy others. Empathy is generally believed to be a very important determinant of helping (Aronfreed, 1970; Berkowitz, 1970; Bryan, 1972; Krebs, 1970; Rosenhan, 1972; Staub, 1972).

Personification depicts potential recipients as "real people" by describing biographical information. In this regard, it should be mentioned that the potential recipients were personified in a manner which described
"average children" whom subjects could probably relate to quite easily. The expression of possible points of identification could facilitate role-taking (Flavell, 1968). Rosenhan (1972) argued that the ability to take the role of the other may be a pre-requisite for empathic expression.

In a somewhat similar vein, Krebs (1970) in his review of the adult literature, suggested that interpersonal attraction might be an important mediating variable. In a study with children, Staub and Sherk (1970) found that fourth-graders shared a crayon longer when interacting with a liked rather than neutral partner. Personification might increase the attractiveness of the potential recipients and, in turn, promote helping.

The recognition of others' feelings is also a pre-requisite for empathy. Activation expresses the difficulties experienced by potential recipients. By directing subjects' attention to the suffering of others in this way, feelings of empathy or sympathy may be elicited.

There are other reasons, perhaps related to empathy, which suggest that recipient-centered verbalizations may be associated with helping. Rosenhan (1972), writing from the point of view of social learning theory, proposed
that helping behavior may be "self-reinforcing" because it enhances the actor's feeling of goodness. Alternatively, it could be reinforcing through relieving a state of distress engendered in the actor (Piliavin, Rodin & Piliavin, 1969). Personification and activation cognitions could, by emphasizing the need of others, influence these affective processes.

Another possible reason why these verbalizations may be effective involves the operation of prosocial norms. Berkowitz and Daniels (1963) proposed that altruistic behavior is motivated by a "norm of social responsibility." Similarly, Leeds (1963) identifies a "norm of giving." It will be recalled that Grusec (1972), in interpreting the results of her study, argued that prosocial norms are internalized by older children. Personification and activation information could, conceivably, make the demands of these norms more salient.

The strength of these prosocial norms may be particularly sensitive to the dependency of the potential recipients. With respect to this, an impressive number of studies with adult subjects have shown that recipient dependency is an important determinant of helping (see Krebs, 1970). Personification and (especially) activation
verbalizations might cause potential benefactors to perceive potential recipients as being more dependent.

Personification and activation might affect helping for yet another reason: increasing the demand characteristics of the situation (Aronfreed, 1968). Demand characteristics refer to those factors which "tell" subject that they are expected to behave in a certain way. Although, in this study, situational demand characteristics were probably reduced, because the helping occurred outside the lab, the quantity and content of information provided to the subjects about needy others might communicate that helping is the expected or appropriate course of action.

An additional issue investigated in the present study was the effects of verbalizations on volunteering to help as well as the helping itself. During the experimental session, children were asked to indicate, in writing, how many toys they anticipated making. This procedure also allowed the examination of the relation between self-reports of intention to help and actual helping.

As discussed above, almost every investigator of altruism has acknowledged the role of empathy as a determinant of helping. However evidence for this position is
indirect (Staub, 1975a). Included in the present study was an attempt to develop a paper and pencil instrument which would provide a measure of children's capacities to experience empathy and comprehend the feelings expressed by others. Such an instrument would be a useful tool for both diagnostic and research purposes.

To accomplish this objective, an empathy test was administered to all subjects. In order to determine its predictive validity, scores on this instrument were correlated with the behavioral measure of helping.

**Experimental Hypotheses**

(1) The empathy test was intended to be sensitive to affective dimensions related to helping. Scores on the test were expected to be positively related to the behavioral measure of helping (i.e. the number of puzzles made for hospitalized children).

(2) Although no clear pattern of sex differences in helping emerge from a review of the literature (Krebs, 1970), the puzzle-making task might be more compatible with the interests of seventh-grade girls than of seventh-grade boys. In accord with the view that the puzzle task might be somewhat "sex-typed," Staub (1975b) reports a significant sex effect favoring females in a study which used a similar dependent measure. Based on
this, it was predicted that females would score higher on measures of helping than males.

(3) A number of reasons suggesting how information emphasizing recipient characteristics might mediate altruistic responses have been proposed. For these reasons, both personification and activation were expected to increase helping.

Method

Subjects

Subjects were one hundred and ten children (58 males and 52 females) drawn from six seventh-grade English classes in a predominately middle-class junior high school located in Amherst, Massachusetts. Four of the classes were taught by a male teacher, the other two by a female instructor. Teachers handed out letters for children to bring home to their parents requesting permission for participation in a project involving prosocial activities. Only children whose parents returned consent forms were included in the study.

There were four treatment groups (factorial combinations of two independent variables, each with two levels). In each class, subjects were randomly assigned to one of two treatment groups. Using this procedure, members of both teachers' classes were included in each of
the four conditions.

Although one objective was to equalize the number of subjects in each cell, due to unanticipated circumstances (e.g. a late school bus, a class's last minute decision to attend a school play during the time scheduled for testing, etc.), the number of subjects in the various treatments was unequal.

Procedure

Design

The study was conducted in two sessions separated by approximately two weeks. Precautions were taken to keep the two sessions independent and unrelated. The fact that during the second session not one subject mentioned the initial session, even though they had ample opportunity to do so and were encouraged to ask questions, suggests that this objective was realized.

All subjects received identical treatment during session #1, the administration of the empathy test. The experimental treatments communicating information about the potential recipients of the children's prosocial behavior were administered during session #2.

A 2X2X2 between subjects factorial design was employed. The factors were sex of subjects; presence or absence of personification information; and presence or
absence of activation information.

Session #1: Empathy Test

During the first session, an experimenter, a 23 year old male graduate student, addressed subjects in their classrooms. He gave each subject a booklet containing four pictures depicting children engaged in affective social interactions or expressing a state of need.

The first picture, which was of a poor child standing in front of an almost empty refrigerator, was selected from Still Hungry in America (Coles, 1969). The other three pictures were chosen from The Family of Man Steichen, 1955). The second picture showed a rather sad looking soldier embracing a young boy who is crying. The third picture was of a group of happy looking young girls standing on a street, perhaps playing some kind of game. The fourth picture showed a boy apparently bullying a girl.

Subjects were told that the experimenter was interested in their reactions to the pictures. Therefore, along with the pictures, booklets containing open-ended questions corresponding to each picture were handed out.

Subjects were asked to describe each picture. They were also asked to relate how they, themselves, felt looking at the picture. Finally, they described how the
person or people depicted in the picture felt. When the subjects finished answering the questions to all four pictures, the booklets were collected and they were thanked for their cooperation.

Session #2: Recipient-Centered Verbalizations

Approximately two weeks after the administration of the empathy test, a different experimenter, a 24 year old male graduate student, visited the school. From each class, small groups of children, ranging in size from two to twelve, both males and females, were taken from their classrooms to another room in the school. As explained above, two groups of subjects were drawn from each of the six classes. Prior to meeting the experimenter, each group was assigned to one of four experimental conditions.

After subjects were comfortably seated in the experimental room, the experimenter introduced himself as representing an organization dedicated to helping needy children (the complete description of the experimenter's statements is included in Appendix A). The experimenter further explained that the purpose of his visit was to engage the cooperation of school children in helping hospitalized children.
Children were told that they could, if they wanted to, help hospitalized children by making puzzles from materials supplied by the experimenter. The helping activity was to be performed at home, in the subjects' spare time, rather than in school in lieu of regular classwork. The voluntary nature of this activity was emphasized.

The experimenter then handed out three 10X14 inch manila envelopes to each subject (all subjects willingly accepted the envelopes). Each envelope contained one unmade puzzle. Each puzzle was a 8.5X14 inch picture, with cardboard backing, showing the outline of a cat dressed as a clown, juggling a number of interesting objects (e.g. ball, fish, etc.). Dotted lines dissected the picture into 20 irregularly shaped puzzle pieces; a dotted line around the border of the picture formed a frame.

As the experimenter explained, finishing the puzzle involved coloring the clown and the surrounding objects in the picture and cutting along the dotted lines to form the pieces and frame. It was estimated that completing a puzzle would take seventh-graders about thirty minutes. Although materials for finishing the puzzles (e.g. scissors, crayons, etc.) were not distributed to the
subjects, it seemed certain that children in a relatively affluent community such as Amherst would have easy access to these materials.

Subjects were told that they could make either three, two, one, or no puzzles. They were allowed four days to return the puzzles (this included a weekend). In order to make the helping activity appear anonymous, and presumably less coercive, subjects were asked to erase their names which were lightly penciled on the envelopes. Moreover, completed puzzles and unused materials were to be placed in a box located in the school's administrative office. Therefore, subjects had no reason to anticipate future interactions with the experimenter. Unobtrusive code numbers printed on the envelopes permitted the identification of subjects who made puzzles.

Depending upon which of the four treatment conditions they were assigned to, subjects heard either one or two types of information (personification, activation) about the potential recipients of the puzzles, both types of information, or neither type. The nature of the information communicated to the subjects constituted the main experimental manipulation. In order to forestall the possibility of the different treatments eliciting differential assumptions about the socio-economic
background of the hospitalized children, all subjects were told that "many of the children come from poor families, though not all."

Treatment Conditions

1. Personification: The subjects in the personification condition heard the following brief report which stressed the individuality of the hospitalized children:

"Most of the children were between five and eight years old. I talked to a five year old boy named Andrew Foster. He told me that at home he has a big sheepdog and two cats but they never fight. A seven year old girl named Carol Kramer said that she loves to go roller skating. She claims that she can skate pretty fast. Bob Simpson, who is also seven, said that he likes to ride bikes with a group of friends. Although Ellen Wallace is only six years old, she says that she wants to be a lawyer when she grows up."

2. Activation: The subjects in the activation condition heard the following brief report which emphasized the distress experienced by the hospitalized children:

"Although they are receiving good medical care, a hospital can be a pretty dull place if you have to spend some time there. This is especially true for young children. In the hospital there are few toys, and therefore little for these children to do. For the most part, they have to stay indoors. They certainly can't go outside and run around as they would like to. They miss not being at home with their families and friends. They are bored and think about their illness too much of the time."
3. **Personification and Activation:** The subjects in the personification and activation condition heard both kinds of verbalizations. For all subjects, the personification information preceded the activation information.

4. **Control:** The subjects in the control group heard neither personification nor activation information.

**Dependent Variables**

**Measure of Intention:** Before returning the children to their classroom, the experimenter explained that he would "like to have an idea of about how many puzzles we will be able to give out." He passed out 3X5 inch index cards and asked subjects to "please write down your name and how many puzzles you think that you will make." After the subjects had finished filling out the cards, they were collected.

This measure of behavioral intention, which could vary from zero to three, was the first dependent measure.

**Behavioral Measure of Helping:** The number of completed puzzles that each subject returned to a box located in the school's administrative office was the second, and critical, dependent variable. This behavioral measure of helping could, of course, vary from zero to three.
Empathy Test: The empathy test represents a preliminary attempt to develop a paper and pencil test which would provide a measure of subjects' capacity to both perceive and experience the feelings of others. (A more detailed description of the coding system and scoring procedures used with the empathy test is included in Appendix B).

The empathy test yielded scores for both empathy and inference. Empathy scores express the extent to which subjects' responses about how they feel, while looking at the pictures, are parallel or correspondent to the affective, emotive messages conveyed by the people depicted in the pictures. Inference scores reflect the accuracy and scope of subjects' perceptions about how the people shown in the pictures might reasonably be expected to feel.

Eight summary scores, four for empathy responses and four for inference responses, were derived for each subject. The eight summary scores were as follows:

1. Regular Empathy Occurrence
2. Regular Empathy Expanded
3. Promotive Empathy Occurrence
4. Promotive Empathy Expanded
5. Regular Inference Occurrence
6. Regular Inference Expanded
7. Promotive Inference Occurrence
8. Promotive Inference Expanded

As explained in Appendix B, regular summary scores were derived by subtracting scores on nonempathic or noninference responses from scores on responses promoting empathy or inference. Promotive summary scores reflect only the promotive responses.

Occurrence summary scores are based only on the number of responses subjects' made. Expanded summary scores consider not only the occurrence of responses, but also their intensity and elaboration. Intensity refers to how strongly a response is stated. Elaboration refers to the extent that a response is explained or described.

Results

Puzzle-Making

The mean number of puzzles made by subjects in each of the treatment conditions is presented in Table 1. A 2X2X2 analysis of variance of the number of puzzles that children made by treatments and sex yielded a significant interaction between activation, personification and sex
Table 1
Average Number of Puzzles
Made by Subjects in Each Treatment Group

<table>
<thead>
<tr>
<th>Sex</th>
<th>Treatment</th>
<th>Personification</th>
<th>No Person.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>Activation</td>
<td>1.50 (8)</td>
<td>.14 (22)</td>
</tr>
<tr>
<td></td>
<td>No Activ.</td>
<td>.75 (12)</td>
<td>1.37 (16)</td>
</tr>
<tr>
<td>Females</td>
<td>Activation</td>
<td>1.25 (12)</td>
<td>1.00 (13)</td>
</tr>
<tr>
<td>Females</td>
<td>No Activ.</td>
<td>1.93 (14)</td>
<td>1.54 (13)</td>
</tr>
</tbody>
</table>
of subject ($F=4.227$, $df=1/102$, $p<.05$). This three-way interaction was the only significant effect demonstrated in the analysis of variance.

The effect of the sex of subjects approached but did not reach statistical significance ($p<.058$), with females making more puzzles than males. The main effect for activation was also marginally significant ($p<.10$), with subjects who received activation information making fewer puzzles than subjects who did not.

An examination of the mean puzzle-making scores suggested that the source of the three-way interaction was that activation information, when presented alone, suppressed the helping behavior of males but not females. In order to investigate this possibility, separate 2X2 (activation-no activation X personification- no personification) analyses of variance were compiled for males and females. The results of these analyses yielded a significant interaction between activation and personification for males ($F=3.59$, $df=1/54$, $p<.01$) but not for females ($F<1$). No other significant effects were found in these analyses.

Examination of the differences between the cell means of the analysis of variance of males' puzzle scores showed
that when males were exposed to only activation information, they made significantly fewer puzzles than those in the control group (t=2.358, df=102, p<.01 two tailed). However, when personification was combined with activation, the number of puzzles male subjects made was not different from those in the control group.

The conclusion that activation information, when presented alone, suppressed the helping behavior of males is further supported by the finding that males exposed to only activation information made significantly fewer puzzles than males exposed to both activation and personification information (t=2.515, df=102, p<.02 two tailed).

Although conventional tests showed no differences between personification and other treatments, the pattern of means suggests, highly tentatively, that personification might have a slightly depressive effect on males. The number of puzzles made by males exposed to only personification information was not significantly different from either controls or subjects in the combined group, but the mean was numerically smaller. Moreover, while, as mentioned above, activation alone depressed helping in males in comparison to both the control and
combined group, the difference between males exposed to only activation and those exposed to only personification was not significant. Therefore, it seems that only the combination of activation and personification information clearly did not depress the helping behavior of male subjects in comparison to the control group.

As mentioned above, the main effect for sex of subjects was only marginally significant and the interactions of sex with activation and sex with personification were not significant. However, the three-way interaction was significant. Post hoc comparison of cell means by t tests suggested the kinds of differences in helping behavior between males and females that were possibly produced by the treatments. When personification information was presented alone, males made fewer puzzles than females \((t=2.290, \text{ df}=102, p<.05 \text{ two tailed})\). For subjects exposed to only activation information, a marginally significant difference favored females \((p<.10)\). However, there were no differences between males and females in either the control or combined groups (see figure 1).

In summary, there was a high level of helping evidenced by subjects in the control group, in comparison to the other treatment groups. The results indicate that
the helping behavior of females was not differentially affected by the treatments. Activation presented alone depressed the helping behavior of males. Moreover, the results suggest that personification presented alone may have also slightly depressed the helping behavior of males.

**Behavioral Intention**

Immediately after exposure to the experimental treatments, subjects were asked to indicate how many puzzles they intended to make. The mean number of puzzles that subjects in each of the treatment conditions volunteered to make is presented in Table 2. A 2X2X2 analysis of variance of this measure of behavioral intention failed to detect any significant effects.

As shown in Table 2, scores on the measure of intention approached the maximum of three puzzles. A comparison of Table 1 and Table 2 shows that, in general, subjects claimed that they would make more puzzles than they actually did make. Although 66 subjects did not make any puzzles at all, only one subject reported that she did not intend to make any puzzles.

It is interesting to note that all of the subjects who failed to make even a single puzzle also failed to
Table 2
Average Number of Puzzles Volunteered
By Subjects in Each Treatment Group

<table>
<thead>
<tr>
<th>Sex</th>
<th>Treatment</th>
<th>Personification</th>
<th>No Person.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>Activation</td>
<td>3.00 (8)</td>
<td>2.68 (22)</td>
</tr>
<tr>
<td>Males</td>
<td>No Activ.</td>
<td>2.67 (12)</td>
<td>2.87 (16)</td>
</tr>
<tr>
<td>Females</td>
<td>Activation</td>
<td>2.58 (12)</td>
<td>2.61 (13)</td>
</tr>
<tr>
<td>Females</td>
<td>No Activ.</td>
<td>2.86 (14)</td>
<td>2.97 (13)</td>
</tr>
</tbody>
</table>
return envelopes containing unmade puzzles, even though they were asked to do so when the envelopes were handed out.

**Empathy Test**

Tables 3a and 3b show the correlations between the number of puzzles that subjects made and the empathy and inference summary scores. Separate correlations for males and females are also given. Tables 3a and 3b further include separate correlations for males and females in each of the treatment cells.

Regular and promotive summary scores were based on the same data (empathic and inference responses), differing only in that regular summary scores also included non-promotive responses. As a consequence of this over-lap, regular and promotive summary scores were inter-correlated. For similar reasons, occurrence and expanded summary scores were also inter-correlated. As explained above (and in Appendix B), both of these kinds of summary scores were based on the occurrence of responses; expanded scores, however, expressed intensity and elaboration as well.

The only test scores that were significantly related to helping behavior were the regular empathy occurrence
### Table 3a

**Correlations Between Empathy Summary Scores and Puzzle-Making**

<table>
<thead>
<tr>
<th></th>
<th>Regular Empathy Occurrence</th>
<th>Regular Empathy Expanded</th>
<th>Promotive Empathy Occurrence</th>
<th>Promotive Empathy Expanded</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person. only</td>
<td>-.066</td>
<td>-.014</td>
<td>.029</td>
<td>.076</td>
</tr>
<tr>
<td>Activ. only</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Person. Activ.</td>
<td>-.102</td>
<td>-.109</td>
<td>-.212</td>
<td>-.103</td>
</tr>
<tr>
<td>Control</td>
<td>-.173</td>
<td>-.276</td>
<td>-.356</td>
<td>-.336</td>
</tr>
<tr>
<td><strong>Total Males</strong></td>
<td>-.078</td>
<td>-.063</td>
<td>-.094</td>
<td>-.043</td>
</tr>
</tbody>
</table>

| **Females**        |                             |                          |                             |                           |
| Person. only       | .028                        | -.040                    | .021                        | -.040                     |
| Activ. only        | .642**                      | .314                     | .607**                      | .316                      |
| Person. Activ.     | .451                        | .329                     | .413                        | .311                      |
| Control            | -.466                       | -.478*                   | -.500*                      | -.518*                    |
| **Total Females**  | -.002                       | -.105                    | .030                        | .000                      |
| **Total Sample**   | .082                        | .047                     | .085                        | .089                      |

* p<.10
** p<.05
Table 3b
Correlations Between Inference Summary Scores and Puzzle-Making

<table>
<thead>
<tr>
<th></th>
<th>Regular Inference Occurrence</th>
<th>Regular Inference Expanded</th>
<th>Promotive Inference Occurrence</th>
<th>Promotive Inference Expanded</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person. only</td>
<td>.153</td>
<td>.184</td>
<td>.129</td>
<td>.187</td>
</tr>
<tr>
<td>Activ. only</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Person. Activ.</td>
<td>.107</td>
<td>.000</td>
<td>.043</td>
<td>-.068</td>
</tr>
<tr>
<td>Control</td>
<td>.134</td>
<td>.168</td>
<td>.000</td>
<td>.084</td>
</tr>
<tr>
<td><strong>Total Males</strong></td>
<td>.063</td>
<td>-.002</td>
<td>-.061</td>
<td>-.044</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Person. only</td>
<td>-.035</td>
<td>-.005</td>
<td>.012</td>
<td>.003</td>
</tr>
<tr>
<td>Activ. only</td>
<td>.150</td>
<td>.114</td>
<td>.129</td>
<td>.051</td>
</tr>
<tr>
<td>Person. Activ.</td>
<td>.215</td>
<td>.140</td>
<td>.232</td>
<td>.042</td>
</tr>
<tr>
<td>Control</td>
<td>-.352</td>
<td>-.299</td>
<td>-.374</td>
<td>-.313</td>
</tr>
<tr>
<td><strong>Total Females</strong></td>
<td>-.036</td>
<td>.034</td>
<td>-.023</td>
<td>-.075</td>
</tr>
<tr>
<td><strong>Total Sample</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.078</td>
<td>.085</td>
<td>.025</td>
<td>-.051</td>
</tr>
</tbody>
</table>
and promotive empathy occurrence scores of females who were exposed to activation information alone (p < .05 in both cases).

Although the correlations were not significant for females in the combined personification and activation group, pooling their scores with those of females who received only activation information also yielded significant correlations between puzzle-making and regular empathy occurrence scores (r = .432, p < .05) and promotive empathy occurrence scores (r = .460, p < .05).

For females in the control group, the negative correlations between helping behavior and three of the four empathy summary scores were marginally significant (p < .10 in all cases).

Discussion

The prediction that subjects exposed to additional information about potential recipients would make more puzzles was not confirmed. The results indicated that increasing amounts of verbal information does not increase helping and may, in fact, depress helping in males.

The most striking result to emerge from this study was that activation information presented alone reduced the prosocial behavior of males. Why did a treatment
intended to promote helping have a negative effect?

The entire content of the activation information related the distress experienced by the hospitalized children. Perhaps this highly focused orientation implied that helping was a moral imperative: not merely the right thing to do but the only thing to do. Males might be particularly resistant to persuasive efforts which they regard as attempts to control them or restrict their freedom. Such perceived threats may arouse oppositional tendencies or psychological reactance (Brehm, 1966) which finds expression in noncompliance. It will be recalled that for similar reasons, reactance has been proposed to account for the failure of moral exhortations to affect sharing (Staub, 1975a).

Why should the arousal of reactance be limited to males? It seems reasonable that females would also show opposition to perceived limitations of their freedom. Perhaps there are sex differences in what elicits reactance in seventh-graders. Females may not have interpreted the activation verbalizations as an implied threat to their freedom. Boys might also be more likely than girls to disregard verbalizations by adults which encourage social behaviors including helping, possibly because boys more often experience unenforced verbal
demands (Staub & Feinberg, in press).

Activation had a negative affect on males only when presented without personification. Combining the two types of verbalizations may have forestalled the arousal of reactance by providing a balance which mitigated the coercive character of the activation information. In context with the descriptive personification information, activation might have been perceived as intended to establish the legitimacy of a need rather than calculated to induce helping.

Although, admittedly, this interpretation is speculative, it is consistent with the findings reported by Feinberg and Staub (1975). Their study examined the effects of both inductive statements elaborating the benefits to the recipients of helping, and participation in helping activity on the subsequent prosocial behavior of elementary school children. Their results indicated that the inductive statements had a negative effect on the number of gift certificates male subjects shared with hospitalized children.

One possible explanation of why helping behavior in the control group was high in comparison to the other treatments centers on the information communicated to
controls. Although controls were exposed to neither personification nor activation, they did hear all of the other information included in the experimenter's address. Some of this pertained to helping. Hospitalized children were mentioned five times. Although the voluntary nature of the helping was stressed, all children were specifically asked to help ("I am here to ask for your cooperation"). In addition to this direct solicitation, they were assured that their participation would be beneficial ("We believe that you can help hospitalized children").

Clearly, controls were exposed to a considerable number of verbalizations directed at helping. Perhaps the elicitation of helping behavior in older children does not require the additional cognitive supports provided by more emphatic recipient-centered verbalizations. The control treatment may have been sufficient to induce empathy arousing cognitions about hospitalized children. It could have also affected behavior by reminding subjects of prosocial norms. Moreover, the demand characteristics of the situation, as experienced by controls, were manifest. All of this suggests that the mediators hypothesized to account for possible personification and activation effects may have influenced controls.
Another speculative explanation for the relatively high level of help demonstrated by controls rests on the possibility that the control treatment heightened the perceived dependency of the hospitalized children. The dependency of the needy others has been found to be an important determinant of helping (see Krebs, 1970).

Both personification and activation verbalizations referred to the home-life activities of the hospitalized children. This may have led subjects exposed to this information to assume that they were only temporarily infirm. Controls might have regarded the potential recipients as chronically ill and hence more dependent. This possible difference in perceived dependency may have offset effects due to recipient-centered verbalizations.

This explanation, however, seems untenable. The personification verbalizations were much more explicit than the activation verbalizations in describing the home-life of the hospitalized children. Therefore, subjects in the personification treatment, not the activation treatment, would be expected to perceive the potential recipients as least dependent and, accordingly, help less.

Regarding the issue of sex differences in children's helping behavior, the significant three-way interaction is in accord with the general trend for sex differences
to occur, if at all, in interaction effects (see Krebs, 1970). Furthermore the pattern of results strongly suggests that the marginally significant main effect favoring females is largely attributable to the low level of helping by males exposed to either only activation or only personification verbalizations. Considered in total, the current body of evidence indicates some differences in the factors which encourage or discourage helping in male and female children rather than general or trans-situational sex differences in children's altruism.

The ceiling effects obtained on the measure of intention is consistent with the results of a study by Green and Schneider (1974) which found that males, ranging in age from five to fourteen, were very willing to volunteer to help poor children by assembling books during their lunch period. Unfortunately, subjects were not given the opportunity to actually perform this helping.

There are a number of reasons why subjects in the present study volunteered to make more puzzles than they actually made. First, intention was measured during the experimental session, which presumably maximized demand characteristics. Second, while the puzzle-making was anonymous, the volunteering was not. Subjects were asked
to include their names along with their estimates. Third, a measure of intention entails considerably less effort than a measure of performance.

It is noteworthy that for many children, volunteering did not produce a commitment to action. This underscores the importance of distinguishing actual helping from measures of intentions in drawing conclusions about the effects of treatments or the influence of subject variables on helping.

Because so few of the correlations reached statistical significance, the interpretation of the results of the empathy test is highly tentative. The finding that both the regular empathy occurrence and promotive empathy occurrence scores were significantly correlated with puzzle scores for females exposed to only activation, nevertheless, deserves comment.

Perhaps females whose responses on the empathy test expressed a concern for the needs and feelings of others were particularly sensitive to the influence of similar verbalizations. This conclusion is supported by both the relatively high, though not significant, correlations for females exposed to both activation and personification and the significant correlations for the group of females exposed to activation without personification.
In the other groups and in the total sample, both empathy and inference summary scores failed to predict helping behavior on the puzzle-making task. This may be due to a deficiency shared by most strategies which attempt to relate measures of personality dispositions or state variables to behavioral indexes of helping. Namely, they fail to take situational variables into consideration. Whether or not helping occurs may be dependent upon a number of situational variables which alter the possible costs and payoffs of action (see Gergen, Gergen & Meter, 1972).

There are further possibilities which suggest the complications inherent in attempting to predict prosocial behavior from scores on a personality instrument which measures empathy. Staub (1975b) proposed that empathic reactions, themselves, may be situation-specific and aroused by different situations for different people. Moreover, even if aroused, empathic tendencies may promote only certain modes of helping by different people. For example, a person who empathizes with the poor might contribute money but not do volunteer work.

How successful the test was in actually measuring empathic tendencies is also open to question. Empathy refers to the vicarious experience of others' feelings.
However, subjects' scores on the test may not have necessarily reflected this affective involvement. Some subjects may have been motivated to make a good impression on the test. This could be accomplished by providing responses which seemed socially sanctioned or correct. Such a strategy would yield high scores on the empathy test without representing true empathic tendencies.

The marginally significant negative correlation between three of the summary empathy scores of females in the control group and helping behavior is curious. It suggests that, at least under certain circumstances, those who are less verbal in expressing empathic or concerned responses demonstrate greater concern for others. In a paper examining the personal histories of people active in the civil rights movement during the late 1950's, Rosenhan (1970) presents anecdotal evidence supporting this suggestion. He reports that those who were more deeply committed to the struggle for civil rights, as measured by their participation in the movement, gave fewer rationales for their involvement than those who were only marginally committed. Notwithstanding this interpretation, the finding that the control treatment has been more effective with lower-scoring females allows no simple explanation.
In conclusion, this study along with a number of others demonstrate that verbalizations designed to promote prosocial behavior in children often do not achieve their intended effect. In fact, certain kinds of verbalizations decrease helping in males. As well as expressing information, the content of verbalizations communicate norms, expectations, and possibly demands. An understanding of the effects of verbalizations on children's helping requires the consideration of all these factors.
Appendix A

Experimenter's Statements
About Helping
Hospitalized Children

Hello, my name is Mr.__________. I'm very happy to be able to talk with you this morning (afternoon).

I'm one of a group of people from the University who try to help children who for some reason need help. One group of children that we try to help is hospitalized children, and I am here to ask for your cooperation in doing so.

One of the things that we do in this regard is to give toys to these hospitalized children. We believe that you can help hospitalized children by making puzzles from materials we'll supply. Naturally this is voluntary: you will do it only if you want to.

I'm going to hand out materials for making three puzzles to each of you. As you can see, each envelope has one unmade puzzle in it.

Let me tell you how to make a puzzle. You can color the picture any way you please. You don't have to color the background, you can just color the cat and the objects around it.
Then you can cut out the puzzle. First cut around the edge to make up the frame, then you can cut out the pieces. As you can see, there are dotted lines to follow. You should put each completed puzzle back in its envelope. You should also erase your name from your envelopes.

Do you have any questions?

On Monday and Tuesday we will return to collect the puzzles that you have made. They have to be ready at that time because we want to hand them out to the children. There will be a box in the principal's office for the puzzles and their envelopes. You can make as few or as many as you wish. You should give back the materials that you don't use by putting them in the box in the principal's office on Monday or Tuesday.

All of the puzzles that you make will be given to hospitalized children. Recently someone from our group visited with and spoke to a group of hospitalized children who are going to get some of the puzzles. Many of the children come from poor families, though not all.

(For subjects in the personification and/or activation treatments) Let me tell you more about them; I will read to you part of the report that I got: Read personification and/or activation information (see Method).
(For all subjects) Remember we are going to come back on Monday and Tuesday to pick up the puzzles and the unused materials. But we would like to have an idea of about how many toys we will be able to give out. On these cards please write down your name and how many puzzles you think that you will make.

Thank You
Appendix B

Coding and Scoring of Empathy Test

Coding System

As a first step to coding the results of the empathy test, the experimenter read all of the protocols. For each question, all of the response items mentioned by the subjects were listed. Response items were defined as words, phrases, sentences, or other units of language expressing relatively autonomous, affective connotations about the subjects' own feelings or the feelings ascribed to the people depicted in the pictures (e.g. angry, in need of love, etc.).

These affective response items were categorized according to a number of relevant dimensions. Each item was placed in one of nine categories. Some of these categories were adopted from a rather similar test used with younger, first to sixth-grade, subjects (Staub & Feinberg, unpublished research). Because the older subjects involved in this study gave a somewhat wider range of responses, additional categories were developed.
These same nine categories were used in coding both empathy items (referring to how the subjects', themselves, felt) and inference items (referring to how the persons depicted in the pictures felt). Based on intuitive judgements, two categories were regarded as reflecting response tendencies promotive of or necessary for empathic capacities. The remaining seven categories were considered as possibly opposing empathic predispositions or representing a nonempathic orientation. These nine categories were as follows:

**Empathy Promotive Categories**

1. Parallel. Parallel responses refer to the expression of feelings that appear to be like those directly experienced by the individuals in the pictures (e.g. the response of "happy" to the picture of the laughing girls).

2. Reactive-other oriented. Responses which directly parallel feelings are not the only ones which express understanding or concern for others. Reactive-other oriented responses express a compassionate reaction to the feelings or situations of others (e.g. the response of "sorry for the boy" to the picture of the crying boy).

**Nonempathic Categories**

responses are reactions to others which emphasize concern for the self rather than concern for the other (e.g. the response of "I feel like I was being laughed at" to the picture of the laughing girls).

4. Irrelevant. Those responses which seemed inappropriate and were not justified or explained by their context were coded as irrelevant (e.g. the response of "the girl feels lonely" to the picture of the girl being bullied).

5. Denial of appropriate affect. Not only are denial responses inappropriate, but they are the opposites or reversals of appropriate responses (e.g. the response of "he feels happy" to the picture of the crying boy).

6. Identification with aggressor. This category was specific to the picture of the boy bullying the girl. Responses which expressed approval of or satisfaction with the boy's aggression were coded as identification with aggressor (e.g. "he is doing the right thing").

7. Negative evaluation. Responses which unjustifiably devalue others were coded as negative evaluation (e.g. describing the laughing girls as "a bunch of creeps").

8. Nonserious. Responses which were derisive or hostile were coded as nonserious (e.g. the response of "soldiers deoderant not working" to the picture of the boy and soldier).
9. Denial of affective reaction. Items which asserted the absence of an affective response were coded as denial of affective reaction (e.g. the response of "I don't feel anything" to the picture of the impoverished child).

**Coding of Response Items**

Responses were coded into these nine categories by two raters. In cases of disagreement or uncertainty, a third rater was consulted. Resolutions were achieved by considering both the meanings of the unsettled items and the definitions of the categories. Ambiguous items were classified as uncodeable. Responses which were descriptive rather than affective (e.g. "an empty refrigerator") were not coded. For a number of items, classification was dependent upon the context in which the item was stated.

**Scoring Procedures**

Protocols were scored using the lists of categorized response items. The number of occurrences of responses in each category was recorded; each separate occurrence received a score of 1. In addition, an intensity and elaboration score was coded with each occurrence. Intensity refers to how strongly stated a response is, and
elaboration refers to the extent to which it is explained or described.

Items unmodified by qualifiers were scored 1 for intensity. Items modified by qualifiers reducing the impact of the affective expression or indicating uncertainty (e.g. somewhat, perhaps, etc.) were scored 0 for intensity. Those items strengthened by qualifiers (e.g. very) received a 2 for intensity.

A score of 0 for elaboration was given to items presented without any causal description. If the item was accompanied by one or two causal descriptions (e.g. "I feel sad because the boy is crying"), it was scored 1 for elaboration. Items with three or more causal descriptions received a score of 2 for elaboration.

Inter-rater reliability was demonstrated by having two independent raters score ten randomly selected protocols. For empathy items (references to subjects' feelings), the inter-rater reliability was .96. For inference items (references to others' feelings), inter-rater reliability was .92.

Summary Scores

Eight summary scores, four for empathy responses and four for inference responses, were derived for each subject. The eight summary scores were as follows:
1. Regular Empathy Occurrence. Occurrence score for promotive categories (i.e. 1 & 2) minus occurrence score for nonpromotive categories (i.e. 3 to 9).
2. Regular Empathy Expanded. Occurrence, intensity and elaboration scores for promotive categories minus occurrence, intensity and elaboration scores for non-promotive categories.
5. Regular Inference Occurrence. Occurrence score for promotive categories minus occurrence score for non-promotive categories.
6. Regular Inference Expanded. Expanded score for promotive categories minus expanded score for non-promotive categories.
7. Promotive Inference Occurrence. Occurrence score for promotive categories.
Footnotes

1. The experimenter strongly feels that research of this kind entails an important ethical obligation. Although the primary purpose of the project was the empirical investigation of basic research issues, children's efforts on behalf of those less fortunate than themselves must not be exploited.

With these considerations in mind, after completing the study, the experimenter and five other people held a party for residents of the Belchertown State School, a public institution for the severely and profoundly retarded, located in western Massachusetts. At the party, ice cream and cake were enjoyed and gifts were distributed. Those in attendance had a good time.
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