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Emotional Reactions to Dramatic Film Stimuli: The Influence of Cognitive and Emotional Empathy

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The idea that empathy may best be considered a multidimensional construct, consisting of both cognitive and emotional facets, has recently been gaining in popularity. To date, however, little research explicitly based on such a view has been carried out. We conducted the present experiment to explore the different influences of cognitive and emotional empathy on two types of responses to dramatic stimuli: positive and negative emotional reactions. Consistent with a multidimensional view of empathy, the two types of empathy exhibited different effects; positive emotional reactions were affected primarily by cognitive empathy, and negative emotional reactions were most heavily influenced by emotional empathy. The results are discussed in terms of their relevance to a multidimensional approach to the study of empathic responding.

Reactions to the observed experiences of others can be of many different kinds. Some of these reactions to others—such as attributions made to them or inferences drawn about them—are predominantly cognitive in nature. As such, little emotion typically results when such judgments are made. Other responses to observed behavior have a more affective tone, and considerable evidence indicates that strong emotional reactions can be evoked in those who observe the behavior of others (e.g., Aderman & Berkowitz, 1970; Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Stotland, 1969). One general term that has been used to describe both types of reactions is *empathy* (Davis, 1980, 1983c; Iannotti, 1979). Although empathy has sometimes been described solely as a cognitive process or reaction (e.g., Borke, 1971; Dymond, 1949) and sometimes solely as an emotional one (Stotland, 1969), recently it has been proposed that a productive alternative approach is to consider empathy as a set of related constructs encompassing both cognitive and affective reactions (Davis, 1980, 1983c; Deutsch & Madle, 1975).

The purpose of the present research was to investigate the utility of this multidimensional view of empathy and to do so through an examination of affective reactions to an arousing stimulus. More specifically, this research was designed to explore the influence of two kinds of dispositional factors (one a measure of cognitive empathy and the other a measure of emotional empathy) and one situational factor (instructional set) on reactions to dramatic film stimuli. Two broad classes of response—positive and negative affective states—were assessed in this investigation. One advantage of the multidimensional approach to empathy is that it lends itself easily to an explicit comparison of the manner in which cognitive and emotional predispositions affect such reactions. This study is designed to take advantage of this opportunity.

Empathy Research and Affective Reactions

Traditionally, an instructional set to adopt the perspective of a target person has been assumed to produce heightened emotional response in observers (e.g., Aderman & Berkowitz, 1970; Aderman, Brehm, & Katz, 1974; Davis, 1983a; Stotland, 1969; Toi & Batson, 1982). Although such a cognitive instructional set has often proved to have a significant influence on emotional reactions, this influence has not been observed consistently or for all emotional reactions. For example, Stotland (1969) reported an influence of instructional set on subjects' self-reported feelings of tension and nervousness after they viewed a target undergoing apparently painful stimulation. Aderman et al. (1974) reported that perspective-taking instructions produced heightened feelings of anger in subjects after they observed a target apparently receiving painful electric shocks. At the same time, however, Aderman et al. reported no effect of this instructional set on five other feeling states, including sadness, elation, and social affection. More recently, two investigations (Davis, 1983a; Toi & Batson, 1982) found that empathy instructions increased sympathetic feelings of warmth and compassion for an observed victim but had no impact on subjects' other, more self-oriented feelings of anxiety and distress. Additionally, the Davis (1983a) study included an individual difference measure of perspective-taking tendency; scores on this measure were found to be unrelated to either feelings of sympathy or personal unease.

The picture that emerges from this research is not particularly clear. Two investigations found that perspective-taking instructions led to greater negative feelings: tension or nervousness (Stotland, 1969) and anger (Aderman et. al., 1974). Two

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other studies reported that instructional set affects feelings of sympathy, but *not* personal feelings of distress (Davis, 1983a; Toi & Batson, 1982). Thus, the precise nature of the affective response likely to result from an instructional set to adopt another's perspective is unknown; it could be either clearly negative and self-oriented, or less clearly negative and more other oriented.

Of course, there are other factors—distinct and separate from this cognitive perspective-taking orientation—that can affect reactions to others. Indeed, the multidimensional approach to empathy is based on the belief that there are a number of independent but related factors that influence our reactions to others. Individual variation in emotional responsivity is one such factor. Archer, Diaz-Loving, Gollwitzer, Davis, and Foushee (1981) found that scores on a general measure of chronic emotionality (the Mehrabian and Epstein Emotional Empathy Scale) were associated with both self-reported feelings of sympathy and personal distress following exposure to a needy target. Davis (1983a), using a measure of a more specific emotional predisposition (the Empathic Concern scale from the Interpersonal Reactivity Index) reported similar effects. Thus, from this limited evidence it can be seen that emotional predispositions also influence affective reactions to targets. Note, also, that in these two investigations emotional predispositions influenced both the self-reported feelings of distress and feelings of sympathy for others; this contrasts with the Davis (1983a) and Toi and Batson (1982) results in which instructional set affected only feelings of sympathy.

Current Study

Although investigations of the effect of empathy on emotional reactions have been carried out, little research using a multidimensional approach has yet been conducted. The present study was designed as an initial step in the process of systematically investigating the separate influences of cognitive and emotional factors on affective reactions. Toward that end, both cognitive (perspective-taking) and emotional factors were included as independent variables in this design. Further, a variety of emotional reactions—both positive and negative in tone—were included as dependent variables in order to better discern the specific influences of cognitive and emotional factors on specific affective domains. All subjects in this study viewed videotape recordings of two different kinds of interactions: one primarily intended to elicit angry/hostile responses and one primarily intended to elicit sympathetic/sad responses. By including two stimulus films it was hoped that generalizations could be made about the nature of empathic reactions across different types of emotional stimuli.

Perspective taking was manipulated through an instructional-set procedure similar to that used in the studies reported earlier. Two instructional sets—modeled after Stotland's (1969) *imagine-him* and *watch-him* sets—were used. In addition, a neutral-set control condition was included in the experimental design. In previous studies it has often been unclear whether *imagine* instructions heightened natural empathic reactions or whether *objective-set* instructions reduced natural empathic reactions, or both. One purpose of the present study was to manipulate perspective taking and judge the effects of such instructional sets vis-à-vis an adequate control. In addition, dispositional tendency to take the perspective of the other (Davis, 1980, 1983c) was included as a second perspective-taking variable in order to provide converging evidence for a particular form of cognitive response involved in empathic reactions. Finally, independent of differences in perspective taking, individuals were distinguished according to their dispositional tendency to experience the emotional reaction of empathic concern (Davis, 1980, 1983c).

The primary dependent variables were derived from responses to the Multiple Affect Adjective Check List (MAACL; Zuckerman & Lubin, 1965), which was completed by subjects after they observed the stimulus material. As mentioned earlier, greater dispositional emotionality has recently been found to foster both feelings of sympathy and feelings of personal distress (Archer et al., 1981; Davis, 1983a). In contrast, a perspective-taking set has recently been found to influence feelings of sympathy but not feelings of distress (Davis, 1983a; Toi & Batson, 1982). Although caution should be exercised in interpreting such a limited number of studies, this pattern does suggest that cognitive and emotional facets of empathy might reliably affect different types of emotional response. Because the MAACL is a general measure of a range of emotional experiences, it is particularly well suited to investigating possible differences between cognitive and emotional empathy.

Method

Subjects and Overview

Subjects were 144 male undergraduates enrolled in psychology classes at Indiana University. All participants partially fulfilled course requirements through their participation. Upon arriving at the experimental location, subjects received a brief description of the study and completed a preliminary questionnaire. Subjects were then shown a series of film clips from the movies *Brian's Song* and *Who's Afraid of Virginia Woolf.* Following exposure to each film, subjects completed a questionnaire concerning their emotional reactions to the film.

Procedure

Subjects were run in groups of 2 to 4 persons. Upon arriving, subjects were seated in the lab. They were separated by wooden partitions that kept them from seeing one another. Subjects were given a brief description of the nature of the experiment and were instructed not to speak aloud during the experiments. They were then given the Interpersonal Reactivity Index (IRI). When all subjects had completed the questionnaire, they were given written instructions for viewing the film.

These instructions were of three types. Subjects receiving the perspective-taking instructions read the following:

> In a few moments, you will be watching a videotape involving a character named (character's name). While you are watching, please try to imagine how (character's name) feels as he engages in the interaction. While you are watching him, picture to yourself just how he feels. As you watch, concentrate on him in the experience. You should identify with his feelings and reactions to the situation. In your mind's eye, try to visualize how it feels to him to be taking part in the scenes depicted. After viewing the tape you will be asked several questions about it.

Subjects receiving the objective-set instructions read the following:

> In a few moments you will be watching a videotape clip involving a character named (character's name). While you are watching, please make careful observations of everything he does. Observe closely all characteristics of his behavior. You should observe carefully both the frequency and pattern of his nonverbal responses. Try to watch for hand gestures, shifts in position, et cetera. In sum, observe his behavior as carefully as you can. After viewing the tape you will be asked several questions about it.

Subjects receiving the neutral control instructions read the following:

> In a few moments you will be watching a videotape clip involving a character named (character's name). After viewing the tape you will be asked several questions about it.

Subjects were told to read the instructions carefully and, when finished, to read them again. Following this, the instructions were taken away from the subjects and the first stimulus tape was started. The order of viewing for the two tapes was reversed on alternate sessions. Early in the viewing of each tape, the tape was briefly stopped and the actor to whom the subjects were instructed to attend was pointed out. The tape was then started again.

After viewing the first tape, subjects were given the questionnaire packet containing the dependent measures for the film they had just viewed.

After this was completed, the subjects were given the viewing instructions for the second tape. These were the same as those for the original film clip, except that the name of the actor to be attended to was changed. Thus, no subjects were given one instructional set for the first film and a different set for the second. Subjects were again told to read the instructions twice, and when this was done, the instructions were again removed. The second film was started and the appropriate actor again pointed out. As before, the subjects were given the dependent-measures packet after the film clip ended.

Materials

Interpersonal Reactivity Index. The IRI is a 28-item self-report questionnaire that consists of four 7-item subscales, each of which assesses a specific aspect of empathy. Two of the subscales were of interest in this investigation: the Perspective-Taking and the Empathic Concern scales.[1] The Perspective-Taking scale measures the respondent's tendency, in everyday life, to adopt the point of view of other people. It is designed to measure a person's tendency to see things from others' points of view. A sample item from this scale is, "I sometimes try to understand my friends better by imagining how things look from their perspective." The Empathic Concern scale measures the respondent's tendency to experience feelings of warmth, compassion, and concern for others. As such, it is explicitly a measure of emotional reactivity. A typical item is, "I often have tender, concerned feelings for people less fortunate than me."

Evidence regarding the validity of these two subscales comes from several recent investigations. Scores on the Perspective-Taking scale have been linked to several qualities and behaviors that theoretically should be associated with a perspective-taking capacity. Davis (1983c) found Perspective-Taking scale scores to be correlated with a constellation of personal characteristics indicative of social competence and satisfaction (i.e., higher social self-esteem and a lack of shyness, loneliness, and social anxiety). Scores on the Perspective-Taking scale are also a significant predictor of accuracy in perceiving others (Bernstein & Davis, 1982).

The Empathic Concern scale has also received support as a measure of individual differences in emotionality. Davis (1983c) reported Empathic Concern scale scores to be strongly correlated with an existing measure of general emotional responsivity: the Mehrabian and Epstein Emotional Empathy Scale (rs = .63 and .56, for male and female respondents, respectively). Consistent with this, Davis (1983a) has found that higher Empathic Concern scale scores are associated with stronger emotional reactions following exposure to an appeal for help from a needy student.

Film stimulus. The stimulus tapes used in this experiment consisted of a series of short segments from the films *Brian's Song* and *Who's Afraid of Virginia Woolf.* Each tape consisted of several segments from one film, edited together into a tape of approximately 15-min running time. Each short segment was separated from the next by a 3- to 5-s pause.

The composition of both series of scenes was designed to concisely convey a synopsis of action from the full film. For instance, the *Brian's Song* tape consisted of scenes that established that the main character (Brian Piccolo) was a football player, that Brian had formed a strong friendship with another player on the team, and that Brian was then stricken with cancer. The tape ended with an emotional scene in Brian's hospital room. The *Virginia Woolf* tape established the main character's (George's) dissatisfaction with an unhappy marriage and portrayed the high level of psychological humiliation he suffered at his wife's hands. The tape ended with an emotional scene in which George was apparently on the verge of shooting his wife with a shotgun. The *Brian's Song* tape was thus heavily slanted toward producing feelings of sadness and sympathy, whereas the *Virginia Woolf* tape was more clearly designed to induce anger and hostility. In more general terms, of course, both tapes were clearly quite negative in tone; that is, neither contained much "upbeat" material that might evoke positive emotional reactions.

Dependent Measures

Following each of the stimulus tapes, a dependent-measures packet was administered to each subject.

Mood Adjective Check List. The MAACL (Zuckerman & Lubin, 1965) was the first questionnaire in the packet. It requires respondents to indicate which of a wide variety of mood states they are currently experiencing. Although the MAACL has traditionally been used to provide scores for three negative moods (hostility, anxiety, and depression), it can also be used to provide the three positive opposites of these moods (friendliness, tranquility, and happiness, respectively). In the present investigation, these six scores were produced by means of the following procedure.

Each of the three traditional MAACL scales—hostility, depression, and anxiety—is made up of two types of items. *Positive* items reflect the presence of the mood state measured by a particular scale; the more of these items respondents endorse, the higher their score on that MAACL scale. *Negative* items indicate the presence of a mood state theoretically opposite in affective tone to that measured by the MAACL scale. The *fewer* of these items that respondents endorse, the higher their scale score. In this investigation we computed six mood scores instead of three. To compute the hostility, anxiety, and depression scores, we simply added up the number of positive items for each scale that were endorsed by the subject. Three parallel measures were then constructed

[1] The other two IRI scales are the Fantasy scale, which measures the tendency to imagine oneself as a character in fictitious settings such as books, movies, and plays, and the Personal Distress scale, which measures feelings of unease and discomfort in tense interpersonal settings. The Empathic Concern scale was chosen as a measure of emotionality in this investigation because of its high correlation with a general measure of emotionality—the Mehrabian and Epstein Emotional Empathy scale (Davis, 1983c).

Table 1
Levels of Reported Positive Affect as a Function of Perspective-Taking Tendency and Instructional Set

Positive affect	Instructional set: Objective	Instructional set: Perspective-taking	Instructional set: Control
Friendliness			
Low perspective takers	2.15	3.23	3.22
High perspective takers	3.50	1.59	3.55
Happiness			
Low perspective takers	3.39	5.03	4.54
High perspective takers	5.87	2.61	5.33
Tranquility			
Low perspective takers	1.75	2.37	2.13
High perspective takers	3.12	1.25	2.81

by separately summing the number of negative items endorsed for each scale. These scores—which represent the positive moods "opposite" in emotional tone to the traditional MAACL scales—are *friendliness* (from the Hostility scale), *tranquility* (from the Anxiety scale), and *happiness* (from the Depression scale).[2]

Manipulation Checks

Two items designed as checks on the manipulated instructional-set variable were also included. Subjects were asked to respond on a 9-point scale to the items "To what extent did you attempt to imagine the feelings, thoughts, and reactions of the characters (George and Brian) in the preceding film clips?" and "To what extent did you attempt to carefully observe every action and behavior of the characters (George and Brian) in the preceding film clips?" Responses could range from 1 (*not at all*) to 9 (*very much*).

Results

For purposes of analysis, median splits were performed on the Perspective-Taking and Empathic Concern scales. The experiment thus consisted of a 2 (high–low dispositional perspective taking) × 2 (high–low dispositional empathic concern) × 3 (instructional set: perspective taking, objective, control) × 2 (the repeated factor of film type) orthogonal design. Affective reactions were assessed after each film.

Affective Measures

As described earlier, the MAACL (Zuckerman & Lubin, 1965) was used to assess subjects' mood following each film. Thus, after each film, three positive moods (friendliness, tranquility, and happiness) and three negative moods (hostility, anxiety, and depression) were measured. These six subscales were analyzed using 2 × 2 × 3 (between) × 2 (within) repeated measures analyses of variance. These analyses resulted in distinctive positive and negative mood effects and the results will be presented accordingly.

Positive moods. Analyses of the three positive-mood scales revealed a significant main effect of film on the measure of friendliness, $F(1, 130) = 8.40$, $p < .01$, such that *Brian's Song* evoked more positive interpersonal feelings than did *Virginia Woolf* (Ms = 3.15 and 2.30, respectively). Of greater theoretical significance is the fact that the perspective-taking variables affected all three positive moods. Dispositional perspective taking interacted with situationally manipulated perspective taking on reports of friendliness, $F(2, 130) = 4.31$, $p < .02$, tranquility, $F(2, 130) = 3.40$, $p < .04$, and happiness, $F(2, 130) = 3.58$, $p < .04$. The pattern of these interactions can be seen in Table 1. Simple effects analyses revealed that instructional set affected, in all three instances, emotional reactions for individuals high in dispositional perspective taking: friendliness, $F(2, 130) = 4.13$, $p < .02$; tranquility, $F(2, 130) = 3.83$, $p < .03$; and happiness, $F(2, 130) = 3.00$, $p = .05$. On the other hand, set did not have an effect on emotional reactions of individuals low in perspective taking (all ps > .15). In general, subjects high in dispositional perspective taking who were given perspective-taking instructions reported the least positive moods; subjects high in dispositional perspective taking who were given objective-set instructions reported the most positive moods; and dispositionally low perspective-taking subjects and the dispositionally high perspective-taking subjects who were given neutral instructions showed roughly equivalent, relatively intermediate levels of positive mood. Keeping in mind the negative nature of the film stimulus, individuals high in dispositional perspective taking who were given perspective-taking instructions displayed the most stimulus-congruent emotional reactions, and individuals high in dispositional perspective taking who were given objective-set instructions displayed the least stimulus-congruent emotional reactions. Furthermore, comparisons with the control conditions made it apparent that subjects high in disposi-

[2] The labels given to these positive scales should not be taken too literally. Each label represents an attempt to capture the flavor of the adjectives making up the scale; however, given the number of adjectives involved, this is a difficult task. For instance, the *friendliness* measure (from the Hostility scale) consists of 12 adjectives, including agreeable, amiable, cooperative, friendly, good-natured, kindly, and understanding. The *tranquility* measure (from the Anxiety scale) consists of 10 items, including calm, contented, happy, pleased, secure, and steady. The *happiness* measure (from the Depression scale) consists of 20 items, including active, enthusiastic, fine, fit, glad, good, inspired, merry, safe, and strong. Thus, each label was chosen to describe the dominant tone of the adjectives making up the scale; although we believe this was successfully accomplished, we do not mean to imply that these labels reflect the full meaning of each and every adjective included in a scale.

Further note that the three positive moods do not represent information redundant with that contained in the three negative measures. Consistent with the recent writings of Polivy (1981) and Zuckerman (1980), intercorrelations among the three negative scales (mean $r = .62$) and among the three positive scales (mean $r = .83$) are quite high. However, the mean correlation between all the positive and negative measures is much lower ($r = -.11$), clearly indicating that the positive and negative measures are tapping separate affective domains. More specifically, the mean correlation between each negative scale and its positive "opposite" is only −.13. Thus, practically speaking, the positive-mood measures in this study are orthogonal to the negative measures.

Table 2
Level of Reported Negative Affect as a Function of Dispositional Empathic Concern

	Dispositional empathic concern	
Negative affect	Low	High
Hostility	1.93	3.04
Anxiety	1.25	2.22
Depression	2.02	4.26

tional perspective taking were affected more by the perspective-taking instructions than by the objective-set instructions. None of the objective-set versus control comparisons for dispositionally high perspective-taking subjects approached significance (all $ps > .25$). On the other hand, all of the perspective-taking versus control comparisons approached or exceeded conventional levels of significance (sympathy, $p < .02$; tranquility, $p = .06$; happiness, $p = .10$).

Unsurprisingly, there was a significant main effect of empathic concern on the friendliness index such that individuals high in empathic concern reported a higher level of positive interpersonal feelings ($M = 3.65$) than did individuals low in empathic concern ($M = 2.11$), $F(1, 130) = 11.59$, $p < .001$.

This finding may be described as unsurprising because the friendliness index contains several adjectives (e.g., kindly, understanding) that are clearly related to the sympathetic and compassionate disposition ostensibly measured by the Empathic Concern scale. Thus, the friendliness index is closest in tone to the measures of sympathy/concern used in earlier investigations (i.e., Davis, 1983a; Toi & Batson, 1982); in a sense, then, this finding can be viewed as a validation of the Empathic Concern scale as a measure of people's tendency to experience sympathetic emotional reactions toward others. Empathic Concern was not related to either of the other two positive-mood scales. The final significant effect was an unexpected one: a three-way Empathic Concern × Instructional Set × Film interaction, $F(2, 130) = 3.18$, $p < .05$, that emerged for the happiness index. This effect seems to be due to the fact that under conditions of no instructional set, those high in empathic concern displayed slightly less happiness relative to those low in empathic concern following *Brian's Song* and markedly more happiness after viewing *Virginia Woolf*.

Negative moods. Although both films evoked reports of hostility, anxiety, and depression, subjects reported feeling more hostile following the *Virginia Woolf* film clips ($M = 3.56$) than they did following the *Brian's Song* film clips ($M = 1.79$), $F(1, 130) = 21.38$, $p < .001$, and they reported feeling more depressed following *Brian's Song* ($M = 3.75$) than they did after viewing *Virginia Woolf* ($M = 2.82$), $F(1, 130) = 4.76$, $p < .04$. Of greater theoretical significance, empathic concern had a significant main effect on reports of all three moods. As Table 2 reveals, subjects high in empathic concern reported feeling more depressed ($M = 4.26$ vs. 2.01), $F(1, 130) = 11.96$, $p < .001$, more hostile ($M = 3.04$ vs. 1.93), $F(1, 130) = 4.39$, $p < .04$, and more anxious ($M = 2.22$ vs. 1.25), $F(1, 130) = 5.00$, $p < .03$, than did subjects low in empathic concern. Thus individuals high in empathic concern underwent more intense negative reactions to the films than did subjects low in empathic concern.

In addition to the significant main effects of film and empathic concern, analyses revealed only two other significant findings. One of these was an interaction of empathic concern and dispositional perspective taking on the measure of anxiety, $F(1, 130) = 5.82$, $p < .02$. Dispositionally high perspective taking functioned to further increase emotional reactivity among individuals high in empathic concern on this measure, but it had the opposite effect on individuals low in empathic concern. The final significant effect was a main effect of instructional set on the measure of depression, $F(2, 130) = 3.52$, $p = .04$, such that subjects receiving either objective-set or imagine-self instructions reported more depression than did neutral control subjects ($Ms = 3.41$, 4.09, and 1.92, respectively). Given that neither of these effects was expected and both were restricted to a single measure of emotional reaction, we hesitate to speculate as to their causes.

Manipulation Checks

Analyses of variance identical to those conducted on the affective measures were carried out on the two manipulation-check items. No significant effects emerged. Given that responses to these two items were assessed after subjects completed the rather long (132-item) MAACL, it is possible that the effects of the manipulations on response to the film stimuli were no longer available in subjects' memories. In any event, it is apparent from the results shown in Table 1 that instructional set did have a clear impact on positive affect, despite the absence of any such effects on the manipulation-check items.

Discussion

A multidimensional approach recognizes that the term empathy encompasses a variety of individual predispositions and cognitive sets and that these various components of empathy can have distinctive influences on different kinds of reactions to other people. Consistent with this view, in the present study we found that the *emotional* independent variable of empathic concern and the *cognitive* variable of perspective taking were associated with clearly different patterns of affective response to the stimulus tapes.

In particular, two major differences between the cognitive and emotional predictors were observed. First, the cognitive and emotional facets of empathy influenced different affective reactions. Dispositional emotional empathy (the Empathic Concern scale) was consistently associated with variations in negative affective reactions, whereas the perspective-taking variables were not. In contrast, perspective taking had strong, consistent effects on all three measures of positive emotional experience, whereas empathic concern had a much more limited effect. Thus, distinctively different patterns of influence were found across three separate types of positive affect and three separate types of negative affect. It is important to note that

these results were obtained for two film stimuli markedly different in affective tone.

Second, in addition to affecting different emotional reactions, empathic concern and perspective taking were associated with different forms of effects. Empathic concern was principally associated with main effects, whereas the two perspective-taking variables consistently interacted. By including a measure of individual differences in perspective taking as well as a situational manipulation that included a neutral control group, it is possible to make fairly precise statements about the joint effects of these two cognitive variables. It appears from this investigation that only individuals high in dispositional perspective taking responded to the situational manipulation by taking the perspective of the protagonist. When instructed to imagine the feelings of the target, individuals high in perspective taking showed stimulus-congruent emotional reactions as evidenced by comparisons with the neutral control conditions. This was not true for individuals low in perspective taking. Furthermore, objective-set instructions did not result in differences in emotional experiences vis-à-vis the neutral control group for either high or low perspective takers. This pattern of results would seem to indicate that persons who regularly use their perspective-taking capacity are also more responsive to an explicit instruction to do so. One important implication of this is that individual differences in perspective taking may be most likely to influence behavior under specific conditions, particularly in situations that contain some explicit or implicit cue to engage in psychological role taking.

These data appear to have considerable implications for the multidimensional approach to empathy. Although it would be foolish to claim that these—or any—results provide "proof" that the multidimensional view is correct, it does seem apparent that such an approach can have clear advantages over more traditional research strategies. For instance, had empathy been defined in this experiment *only* as a cognitive variable—and thus with no measure of emotional responsivity included—there would have been virtually no evidence of empathy's impact on the negative states of depression, anxiety, and hostility. Had empathy been defined only as emotional responsivity—and no perspective-taking manipulation been included or perspective-taking trait measured—little influence of empathy on positive affective reactions would have been observed. It was only by explicitly defining empathy as a multifaceted construct—and then assessing its multiple facets—that the full scope of empathy's influence was apparent. It is in this fashion that the value of a multidimensional strategy is demonstrated: when the explicit use of such an approach provides more complete information about psychological functioning than is provided by other, more traditional approaches.

Theoretical Issues

The fact that perspective taking and empathic concern have separate and discriminable effects on affective reactions is important, but the task remains to provide some theoretical account for these effects and to discuss the relation between these results and those of earlier investigations. Remember that two earlier investigations using instructional sets (Aderman et. al., 1974; Stotland, 1969) found that such instructions heightened negative feelings of anger, tension, and nervousness; two other investigations (Davis, 1983a; Toi & Batson, 1982) found that instructional sets did not affect clearly negative feelings but did affect feelings of sympathy—an emotional state that seems to most closely resemble the positive emotion of friendliness in this study.

One procedural difference between these two sets of earlier studies may provide a clue as to why they obtained different results. The findings of Stotland (1969) and Aderman et al. (1974) were both obtained by using imagine-self instructions, which asked subjects to imagine how they *themselves* would feel if they were in the target's place. The Davis (1983a) and Toi and Batson (1982) investigations both used imagine-him instructions, which urged subjects to imagine how the *target* feels. Thus, imagine-self instructions have been most clearly associated with negative affective reactions and imagine-him instructions with more other-oriented (and perhaps more positive) reactions.

In the present experiment, of course, imagine-him instructions were used. Solely on the basis of previous research, then, we would expect this instructional-set variable to affect feelings of sympathy (and perhaps positive emotions more generally) and *not* to affect negative emotions. To a substantial degree, this is what occurred. Perspective-taking variables were for the most part not found to influence negative-mood states, but they were found to influence more positive states. Therefore, one useful research question suggested by these results concerns the differential effects of the imagine-self and imagine-him instructional sets. An understanding of why these two instructional sets differ in their impact on emotional reactions might prove valuable in specifying the mechanism by which perspective taking leads to affective responses. On the surface, it appears reasonable to speculate that imagine-self instructions figuratively place the observer in the role of the (usually) unfortunate target and thus create feelings that mirror the self-oriented negative affect experienced by that target. In contrast, an imagine-him set instructs the observer to attend to a distressed target without figuratively putting oneself in his or her place. In a sense, then, the imagine-him set does less to dissolve the self–other distinction, and an observer may therefore be less likely to experience the clearly *self*-oriented negative affect of the target and more likely to undergo different feeling states, especially the *other*-oriented feeling of sympathy.

This reasoning, although speculative, provides a means of reconciling the current results with earlier empathy research that used instructional sets. A separate issue to be addressed deals solely with the findings of this study: specifically, the differential effects in this investigation of the cognitive and emotional independent variables. That is, what can account for the fact that cognitive empathy chiefly influenced positive affect and emotional empathy influenced negative affect? One possible explanation for this finding involves the relative availability of positive and negative cues in the film stimulus. Clearly, the affective tone in both of the stimulus tapes was primarily negative. Although there were differences between the tapes (*Brian's Song* evoked more depression and *Virginia Woolf* evoked more hostility), they were similar in that there were few cues in either

tape to feel happy or tranquil. In order for viewers to display systematic variation in their positive moods, some higher level of cognitive work was probably necessary. That is, additional intellectual effort may well have been necessary in order to discern and react to the few positive emotional cues in the face of the stronger and more obvious negative ones. It seems reasonable, then, that variations in positive emotional reactions were largely associated with variations in cognitive, perspective-taking variables rather than in the measure of emotionality.

A second possibility is that regardless of the nature of the stimulus, negative emotional reactions may be somehow more basic or fundamental than positive ones. Thus, negative emotions may be less subject than positive emotions to cognitive manipulations (at least of the imagine-him variety) and may be more influenced by overall affective reactivity. According to this view, negative emotions are relatively less susceptible to manipulation through cognitive instructional set and more affected by a basic predisposition to respond emotionally to observed experiences. Conversely, positive emotional experience may somehow be less fundamental and more subject to intellectual manipulations and cognitive control. Both of these explanations can account for the observed pattern of results, although neither can be directly tested on the basis of the data collected in this study.

On the Nature of Positive and Negative Emotions

As we have seen, assessing both positive and negative emotional responses in this study was useful in demonstrating the separate effects of cognitive and emotional empathic predispositions. However, one final issue to be addressed concerns the general nature of positive and negative affective states. To some degree, few would quarrel with this dichotomous typology of affect. Many feelings (e.g., depression or anxiety) are viewed virtually universally as negative and unpleasant; likewise, feelings of elation or exuberance are seen by almost everyone as positive, enjoyable states. Unfortunately, there are other important affective reactions that fall less clearly into one of these two categories. An emotional reaction of sympathy or compassion is one such state. Is the tender, bittersweet feeling of concern for others a positive emotion? It certainly seems more positive than do the clearcut reactions of anxiety or depression, but is it positive in the same way that a feeling of exuberance or elation is? At the present time, no truly satisfactory answer seems to exist for this question.

Instead, what this suggests is that a simple good–bad typology may be inadequate to categorize all the meaningful emotional reactions resulting from our observation of others' distress. A less-global typology—based on more specific, relevant features of the affective response—might be more appropriate. One successful use of such a specific classification scheme can be found in Batson and his colleagues' study of the links between emotional state and altruism (e.g., Batson et al., 1981; Toi & Batson, 1982). Batson defined and measured two specific emotional states said to have clear relevance for helping behavior: empathic emotion (characterized by feelings of sympathy and concern) and personal distress (personal feelings of anxiety and unease). In a carefully reasoned way, Batson outlined the implications of these mood states for the occurrence of helping behavior under different situational circumstances and neatly demonstrated their disparate effects on behavior. Predictions were therefore made on the basis of the *specific* implications these affective states had for behavior, and not because they were positive or negative in tone. Batson's findings are particularly impressive in the face of what one reviewer (Wispe, 1980) has called the "meager" evidence for the role of "positive" and "negative" moods on mediating helping behavior.

Summary

When placed in the context of other relevant research, these results help provide further insight into the multifaceted nature of empathy. Some recent work has indicated that perspective taking—and not emotional responsivity—significantly influences certain cognitive social behavior, such as accuracy in person perception (Bernstein & Davis, 1982); other investigations have demonstrated the superiority of emotional empathy over perspective taking for predicting other behavior, such as altruism (Davis, 1983a, 1983b). Thus, whereas those previous studies emphasize the separate domains of cognitive and emotional empathy, the present study demonstrates the complex effects that both facets can have within the *same* general arena: that of affective reactions. Although much work remains to be done in order to fully understand the complex interplay of cognitive and emotional factors, results such as these underscore the bright promise of a careful multidimensional approach to the study of empathy.

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