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ABSTRACT

To explain the role of empathy in forms of prosocial behavior, two studies were conducted to examine the relationships among different dimensions of empathy, communication, and prosocial behavior. Study one tested three models hypothesized to explain this process, an altruistic model, an egoistic model, and a dual-process model combining aspects of both motivational processes. Subjects, 171 students enrolled in introductory communication courses, were given empathy and communicative responsiveness measures, and were asked to respond to a video presentation soliciting volunteer assistance for a cancer aid program. Results indicated support for altruism as a motivator of prosocial behavior and suggest that the egoism and dual-process models are unlikely explanations. Study two sought additional support for the altruism model, and differed from the first study only in substituting a measure of comforting behavior for volunteering. Students were asked to list the things they would say to comfort a distressed friend. The second study fully replicated the findings of the first study. Together, these findings suggest that prosocial behavior is primarily motivated by concern for others, that emotional reactions to the perceived distress of others are preceded by a concern for others, and that an altruistic interpretation of prosocial behavior should be used to reformulate the egoistic model. A 45-item reference list and various data tables are included. (JG)

Empathy, Communication, and Prosocial Behavior*

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Running Head: Empathy

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ABSTRACT

Two studies were conducted to examine the relationships among different dimensions of empathy, communication, and prosocial behavior. Study one provides a test of three models hypothesized to explain this process Results of this study indicated support for altruism as a motivator of prosocial behavior and suggest that the egoism and dual-process models are unlikely explanations. Study two was conducted in hopes of identifying additional support for the model that emerged from study one. The second study fully replicated the findings of the first study. Results from both studies suggest that prosocial behavior is motivated primarily by concern for others. Moreover, emotional reactions to the perceived distress of others are preceded by a concern for others. Together, these findings strongly support an altruistic interpretation of prosocial behavior and suggest that the egoistic model be reformulated.

Empathy, Communication, and Prosocial Behavior

Empathy, and its associated processes, have been a target of investigation for researchers in social and clinical psychology, child development, counseling, and communication. However, despite this widespread interest and the fact that it has been the topic of scholarly inquiry for well over a century (Smith, 1759; Spencer, 1870), it is only recently that some consensus has begun to emerge regarding the boundaries of the construct and its role in certain affective, cognitive, and behavioral operations.

At this point two generalizations appear warranted. First, there seems to be agreement among researchers regarding the notion that empathy is not one variable but several. Multidimensional conceptualizations are prevalant among empathy theorists in all areas of social science (e.g., Deutsch & Madle, 1975, Feshbach, 1975; Gladstein, 1983). Furthermore, those empirical investigations which have addressed the matter concur on the presence of multiple factors, although they differ in terms of number and content (e.g., Davis, 1983; Johnson, Cheek, & Smither, 1983).

Second, empathy has been broadly implicated in processes which lead to helping and other forms of prosocial behavior. For example, Rogers (1957) contended that empathy was one of the "necessary and sufficient conditions for therapeutic personality change" (p. 99). Batson and his colleagues (Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Coke, Batson, & McDavis, 1978) have emphasized responses to persons in distress such as donating time to help with the completion

of academic requirements or volunteering to take the place of a subject who is receiving electrical shocks. Although there seems to be growing agreement about the processual nature of empathically motivated prosocial behavior, there is considerable disagreement about the specific causal relationships among variables which produce such behavior.

The present paper operates within the boundaries established by this pair of broad generalizations. Its purpose is (1) to address directly the causal sequencing of certain components of empathy identified by other researchers and (2) to place that process in relation to a specific type of helping behavior, that is, communicative responsiveness.

The Dimensionality of Empathy

Perhaps the aspect of empathy about which there is the greatest consensus is that of perspective taking. This cognitive component of the superordinate empathy construct refers to the ability of an individual to adopt the viewpoint of another (Coke et al., 1978; Davis, 1980, 1983; Deutsch & Madle, 1975; Dymons, 1949; Feshbach, 1975; Krebs, 1975; Mead, 1934; Piaget, 1932). By adopting the position of another, persons with this ability report they are able to consider "both sides of an issue."

A second element integral to most current treatments of empathy is emotional contagion. Emotional contagion is an explicitly affective aspect of empathy, which occurs when one person experiences an emotional response parallel to, and as a result of, observing another

person's actual or anticipated display of emotion (Coke, et al., 1978; Davis, 1980, 1983; Deutsch & Madle, 1975; Feshbach, 1975; Stotland, 1969). The "parallel to" portion of the definition suggests that some general correspondence between two persons exists in the substantive nature of an emotion, though perfect correspondence is usually not considered necessary (Hoffman, 1977, 1978).

Empathic concern, a third component, also references an affective component (Davis, 1980, 1983). Efforts to capture the substantive nature of this aspect of empathy can be seen in such terms as "sympathetic arousal" (Hoffman, 1977), "humanistic orientation" (Dillard & Hunter, 1987), "altruistic motivation" (Coke et al., 1978) and "sympathy" (Bennett, 1979). While there is greater variability among definitions of this component than the preceding two, there is considerable common ground among each. The two key features upon which all treatments of empathic concern seem to turn are (1) a general concern and regard for the welfare of others and (2) the stipulation that the affect is not parallel to that of the target person. It is this second feature which makes clear the distinction between emotional contagion and empathic concern. While, emotional contagion necessitates some degree of correspondence in affect, empathic concern stipulates that the affect of the target and perceiver differ. For example, the observation of a person in distress should activate a parallel, negative response (emotional contagion) and a positive, nonparallel response (empathic concern).

While fictional involvement is another suggested component of empathy, it has received very little attention. Stotland (1969)

recognized its existence years ago when he remarked that when "people read novels, poetry, or just newspaper accounts of emotional experiences, they will often become emotionally aroused" (p. 272). Since then, two data-based studies yielded factors compatible with Stotland's thinking (Davis, 1980; Dillard & Hunter, 1986, see also Stotland, Mathews, Sherman, Hansson, & Richardson, 1978). Because fictional involvement is not yet integrated into the empathy literature and because it appears to bear no relationship to helping behavior, it will not be examined further in this paper. Thus, the three major components of empathy to be considered in this investigation are perspective taking, emotional contagion, and empathic concern.

Empathic Processes

These three components of empathy -- perspective taking, emotional contagion, and empathic concern -- are viewed by many researchers to be sequentially and causally ordered. In terms of causal sequencing, there is fairly substantial agreement that the cognitive variable, perspective-taking, initiates the process (Coke et al., 1978; Feshbach, 1975; but see Gladstein, 1983). Experimental work such as that of Stotland and Sherman (reported in Stotland, 1969) has emphasized this assumption by instructing study participants to imagine themselves in the situation of the target person (high empathy manipulation) or to simply watch the target person (low empathy manipulation).

Given that the observer assumes the role or perspective of the target, either through innate tendency or experimental manipulation, several things may result. One group of theorists argue that persons

who observe the distress of another become emotionally agitated themselves (Gaertner & Dovidio, 1977; Piliavin, Rhoden, & Piliavin, 1969). In other words, these theorists contend that perspective taking causes emotional contagion. Emotional contagion motivates persons to reduce the source of unpleasantness to the other because of its indirect effects on themselves. This perspective of empathic helping has been labeled egoistic because it assumes that prosocial behavior comes about solely because of a desire to benefit the self.

Another perspective, anchored by the work of Batson and Coke, argues for the existence of altruistic motivations for helping others (Batson, Darley, & Coke, 1978; Batson, et al., 1981; Batson & Coke, 1981; Coke et al., 1978). This approach suggests that perspective taking causes empathic concern which motivates prosocial behavior. While these researchers do not deny the reality of egoistic motives, they claim that behavior may also be caused by a desire to improve the other's welfare or by a combination of altruistic and egoistic motives.

Empathy and Prosocial Behavior

Traditionally, empathy has been studied in relation to prosocial behavioral responses directed toward some distressed individual in an emergency situation. Much of the recent work in this area has attempted to identify whether such behaviors are altruistically or egoistically motivated (Archer, Diaz-Loving, Gollwitzer, Davis, & Foushee, 1981; Coke, Batson, & McDavis, 1978; Batson, Bolen, Cross, & Neuringer-Benefiel, 1986; Batson, et al. 1981; Fultz, Batson,

Fortenbach, McCarthy, & Varney, 1986; Toi & Batson, 1982).

Recently, this emphasis has shifted away from the psychological process of offering material aid, and researchers have become increasingly concerned with communicative responses to the perceived emotional states of others. For example, Burleson and his associates (Burleson, 1978, 1982, 1983; Burleson & Delia, 1983; Burleson & Samter, 1983) have focused almost exclusively on individuals' abilities to produce comforting messages when interacting with distressed target persons. Stiff (1984) also emphasized the communicative component of empathic responses and developed a measure of communicative responsiveness. This self-report measure focused on individuals' perceived abilities to listen to and respond effectively to another in distress.

Miller and Steinberg (1975) highlight the importance of overt communicative responses when they argue that vicarious responses and empathic concern are insufficient to produce the impression of empathy. They note, "we do not bestow the title of 'good empathizer' upon someone unless they communicate with us in rewarding ways" (p. 175). Although we prefer to retain the distinction between psychological processes and behavioral outcomes, Miller and Steinberg's argument is sound. Rather than the material aid called for in emergency situations, it is likely that the most frequently expressed responses to empathy are communicative in nature.

Nevertheless, both the psychological process of generating a prosocial response and the response itself are important to

understanding empathy. Thus, this paper will compare altruistic and egoistic approaches to explaining communicative responses as a form of prosocial behavior.

Models of Empathy and Prosocial Behavior

The previous discussion of perspective-taking, emotional contagion, empathic concern, and communicative responsiveness suggests the existence of different processes underlying communicative helping behavior. These processes are graphically summarized in Figure 1.

Figure 1 about here

Figure 1 provides a path diagram of the possible relationships among perspective taking, emotional contagion, and empathic concern for generating communicative responses in both altruistically and egoistically motivated processes. Each path can be assigned a coefficient (or weighted value) indicating the strength of the given causal relationship.

If the egoistic position is correct, the matrix of path coefficients which describe the model assumes a certain form. Specifically, the paths for the perspective-taking to emotional contagion link and the emotional contagion to communicative responsiveness link should be positive and significantly different from zero. In addition, the perspective taking to empathic concern and empathic concern to communicative responsiveness paths should be

approximately zero.

A purely altruistic model predicts exactly the opposite. That is, the positive links in the egoistic model should be approximately zero, while the perspective-taking to empathic concern and the empathic concern to communicative responsiveness paths should be positive and significantly different from zero.

Finally, a dual-process model is also possible. Batson et al. (1981) have argued that "motivation for helping may be a mixture of altruism and egoism; it need not be solely altruistic or even primarily altruistic to have an altruistic component" (p. 291). Because this model hypothesizes that both altruism and egoism motivate prosocial behavior, the coefficients for all four paths in the model could be positive and significantly different from zero.

Rationale

The purpose of this investigation was twofold. First, we wished to examine the operation of altruistic and egoistic processes simultaneously. This approach departs from previous research which has tended to examine the two explanations independently of one another. Our hope was to provide a more thorough picture of the way in which empathy operates by considering all of the relevant pieces of the process together.

Second, while building upon the foundations laid by earlier investigators of prosocial behavior, we sought to extend the theoretical structure to include measures of communication behavior

designed to benefit distressed individuals. To tie our results to previous efforts, we included a measure of willingness to provide physical assistance to an organization whose purpose is to help children suffering from cancer. In order to carry our inquiry into the under-researched area of communication behavior, we included measures of communicative responsiveness (Stiff, 1984) and of comforting strategies (Burleson, 1978). Two studies were conducted.

METHODS: STUDY ONE

Participants

A total of 171 students enrolled in introductory communication courses at a large midwestern university served as respondents. Each person received extra course credit for participation.

Procedure

Participants arrived at the laboratory in groups of six to ten and were greeted by one of the investigators. After completing two consent forms, a questionnaire containing measures of empathy and communicative responsiveness was administered. When the participants had completed the surveys, they were informed that the session was over. The study was described as having been designed to test the statistical relationships among several of the personality measures they had completed.

Next, participants were thanked and told that a graduate student from the depar ment was giving a video presentation down the hall and had requested their assistance in evaluating it. They were informed

that it would require about ten minutes of their time. The experimenter asked the participants to assist the graduate student by viewing the p[illegible]ation but emphasized the voluntary nature of doing so. Following this, participants were again thanked and then shown the way to the room where the graduate student would be making the presentation.

After the participants had arrived at the second lab the graduate student (who was one of the investigators) greeted the participants and read the following statement:

> For the past several months I have been working as a volunteer with an organization that provides social support for families with children who have cancer. This organization's major activity is the operation of a summer camp and two winter weekend camps for the children who have cancer. This is a non-profit organization that relies heavily on the efforts of volunteers. I would like you to view a videotape that introduces the organization and its major activities. Following this, I would like to get some feedback from you about the presentation and the organization.

Following this introduction, participants were shown the videotaped presentation and asked to complete a short questionnaire that assessed their attitudes toward the organization and their willingness to help. The investigator then read the following

statement:

> We are currently preparing for the camp this summer. Preparation for an activity like this requires many hours of organization and administrative work and we are looking for volunteers to help with the preparations. Much of the work that we have to do involves collating and mailing information that must be sent to children who would like to attend camp this summer.
>
> All of the work will be completed in this building, so trans ortation should not be a problem. You may volunteer for as little as one hour of time or as many hours as you like. There are many different times next week when we will be holding work sessions, some of these times are during the day and some are at night. This organization and the children it serves could really use your help. If you would like to volunteer, please complete this form (each participant was given a volunteer form) and indicate whether you would like help.

After they had completed the forms, the graduate student thanked the participants for their cooperation and indicated that those who had volunteered would be contacted by phone to arrange a specific work time.

Students who volunteered were called three to four days later and

asked if they still wanted to volunteer to help. Those who responded positively were signed up to work during one of the arranged sessions the following week. When participants arrived the next week they were introduced to the tasks that they were to complete. An investigator was present during all of the volunteer sessions. The amount of time volunteered by each participant was recorded by the investigator. When all of the volunteer sessions were complete, every research participant (including those who did not volunteer) was sent a short letter fully describing the nature of the study and encouraging those with questions to contact one of the investigators.

Stimulus Materials

The videotape used in the experiment was a segment of a news feature about the organization. Because the organization has been operating successfully for a number of years, several local and national news features about the organization exist. The director of the the organization granted us permission to use one of these videotaped news features as stimulus material for the project. The segment we chose was approximately nine minutes in length and provided a thorough overview of the organization, camp life, and interviews with some of the young people who attend the camp. Because of its origin, the production quality of the videotape was quite high.

Instrumentation

The first questionnaire was completed by all research participants and contained measures of several dimensions of empathy. Measures of Perspective Taking (Davis, 1983), Emotional Contagion (Dillard &

Hunter, 1986), Empathic Concern (Davis, 1983), and Communicative Responsiveness (Stiff, 1984) were included in this questionnaire. Davis (1983) provides evidence of the construct validity and structural quality of the perspective taking and the empathic concern measures. The measure of emotional contagion emerged from Dillard and Hunter's (1986) analysis of the structural qualities of the emotional empathy scale (Mehrabian & Epstein, 1972). Stiff (1984) provided evidence for the construct validity and unidimensionality of the measure of communicative responsiveness. This scale measures a person's ability to listen to and communicate effectively to others who are experiencing distress.

Participants completed a second questionnaire after viewing the videotape which measured attitudes toward the organization. Following the appeal for volunteers, participants were asked to indicate if they would like to volunteer to help complete several administrative tasks for the organization. The decision to volunteer served as a measure of their intention to offer help.

RESULTS

Measurement Models

The first step in the analyses was to identify the structural qualities of the self-report measures used in the study. Hunter (1980) identifies three criteria for assessing the unidimensionality of a cluster of items: content homogeneity, internal consistency, and parallelism. Content homogeneity, often termed face validity, suggests that all of the items in a unidimensional cluster should have the same

or similar meaning.

Following content analyses, confirmatory factor analyses were computed on each of the measures using PACKAGE (Hunter, Cohen, & Nicol, 1982). Using theorems provided by Hunter (1980), formal tests of the internal consistency and parallelism of each measure were conducted.

As is typical for this type of procedure, not all of the items in each measure fit the criteria for internal consistency and parallelism. Such items are indicators of multidimensionality and were deleted from further analyses before a unidimensional factor could be identified for each measure.

Three of the seven items developed by Davis (1983) survived this analysis and formed a unidimensional factor labeled perspective taking. Seven items identified by Dillard (1983) formed a measure of emotional contagion. Six items identified by Davis (1983) were used to measure empathic concern, and five items developed by Stiff (1984) measured communicative responsiveness. The alpha coefficients for these four measures ranged from .69 to .87. The items and reliability estimate for each measure are presented in Table 1. Sixty-five of the 171 research participants who viewed the stimulus tape volunteered to help the organization. Whether or not an individual volunteered was used as the measure of helping behavior.

Table 1 about here

Theoretical Models

Correlations among the four dimensions of empathy and the single item measure of volunteering were computed. Table 2 gives these correlations corrected and uncorrected for measurement error. To test the altruistic, egoistic, and dual-process models of empathy, path analyses were conducted on the corrected correlations using LISREL V (Joreskog & Sorbom, 1981). Communicative responsiveness and volunteering were treated as separate indices of prosocial behavior.

Table 2 about here

The path coefficients for the dual-process model are given in Figure 2. A cursory inspection of the results would seem to support the altruistic explanation, but not the egoistic one. However, an omnibus test revealed that the model as a whole failed to fit the data. The chi-square goodness of fit test for the overall model indicated that the matrix of correlations predicted by the model deviated from the observed matrix of correlations by more than could be expected from sampling error alone (chi-square = 38.75, df = 4 $p < .001$).

Figure 2 about here

Micro analyses showed three modifications that would improve the overall fit of the model. Inspection of the matrix of deviations revealed two deviations that were larger than one would expect by sampling error and two others that were relatively large. Diagnostics produced by LISREL V suggested that the deletion of two paths and the addition of another would reduce the size of these deviations and provide a better fit of the model.

The revised model deleted the paths from perspective taking to emotional contagion and from emotional contagion to volunteering. The final modification was the addition of a path from empathic concern to emotional contagion. Analysis of the revised model indicated that the data fit this model well (Figure 3). The test for the overall goodness of fit of the model indicated that the the matrix of deviations did not differ from zero (chi-square = 10.51, df = 4, $p < .05$). In addition to this global assessment, micro analyses indicated a good fit of the model. All of the path coefficients differed substantively and significantly from zero. None of the reproduced correlations predicted by the model deviated from the observed correlations by more than one would expect due to sampling error alone. The sum of squared deviations was relatively small (.05), as was the average absolute deviation (.094). In sum, both the micro and macro analyses indicate that the revised model fits the data well.

Figure 3 about here

DISCUSSION

Two issues are highlighted by the revised model. First, although the revised model is compatible with current theorizing regarding the operation of altruistic processes. it suggests that a radical reformulation of the egoistic position is necessary. The lack of a relationship between emotional contagion and volunteering and the negative path from contagion to communicative responsiveness are both incompatible with the claim that persons offer aid to suffering others in order to relieve their own distress. The fact that the data called for a link from empathic concern to emotional contagion, rather than the expected path from perspective taking to emotional contagion, also contributes to the overall disconfirmation of the egoistic hypothesis.

Second, it is important to note that with the absence of a link from emotional contagion to volunteering, the two measures of prosocial behavior have different causal antecedents. This suggests the possible existence of different classes of prosocial variables.

In short, study one yielded findings which were quite surprising for the the egoistic model and inconsistent across the two measures of prosocial behavior. In order to test the durability of these findings another study was conducted. It mirrored the first investigation in every way but one: a measure of comforting behavior was substituted for volunteering. This measure was chosen because (1) like volunteering, it was a behavioral index, and (2) like communication responsiveness, it tapped a form of communication. We reasoned that if the difference between behavior and self-report measures accounted for the variation

in findings between the two indices of prosocial response, then study two would replicate the study one findings by showing no path between emotional contagion and (helping) behavior. In contrast, if the common, communication aspect of the two measures was predominant then both should manifest similar relationships with empathic concern and with emotional contagion.

STUDY TWO: METHODS

Research Participants

Research participants were 126 students enrolled in communication courses at the same large midwestern university. Again, participation was voluntary and students who agreed to act as respondents received extra credit for participation.

Procedure

Students were assembled in large groups and asked to complete a questionnaire containing measures of perspective-taking, emotional contagion, empathic concern, and communicative responsiveness. Next, participants were asked to respond to Burleson's (1984) measure of comforting behavior. When everyone had completed this second questionnaire, the group was debriefed concerning the nature of the study and thanked for their participation.

Instrumentation

The first questionnaire contained the same measures of perspective taking (Davis, 1983) emotional contagion (Dillard & Hunter, 1986),

empathic concern (Davis, 1983; Dillard & Hunter; 1986) and communicative responsiveness (Stiff, 1984) that were used in study one. The second questionnaire contained two role-play scenarios designed to assess an individual's ability to comfort a distressed other (Burleson, 1984). One scenario asked respondents to imagine that a close friend had just flunked a class that was important to him or her to perform well in. Respondents were asked to think about this friend for a few minutes before listing the things they would say to this person to make him or her feel better. The second scenario asked respondents to imagine that their friend had recently "broken up" with a long time boyfriend or girlfriend. Once again, respondents were asked to think about this person before listing the things they would say to make this person feel better.

Two graduate students trained to use Burleson's (1984) coding scheme categorized the comforting responses. Although respondents were asked to provide several responses to each scenario, the highest level response offered by each participant served as the indicator of their comforting response for the scenario. This approach is consistent with the one adopted by Burleson (1984). He argued that the highest level message produced by an individual is an indicator of his or her comforting competence. Hence, this treatment of the data emphasizes the respondent's level of social skill over their social motivation. Because we had data from two situations, the average of the highest response in each situation was used to estimate competence.[1]

Twenty-five percent of the comforting responses were rated by both

raters. There was considerable uniformity in the raters' evaluations of the comforting messages for both the exam scenario (r = .85) and the boyfriend/girlfriend scenario (r = .72). The remaining 15 percent of the strategies were rated by only one person.

RESULTS

Measurement Models

Once again, the first step in the analysis was to identify the structural features of the measures used in the study. Using the procedures outlined in the initial study, confirmatory factor analyses were performed on each of the measures of empathy. These analyses were conducted on the complete list of items used in study one. The results of those analyses were very similar to those in study one. The only difference was the Davis' (1983) measure of perspective taking. In that study three items were used to assess this construct. Results of the factor analyses for study two indicated that six of the seven original items developed by Davis (1983) formed a unidimensional measure of perspective taking. Other than the addition of three items to the perspective taking measure, the measures used in the second study were identical to those used in study one. The factor loadings for each of the items and the reliability estimates for these measures are presented in Table 1.

Theoretical Model

The major focus of this study was to test the model of empathy which emerged from study one. To do this, correlations among the

measures of persepctive taking, empathic concern, emotional contagion, communicative responsiveness and comforting behavior were computed and corrected for error in measurement (Table 3).

Table 3 about here

These correlations were then subjected to path analysis using LISREL V (Joreskog & Sorbom, 1981). Results from this analysis indicated that the model fit the data very well (Figure 4). Although the overall test of the goodness of fit of the model indicated that the observed matrix of deviations differed from zero (Chi-square = 12.27, df = 5, $p < .05$) Bentler and Bonett (1980) argue that this test is very sensitive. That is, very small deviations can often produce statistically significant differences. Instead, they offer the chi-square to degrees of freedom ratio as a better indicator of overall goodness of fit. This ratio was computed for the present data and was lower (2.45) than the value (5.00) Bentler and Bonett recommend as a "rule of thumb" upper limit for the fit of a model.

Figure 4 about here

In addition to the overall test, micro analyses indicated that the model fit the data well. All of the observed paths differed significantly from zero and none of the individual correlations in the

deviation matrix was larger than one would expect due to sampling error alone. In fact, the sum of squared deviations was small (.08), as was the average absolute deviation (.098).

Perhaps most important is the extent to wh ch the observed paths in this model are similar to the observed paths in the model that emerged from study one. In this respect the data fit the hypothesized form very well. None of the observed paths in this model differed significantly from their corresponding paths in the model that emerged from study one. In short, the observed relationships in this study fully replicated the findings of study one.

DISCUSSION

In light of the near-perfect replication we can have considerable confidence that the str'cture of the data in two studies is not simply an aberation produced by sampling error. Rather, the fact that both data sets fit the same model well suggests that this hypothesized set of relationships my be an accurate depiction of the empathy process. The model indicates that perspective taking leads to empathic concern which influences, emotional contagion, communicative responsiveness, and particular prosocial behaviors, i.e., volunteering and comforting. The implications of this model are numerous.

First of all, the role of empathic concern in this model strongly underscores the centrality of altruistic motivation in all forms of empathic responding. Empathic concern was shown to have a substantial impact on three different outcomes of the empathy process: communicative responsiveness, comforting behavior, and volunteering.

Although the pair of studies reported here might be criticized for their reliance on static data to make causal claims, it should be to noted that this sequencing of the various components of empathy is specified by existing theory and is corroborated by several experimental studies (Batson, in press; Batson, et al., 1981; 1986). In conjuction with the extant literature it would seem safe to conclude that the existence of an altruistic motivation for prosocial behavior is no longer in question (see also Eisenberg, 1983; Eisenberg & Miller, 1987).

Equally important are the conclusions which must be drawn concerning egoistic processes. Twice the data fit a model in which the influence of perspective taking was mediated by empathic concern. The presence of this intervening variable indicates that a wholly new conception of the functioning of emotional contagion is needed. It appears that a concern for other people is a necessary precursor to the personal distress produced by emotional contagion. This finding is diametrically opposed to the egoistic position which emphasizes the importance of the welfare of self over that of others.

In addition, the observed impact of emotional contagion was shown to be sharply at odds with expectations derived from egoistic theory. Its negative influence on communicative responsiveness implies that emotional contagion may actually interfere with empathic responding. Although our original predictions were consistent with the conclusions of a number of previous researchers, a closer examination of the data in these prior studies suggests that our "counterintuitive" finding should have been expected.

Three recent studies (Batson et al., 1986; Fultz, et al., 1986; Toi & Batson, 1982) measured the effect personal distress (emotional contagion) on some empathic response (helping behavior). In each of these studies, the simple correlations between personal distress and helping behavior were relatively small and nonsignificant. However, these correlations may have been been suppressed by "other factors" which were not considered by the researchers. In fact, when Fultz et al. (1986) partialled out the effect of empathic concern, they found that the correlations between personal distress and helping behavior changed substantially (from r = .40 to r = -.31 in study one and from r = .21 to r = .04 in study two). Thus, despite our surprise at uncovering the negative link from emotional contagion to communicative responsiveness, findings from earlier experimental work are congruent with the results of the present study one and study two.

Also of interest is the fact that communication responsiveness was the result of both empathic concern and emotional contagion while volunteering and comforting were related only to empathic concern. While it would appear that the nature of the measures, i.e., behavioral vs. self-report might be sufficient to account for this difference such a conclusion should not be accepted too hastily for the variables also differ considerably in scope. Communication responsiveness is a trait measure which addresses a broad range of encoding and decoding skills as well as tapping into the motivation to employ those skills. By contrast, comforting competence and volunteering are more narrow indices. Thus, the question may be somewhat more complex than that of behavior vs. self-report. What does seem abundantly evident is that

there are multiple outcomes to the empathy process. Some appear to the result of caring about others (empathic concern) while others are a function of both empathic concern and emotional contagion. Specifying the contents of these two classes of prosocial behaviors is certainly a task worthy of future inquiry.

One other, more general conclusion also emerges from this research. Because the correlations among the predictor variables in the present study and in previous research are sizeable, the effect of one factor on another cannot be fully estimated with a simple correlation. Without systematically controlling for the influence of suppressor variables, it is impossible to correctly identify the relationships among the various components of the empathy process.

In the present study, the use of path analytic techniques helped identify an important suppressor effect. Although the correlation in the first study between emotional contagion and communicative responsiveness was -.01, the path coefficient was -.23, indicating a significant, negative relationship. The relationship between empathic concern and emotional contagion served to suppress the true nature of the relationship. In sum, careful consideration of the influence of suppressor effects on causal relationships is critical to the development and testing of models of empathic responsiveness. Only by studying the empathy process in its entirety can we hope to advance our understanding of this important area of inquiry.

FOOTNOTES

1. The ratings for the average score in the two situations were not highly correlated (r = .19) indicating a considerable amount of situational variance in people's comforting message development. As a result, this two item measure of comforting behavior was not highly reliable: findings involving this factor should be interpreted with caution.

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Table 1

Factor Loadings, and Reliability Estimates of Four Empathy Measures

	Factor Loading	
Perspective Taking	Study I	Study II
1. Before I criticize somebody, I try to imagine how I would feel in their place.	.72	.60
2. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (R)	.89	.63
3. I believe there are two sides to every question and I try to look at both of them.	.91	.61
4. I sometimes find it difficult to see things from the other person's point of view. (R)	--	.56
5. I try to look at everybody's side of a disagreement before I make a decision.	--	.68
6. When I am upset at someone, I usually try to put myself in his or her "shoes" for a while.	--	.48
Coefficient Alpha	.87	.76
Empathic Concern		
1. When I see someone being taken advantage of, I feel kind of protective toward them.	.57	.57
2. When I see someone being treated unfairly, I sometimes don't feel much pity for them. (R)	.46	.49
3. I often have tender, concerned feelings for people less fortunate than me.	.70	.67
4. I would describe myself as a pretty soft-hearted person.	.65	.71
5. Other people's misfortunes do not usually disturb me a great deal. (R)	.56	.78
6. I am often touched by the things that I see happen.	.71	.61
Coefficient Alpha	.78	.82

	Factor Loading	
Emotional Contagion	Study I	Study II
1. I often find that I can remain cool in spite of the excitement around me. (R)	.47	.42
2. I tend to lose control when I am bringing bad news to people.	.43	.36
3. I tend to remain calm even though those around me worry. (R)	.68	.59
4. I cannot continue to feel O.K. if people around me are depressed.	.58	.56
5. I don't get upset just because a friend is acting upset. (R)	.50	.50
6. I become nervous if others around me are nervous.	.52	.44
7. The people around me have a great influence on my moods.	.52	.52
Coefficient Alpha	.73	.68
Communicative Responsiveness		
1. I usually have a knack for saying the right thing to make people feel better when they are upset.	.64	.53
2. I usually respond appropriately to the feelings and emotions of others.	.65	.55
3. Others think of me as a very empathic person.	.36	.57
4. I am the type of person who can say the right thing at the right time.	.5[illegible]	.42
5. My friends come to me with their problems because I am a good listener.	.59	.42
Coefficient Alpha	.69	.62

Note: Items followed by (R) have been reflected

Table 2

Correlations Among the Four Dimensions of Empathy and the Measure of Helping Behavior in Study One

Perspective Taking	1.00	.30	-.01	.29	.06
Empathic Concern	.25	1.00	.40	.45	.32
Emotional Contagion	-.01	.30	1.00	-.01	.05
Communicative Responsiveness	.23	.33	-.01	1.00	.21
Helping Behavior	.05	.28	.04	.17	1.00

Note: Correlations below the diagonal are not corrected for attentuation due to measurement error. Correlations above the diagonal are corrected for attentuation due to error in measurement. The corrected correlations were used for all path analyses.

Table 3

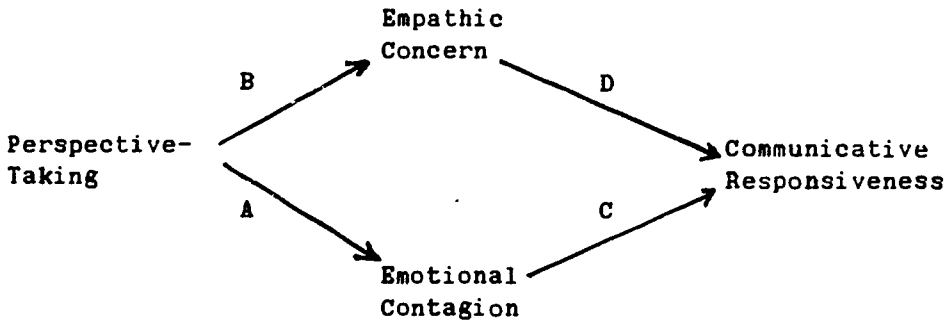
Correlations Among the Four Dimensions of Empathy and the Measure of Helping Behavior in Study Two

Perspective Taking	1.00	.47	.13	.34	.26
Empathic Concern	.37	1.00	.34	.55	.22
Emotional Contagion	.09	.26	1.00	.01	-.07
Communicative Responsiveness	.24	.39	.01	1.00	.20
Comforting Behavior	.14	.12	-.04	.09	1.00

Note: Correlations below the diagonal are not corrected for attentuation due to measurement error. Correlations above the diagonal are corrected for attentuation due to error in measurement. The corrected correlations were used for all path analyses.

Figure 1

A Model of Empathy and Prosocial Behavior

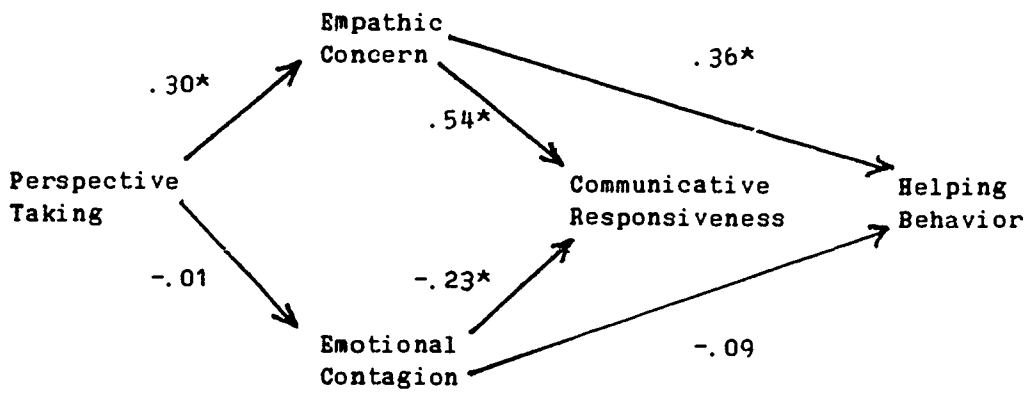


Predicted Sign of Each Path Coefficient

Theoretical Position	A	B	C	D
Egoistic Model	+	0	+	0
Altruistic Model	0	+	0	+
Dual-Process Model	+	+	+	+

Figure 2

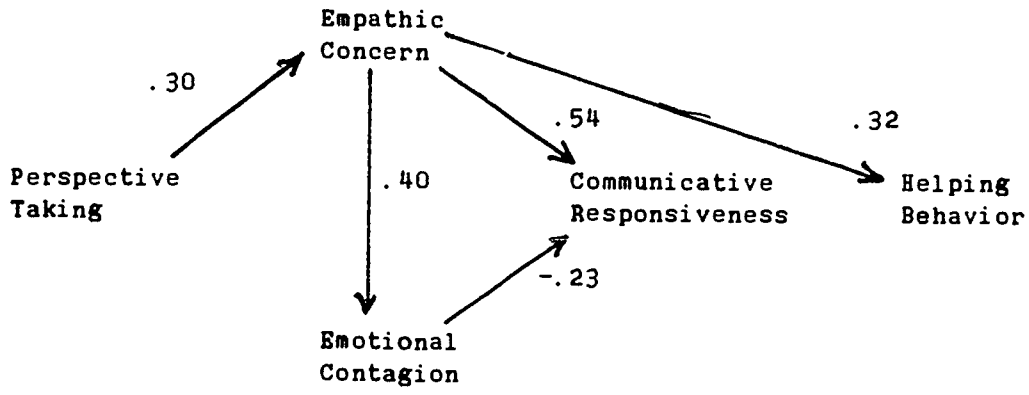
Results of a Test of the Hypothesized Model



Note: Path coefficients with asterisks differ significantly from zero.

Figure 3

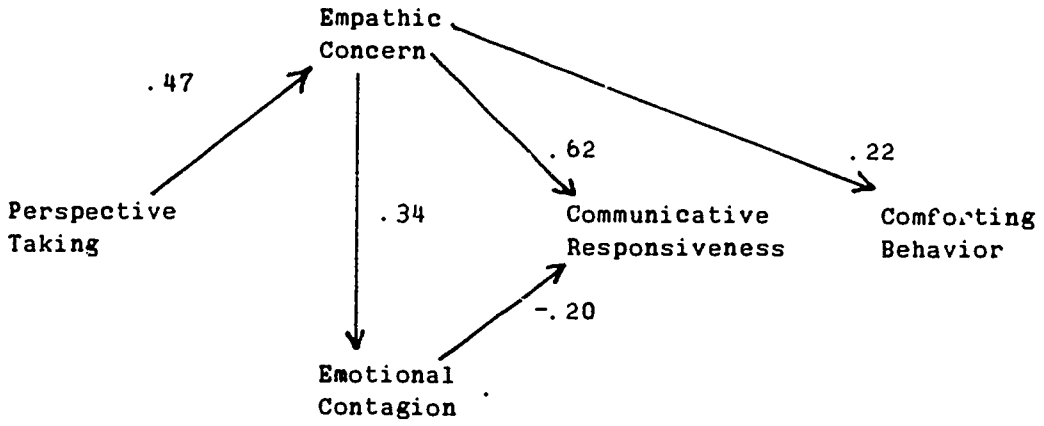
Results of a Test of the Revised Model (Study One)



Note: All paths differ significantly from zero.

Figure 4

Results of a Test of the Hypothesized Model (Study Two)



Note: All paths differ significantly from zero.