

## The Role of Dispositional Empathy and Social Evaluation in the Empathic Mediation of Helping

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Coke, Batson, and McDavis have proposed a two-stage model of empathy-mediated helping, based on emotional arousal and perspective taking. We hypothesized that in addition, a dispositional factor—individual differences in empathy—and a situational factor—potential evaluation from others (demand)—should be included in the process. A study was conducted in which female subjects received false galvanic skin response feedback, indicating that they had either high or low arousal during a broadcast of a person's need for help, as in the Coke et al. experiment. In addition, subjects were led to believe that the experimenter either did or did not know their level of arousal (demand vs. no demand). Subjects' premeasured dispositional empathy constituted the third (continuous) variable in the design. The effect of greater help following high- rather than low-arousal feedback found by Coke et al. was replicated. However, as predicted, this was true only for subjects higher in dispositional empathy in the demand condition. The implications of these results for a revised model of empathy-mediated helping are discussed.

Coke, Batson, and McDavis (1978) recently proposed a two-stage model of empathy-mediated helping. These authors reject the view that empathy is primarily a cognitive process of taking another's perspective (e.g., Regan & Totten, 1975). Instead they favor the position that empathy is the result of an emotional response based on physiological arousal (e.g., Krebs, 1975), although they are unwilling to dismiss cognition as unimportant to the process. Building on the suggestions of Stotland (1969), Feshbach (1975), and Krebs (1975), they maintain that "(a) taking the perspective of a person in need tends to increase one's empathic emotional response," and "(b) em-

pathic emotion in turn increases motivation to see that person's need reduced" (Coke et al., 1978, p. 753). Although we support the contention of Coke et al. that both emotions and perspective taking are bound up in the empathic process, other factors appear to be involved that have not been embraced by the two-stage model.

The first of these additional factors is the individual's characteristic tendency to empathize with others: a stable dispositional factor. Mehrabian and Epstein (1972) developed a scale to examine individual differences in empathy as an emotional response. Most of the items of this scale are aimed at vicarious emotional responses to the experiences of another (e.g., "Seeing people cry upsets me"), but a few involve perspective taking (e.g., "It is hard for me to see how some things upset people so much"). Mehrabian and Epstein demonstrated the effects of individual differences as operationalized by the scale in two studies involving different empathy-related behaviors. In the first study, persons scoring high or low on the scale served as "teachers" in a variation of the Buss (1961) "aggression machine" paradigm. Subjects ostensibly shocked a "learner" (in reality a confeder-

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ate) for his mistakes as he was being taught a task. High-empathy subjects who were in close proximity to the learner—about 8 feet (2.4 m) away—gave the lowest level of shock. High-empathy subjects in the adjoining room and low-empathy subjects in both proximity conditions gave higher levels. In the second study, subjects who had completed the empathy scale met with their (confederate) partner to exchange information before participating jointly in a task. During the exchange, the confederate revealed her need for volunteers to complete a class project and asked the subject if she would participate. Scores on the empathy scale were significantly related to the amount of time volunteered. People who characteristically empathize, then, should be expected to harm others less and to help them more.

A situational factor not addressed in the two-stage model is the potential for receiving evaluation from others. In public situations when others are aware that a person is reacting emotionally to someone's plight, many of the customary excuses for not helping, such as failing to notice (see Latané & Darley, 1970), cannot be offered. An emotional reaction betrays the observer's interpretation of the situation as distressing and apparently calling for aid. Not to take action in the midst of clearly detectable emotion may appear irrational as well as reprehensible. Schlenker (1975) has demonstrated that under public performance conditions, subjects present themselves in a manner consistent with their reported beliefs. Similarly, the potential for social evaluation in helping situations may increase helping among empathizing individuals.

So far we have argued that empathy as a personal factor) and potential-for-social-evaluation as a situational factor should both increase helping. But beyond their independent effects, individual differences in empathy and social evaluation may interact with one another. Foushee, Davis, and Archer (1979) found that empathy, as measured by the Mehrabian–Epstein scale, was strongly related to the Masculinity–Femininity (M–F) Scale of the Personal Attributes Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1974). The individual items of the M–F Scale, with an emphasis not only on

emotionality but on emotional vulnerability (e.g., “excitable in a major crisis,” “feelings easily hurt,” and “cries very easily”), seemed to account for most of the relationship. If highly empathic individuals are both more emotional and more emotionally vulnerable, then their behavior may be especially influenced by helping situations involving potential social evaluation. Not only will their feelings be stronger, but they will be more subject to the judgment of others. They will also (perhaps as a result) be more fearful of the judgment when it comes.

Davis (1979) found a significant relationship between total scores on the Mehrabian–Epstein empathy scales and both the private ( $r = .61$ ,  $p < .001$ ) and public ( $r = .46$ ,  $p < .001$ ) subscales of the Self-Consciousness Inventory (Buss, 1980; Fenigstein, Scheier, & Buss, 1975), which supports this line of reasoning. According to Fenigstein et al., private self-consciousness refers to “an awareness of inner thoughts, feelings, and motives” (e.g., “I reflect about myself a lot”). Persons high in private self-consciousness have been shown to provide more accurate self-reports (Scheier, Buss, & Buss, 1978) and to react more intensely to positive and negative affective stimuli (Scheier & Carver, 1977). Public self-consciousness, on the other hand, reflects “an awareness of the self as a social object” (e.g., “I’m concerned about what other people think of me”). In research settings, persons high in public self-consciousness have demonstrated greater conformity to group pressure (Froming & Carver, Note 1) and a more negative reaction to rejection by the group (Fenigstein, 1979). On the basis of these relationships with self-consciousness, it would appear that empathic persons are quite concerned with their own feelings and outcomes as well as with the feelings and outcomes of others.

There is reason to believe that dispositional empathy and social evaluation may have contributed jointly and directly to the helping effects obtained by Coke et al. (1978, Experiment 2) in their test of the two-stage model. In their experiment, subjects were instructed to empathize with a graduate student who desperately needed volunteers to complete her master's thesis research. While subjects listened to the tape

recording of the graduate student's request, they received false feedback from a galvanized skin response (GSR) machine. As they watched, the machine registered either high or low arousal. The experimenter who had been monitoring the subjects' GSR from the next room then entered and obtained a self-report measure of their emotional state during the broadcast. Finally, he asked subjects to read and respond to a letter from the needy graduate student soliciting volunteers for up to 4 hours of time. As Coke et al. predicted, the results showed that subjects in the high-arousal feedback condition volunteered more time than subjects in the low-arousal feedback condition.

The experimenter appeared reluctant to present the helping request and departed during the period in which subjects responded to it. But subjects may still have felt their behavior was under scrutiny. The experimenter told them that the professor supervising the project "thought it would be nice to do something for (the needy graduate student)." Furthermore, he gave no assurance that responses to the request would remain a secret. High-arousal subjects, in particular, may have felt pressured to comply with the request. Not to do so when the experimenter had witnessed their arousal might make them appear inconsistent or cast doubt on the elaborate physiological measure. Conversely, a desire to avoid inconsistency and to uphold the validity of the experimenter's measurement may even have pressured low-arousal subjects not to comply.

The account of the potential interaction between dispositional empathy and the evaluative aspects of the situation presented earlier suggests further that high empathizers should have been especially sensitive to the experimental demand for help. Persons who usually empathize would have been not only more likely to experience empathy and thus perceive the feedback in the high-arousal condition as veridical but also would have been more concerned about the experimenter's view of their behavior in both arousal conditions. This analysis of the Coke et al. (1978, Experiment 2) results was tested in the following study.

As in the original experiment by Coke et al., subjects received false GSR feedback

that they had high or low arousal during the broadcast of a person's need for help. In our study, however, half the subjects were led to believe that the experimenter had knowledge of their arousal (demand). The other half were led to believe that the experimenter was blind to their arousal (no demand). In addition, all subjects were premeasured for dispositional empathy on the Mehrabian–Epstein scale, and their scores were included as a third (continuous) predictor variable in the design. An interaction among arousal, demand, and dispositional empathy was predicted: Within the demand condition for subjects with higher levels of empathy, high arousal was expected to result in a greater amount of helping than low arousal.

A further issue that is raised by the results of the Coke et al. studies is the nature of the empathy-induced motivation to help. The source of the emotion may be a feeling of *empathic concern*, an other-centered, altruistic desire to reduce another's distress (Batson, Darley, & Coke, in press; Krebs, 1975), and/or it may be a feeling of *personal distress*, a self-centered, egotistical desire to reduce one's own arousal (Piliavin & Piliavin, Note 2). Coke et al. (1978) have argued that "empathic concern, and not personal distress or some other emotion mediated helping" in their experiment (Experiment 2, p. 762). Our analysis of the helping situation suggests otherwise. The effect of social evaluation may be to increase feelings of self-consciousness for those who are high in dispositional empathy (Davis, 1979). Moreover, high empathy appears to be associated with emotional vulnerability (Foushee et al., 1979). Therefore, it was predicted that greater feelings of personal distress as well as greater feelings of empathic concern would be reported under high arousal rather than under low arousal among subjects high in dispositional empathy in the demand condition. In addition, both empathic concern and personal distress were expected to show a relationship with helping.

## Method

### Subjects

One hundred and twenty-three female undergraduates from the University of Texas at Austin participated

as subjects in partial fulfillment of a course requirement for introductory psychology. They were part of a larger pool of 610 women who had been premeasured for dispositional empathy on the Mehrabian–Epstein (1972) scale. To ensure a representative distribution of scores, equal numbers of subjects from above and below the scale median ( $Mdn = 47.51$ ,  $SD = 27.00$ ) were assigned by a randomized blocks procedure to each of the manipulated conditions of the 2 (arousal)  $\times$  2 (demand) design. During the course of the study, three subjects were eliminated from the design. Two subjects had been in previous studies that used the same false feedback manipulation of arousal, and an equipment failure occurred during the testing of a third subject. All three were replaced in the design, so that there were 30 subjects in each manipulated condition.

### Apparatus

A display meter (a Micronta DC meter in a slope-front metal cabinet), seemingly connected to a galvanic skin response monitor (a C. H. Stoetting Psychogalvanoscope) in the next room, was modified to deliver false-arousal feedback. The needle on the display meter was in reality driven by electrical current from the speaker outlet of one channel of a two-channel (Sony TC 252) tape recorder, as in the Coke et al. (1978, Experiment 2) study. While the subject listened to the voice recording on the second channel, variations in the volume of a tone recorded on the first channel altered the electrical output signal. The signal was then registered by the display meter as arousal. The display meter was provided with a 30-point scale ( $-15$  to  $+15$ ). The low end of the scale was labeled "low arousal" and the high end, "high arousal."

### Procedure

Subjects for whom dispositional empathy scores had been obtained were recruited by means of eligibility lists: one composed entirely of persons with scores above the median, the other entirely of persons below the median. The experimenter was kept blind to the existence of the two lists as well as to the hypothesis for the study.

Most of the procedure, excepting the demand manipulation, was taken directly or adapted from Coke et al. (1978, Experiment 2). When each subject arrived at the designated waiting place, she was met by a male experimenter and escorted to the suite of experimental cubicles. The subject was first ushered into the "control room," which contained a GSR monitor and tape recorder. The experimenter explained that during the study the subject would listen to and evaluate a pair of broadcasts. He showed her the GSR monitor and described its operation and role in the study in one of two ways.

*The demand manipulation.* For half the subjects, the description of the role of the GSR monitor in the session was essentially that provided by Coke et al. In this, the *demand* condition, the experimenter told subjects that he would monitor their responses to the broadcast and showed them the built-in arousal display meter on the GSR machine.

For the other half of the subjects, the operation of the

GSR monitor was described differently. In this, the *no-demand* condition, the experimenter told subjects that the GSR machine would internally record their responses to the broadcasts so that he could remain blind to their reaction. He showed them how the display meter on the machine had been taped over to prevent the reading from influencing his behavior toward subjects.

Following the demand manipulation, the subject was conducted to the next cubicle and seated before a desk on which was displayed the false-feedback GSR monitor. She was asked to read the following written explanation of the study:

In this experiment your job will be to listen to and evaluate two radio broadcasts. These broadcasts were recorded as pilots for two new programs planned by KUT, the University radio station. The first program involves an announcement about upcoming campus events; the second involves appeals for student help. Although authentic, neither pilot has been or will be aired.

When the subject had finished reading, the experimenter further explained what would take place during the session. Each broadcast, he said, would be played on a tape deck in the control room connected to a speaker in the subject's cubicle. In addition to the GSR machine in the control room, the monitor on her desk would also register her arousal during the broadcast. This second monitor was supposedly set up because subjects might find it interesting to see how they were reacting. The experimenter then described the working of the monitor and how to read it. He also noted that research had shown that GSR was impossible to consciously control. In the no-demand condition, the experimenter also emphasized that the subject was *not* to tell him what the monitor registered.

After the subject agreed to participate in the study, the experimenter attached electrodes to the first and third fingers of her nondominant hand. In keeping with the procedure of Coke et al., she was then given written instructions describing her evaluation task during the first broadcast:

In order to provide a more thorough evaluation of the tapes, different subjects are asked to listen to each broadcast from a different point of view or perspective. By random assignment, you were selected to receive the following instructions. Please attend to the broadcast techniques while listening to the first broadcast. Give them full attention and consider them carefully.

Having handed these instructions to the subject, the experimenter left the room, allegedly to turn on the GSR machine and start the broadcast. In fact, an assistant to the experimenter entered the control cubicle and played the broadcast recordings so the experimenter could remain blind to the arousal manipulation later.

The first broadcast was designed to serve as a point of reference for interpreting the false-arousal feedback to come later. It took the form of a bland announcement of an upcoming anthropology lecture. During the announcement, the subject observed the needle on her arousal display meter fluctuate only slightly between  $-3$  and  $+3$  on the 30-point scale. When the recording

ended, the experimenter returned and administered two bogus questionnaires purportedly assessing perceptions of the "theme of the broadcast" and its "technical quality."

When the subject had finished with the questionnaires concerning the first broadcast, the experimenter handed her written empathy instructions for her evaluation of the second recording:

While listening to the second tape you should try to imagine how the person in the broadcast feels. Imagine how you yourself would feel if you were subjected to the same experience. In your mind's eye, perhaps you can visualize how it would feel for you to be in this situation.

The experimenter again left the room during the second broadcast while the unseen assistant played the recording manipulating the false-arousal feedback.

*Arousal manipulation.* The second broadcast was an appeal for help from a graduate student in the College of Education. Her need was for students to participate in her master's thesis research. She could not afford to pay for participation, so she was asking for volunteers. During the playing of the appeal, subjects in the low-arousal condition saw the needle of the GSR monitor remain within the same 6-point range (-3 to +3) as it had during the first recording. But for subjects in the high-arousal condition, the needle climbed slowly until it reached a point between +12 and +15, where it remained until the end of the broadcast.

*Measurement of emotional state.* When the second broadcast ended, the experimenter returned with more questionnaires. Two of the questionnaires were the bogus "theme of the broadcast" and "technical quality" instruments. The experimenter placed the bogus questionnaires on the table and asked the subject to complete them first. In the demand condition, subjects next received an "emotional reactions" questionnaire. Subjects in the no-demand condition, however, did not complete the emotional reactions questionnaire until after the measure of helping had been taken. This switch in the order of the measures was necessary to prevent subjects in the no-demand condition from inferring that the experimenter had learned of their arousal by examining their self-ratings.

The emotional reactions questionnaire was composed of 22 of the 23 adjectives used by Coke et al. (1978, Experiment 2) to tap emotional state. For each adjective, the subjects were to indicate the degree to which they had experienced the emotion on a scale from 1 (not at all) to 7 (very). All 13 of the original personal distress adjectives (*alarmed, perturbed, disconcerted, bothered, irritated, disturbed, worried, uneasy, distressed, troubled, upset, anxious, and grieved*) were included. However, the adjective *empathic* was deleted from the original empathic-concern adjectives, leaving seven (*moved, softhearted, sorrowed, touched, warm, concerned, and compassionate*).<sup>1</sup> The two filler adjectives used by Coke et al., *intent* and *intrigued*, that were not part of either set were also included.

*Measurement of helping.* After the subject had completed the first of the bogus questionnaires, the experimenter placed the other before her. Lifting the second

questionnaire from the table, he revealed a letter. Appearing surprised and a little dismayed (cf. Coke et al., 1978, Experiment 2), as though he had picked up the letter by mistake, he explained to the subject:

Since I was going to give this to you at some point anyway, I guess I should go ahead and explain it now. This is a letter from the woman you just heard. The reason I am giving it to you is that the professor in charge of this study, Dr. \_\_\_\_\_, had to ask her for permission to use her broadcast in the study. Dr. \_\_\_\_\_ thought it would be nice to do something for her. For that reason he asked me to give this letter to all the people that participated in our study. (Pause) Let me ask you to go ahead and read the letter and decide what you want to do about it while I get the [last/third] questionnaire.

The letter restated the graduate student's need for volunteers. A response scale with 30-min. increments was provided on which subjects were to indicate how much time they were willing to give.

In the demand condition, the experimenter also gave the subject the emotional reactions questionnaire while the helping request was before her. Then he left the cubicle long enough for her to complete the questionnaires and the helping measure. When he returned he personally collected the request for help along with the questionnaires.

In the no-demand condition, before departing from the room, the experimenter added:

No matter what you decide to do about the request, that is if you fill in any information or leave it blank, please enclose and seal it in one of those envelopes addressed to [the graduate student]. Then put it in that box where those other envelopes are. We will send them over to the College of Education.

Upon his return, the sealed request was lying in the box (along with two other envelopes). Not until this point did he give the subject the emotional reactions' questionnaire.

*Manipulation checks.* Before debriefing the subject, the experimenter gave her a sheet with three items employed by Coke et al., as checks on the arousal manipulation. Subjects were asked to indicate how aroused they had felt while listening to the broadcast (from not at all to extremely), how accurately the GSR monitor had measured their level of arousal (from not at all accurate to very accurate), and the magnitude of the graduate student's need (from very little to very great). All three items were in the form of 8-point scales.

## Results

### Analyses

The major analyses performed used the simultaneous multiple regression program

<sup>1</sup> The adjective *empathic* was deleted because its close relationship to the wording of the empathy-listening instructions might have led to demand effects.

from the SPSS (Statistical Package for the Social Sciences; Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). The continuous variable—dispositional empathy score—and the two dichotomous variables—arousal and demand condition—were the predictors. Simultaneous multiple regression and effect coding of the dichotomous variables were used as the best approximation of analysis of variance when cell *ns* are unequal (Carlson & Timm, 1974; Overall, Spiegel, & Cohen, 1975). Values of the continuous variable were coded in terms of their deviation from the mean to reduce the correlation between main effect and interaction terms (Althauser, 1971; Kenny, 1979).

Separate simple effects tests were performed when interactions were obtained. These simple effects tests were also run as simultaneous multiple regressions (i.e., one-degree-of-freedom contrasts), using the overall residual from the main analysis as the error term.

### *Effectiveness of the Manipulations*

The multiple regression analysis performed on subjects' self-reported arousal showed only one significant effect, a main effect for the arousal variable,  $F(1, 112) = 15.79, p < .001$ . The false feedback was effective in eliciting higher reports of arousal from subjects in the high-arousal condition than from subjects in the low-arousal condition (5.09 vs. 3.95). The analysis of the item assessing subjects' perceptions of the magnitude of the graduate student's need also revealed an arousal main effect,  $F(1, 112) = 4.73, p < .04$ , but it was strongly qualified by an interaction between all three of the predictors,  $F(1, 112) = 6.79, p < .01$ . High-arousal subjects tended to perceive more need on the part of the graduate student (6.52 vs. 5.97 in the low-arousal condition). Consistent with our predictions, however, arousal interacted with demand for subjects high in dispositional empathy,  $F(1, 112) = 5.45, p < .03$ , but not for subjects low in dispositional empathy,  $F(1, 112) = 2.51, p > .11$ . Among high-empathy subjects, the difference between high and low arousal was significant in the high-demand condition (7.00 vs. 5.73),  $F(1, 112) = 5.01,$

$p < .03$ , but was (nonsignificantly) reversed in the low-demand condition (6.00 vs. 6.6),  $F(1, 112) = 1.13, p > .29$ .

The results of the regression analysis performed on subjects' perceptions of the accuracy of the GSR feedback also reflect the influence of the demand manipulation. A marginal interaction between arousal and demand was found,  $F(1, 112) = 3.32, p < .08$ , because high-arousal feedback led to slightly (and nonsignificantly) higher perceptions of its accuracy in the high-demand condition than low-arousal feedback (5.53 vs. 5.17),  $F < 1$ , but somewhat lower perceptions of accuracy in the no-demand condition (5.04 vs. 5.97),  $F(1, 112) = 3.98, p < .05$ .

Overall, these checks suggest that both the arousal and the demand manipulations had their intended effects. Furthermore, there was an indication that dispositional empathy, the individual difference variable, magnified the effects of the manipulations as expected.

### *Effects of the Predictor Variables on Emotions*

The major analyses to examine subjects' emotional reactions were conducted on an empathic concern index and a personal distress index. The empathic concern index was composed of responses to the adjectives *soft-hearted, warm, concerned, and compassionate*, summed and averaged for each subject ( $\alpha = .82$ ). Except for the absence of the adjective *empathic*, this index was identical to the empathic concern index constructed by Coke et al. The personal distress index was composed of the adjectives *upset, alarmed, and troubled*, again summed and averaged for each subject ( $\alpha = .80$ ). The corresponding personal distress index of Coke et al. was formed from these same adjectives.<sup>2</sup>

<sup>2</sup> The adjectives for the empathic concern and personal distress indices were, except for the missing *empathic*, the same ones used by Coke et al., in order to facilitate comparison between the studies. A factor analysis was also performed on subjects' responses to the entire set of emotions adjectives. Since the factors were not expected to be orthogonal, an oblique rotation was used. Sizeable intercorrelations between the items (.35-.77) led to the employment of the PA1 option from the SPSS program package (Nie et al., 1975). A three-fac-

Table 1  
*Mean Self-Reported Emotion for Subjects  
 Above and Below the Median in Dispositional  
 Empathy in Each Condition*

Condition	Low empathy		High empathy	
	Low arousal	High arousal	Low arousal	High arousal
Demand				
Empathic concern	4.73	4.87	4.47	5.35
Personal distress	2.62	2.60	2.61	3.89
No demand				
Empathic concern	4.50	4.85	4.89	4.72
Personal distress	2.62	2.15	2.42	2.76

Note.  $N = 15$ .

The multiple regression performed on the empathic concern index yielded an interaction among dispositional empathy, arousal, and demand,  $F(1, 112) = 4.20, p < .05$ . As may be seen from the Table 1 means, a (borderline) interaction between arousal and

tor solution emerged. Within this solution *troubled*, *upset*, *anxious*, and *grieved* all loaded highly (loadings  $> .60$ ) on the first factor (exclusively), a sad personal distress factor. *Moved*, *softhearted*, *touched*, *warm*, *concerned*, and *compassionate* all loaded highly (loadings  $> .60$ ) on the second factor (exclusively), empathic concern. On the third factor, which accounted for less than 6% of the variance, *perturbed*, *bothered*, *irritated*, and *disturbed* loaded highly (loadings  $> .60$ ) and exclusively. It seemed to represent an angry form of personal distress.

Subjects' responses to these items with loadings  $> .60$  were summed and averaged for each factor to form an empathic concern index, a personal distress-sad index, and a personal distress-angry index. When this expanded version of the empathic concern index and the personal distress-sad index were substituted in the multiple regression analyses for the indices based on Coke et al.'s selection, the effects were weaker but similar. For the expanded empathic concern index, the main effect for arousal,  $F(1, 112) = 3.72, p < .06$ , and the hint of the interaction among dispositional empathy, arousal, and demand,  $F(1, 112) = 3.09, p < .09$ , were found. For the personal distress-sad index, significant dispositional empathy,  $F(1, 112) = 4.81, p < .03$ , and demand,  $F(1, 112) = 3.76, p < .06$ , main effects emerged along with an Empathy  $\times$  Arousal interaction,  $F(1, 112) = 5.30, p < .03$ . The analysis for the personal distress-angry index yielded only a dispositional empathy main effect,  $F(1, 112) = 9.48, p < .003$ .

demand was found among subjects high in dispositional empathy,  $F(1, 112) = 3.73, p = .056$ , but not among subjects low in dispositional empathy ( $F < 1$ ). For subjects with higher empathy scores, high arousal led to significantly greater self-reports of empathic concern under high demand,  $F(1, 112) = 5.90, p < .02$ , but the effect was slightly (and nonsignificantly) reversed under low demand ( $F < 1$ ).

Table 1 also indicates that the scores on the personal distress index were arrayed in a similar pattern to the empathic concern scores. The multiple regression analysis of these scores, however, revealed a main effect for dispositional empathy,  $F(1, 112) = 5.21, p < .03$ , and a main effect for demand,  $F(1, 112) = 4.17, p < .05$ . Both higher empathy scores and the demand manipulation additively increased subjects' reports of self-oriented personal distress.

The close parallel between the results for the analysis of the empathic concern index and those for the personal distress index suggest that the two emotions are interrelated.<sup>3</sup> Subjects with higher dispositional empathy scores exposed to the demand manipulation felt not only more concern for the person in need but also more concern for themselves.

### *Effects of the Predictor Variables on Helping*

Responses to the request for help were coded for analysis using the following scheme: no help = 0; 30 min. = 1; 60 min. = 2; 90 min. = 3; 120 min. = 4; and more than 120 min. = 5. When these coded responses were subjected to a multiple regression analysis, a main effect for dispositional empathy emerged,  $F(1, 112) = 5.01, p < .03$ , strongly qualified by the predicted interaction among all three variables (empathy, arousal, and demand),  $F(1, 112) = 6.25, p < .02$ . As may be seen in Figure 1, subjects with higher dispositional scores generally offered more help. But the pattern of volunteering also clearly shows the interactive effects of arousal and

<sup>3</sup> The correlation between the empathic concern index and the personal distress concern index was .42,  $p < .001$ .

demand on high-empathy subjects,  $F(1, 112) = 4.13, p < .04$ , but not on low-empathy subjects ( $F < 1$ ). High arousal led to more volunteering than low arousal when subjects had higher dispositional empathy scores and received the demand manipulation,  $F(1, 112) = 10.26, p < .001$ . Interestingly enough, this difference was produced primarily by an extremely low level of helping in the low-arousal condition rather than a particularly high incidence of helping under high arousal. There was a slight reversal of the pattern in the no-demand condition in which subjects higher in empathy volunteered (nonsignificantly) more help under low arousal than high ( $F < 1$ ). However, for subjects with lower empathy scores, the manipulations had little effect on their willingness to help. Thus, as predicted, the original finding by Coke et al. of greater help after arousal feedback was replicated, but only when a particular combination of dispositional empathy and situational demand was present.

#### *Empathic Concern and Personal Distress as Mediators of Helping*

To investigate the relationship among empathic concern, personal distress, and helping, a multiple regression on helping was performed in which subjects' scores on the empathic concern and personal distress indices were entered as the predictors. In this analysis, subjects' dispositional empathy, arousal condition, and demand condition were not entered as predictors of helping.

The main effects were generally consistent with the findings of Coke et al. Empathic concern significantly affected helping,  $F(1, 116) = 23.28, p < .001$ , whereas personal distress did not ( $F < 1$ ). But the interaction between empathic concern and personal distress was also significant,  $F(1, 116) = 5.61, p < .02$ . As Figure 2 shows, for subjects high in empathic concern, personal distress did affect helping,  $F(1, 116) = 4.31, p < .04$ , whereas for subjects low in empathic concern it did not ( $F < 1$ ).

The results of this analysis undercut the argument of Coke et al. that personal distress plays no mediating role in helping in this situation. Moreover, they provide sup-

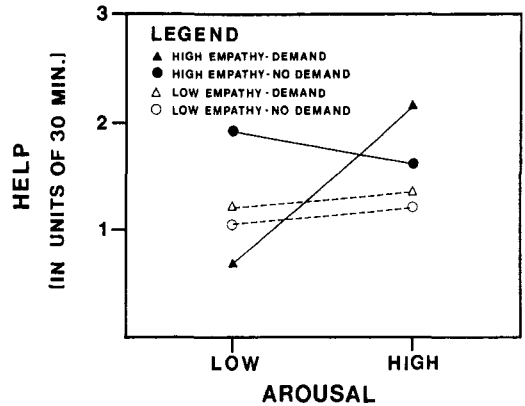


Figure 1. Mean help volunteered for subjects above and below the median in dispositional empathy in each condition.

port for our contention that helping is influenced by both empathic concern and personal distress—emotions that were strongest for those high in dispositional empathy who were subjected to demand characteristics.

#### Discussion

Our hypothesis stated that among subjects high in dispositional empathy in the high-demand condition, high arousal should result in greater helping than low arousal. Clearly, the results from the helping measure confirm it. Empathy as a dispositional factor and social evaluation as a situational factor interacted with arousal feedback to predict helping.

The two-stage model of empathy-mediated helping proposed by Coke et al. (1978) treats only the situational factors of perspective taking and emotional response. However, they recognized the possibility that demand characteristics (Orne, 1962) might have influenced their results (Coke et al., 1978, p. 763). Furthermore, the likelihood that the process would be influenced by individual differences seems clear from previous dispositional empathy research (e.g., Mehrabian & Epstein, 1972). What might not have been anticipated was the intriguing manner in which these factors interact with arousal in the helping situation. The original Coke et al. finding of more help volunteered after high-arousal than low-arousal feedback, was replicated only for high-empathy



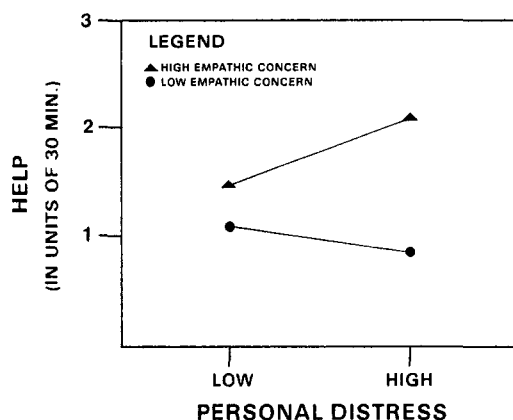


Figure 2. Mean help volunteered by subjects' self-reported empathic concern and personal distress.

persons subjected to the demand manipulation.

Coke et al. interpreted their helping results as purely the product of empathic concern for another. We hypothesized and found that personal distress would also be affected by the unique combination of dispositional empathy, arousal, and demand. Moreover, the analysis employing empathic concern and personal distress as predictors of helping found that these emotions bear an interactive relationship to volunteering. This interaction between empathic concern and personal distress corresponds well with the correlations found by Foushee et al. (1979) between empathy and emotional vulnerability. Persons who become the most concerned over the welfare of others also seem to experience the most personal upset. Thus, it seems premature to dismiss egoistic models of helping motivation (e.g., Piliavin & Piliavin, Note 2) where empathy is involved. Interestingly enough, among persons who experience stronger altruistic feelings, part of the motivation to aid another may stem in part from the egoistical desire to end one's own aversive arousal. To fully disentangle the respective roles of personal distress and empathic concern in helping situations, it seems likely that it will be necessary to develop a multidimensional measure of empathy along the lines undertaken by Davis (1979).

Although our prediction was simply stated in terms of arousal differences among high-

empathy subjects in the demand condition, we were surprised that most of this difference was due to low arousal. It was primarily the extreme decrease in helping for high-empathy subjects in the low-arousal demand condition rather than the slight increase in helping in high-arousal demand that produced the interaction. Since the original Coke et al. (1978, Experiment 2) study included only a low- and a high-arousal condition and no other control groups, their arousal differences may have resulted from a similar decrease. Our account of the forces bearing on highly empathic persons would suggest that in the high-arousal condition, both their personalities and the meter feedback would coincide, whereas in the low-arousal condition, the feedback would be discrepant with their disposition. Social evaluation might be expected, then, to elevate helping in the high-arousal condition much more than it would depress it in the high-arousal condition. But the form-of-actual-helping results argue that the impact of social evaluation was not to magnify the influence of dispositional empathy; rather, it was to magnify the influence of situational arousal feedback. To put it another way, it seems as though the tendency toward public self-consciousness of our high-empathy subjects, rather than their tendency toward private self-consciousness, produced this reaction to the demand manipulation (see Buss, 1980).

Dispositional empathy is, to some extent, an index of the tendency to experience vicarious arousal. Persons high on this index are presumably used to experiencing empathic concern and personal distress and labeling them as such. But the results of this and some other studies examining individual differences in emotional empathy (Archer, Foushee, Davis, & Adelman, 1979; Mehrabian & Epstein, 1972) provide a basis for speculating that dispositional empathy and responsiveness to social influence go hand in hand. Mehrabian and Epstein (1972) found that high-empathy subjects were less aggressive than low-empathy subjects, but only in the immediate condition when they were actually in the room with their victim, faced with his facial grimaces, gasping, and arm jerking. In the nonimmediate condition, the

aggression scores were slightly (and nonsignificantly) higher for the high-empathy subjects than for the low-empathy subjects. Similarly, Archer et al. (1979, Experiment II) found in a simulated trial that subject-jurors high in dispositional empathy rated the defendant less guilty and assigned less of the blame for the hypothetical stabbing to him. However, these benevolent reactions appeared *only* for high-empathy subject-jurors who heard the defense attorney deliver an appeal to empathize—a type of demand characteristic. In fact, high-empathy subject-jurors who heard the neutral, fact-oriented (nonempathy) appeal rated the defendant more severely than low-empathy subject-jurors. Finally, in the present study, the demand manipulation produced the highest perceptions of the graduate student's need and the most volunteering among high-empathy subjects in the arousal condition, but it also led to the lowest perceptions of need and the least volunteering among these subjects when arousal was low.

In all three studies cited above, dispositional empathy is associated with a chameleonlike responsiveness to the salient situational variables (i.e., presence of victim feedback, nature of the attorney's appeal, degree of arousal on the experimenter's display meter). As Archer et al. and Foushee et al. suggest, it may be necessary to revise our traditional view of the empathic individual as an unfailing altruist. Apparently empathy can be counted on to produce helping only when the social situation clearly calls for it. As we suggested earlier, a more thorough study of empathy as a characteristic (or set of characteristics) of personality is called for.

It might be argued that social evaluation, in general, and our demand manipulation, in particular, bear a more complex relationship to the helping situation than we have so far considered. By warning subjects that the experimenter would be monitoring their arousal, we may have induced self-awareness (self-focus of attention; Duval & Wicklund, 1972; Wicklund, 1975). In a recent review of the experimental literature, Wicklund (1978) concludes that "*especially* when the cue for helping is a prominent feature of the situation, self-focused attention acts to bring

behavior into line with the norm of helping" (p. 516). Furthermore, our intentional confounding of order of measurement of emotions with monitoring of the subject's arousal by the experimenter might have strengthened differences in self-awareness between the demand and no-demand condition. As in the Coke et al. (1978, Experiment 2) experiment, demand-condition subjects were asked to report, and thus focus, on their emotions before the opportunity to help occurred, whereas no-demand condition subjects did not report their emotions until after the opportunity occurred. However, if self-focus had been manipulated through the order of measurement, it seems unlikely that high-empathy subjects exposed to the "before" order (demand) would reduce their helping under low arousal more than they increased it under high arousal—or, for that matter, that they would reduce it at all. Based on the obtained results, the confounding does not appear to have had much of an effect.

In sum, the results of our study pose some serious questions for the Coke et al. two-stage model. Strictly speaking, they do not *disconfirm* the model. Indeed, the arousal-feedback effect on helping was reproduced, and empathic concern was again implicated as a mediating variable. But apparently the model predicts helping only for would-be benefactors who are high in dispositional empathy and who find themselves in socially evaluative circumstances. It would be premature to attempt to finalize our speculation as a new model of empathy-induced helping until dispositional empathy and social evaluation have been investigated more fully. The role of public and private self-consciousness, in particular, deserves a closer look. However, it seems certain that the Coke et al. two-stage model must be expanded to incorporate these factors in some form. Both have important motivational and cognitive consequences and appear to deserve equal status with emotional arousal and perspective taking in a fully interactive model.

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