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# The Effects of Perspective Taking on Motivations for Helping: Still No Evidence for Altruism

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*To investigate the existence of true altruism, the authors assessed the link between empathic concern and helping by (a) employing an experimental perspective-taking paradigm used previously to demonstrate empathy-associated helping and (b) assessing the empathy-helping relationship while controlling for a range of relevant, well-measured nonaltruistic motivations. Consistent with previous research, the authors found a significant zero-order relationship between helping and empathic concern, the purported motivator of true altruism. This empathy-helping relationship disappeared, however, when nonaltruistic motivators (oneness and negative affect) were taken into account: Only the nonaltruistic factors of oneness (merged identity with the victim) and negative affect mediated helping, whereas empathic concern did not. Evidence for true altruism remains elusive.*

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**T**he empathy-altruism hypothesis holds that empathic concern for another leads to truly selfless motivation to help that other. In a long line of research, Batson and his colleagues have generated support for this hypothesis (see Batson, 1991, for a review), thereby suggesting a magnanimous fundamental view of human nature: Individuals are capable of pure altruism, of acting with the truly selfless motivation to benefit another.

*Motivation to Help:*

*Nonaltruistic Challenges to the*

*Empathy-Altruism Hypothesis*

As philosophers have noted and empirical researchers have confirmed, however, it is difficult to tease apart

selfish and selfless motivations for helping others (Archer, 1984; Cialdini, 1991; Davis, 1994; Piliavin & Charng, 1990). For example, conditions that normally lead observers to feel empathic concern for a sufferer also normally lead them to feel sad. In such a case, it may be a helper's egoistic desire to relieve personal sadness, and not his or her empathic concern, that accounts for the increased aid usually provided in such circumstances (Cialdini et al., 1987; Schaller & Cialdini, 1988). Indeed, negative affect can lead to increased helping even when the source of the negative mood is unrelated to the opportunity to help (Cialdini, Kenrick, & Baumann, 1982).

The empathy-altruism hypothesis has recently been challenged on additional grounds. Prior research and theorizing has noted that a sense of shared personal identity with another increases the likelihood of assisting that person (e.g., Aron & Aron, 1986; Hornstein, 1982; Lerner, 1982; Piliavin, Dovidio, Gaertner, & Clark, 1981). Cialdini, Brown, Lewis, Luce, and Neuberg (1997) contended that this sense of shared identity,

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which they termed “oneness,” could account for data apparently supporting the empathy-altruism hypothesis. They argued that according to the empathy-altruism hypothesis, a prerequisite for altruistic motivation is that the self and other be perceived as separate entities (Batson, 1991, 1998). Cialdini et al. (1997) reasoned that aiding someone with whom one feels a sense of merged identity cannot be viewed as wholly selfless because in such a case helping another would be helping oneself. Hocutt (2000) articulates this position, “You must not help him because he is your friend or your brother. . . . There are to be no personal pronouns in statements of altruistic reasons” (p. 70).

Cialdini et al. base their argument on contemporary social-cognitive findings demonstrating that conceptual mergings of self and other identities do indeed occur (Aron, Aron, & Smollan, 1992; Aron, Aron, Tudor, & Nelson, 1991; Davis, Conklin, Smith, & Luce, 1996). Self-other overlap is also real in the genetic sense: Our genes reside not only within our own skins but also within the skins of related others (e.g., siblings, parents, offspring). Hamilton’s (1964) principle of inclusive fitness explains why helping a relative is genetically self-promoting. In terms of both psychological identity and biological substance, then, there are circumstances in which full self-other separation does not hold, making it difficult (if not impossible) to detach altruistic from egoistic motivation.

Furthermore, the factors that lead to empathic concern (for a review, see Batson, 1998) are often precisely the same factors that lead people to perceive a sense of oneness with another: kinship (Hamilton, 1964), relational closeness (Aron et al., 1991, 1992), shared group identity (Smith, Coats, & Walling, 1999; Tajfel & Turner, 1986), and perspective taking (Davis et al., 1996). As a result, when researchers use these factors to elicit empathic concern, they likely also elicit perceived oneness with the other, and it may be perceived oneness that accounts for the elevated helping typically found in so-called high empathy conditions.<sup>1</sup>

Finally, because prior research supporting the empathy-altruism hypothesis has not measured (and statistically controlled for) oneness, there is no way of knowing whether the manifest relationship between empathic concern and increased helping is itself causal or whether it is merely concomitant to a oneness-helping causal relationship.

To explore this reasoning, Cialdini et al. (1997) had participants report their willingness to provide aid to individuals of differing levels of relationship closeness (from near stranger to closest family member) in several need situations and measured four potential mediators of the reported aid: empathic concern, sadness, personal distress, and oneness. Three studies produced the same pattern of results: Although empathic concern

bore a substantial zero-order relationship with helping, that relationship disappeared when perceived oneness with the target was added to the regression models. Thus, empathic concern’s relationship to helping was accounted for by its shared variance with perceived oneness, which maintained a strong, significant relationship to helping over and above empathic concern. Cialdini et al. interpreted their findings as support for the argument that because participants’ decisions to help stemmed from oneness with the target, their fundamental motivation for helping was not selfless consideration of the other’s need.

In contrast, Batson et al. (1997) presented data claimed to preserve the validity of the empathy-altruism hypothesis. These researchers manipulated whether participants took the perspective of a target in need of assistance and whether participants shared group membership with that target; they measured willingness to help, empathic concern, and self-other merging. Results of two studies replicated the basic finding that taking the target’s perspective leads to both increased empathic concern and increased helping. Unlike Cialdini et al.’s (1997) results, however, participants’ perceptions of self-other overlap did not account for the link between empathic concern and helping. In an effort to reconcile their own results with those of Cialdini et al., Batson et al. suggested that Cialdini et al.’s use of imagined scenarios may not have reflected the experiences and motivations that would exist in true helping situations.

#### *Methodological Considerations*

Both sets of researchers have listed specific conditions they consider requisite for a meaningful empirical test of the relative contributions of empathic concern and nonaltruistic alternatives in predicting helping. To our knowledge, no research has yet simultaneously met both sets of conditions. Doing so contributes an important step forward in empirically advancing the empathy-altruism exchange.

Neuberg et al. (1997) specified three conditions researchers must meet to rule out nonaltruistic accounts for helping: They must (a) measure a set of relevant nonaltruistic motives, (b) reliably and validly measure those motives, and (c) assess the empathy-helping relationship while controlling for the full set of nonaltruistic motivations. Because Batson et al. (1997) did not meet any of these conditions—indeed no studies within the impressive empathy-altruism program of research has met them—Neuberg et al. argued that Batson et al. (1997) had not meaningfully defended the empathy-altruism hypothesis against nonaltruistic alternatives.

Batson (1997, p. 520) also provided a set of conditions required to satisfactorily test the idea that the empathy-helping relationship is due to self-other overlap: (a)

Include the same helping target throughout the research design, (b) elicit genuine empathic concern, (c) manipulate empathic concern directly (via perspective taking instructions), and (d) use a uniform helping measure.

*Reconciling the Differences:  
The Present Research*

The goal of the current research was to simultaneously meet the conditions required by Batson (1997) and by Neuberg et al. (1997) in testing the potential mediators of helping. We independently manipulated perspective taking and oneness with a target. We assessed participants' willingness to help the target and self-reports of empathic concern, sadness, personal distress, and oneness with the target. The research design met Neuberg et al.'s conditions by measuring a set of nonaltruistic motives, making it possible to statistically assess the empathy-helping relationship while controlling for the set of alternatives. The research design met Batson's conditions by (a) eliciting genuine empathic concern by placing participants in the same situation he has used in his studies, (b) directly manipulating empathic concern by utilizing the same perspective-taking instructions widely used by Batson and colleagues, (c) using the same target throughout the research design, and (d) administering a uniform helping measure.

We designed a novel manipulation of oneness that could be instantiated in the laboratory and would avoid any natural confounds associated with kinship, close relationships, and truly held group identities. Participants received false feedback indicating that their own brain wave activity was very similar to (vs. very different from) the brain wave activity of the target. Experimenters clearly conveyed that similarities and differences in brain wave profiles map onto similarities and differences in core aspects of identity. We sought to create perceptions of oneness that would be analogous to the intuitive feeling toward kin of "being of the same stuff."

We predicted that Cialdini et al.'s (1997) findings would be replicated using this different experimental approach. Specifically, the oneness manipulation was expected to increase helping by increasing perceptions of oneness with the target. We expected the perspective-taking manipulation to elevate empathic concern, sadness, distress, and oneness. We anticipated that the perspective-taking manipulation would increase helping only in the absence of available oneness information (in our control conditions) but not when participants had prior knowledge of their oneness with the target. Most central to the purpose of the research, we predicted that there would be a significant zero-order correlation

between empathic concern and helping but that this relationship would disappear when controlling for the set of nonaltruistic affective motivators. Furthermore, we predicted that only nonaltruistic motivators would significantly mediate effects of the manipulations on helping.

## METHOD

### *Participants*

One hundred sixty-nine undergraduate students (69 men, 100 women) participated in exchange for partial fulfillment of an Introductory Psychology course requirement. We used a 3 (oneness: high, low, control)  $\times$  2 (perspective taking: take other's perspective, be objective) between-subjects factorial design. Participants were randomly assigned to one of these six conditions. Nineteen participants were excluded from analysis because they reported substantial suspicion about either the manipulations or the helping measure.<sup>2</sup>

### *Procedure*

Participants were greeted individually by an experimenter and seated in the laboratory. The experimenter explained that the study investigated whether radio interviews are processed more effectively when the person listening to the interview and the person being interviewed have similar versus dissimilar thinking styles. Participants were told that they would listen and respond to a randomly selected interview from the show "News From the Personal Side" (Batson et al., 1997). They were told that prior to listening to the interview, they would have their brain activity patterns measured via EEG to assess the similarity between themselves and the person being interviewed.

The experimenter explained that brain wave patterns are basically a "fingerprint" of one's personality and that these patterns can be used to analyze the fundamental similarities and differences between people. The experimenter explained that to assess the differences and similarities between the participant and the interviewees, the participant's brain wave profile would be compared to that of the interviewee. Participants were told that they would wear an EEG headband and view a series of images and words on a nearby computer screen while their brain activity was measured. They were asked to simply relax, watch the computer screen, and let their minds free-associate. During this process, the experimenter turned off the lights and left the room.

Once the EEG procedure was complete, the experimenter returned with pre-prepared EEG results. First, a hardcopy Similarity Report indicated that one of the three interviewees had a brain wave profile 51% similar to the participant, a figure that the experimenter

expressed was typical for any two randomly selected people. The experimenter emphasized how rare an occurrence it was that the second interviewee's brain wave profile was 91% similar and asked if this person might be the participant's brother or sister. The experimenter then emphasized how dissimilar the participant's own brain activity was to the third interviewee, whose profile was only 12% similar.

Next, the participant was shown a graph of his or her own brain wave profile. Comparing this graph to those of the three interviewees, the experimenter emphasized the similarity with the 91% similar interviewee (in this case, the graphs were almost identical) and the dissimilarity with the 12% similar other (very dissimilar-looking graphs). The graph for the third interviewee was neither very similar nor dissimilar.

Participants were then shown their own Individual Report and reports for the three interviewees. These reports contained two key measures used to identify the percentage of the population possessing similar brain activity profiles (and, in turn, similar personality) to the subject of the EEG. The experimenter plotted each participant on a Population Grid highlighting the percentage of the population falling into each section of the grid. The participant was always plotted within a small box marked ( $< 1\%$ ) indicating that he or she shared a brain activity profile with less than 1% of the population. The 91% similar interviewee was plotted in the same  $<1\%$  box as the participant, whereas the 12% similar interviewee was plotted in a distant  $<1\%$  box. Again, the experimenter emphasized how rare that such striking similarities and differences would be revealed between the participant and the others. The 51% similar interviewee was plotted in between the other two interviewees.

Participants then selected one of three envelopes and were told that their selection would determine, at random, which of the three interviewees they would be assigned. In actuality, all three envelopes named a woman, Katie Banks (Batson et al., 1997), as the selected interviewee.

*Oneness manipulation.* Oneness was manipulated immediately after participants selected the Katie Banks interview by telling them that Katie was the interviewee whose brain wave profile was described earlier as being either very similar (91% similar) or very dissimilar (12% similar) to the participant's profile. Participants in the high oneness condition were told that Katie Banks was the interviewee described as having a very similar profile. Participants in the low oneness condition were told that Katie was the interviewee described as having a very dissimilar profile. Participants in the control condition received no similarity information.

*Perspective-taking manipulation.* Perspective taking was manipulated by instructing participants to take a particular mindset while listening to the interview. The perspective-taking and objective instructional sets were identical to those employed by Batson et al. (1997). Participants in the perspective-taking condition were instructed to

try to imagine how the person feels about what has happened and how it has affected his or her life. Try not to concern yourself with attending to all the information being presented. Just concentrate on trying to imagine how the person in the interview feels.

Participants in the objective condition were instructed to

try to be as objective as possible about what has happened to the person and how it has affected his or her life. To remain objective, do not let yourself get caught up in imagining what this person has been through and how he or she feels as a result. Try to remain detached as you listen.

Experimenters were blind to participants' perspective-taking instructions (instructions were provided on a sheet of paper).

After giving participants their perspective-taking instructions, the experimenter left the room while the participant listened to the recorded interview. The Katie Banks interview was identical to that used by Batson et al. (1997) except that in the present study Katie was identified as an Arizona State University (ASU) student. In the interview, Katie Banks tells of a recent tragedy in which her parents were killed in a car accident. She explains that she might have to drop out of school to work full time, unless she can find help raising money to care for her little brother and sister. When the interview ended, participants completed an Interpersonal Reactions questionnaire, which contained items assessing their emotional reactions to the interview as well as their perceived level of oneness with Katie. After participants completed this questionnaire, the experimenter returned with an envelope and explained that Dr. Edmonds (the professor purportedly in charge of the study) had asked all participants listening to the Katie Banks interview to read a letter he had written. The experimenter asked the participant to read the letter and then left the room.

In his letter, Dr. Edmonds suggested that participants might volunteer some of their time to help Katie. Included in the envelope was a handwritten letter from Katie, which described how participants might help by addressing and stuffing envelopes to be sent to potential donors. A response form was included on which participants could indicate whether they were willing to help



and, if so, how many hours they would donate: 2 to 4, 5 to 7, or 8 to 10. The helping request (including the letters and helping form) was identical to that used by Batson et al. (1997).

After allowing sufficient time for the participant to respond to the request, the experimenter returned, carefully probed for suspicion, debriefed the participant, and gave the participant his or her experimental credit.

### Measures

The primary dependent variable was how much participants were willing to help Katie. Helping was coded on a 4-point scale ranging from 1 (*not willing to help*) to 4 (*8-10 hours*).<sup>3</sup>

Responses to the Interpersonal Reactions Questionnaire were used to assess potential affective mediators of helping. The affect items and scales on this questionnaire were identical to those used by Batson et al. (1997). The construction of composite affect measures was based on the use of these measures in prior research (e.g., Batson, O'Quin, Fultz, Vanderplas, & Isen, 1983; Batson et al., 1997) and on factor analytic work regarding affective responses to another's suffering (Fultz, Schaller, & Cialdini, 1988). Averaged responses to the items *sympathetic*, *compassionate*, *soft-hearted*, *warm*, *tender*, and *moved* formed the empathic concern index ( $\alpha = .86$ ). Averaged responses to the items *alarmed*, *troubled*, *distressed*, *upset*, and *disturbed* formed the personal distress index ( $\alpha = .87$ ). Averaged responses to the items *sad*, *low-spirited*, *feeling low*, *heavy-hearted*, *grieved*, and *sorrowful* formed the sadness index ( $\alpha = .91$ ). All responses were measured using 7-point Likert-type scales. After recording their emotional responses, participants completed the Inclusion of Other in the Self Scale (IOS) (Aron et al., 1992). For the IOS, participants indicated which of a set of increasingly overlapping circles best depicted the extent to which they felt connected to Katie using a 7-point scale with endpoints of *two non-overlapping circles* (1) and *two almost completely overlapping circles* (7). Participants also indicated "to what extent you would use the term 'we' to characterize you and this person [Katie Banks]" using a 7-point Likert-type scale with endpoints *not at all* (1) to *extremely* (7). Averaging responses to these latter two items ( $\alpha = .81$ ) formed a perceived oneness index.

### RESULTS

Our theory led us to generate very specific predictions regarding the pattern of means across the conditions of our six-cell design. We applied a contrast analysis strategy to test these predicted patterns (Levin & Neumann, 1999; Rosenthal & Rosnow, 1985). Key advantages of the contrast strategy are that it permits a more

precise, parsimonious, and powerful test of specific interaction patterns than standard ANOVAs can provide while remaining responsive to Type I error. To apply the contrast strategy, we contrast coded each of the six cells of the design along a single dimension. For each hypothesis test, we assigned each cell a contrast weight to represent the predicted pattern of means (see below). One-way ANOVAs were used to test the 1 *df* *F* value for each set of contrast weights as well as the *F* value for the test of departures from the predicted pattern (expected to be nonsignificant; see Levin & Neumann, 1999).

### Effects of Manipulations on Putative Mediators

Cell means and standard deviations for the perceived oneness, empathic concern, sadness, and distress composites are provided in Table 1.

*Empathic concern.* First, a one-way ANOVA showed that there was significant between-cell variance in empathic concern across the six conditions,  $F(5, 139) = 7.15, p < .001$ . In line with much prior research, we expected that participants would report more empathic concern after taking the perspective of the target than after remaining objective. The test of this contrast was significant,  $F(1, 143) = 34.04, p < .001$  ( $R^2 = .19$  – medium to large effect size, based on Cohen, 1977).<sup>4</sup> The test of the residual contrast was not significant,  $F_{\text{residual}}(4, 143) = 0.50, ns$ , indicating that the perspective-taking manipulation accounted for most of the between-cell variance in empathic concern.

*Sadness and distress.* First, one-way ANOVAs showed that there was significant between-cell variance in both sadness,  $F(5, 141) = 5.47, p < .001$ , and distress,  $F(5, 141) = 4.38, p = .001$ . A contrast confirmed the predicted main effect of perspective taking on sadness,  $F(1, 145) = 25.75, p < .001$  ( $R^2 = .15$  – medium effect size) and distress,  $F(1, 145) = 19.46, p < .001$  ( $R^2 = .12$  – medium effect size). The test of the residual contrasts were nonsignificant for both sadness,  $F_{\text{residual}}(4, 145) = 0.49, ns$ , and distress,  $F_{\text{residual}}(4, 145) = 0.65, ns$ , indicating that the perspective-taking manipulation explained most of the between-cell variance in sadness and distress.

*Oneness.* A one-way ANOVA showed that there was significant between-cell variability in the amount of perceived oneness with the target,  $F(5, 144) = 7.97, p < .001$ . Within the experimental conditions where oneness was explicitly manipulated, we expected a simple effect of the manipulation on perceptions of oneness. However, in the control cells in which no information about oneness was provided, we expected that perspective taking would increase perceived oneness relative to remaining objective (consistent with Davis et al., 1996). The contrast weights used to represent this interaction were high

**TABLE 1: Mean Perceived Oneness, Sadness, Distress, and Empathic Concern by Oneness and Perspective-Taking Manipulations**

Perspective-Taking Manipulation	Oneness Manipulation		
	Low	Control	High
Perceived oneness ( $n = 150$ )			
Perspective taking	2.35 (0.83)	2.83 (1.25)	3.98 (1.52)
Objective	2.26 (1.20)	2.23 (1.11)	3.33 (1.49)
Empathic concern ( $n = 145$ )			
Perspective taking	4.59 (1.10)	4.64 (1.32)	4.85 (1.08)
Objective	3.59 (1.20)	3.47 (0.97)	3.83 (1.03)
Sadness ( $n = 147$ )			
Perspective taking	4.12 (1.62)	4.30 (1.38)	4.56 (1.29)
Objective	3.06 (1.20)	3.19 (1.34)	3.37 (1.35)
Distress ( $n = 147$ )			
Perspective taking	3.56 (1.79)	3.76 (1.16)	4.18 (1.25)
Objective	2.84 (1.18)	2.85 (1.22)	2.90 (1.58)

NOTE: Standard deviations are in parentheses.

oneness, perspective taking (2); high oneness, objective (2); control, perspective taking (1); control, objective (-1); low oneness, perspective taking (-2); and low oneness, objective (-2). The test of this contrast was significant,  $F(1, 148) = 31.47, p < .001$  ( $R^2 = .18$  – medium to large effect size). The test of the residual contrast was not significant,  $F_{\text{residual}}(4, 148) = 1.86, ns$ .

#### Effects on Helping

Cell means and standard deviations for the helping measure are found in Table 2. First, a one-way ANOVA showed that there was significant between-cell variability in the amount of help participants were willing to donate across the six cells of our design,  $F(5, 144) = 3.94, p < .01$ . Next, we assigned contrast weights to test the predicted interactive effects of the oneness and perspective-taking manipulations on helping. We expected that the high and low oneness conditions would yield the highest and lowest levels of helping, respectively. Furthermore, we expected perspective taking to elicit different levels of helping only in the control condition where oneness information was absent. The contrast weights employed were identical to those used to test effects on the oneness composite: high oneness, perspective taking (2); high oneness, objective (2); control, perspective taking (1); control, objective (-1); low oneness, perspective taking (-2); and low oneness, objective (-2). The test of this contrast was significant,  $F(1, 148) = 18.58, p < .001$  ( $R^2 = .11$  – medium effect size). The test of the residual contrast was not significant,  $F_{\text{residual}}(4, 148) = 0.30, ns$ , indicating that the observed pattern of helping did not differ significantly from the predicted pattern.

We also tested a possible main effect of perspective taking on helping. The test of this contrast was

**TABLE 2: Means for Helping Volunteered by Oneness and Perspective-Taking Manipulations**

	Oneness Manipulation		
	Low	Control	High
Perspective-taking manipulation			
Perspective taking	1.48 (0.51)	1.78 (0.80)	2.14 (0.80)
Objective	1.43 (0.51)	1.54 (0.58)	1.92 (1.02)

NOTE:  $n = 150$ . Standard deviations are in parentheses.

nonsignificant,  $F(1, 148) = 1.75, ns$ , and the test of the residual contrast was significant,  $F(4, 148) = 4.41, p < .01$ , demonstrating that a simple effect of perspective taking did not account for the pattern of helping means across conditions.

#### Mediation of Manipulated Variables on Helping

We used a structural equation modeling approach to investigate the mediation of the oneness and perspective-taking manipulations on helping. Of central interest was the relative contribution of the altruistic motivator (i.e., empathic concern) and nonaltruistic motivators (i.e., oneness, sadness, and distress) in mediating the effects of the manipulations on helping. Zero-order correlations among the putative mediators and helping are provided in Table 3.

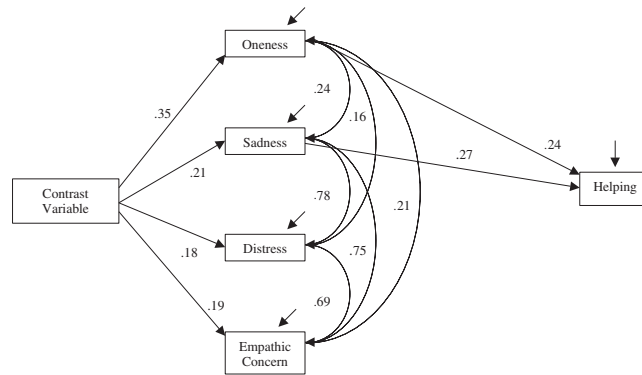
The contrast coded oneness and perspective-taking manipulations, which in the earlier contrast analysis predicted the pattern of helping across the six-cell design, served as the exogenous variable. We included a set of potential nonaltruistic mediators (perceived oneness, sadness, personal distress) along with the potential mediator underlying altruistic motivation: empathic concern. Finally, the helping measure served as the outcome variable. Figure 1 depicts the model illustrating the mediation of helping. The path analysis confirmed our prediction that only nonaltruistic mediators would bear a significant relationship to helping outcomes and that empathic concern would not. Both oneness and sadness significantly mediated effects on helping, whereas empathic concern and distress did not. This model adequately fit the data,  $\chi^2(3, n = 143) = 5.46, p = .14$ , Root Mean Square Error of Approximation (RMSEA) = .076, Comparative Fit Index (CFI) = .99, Standardized Root Mean Squared Residual (SRMR) = .034.<sup>5</sup> All paths depicted in the model are significant at  $p < .05$  (two-tailed) or less.

Chi-square difference tests showed that removing oneness as a mediator of helping significantly reduced the model's fit,  $\chi^2_{\text{difference}}(1) = 9.19, p < .01$ , and that removing sadness as a mediator of helping also significantly reduced the model's fit,  $\chi^2_{\text{difference}}(1) = 11.93, p < .01$ .

**TABLE 3: Correlations Among Helping, Oneness, Sadness, Distress, and Empathic Concern**

	Helping	Oneness	Sadness	Distress	Empathic Concern
Helping	1.00				
Oneness	.32	1.00			
Sadness	.35	.36	1.00		
Distress	.26	.26	.81	1.00	
Empathic concern	.27	.32	.79	.72	1.00

NOTE:  $n = 143$ . All correlations are significant at  $p < .01$  or lower.



**Figure 1** A path model representing the effects of the contrast coded oneness and perspective-taking manipulations on helping, as potentially mediated by perceived oneness, empathic concern, sadness, and personal distress.

NOTE: All depicted paths are significant ( $p < .05$  or less). This model adequately fit the data,  $\chi^2(3, n = 143) = 5.46, p = .14$ , Root Mean Square Error of Approximation (RMSEA) = .076, Comparative Fit Index (CFI) = .99, Standardized Root Mean Squared Residual (SRMR) = .034.

.001. Although empathic concern exhibited a significant zero-order correlation with helping ( $r = .27, p < .001$ ), a chi-square difference test showed that adding a mediational path from empathic concern to helping did not enhance the fit of the model,  $\chi^2_{\text{difference}}(1) = 0.05, ns$ .

We were, however, not fully satisfied that this analysis definitively demonstrated the lack of an underlying selfless component in helping. Of key concern to us were the notably high correlations among the potential affective mediators: empathic concern, sadness, and personal distress (see Table 3 and Figure 1). The magnitude of these correlations suggested that these measures might have been tapping the same underlying construct. For example, to the extent that participants, when indicating their sadness or distress, were reporting sadness or distress for Katie, then these affective measures may have in fact been tapping different forms of empathic concern.<sup>6</sup>

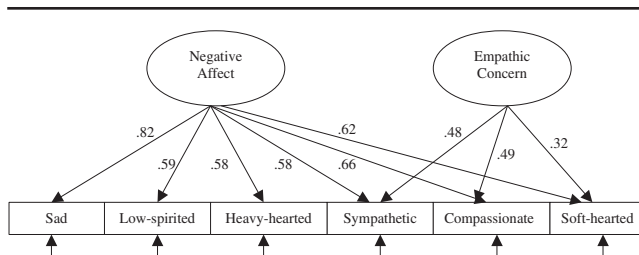
This reasoning motivated us to focus further analysis on the measurement of the potential affective mediators

of helping. We were particularly interested in isolating a meaningful measure of empathic concern, a measure of other-oriented affect distinct from general negative affect. Data from our own previous research on the role of affect in prosocial behavior suggested that a general-specific (GS) measurement model (Schmid & Leiman, 1957; see Gustafsson & Balke, 1993, for an application) could be used to effectively depict the relationship between latent constructs of empathic concern and general negative affect (see Figure 2). The model included a general latent factor of negative affect, indicated by six items: *sad*, *low-spirited*, *heavy-hearted*, *sympathetic*, *compassionate*, and *soft-hearted* (all measured using 7-point Likert-type scales). In addition, we included a specific empathic concern factor to account for shared covariation among the items *sympathetic*, *compassionate*, and *soft-hearted*, above and beyond that accounted for by general negative affect. Note that the correlation between the general negative affect factor and the specific empathic concern factor was constrained to be zero. The fit of this model was assessed with a sample of 300 participants combined across two studies that used identical affect items and similar helping paradigms. Results from these prior studies suggested that the GS model adequately accounted for covariation among the affect items,  $\chi^2(6, n = 300) = 12.60, p = .05$ , RMSEA = .06. Note that a one-factor model did not fit these data,  $\chi^2(9, n = 300) = 42.63, p < .001$ , RMSEA = .12. This is important because it suggests that participants were not simply reporting different shades of other-oriented affect on all affect items.

We replicated this GS measurement approach in the present study to model the relationship between empathic concern and general negative affect. The GS model demonstrated a close fit to these data,  $\chi^2(6, n = 146) = 7.65, p = .27$ , RMSEA = .04, whereas the one-factor model did not,  $\chi^2(9, n = 146) = 26.64, p = .002$ , RMSEA = .12. Given this replication, we felt confident using this new measurement model of affect to replace our original, highly correlated affective composite measures.

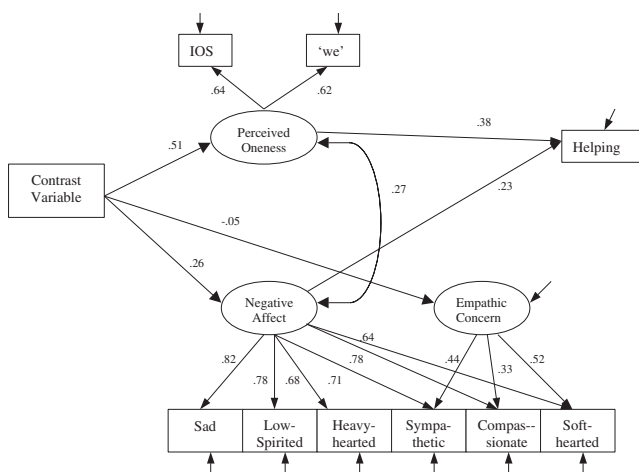
As before, the new mediational model included the contrast coded oneness and perspective-taking manipulations as the exogenous variable and helping as the outcome variable. General negative affect, empathic concern, and perceived oneness were included as potential mediators. Figure 3 depicts this full structural equation model.

Results of this analysis were consistent with those of the original path analysis and confirmed our prediction that nonaltruistic mediators (oneness and general negative affect) would bear a significant causal relationship to the helping outcome, whereas empathic concern would not. Only perceived oneness and general negative affect significantly mediated effects on helping. This model



**Figure 2** A general-specific factor model depicting potential affective motivators of helping based on a sample of 300 participants from prior research.

NOTE: The model includes a general factor of negative affect and a specific factor of empathic concern. Note that the factors are uncorrelated, showing that empathic concern accounts for covariance among the items sympathetic, compassionate, and soft-hearted, above and beyond that accounted for by general negative affect.



**Figure 3** A structural equation model representing the effects of manipulated oneness and perspective taking on helping, as potentially mediated by oneness, general negative affect, and empathic concern.

NOTE: The path from the exogenous variable to empathic concern is nonsignificant, and all other paths are significant ( $p < .05$  or less). The model adequately fit the data,  $\chi^2(29, n = 146) = 44.94, p = .03$ , Root Mean Square Error of Approximation (RMSEA) = .06, Comparative Fit Index (CFI) = .97, Standardized Root Mean Squared Residual (SRMR) = .05. IOS = Inclusion of Other in the Self Scale.

adequately fit the data,  $\chi^2(29, n = 146) = 44.94, p = .03$ , RMSEA = .06, CFI = .97, SRMR = .05. Approximately one quarter of the variability in helping was accounted for in the model ( $R^2 = .27$ ). All paths depicted in the model are significant at  $p < .01$  (two-tailed) or less, except for the path from the contrast variable to empathic concern.

Chi-square difference tests showed that removing oneness as a mediator of helping significantly decreased the model's fit,  $\chi^2_{\text{difference}}(1) = 10.59, p < .01$ , and that removing general negative affect as a mediator of helping also significantly reduced the model's fit,  $\chi^2_{\text{difference}}(1) = 6.01, p < .05$ . A chi-square difference test showed that add-

ing a causal path from empathic concern to helping did not enhance the fit of the model,  $\chi^2_{\text{difference}}(1) = 0.37, ns$ .

## GENERAL DISCUSSION

The present study met all of the methodological requirements proposed by Batson (1997) and Neuberg et al. (1997) to test the links between perspective taking, empathic concern, and helping. Results of the present study supported our predictions. First, the data were consistent with a model in which experimentally increasing oneness should increase helping, whereas instructing participants to take the target's perspective should only increase helping when participants have no explicit information about oneness. Second, the source of altruistic motivation—empathic concern—did demonstrate a significant zero-order relationship with helping. Indeed, the zero-order relationship between empathic concern and helping was nearly as strong as the relationship between perceived oneness and helping. However, the empathy-helping relationship disappeared when statistically controlling for the set of nonaltruistic motivators. Finally, our data indicate that helping was functionally mediated by only nonaltruistic constructs (perceived oneness, nonempathic negative affect) and not by empathic concern. Note that the pattern of helping means across conditions closely mirrored the pattern of perceived oneness across conditions and did not mirror the pattern of empathic concern across conditions (see Tables 1 and 2). Accordingly, the same set of contrast weights significantly predicted both perceived oneness and helping, whereas the contrast weights that so nicely predicted the effects of perspective taking on empathic concern failed to predict helping. Thus, these data pose a substantial challenge to the empathy-altruism hypothesis.

It is important to note that if we had only met Batson's (1997) methodological criteria and had not also included a set of alternative motivator variables, the results would have appeared to support the empathy-altruism hypothesis. This is precisely why Cialdini et al. (1997) called into question data previously used to support the empathy-altruism hypothesis. Helping outcomes can erroneously appear to be motivated by empathic concern, and thus appear to be altruistic, if researchers do not also follow Neuberg et al.'s (1997) major methodological requirement: Examine the empathy-helping relationship while statistically controlling for a full set of plausible nonaltruistic mediators. In meeting both sets of methodological requirements, the current work takes a meaningful step forward in resolving the previous debate.

The present study also takes a step forward in identifying issues relevant to the measurement of potential affective mediators of helping, in particular the construct of



empathic concern. Our analysis suggests that researchers can meaningfully measure empathic concern but that doing so may not be as simple as measuring responses to items purported to indicate other-oriented emotion, as researchers on both sides of the empathy-altruism debate have done in the past (e.g., Batson et al., 1983, 1991, 1997; Batson, Turk, Shaw, & Klein, 1995; Cialdini et al., 1997). The present data suggest that such items tap into both empathic concern and more general negative affect and that a meaningful measure of other-oriented emotion can be achieved only once the more general affective component is removed. The general-specific measurement model we present is a step toward understanding how to meaningfully measure and differentiate such affective states.

#### *Future Directions*

We believe the present study sets the stage for the development of more integrative models linking the functional relationships among perspective taking, oneness, empathy, other help-relevant affective states, and helping itself. In particular, the interactive effects of perspective taking and oneness may be of great importance. For example, it might be the case that perspective taking enhances perceptions of oneness in circumstances where there exist indicators of high oneness or when oneness-relevant information is absent. In addition, although we have seen little compelling evidence that empathic concern motivates help when it is costly—in such circumstances, oneness appears to be a better candidate—it may have some unique causal influence when help is of low cost (Neuberg et al., 1997). Moreover, there exists a wealth of findings on the roles played by nonaltruistic affective states (e.g., sadness, distress) in facilitating and inhibiting helping. Finally, it seems quite clear that perceptions of high oneness facilitate helping. The task for the future is to pull these various findings together in a theoretically cohesive, integrative manner. We are currently pursuing this goal.

The question of whether true altruism exists is a question about human nature—the capacity to act selflessly. In our explorations of this question, we and others have come on what we believe to be a fundamental facet of human nature—the ability to include others in the definition of self and to see the self in others. We hope future research elucidates these human capacities as fruitfully and carefully as it has examined the possibility of true altruism.

#### *Conclusion*

With this research, we do not intend to simply rehash previous debates over the existence of true altruism. Incorporating (for the first time) critical suggestions

made by those on both sides of the debate, the present study provides evidence suggesting that although motivations for helping can appear altruistic, those motivations may be ultimately egoistic in nature. Note that we are not claiming that the oneness perspective should replace the empathy-altruism hypothesis as the sole explanation for helping that flows from perspective taking. Indeed, the present findings also demonstrate that enhanced negative affect, as well as perceptions of oneness, led participants to act prosocially after taking another's perspective. In addition, although the present data cannot directly comment on them, other egoistic motivations also may uniquely underlie similar decisions to help others. Our claim, then, is broader: The evidence gathered across numerous studies compellingly points to egoistic, rather than altruistic, explanations for prosocial behavior, including those forms of aid for which purely selfless motives have been claimed.

#### NOTES

1. The Batson et al. convention of referring to perspective-taking manipulations as “empathy manipulations” (e.g., Batson et al., 1991, 1997; Batson, Turk, Shaw, & Klein, 1995), therefore, may be misleading because perspective-taking manipulations increase not only empathic concern but also other emotions (i.e., sadness, distress) as well as oneness.

2. Suspicious participants were distributed across conditions,  $\chi^2(2) = 2.37$ , *ns*, and including suspicious participants in the analyses did not alter the results.

3. Similar to Cialdini, Brown, Lewis, Luce, and Neuberg (1997), we used a continuous, as opposed to dichotomous, helping measure because it provided more textured information about participants' willingness to help, above and beyond simply deciding to help. Note that dichotomous and continuous forms of this dependent variable were highly correlated ( $r = .82$ ) and that results of a logistic regression analysis of the dichotomous measure were equivalent to those obtained from analysis of the continuous measure.

4. Note that this test is equivalent to the main effect test of perspective taking in a standard 2 (perspective taking, objective)  $\times$  3 (oneness: high, low, control) ANOVA.

5. The fit of all models was assessed using maximum likelihood estimation, with a Satorra-Bentler adjustment for multivariate kurtosis (a robust method for calculating standard errors) (Satorra & Bentler, 1994). All chi-square difference tests were performed after correcting for the adjustment.

6. We thank C. Daniel Batson for insightfully pointing out this potential flaw in the present analysis.

#### REFERENCES

- Archer, R. L. (1984). The farmer and the cowman should be friends: An attempt at reconciliation with Batson, Coke, and Pych. *Journal of Personality and Social Psychology*, 46, 709-711.
- Aron, A., & Aron, E. N. (1986). *Love and the expansion of self: Understanding attraction and satisfaction*. Washington, DC: Hemisphere.
- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of the other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, 63, 596-612.
- Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology*, 60, 241-253.
- Batson, C. D. (1991). *The altruism question: Toward a social-psychological answer*. Hillsdale, NJ: Lawrence Erlbaum.

- Batson, C. D. (1997). Self-other merging and the empathy-altruism hypothesis: Reply to Neuberg et al. (1997). *Journal of Personality and Social Psychology*, 73, 517-522.
- Batson, C. D. (1998). Altruism and prosocial behavior. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, 4th ed., pp. 282-316). Boston: McGraw-Hill.
- Batson, C. D., Batson, J. G., Slingsby, J. K., Harrell, K. L., Peekna, H. M., & Todd, R. M. (1991). Empathic joy and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, 61, 413-426.
- Batson, C. D., O'Quin, K., Fultz, J., Vanderplas, M., & Isen, A. (1983). Influence of self-reported distress and empathy on egoistic versus altruistic motivation to help. *Journal of Personality and Social Psychology*, 45, 706-718.
- Batson, C. D., Sager, K., Garst, E., Kang, M., Rubchinsky, K., & Dawson, K. (1997). Is empathy-induced helping due to self-other merging? *Journal of Personality and Social Psychology*, 73, 495-509.
- Batson, C. D., Turk, C. L., Shaw, L. L., & Klein, T. R. (1995). Information function of empathic emotion: Learning that we value the other's welfare. *Journal of Personality and Social Psychology*, 68, 300-313.
- Cialdini, R. B. (1991). Altruism or egoism? That is (still) the question. *Psychological Inquiry*, 2, 124-126.
- Cialdini, R. B., Brown, S. L., Lewis, B. P., Luce, C., & Neuberg, S. L. (1997). Reinterpreting the empathy-altruism relationship: When one into one equals oneness. *Journal of Personality and Social Psychology*, 73, 481-494.
- Cialdini, R. B., Kenrick, D. T., & Baumann, D. J. (1982). Effects of mood on prosocial behavior in children and adults. In N. Eisenberg (Ed.), *The development of prosocial behavior* (pp. 339-359). New York: Academic Press.
- Cialdini, R. B., Schaller, M., Houlihan, D., Arps, K., Fultz, J., & Beaman, A. L. (1987). Empathy-based helping: Is it selflessly or selfishly motivated? *Journal of Personality and Social Psychology*, 52, 749-758.
- Cohen, J. (1977). *Statistical power analysis for the behavioral sciences*. New York: Academic Press.
- Davis, M. H. (1994). *Empathy: A social psychological approach*. Madison, WI: Brown & Benchmark.
- Davis, M. H., Conklin, L., Smith, A., & Luce, C. (1996). Effect of perspective taking on the cognitive representations of persons: A merging of self and other. *Journal of Personality and Social Psychology*, 70, 713-726.
- Fultz, J., Schaller, M., & Cialdini, R. B. (1988). Empathy, sadness, and distress: Three related but distinct vicarious affective responses to another's suffering. *Personality and Social Psychology Bulletin*, 14, 312-325.
- Gustafsson, J., & Balke, G. (1993). General and specific abilities as predictors of school achievement. *Multivariate Behavioral Research*, 28, 407-434.
- Hamilton, W. D. (1964). The genetic evolution of social behavior. *Journal of Theoretical Biology*, 7, 1-52.
- Hocutt, M. (2000). *Grounded ethics: The empirical basis of normative judgments*. New Brunswick, NJ: Transaction Publishers.
- Hornstein, H. A. (1982). Promotive tension: Theory and research. In V. Derlega & J. Grzlak (Eds.), *Cooperation and helping behavior: Theories and research* (pp. 229-248). New York: Academic Press.
- Lerner, M. J. (1982). The justice motive in human relations and the economic model of man. In V. Derlega & J. Grzlak (Eds.), *Cooperation and helping behavior: Theories and research* (pp. 249-278). New York: Academic Press.
- Levin, J. R., & Neumann, E. (1999). Testing for predicted patterns: When interest in the whole is greater than in some of its parts. *Psychological Methods*, 4, 44-57.
- Neuberg, S. L., Cialdini, R. B., Brown, S. L., Luce, C., Sagarin, B. J., & Lewis, B. P. (1997). Does empathy lead to anything other than superficial helping? Comment on Batson et al. (1997). *Journal of Personality and Social Psychology*, 73, 510-516.
- Piliavin, J. A., & Charng, H. W. (1990). Altruism: A review of recent theory and research. *American Sociological Review*, 16, 27-65.
- Piliavin, J. A., Dovidio, J. F., Gaertner, S. L., & Clark, R. D. (1981). *Emergency intervention*. New York: Academic Press.
- Rosenthal, R., & Rosnow, R. L. (1985). *Contrast analysis: Focused comparisons in the analysis of variance*. Cambridge, UK: Cambridge University Press.
- Satorra, A., & Bentler, P. M. (1994). Corrections to test statistics and standard errors in covariance structure analysis. In A. von Eye & C. C. Clogg (Eds.), *Latent variables analysis: Applications for developmental research* (pp. 399-419). Thousand Oaks, CA: Sage.
- Schaller, M., & Cialdini, R. B. (1988). The economics of empathic helping: Support for a mood-management motive. *Journal of Experimental Social Psychology*, 24, 163-181.
- Schmid, J., & Leiman, J. M. (1957). The development of hierarchical factor solutions. *Psychometrika*, 22, 53-61.
- Smith, E. R., Coats, S., & Walling, D. (1999). Overlapping mental representations of self, in-group, and partner: Further response time evidence and a connectionist model. *Personality and Social Psychology Bulletin*, 25, 873-882.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago: Nelson-Hall.

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