1-1-2011

A bioecological approach to empathy, altruism, and intent to help: developmental, dispositional and contextual factors influence prosocial motivations and intentions

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A BIOECOLOGICAL APPROACH TO EMPATHY, ALTRUISM AND INTENT TO HELP: DEVELOPMENTAL, DISPOSITIONAL AND CONTEXTUAL FACTORS INFLUENCE PROSOCIAL MOTIVATIONS AND INTENTIONS

by

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DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

2011

MAJOR: PSYCHOLOGY (Cognitive,
Developmental and Social Psychology)

Approved by:

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Advisor   Date

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DEDICATION

For my Papa.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

Why do we help? Early social psychological research examined situational factors which influenced the probability of helping in emergency situations (for example, Latane & Darley, 1970). Later research, however, began to focus on the motivations behind helping behaviors. The general consensus was that all helping behavior is rooted hedonism, such as gain of rewards or avoidance of punishments (Archer, Diaz-Loving, Gollwitzer, Davis & Foushee, 1981; Cialdini & Kenrick, 1976; Krebs, 1975; Piliavin, Piliavin & Rodin, 1975). At the same time, personality and developmental psychology researchers studied the dispositional and socialization histories which best predict sympathy and helping behavior. Few studies have looked at the combined effects of situational, dispositional and developmental factors on whether individuals will help, and whether they help due to empathic concern or selfishness. The present study tested a model which followed a bioecological approach to helping in which dispositional empathy, developmental history, maturation level, relational context and situational influences predict emotional responding and helping intentions in a need situation.

The present paper will take the perspective in which empathy is a possible reaction to a victim in a need situation. According to the Empathy-Altruism hypothesis, when a bystander encounters another individual in need, the bystander may take the needy individual's perspective. Perspective taking leads to empathy, which is the motivation behind truly altruistic behavior (Batson, 1991). Empathy is vicarious emotional responding with a focus on another person's welfare (Fultz, Batson, Fortenbach, MCarthey & Varney, 1986), and thus true altruism is the motivational state in which the "ultimate goal" is "increasing the other's welfare," whereas

egoism is the "motivational state with the ultimate goal of increasing one's own welfare (Batson, Sager, Garst, Kang, Rubchinsky & Dawson, 1997; pg. 497).

Reward-Seeking Egoistic Motivation

Batson (1991) outlined the three motivational paths which may lead to helping behavior. The first is *reward-seeking egoistic motivation,* in which an individual uses the need situation to gain rewards or avoid punishments. Hypotheses of *reward-seeking egoistic motivation* are exemplified by earlier social psychological helping research. The hypothesis of empathy-specific rewards (Krebs, 1975) states that helping leads to rewards such as honor or praise when the victim is helped. Hypotheses of empathy specific punishments (Archer et al., 1981) state that suffering of the victim elicits guilt and shame by the observer, and therefore the purpose of helping is to reduce that negative self evaluation. The arousal: cost-reward model (Piliavin et al., 1975) integrates the previous two hypotheses and states that whether an individual will help depends on the costs of helping and the costs of not helping. These hedonistic models received inconsistent support, however. Fultz et al. (1986) demonstrated that motivation to help due to empathy is not due to fear of negative social evaluation, and Batson et al. (1988) demonstrated that empathy induced helping is not due to either empathy-specific rewards or empathy-specific punishments.

The Negative-State Relief Hypothesis. Whereas the previous models viewed the motivation of helping according to potential costs and rewards, the negative state relief model (Cialdini & Kenrick, 1976) focused on mood as a motivator for helping. According to the negative state relief hypothesis, helping is socialized in childhood to be gratifying, and therefore individuals will be motivated to help when in a saddened mood because altruistic behavior improves mood (Cialdini & Kenrick, 1976). Thus, as helping is conditioned to be gratifying

throughout childhood, helping itself can reflect a motive to alter one's mood: helping behavior is egoistic because it is used to improve a depressed mood state. This hypothesis was supported by demonstrating that negative mood predicts helping behavior only for older children, for whom gratification due to helping had already been socialized (Cialdini & Kenrick, 1976). Additional support was given by a later study (Cialdini et al., 1987), by demonstrating that an empathic orientation increased both empathic concern and sadness, but that helping was predicted by sadness but not empathic concern. When participants' sadness was relieved during experiments, they were no longer helpful, and those subjects in an empathic condition were more helpful only when they believed their mood would be improved. Thus, the negative-state relief model at first appeared to have strong research support.

Support for the negative-state relief model was inconsistent, however. Batson et al. (1989) demonstrated that expected mood enhancement does not decrease helping for individuals in a high-empathy situation. Dovidio, Allen and Schroeder (1990) demonstrated that individuals are selective about the type of help they will give, although a negative-state relief model would suggest that any help could be given in order to improve mood. Results supported the empathy-altruism hypothesis, such that participants in a high-empathy condition were more likely to help if the problem did not change. Moreover, empathy predicted helping even with the potential mediating effects of sadness in the model. The authors concluded that although sadness *can* mediate the relationship between empathy and helping, it is not always the case: the possibility of sadness increasing helping is not the same as it necessarily being so.

The Felt-Oneness and Empathy-Altruism Hypotheses

The second and third motivations discussed by Batson (1991) are *arousal-reducing egoistic motivation,* in which a bystander feels the vicarious emotional response of personal

distress when presented with a need situation, and thus has an egoistic desire to reduce that arousal, and the *empathically evoked altruistic motivation*, in which a bystander feels the vicarious emotional response of empathic concern, or sympathy, when presented with a need situation, and thus has a truly altruistic motivation to reduce other person's need. Whereas the motivation of personal distress may lead to an individual leaving the need situation in order to reduce arousal, a bystander who feels empathy will respond by helping or finding someone else to help, and will not feel a reduction in arousal until the victim is helped. These motivations directly map on to the emotional responses measured by Fultz, Schaller and Cialdini (1988), who factor analyzed subjects' emotional responses after presentation of a need situation. The factor analysis yielded three factors: the first component, *empathy*, is related to empathically-evoked altruistic motivation, and consisted of the adjectives 'sympathetic', 'softhearted', 'tender', 'compassionate', 'warm', 'moved', 'touched' and 'concerned'. The other two components map onto arousal-reducing egoistic motivation. The second component, *sadness*, included the adjectives 'sad', 'dejected', 'sorrowful', 'low-spirited', 'downhearted', 'downcast', 'heavyhearted', and 'feeling low'. The third component, *distress*, consisted of the adjectives 'alarmed', 'worried', 'uneasy', 'disturbed', 'upset', 'troubled', 'grieved' and 'distressed'. The three factors were highly correlated, yet distinct, suggesting that although the emotional responses are all related, the arousal-reducing egoistic motivations, which are reflected by a bystander's personal distress and sadness, are distinct from the altruistic motivation of empathy.

These two egoistic motivations, and the emotional responses which accompany them, are highlighted by the acknowledgment of negative affect in both the Felt-Oneness and Empathy-Altruism hypotheses. In both, negative affect is felt in need situations, but is not the driving factor in helping. Felt-oneness is an additional egoistic motivation, and according to the Felt-

Oneness hypothesis (Cialdini et al., 1997), if one takes another's perspective or has an attachment to the victim, then the bystander experiences Oneness, "a sense of shared, merged, or interconnected personal identities (Cialdini, et al., 1997; p. 483). Cialdini et al. add that this hypothesis fits well with the evolutionary concept of inclusive fitness (Hamilton, 1964), in which an individual attempts to preserve his or her own genes, which may be shared by another. They also note that it fits with Aron and Aron's (1986) model of self-other merging in relationships, such that the bystander experiences an overlap in identity with the victim. Oneness can be obtained by perspective taking, which facilitates self-other merging, or by attachment cues such as kinship, which is a signal of genetic similarity.

According to Batson's (1991) empathy-altruism hypothesis, a bystander feels empathy when he or she sees someone in need and takes the victim's perspective, and this of empathy is the truly altruistic helping motivation. Thus, true altruism is helping regardless of external or internal rewards which the helper may accrue. Three conditions encourage this perspective taking: the individual had a similar need experience and understands the situation, the individual is somehow attached to the victim (kinship, etc...) or the observer is instructed to imagine the victim's situation. Again, if empathy is aroused, the focus is on the victim's need, and the motivation to help from the bystander or someone else, and avoiding the situation is not an appropriate form of handling the arousal - a marked difference from the vicarious emotional response of personal distress. The felt-oneness and empathy-altruism hypotheses are thus similar, except that because of self-other overlap according to the felt-oneness hypothesis, any helping becomes inevitably selfish.

Research Support. Cialdini et al. (1997) demonstrated in a model which included empathy, sadness, personal distress and oneness that empathic concern no longer predicted

prosocial behavior once oneness was controlled for in the model, but that oneness predicted prosocial behavior when controlling for empathic concern. The authors varied closeness (near stranger, acquaintance, good friend and family member) and severity of need (eviction from home, orphaned children, and telephone call), and measured participants' levels of sadness, personal distress, empathic concern and oneness with the victim. The self-other overlap between the potential helper and the victim accounted for the relationship between empathy and intention to help.

Batson, Sager et al. (1997) noted that Cialdini et al's experiment only examined imagined needs and used self-reports of intentions to help, only manipulated relationship closeness and not empathy and perspective taking, and empathy was measured after measuring intentions to help, which may have a created a confound in which reported empathy actually reflected social norms for how one should feel in a need situation. They state that empathy-evoking conditions increase concern for the victim, but do not blur the distinction between the self and the other. Their experiment varied both empathy and group membership. Participants listened to a fictional radio recording of a young woman named Katie, whose parents had recently died. She was struggling to finish college while taking care of her younger siblings. Empathy was manipulated by asking participants to imagine how Katie was feeling (high empathy) or to be as objective as possible (low empathy). Group membership was manipulated by informing students that Katie was from their university (shared) or another university (unshared). The authors predicted that participants in the high empathy condition would report more empathy, and would offer more help. If the felt-oneness hypothesis (Cialdini, et al., 1997) was correct, empathy would only predict helping if there was shared group membership, because this would create overlap. According to the empathy-altruism hypothesis, however, oneness should not mediate the relationship between

empathy and helping. Batson, Sager et al.'s (1997) results indicated that none of the measures of self-other overlap could account for the relationship between empathy and helping, supporting the empathy-altruism hypothesis. Further, the authors pointed out that the empathy-altruism hypothesis does not claim that *all* helping is due to empathy, but that motivation to help that is rooted in empathy is altruistic.

There were several methodological issues with testing the felt-oneness and empathy-altruism hypotheses against one another. Specifically, the studies were incongruent in their manipulations and their helping outcomes. Cialdini et al. (1997) asked participants to imagine a situation in which someone they already knew was in a need situation, whereas Batson, Sager et al. (1997) had participants listen to an audio recording of a fictitious person who the participants believed was real. Thus, whereas participants indicated how much help they would give if they were in that situation in the former study, participants actually volunteered help in the latter study. Batson, Sager et al. (1997) gave four requirements to test whether empathic helping is due to merging between the self and other: 1) use the same needy individual throughout the study, 2) elicit genuine empathy, 3) manipulate empathic concern directly, and 4) use a uniform helping measure across conditions. Neuberg et al. (1997) also listed three conditions which should be met in order to rule out egoistic motivations for helping: the study should 1) measure relevant egoistic motives 2) reliably and validly while 3) simultaneously controlling for all of the relevant egoistic motives.

Maner et al. (2002) tested the felt-oneness and empathy-altruism hypotheses against each other by simultaneously meeting all of the conditions suggested by Batson, Sager et al. (1997) and Neuberg et al. (1997). Participants were led to believe that their brain waves were being measured, and that these waves were like the "fingerprint" of one's personality. To manipulate

oneness, some individuals were told that a second interviewee, Katie, had brain waves that were very similar (91%) or dissimilar (12%) to their own. Afterward, participants listened to the recording about Katie (which was used in Batson, Sager et al.'s, 1997 experiment), after being told to either stay as objective as possible (low-empathy condition) or to imagine how Katie felt (high-empathy condition). After listening, participants filled out a questionnaire which measured their emotional reactions of sadness, personal distress and empathy, and their felt-oneness with Katie, and were presented with a letter asking the participant to volunteer time to help her. The results showed that with the egoistic motives (oneness, sadness, and personal distress) all included in a structural equation model which also included empathic concern, only oneness and sadness predicted helping. Empathy was correlated with both oneness and sadness, which may have been influencing its relationship with helping. Thus, while controlling for egoistic factors, empathic concern no longer predicted helping behavior, supporting the felt-oneness hypothesis.

Nurturance Hypotheses. Similar to the issue of self-other merging, Batson, Early and Salvarani (1997) and Batson, et al. (2003) examined differences in helping motivation for different perspective taking conditions. Batson, Early et al. (1997) demonstrated that if one is told to *imagine how another individual feels*, then he or she is more likely to respond empathically (and thus, altruistically). If, on the other hand, one is told to *imagine how he or she would feel* in that situation themselves, the individual is likely to feel both empathy and personal distress, and helping is therefore egoistically motivated. Batson et al.'s (2003) study further indicated that when participants imagine themselves in the victim's condition, it focuses attention back onto their own interests and they act egoistically. On the other hand, if one imagines how the victim feels, the focus is kept on the victim, and the individual is more likely to feel altruistic motivation to help. This difference was reduced, however, if the potential helper was in a far

better position than the victim: if the participant fared better than the victim, even imagining him- or herself in the victim's position led to more empathy and altruistic motivation. Thus, it is possible that imagine oneself in the other's condition, and that other is similar in terms of resources, leads to an increase in self-other overlap. However, if the victim is far worse off than the potential helper, perspective taking leads to empathic motivation to help.

Taking the perspective of a victim in a far worse situation was examined in Batson, Lishner, Cook and Sawyer's (2005) study examining a nurturance hypothesis. A nurturance explanation assumes that empathy is an impulse to care and protect one's young, that humans are capable of generalizing this nurturing tendency to non-kin, and that the strength of this impulse can vary dependent upon the situation. Thus, empathy can be induced for a wide variety of individuals: friends and family, strangers, and even non-human targets. Batson et al. (2005) varied stranger type and measured empathy as an outcome measure. Even when varying the type of stranger (student, child, dog and puppy), perceived similarity between the participant and the victim did not correlate with empathy. Similarity was found to be a moderator of empathic response, and the authors note that if the victim's need is ambiguous, then similarity may help the individual infer the victim's need, or antipathy may be a confound between similarity and reduced helping. The authors also suggest that empathy felt for strangers may be due to nurturance, in which the potential helper views the victim as requiring some need or protection.

The Relational Context. The hypothesis of nurturance also fits well with Maner and Gailliot's (2007) study examining relationship context and motivations for helping. The authors hypothesized that the altruistic motivator of empathy may predict helping one's kin, whereas the egoistic motivators of negative affect (sadness or personal distress) and felt-oneness predict helping a stranger. Some participants were told to imagine a close relative of similar age,

whereas others were told to imagine someone they had never spoken to, but would recognize from class. Results indicated that more empathy was felt for kin than for strangers, and that participants reported less felt-oneness for kin than for strangers, especially under greater need scenarios. For participants imagining a family member, empathy predicted intent to help above and beyond felt-oneness and negative affect. For participants imagining a stranger, however, only the egoistic motivator of felt-oneness predicted intent to help, highlighting the importance of relational context. Moreover, this support's Batson's assertion that empathy does not blur the distinction between the self and other (Batson, Sager et al., 1997). Rather, it appears that felt-oneness occurs in the instance of egoistic motivation.

The importance of the relationship context was also suggested by Cialdini et al.'s (1997) results, with a significant relationship closeness and severity of need interaction. For low severity situations, participants were equally likely to help strangers and kin. For situations with greater severity, however, participants were more likely to help family and least likely to help strangers. These findings suggest that the relationship context is important in determining the motivation and the amount of help that will be given in a need situation.

Similarly, DeWall, Baumeister, Gailliot and Maner (2008) demonstrated that if participants performed a task which required controlled attention (ego-depletion task), they were less likely to volunteer help. If the participants drank a glucose drink, giving them more energy, they were likely to help regardless of whether or not they were also required to perform an ego-depletion task. These effects were qualified, however, by relational context: ego-depletion did not lead to decreased helping of family members. Thus, relationship closeness creates a need to help, regardless of the energy resources of the helper.

Conclusions and Limitations of the Felt-Oneness and Empathy-Altruism Hypotheses. Taken together, the previous studies demonstrate a complex relationship between the helper, the victim, and their relationship context. If the victim is a stranger to the potential helper, it appears that helping is evoked with a felt self-other overlap between the helper and the victim, particularly if the victim has equal footing with the bystander, such as in terms of resources. In some cases, however, a stranger in need can evoke empathy and altruism as well. If the helper is in a far more advantageous situation than the victim, and if the helper imagines how the victim feels (rather than how he or she would feel if she were in such a situation) nurturance can evoke the altruistic motivation of empathy.

Thus, felt-oneness appears to predict helping if the victim is a stranger, but only if the helper and the victim are similar in terms of resources, otherwise the helper may feel nurturance and empathy toward the victim. Empathy, however, tends to predict helping in kin and nurturance conditions, especially if there is greater severity of need. Relational context and nurturance are thus important in determining whether empathy or egoistic motives are experienced. Antipathy, which has been cited as a possible confound (Batson et al., 2005), may also influence whether one feels empathy in a need situation, but has not been examined.

Dispositional empathy

The previously discussed studies examined situational empathy, which is due to perspective taking. This is not the same as dispositional empathy, which is "the individual differences in the amount of empathic emotion felt in a particular situation and measured by self-reports of general tendency to feel sympathy or concern for people less fortunate than oneself" (Fultz et al., 1986; p. 761).

Batson, Bolen, Cross and Neuringer-Benefiel (1986) studied the altruistic personality, including personality correlates of helpfulness. According to the authors, for a personality variable to be *altruistic*, it should be correlated with helping when it is both easy and difficult to escape the situation. The personality variables measured were self-esteem, social responsibility, ascription of responsibility, and dispositional empathy measured with Davis's (1983) Interpersonal Reactivity Index, which includes scales of perspective taking, fantasy, personal distress and empathic concern. When escape was difficult, self-esteem, ascription of responsibility, and empathic concern were all positively correlated with helping. However, when escape was easy (such that helping would be altruistic), none of the altruistic personality variable were correlated with helping. Batson et al. (1986) thus conclude that helping by individuals scoring higher on these measures is due to an avoidance of guilt and shame, rather than the truly altruistic desire to help the needy individual. There were several limitations, however. For instance, analysis of the data was limited to point-biserial correlations and therefore did not address their larger underlying constructs, and there was no examination of the possible interactions between personality and contextual factors. Ease of escape may not be a sufficient manipulation to pin-point whether or not someone will help altruistically. Additionally, Batson et al. (1986) only looked at a single measure of helping which may have attenuated the relationship between personality characteristics and helping.

Several other researchers, however, have demonstrated that there are individual differences in prosocial behavior which can be reliably measured. Penner, Fritzche, Craiger and Freifeld (1995) created the Prosocial Personality Battery (PSB) in order to study the personality correlates of prosocial behavior. They identified several different personality measures that were already in the literature, noting that "prosocial behavior was too complex to be adequately

predicted by a single personality characteristic" (Penner et al., 1995, pg. 148). The inclusion criteria were 1) the scales have been found to correlate with prosocial emotions, cognitions, and 2) there was a theoretical model of helping which explained why that personality characteristic should be correlated with prosocial dispositions. A factor analysis yielded two factors: *other-oriented empathy* assessed prosocial affect and cognitions, and includes empathic concern (sympathy), ascription of responsibility, other-oriented moral reasoning (the tendency to focus on the best interest of others when making moral decisions), perspective taking, and mutual concerns moral reasoning (the tendency to consider the best interests of all parties when making moral decisions). *Helpfulness* assessed prosocial behaviors, and includes personal distress (negative loading; the tendency to experience personal anxiety and unease in tense situations) and self-reported helpfulness. The authors note that separately, the personality characteristics in the PSB do not reliably predict other aspects of helping, but taken together, the factors underlying the PSB do predict prosocial emotions, cognitions and behaviors. The piecemeal way in which Batson et al. (1986) studied prosocial personality characteristics may explain why their findings were not significant, whereas Penner et al.'s (1995) personality characteristics were cohesive and predictive. A later study by Carlo, Hausman, Christiansen and Randall (2003) replicates these findings: ascription of responsibility, more internalized prosocial moral reasoning, perspective taking skills, sympathy and ascription of responsibility were associated with more altruistic helping.

In a longitudinal study of young adults, Eisenberg et al. (2002) included self- and friend-reported measures which included helping, consideration of others, suppression of aggression, care orientation, social responsibility, sympathy and perspective taking. The authors found that the prosocial characteristics were inter-correlated with one another and that aggregated self-

reports of prosocial dispositions were correlated with friends' reports, replicating Penner et al.'s (1995) findings. They also found consistency in prosocial dispositions across time and raters, demonstrating that these individual differences exist across developmental and social contexts. The authors conclude that there are individual differences in prosocial tendencies, and prosocial moral reasoning plays a role in adults' prosocial tendencies.

Further, dispositional prosocial behavior may be best explained by an interaction of personality characteristics, as suggested by Knight, Johnson, Carlo and Eisenberg (1994)'s results which demonstrated that prosocial behaviors may have multiple dispositional antecedents which interact to produce behavior. In a study of elementary aged children, those who scored high in affective reasoning, sympathy and money knowledge donated the most money, and scoring lower any of those three led to a much smaller donation than would be expected by a simple additive model. In other words, the interaction of child dispositions and resources explains more variance in helping than the sum of each, and by using additive models, the importance of dispositional influences on helping behaviors may have been underestimated. The findings suggest that the complex interaction of affect, cognition and resources explain more variability than any dispositional characteristic alone.

In sum, contrary to what Batson et al. (1986) suggest, there does appear to be an "altruistic personality." Dispositional empathy is an array of individual differences, which may be greater than the sum of their additive effects. As suggested by Knight et al. (1994), the prosocial personality and prediction of helping behavior may best be explained by the interaction of dispositional characteristics.

Developmental Perspectives

Developmental perspectives of prosocial behavior fall into two broad categories. The first attempts to map out the change in prosocial motivation over time, for example Eisenberg's (1986) levels of prosocial development. The second addresses the dispositional and environmental influences on prosocial development.

Maturation Level. Eisenberg (1986) describes the development of prosocial reasoning beginning with hedonism in early childhood and ending with internalized empathy in adulthood. Level 1 is a hedonistic orientation, driven by rewards and reciprocity. Level 2 is a needs-oriented approach, in which there is simple concern for needs of others. Level 3 is an approval or stereotyped orientation, which is heavily influenced by what others will think, or stereotyped images of right and wrong. Level 4 is reflective empathic orientation and is characterized by perspective taking and emotional investment in the outcome of the needy individual. Level 5 is the highest level, the strongly internalized stage, and is characterized by internalization of values and in the belief of others' rights. Thus, different maturation levels lead to different motivations for helping behaviors. Whereas the hedonistic orientation is egoistically motivated, the strongly internalized state is generally more empathic and altruistic (Eisenberg, 1986).

Additionally, the way that prosocial behavior and motivations are felt and expressed changes over time. For younger children, prosocial behavior appears to be rooted in affect rather than cognition. Garner, Jones and Palmer (1994) showed that affective knowledge, measured by emotional role-taking (the child recognizes that a character's facial expressions are incongruent with what he or she should be feeling) in preschoolers is predictive of sibling caregiving behavior. Cognitive perspective taking, in which the child can distinguish thoughts of others from own, was not predictive of sibling caregiving behavior. Emotional situation knowledge (the child recognizes appropriate emotions for a situation) was negatively related to sibling

caregiving, perhaps because helping was motivated by approval, since they know how they should behave situationally, as demonstrated by the measure. Thus, caregiving behavior was significantly predicted by emotional role taking and caregiving scripts, demonstrating the importance of affect in prosocial behavior in early childhood (Garner et al., 1994).

The recipient of empathy also changes over time. At 16 months of age, children showed empathy to both their mother and a stranger who fake injury at equal levels. By 22 months, however, children are slightly more likely to show empathy toward mothers, but less likely to show empathy toward a stranger (van der Mark, van Ijzendoorn, Bakermans-Kranenburg, 2002). These results suggest that for older children, relational context is important in determining whether or not empathy is experience, replicating Maner and Gailliot's (2007) findings.

Age is also positively related to perspective taking, which predicts child empathy (Strayer & Roberts, 2004). Child's age is negatively correlated with child anger, which decreases empathy. Additionally, in mediational pathways, children who are older have more emotional insight (perspective taking for others' emotions), predicting greater child empathy. Thus, perspective taking is predictive of empathy, consistent with Batson's (1991) empathy-altruism hypothesis.

Developmental changes in prosocial behavior continue into adolescence. Younger adolescents (< 16 years of age) who reported higher levels of prosocial moral reasoning were more likely to report altruistic tendencies, whereas those who reported lower levels of prosocial moral reasoning were less likely to report altruistic tendencies (Carlo et al., 2003). According to the authors, this supports cognitive-development theory which posits that prosocial reasoning based on more advanced internalization of values, which consider others welfare, facilitates altruism, and younger children with more advanced reasoning are more likely to behavior

altruistically (Eisenberg & Fabes, 1998). Additionally, adolescents who were more helpful in emotionally upsetting contexts were more likely to use prosocial moral reasoning, to take another's perspective (younger adolescents only), understand another's situation, high levels of empathy and ascription of responsibility, but experience less personal distress. Thus, in emotionally charged situations that could cause personal distress, helping is associated with empathy, consistent with the empathy-altruism hypothesis (Batson, 1991). Older adolescents (> 17 years of age) reported more altruistic helping and were more likely to describe themselves as altruistic, further supporting the hypothesis that empathy requires more advanced cognitive development (Carlo et al., 2003).

In sum, maturation plays an important role in prosocial behavior and motivation. Moral reasoning and behavior begins as self-serving and affect-based in early childhood, but becomes more internalized and part of the self-concept in adulthood.

Parenting Influences. In addition to age related developmental changes, socialization history also influences prosocial dispositions. Dlugokinski and Firestone (1974) studied maternal discipline and measures of empathy, moral maturity and kindness. Maternal inductive discipline, which includes reasoning and communication of consequences for the child's actions, predicted child higher peer ratings of considerateness, greater donations to UNICEF, greater importance of altruistic values, and more mature understanding of concepts related to altruism, whereas overall, maternal power assertion was a weaker, negative predictor. Additionally, children gave more money to UNICEF when an appeal to donate matched their maternal disciplinary style.

Zahn-Waxler, Radke-Yarrow and King (1979) studied maternal influences on child reparation and altruism. Mothers who explained to the child the consequences of their actions,

had greater intensity of feeling, used multiple forms of communication, and used frequent verbalization of absolute principles about not hurting others, had children with higher reparation scores. Unexplained prohibitions ("stop it!") decreased child reparative behavior. Mothers who used affective explanations, moralized, used direct instruction to make amends when child caused an emotional upset and used higher affective communication, had children who were higher in altruism. Physical punishment and restraint were not associated with altruism, and prohibitions without explanation were associated with less altruism. Overall, average altruistic responding was 46% for children whose mothers were rated high in empathic caregiving, but only 24% for children whose mothers were rated low in empathic caregiving.

Dekovic and Janssens (1992) examined parental disciplinary styles and child prosocial behavior and sociometric status. A factor analysis yielded two parenting factors: an *Authoritative/Democratic* factor, which included high positive loadings for support, suggestions, positive remarks, providing information, induction, warmth and responsiveness, among others, and an *Authoritarian/Restrictive* factor which included high positive loadings for prohibitions, negative nonverbal behavior, directives, negative remarks, restrictiveness, high negative loadings for nonverbal support, warmth, responsiveness and demandingness. Prosocial behavior was significantly predicted from both maternal and paternal behaviors. For mothers, this effect was attributed to authoritative parenting style (positive association), whereas for fathers the effect was mostly due to authoritarian parenting (negative association). Mothers who were more authoritative and accepting had children who were more prosocial with peers, and the more restrictive the father was, the less likely the child was to behave prosocially. The results suggest that authoritative parenting and a positive affectionate relationship fosters child prosocial development.

Strayer and Roberts (2004) tested a model in which socialization of empathy involves a complex system of parental and child factors. Parenting factors such as parental empathy, control, encouragement of emotional responsiveness and warmth, predict child empathy through mediation by role taking, emotional expressivity, and emotional insight, whereas child anger is negatively associated with child empathy. Physical discipline and rejection were negatively associated with child emotional insight, which is positively associated with empathy. Thus, children who are physically disciplined and rejected have less empathy. As noted by Grusec, Goodnow and Kuczynski (2000), there is a need to clarify the differential forms of responsivity, which may have differential impacts on child socialization. Different types of responsiveness work in different ways, and may involved different routes of influence to prosocial behavior and should not be collapsed together.

Thus, parental warm discipline, characterized by inductive reasoning, empathy, and authoritative parenting, is associated with greater child empathy, altruism and prosocial responding. Power assertion and authoritarian parenting, however, is associated with less altruism and prosocial behavior in children.

Parenting and Temperament Interactions. The influence of socialization also differs as a function of child temperament. As noted by Grusec et al. (2000), effective parenting should not be conceptualized as the use of certain strategies or parenting styles. Parents change their parenting methods as a function of the child and the situation. The conditions that parents may take into account when they decide upon some socialization strategies over others depends on the bidirectional parent-child interactions, with the parent's understanding of the child as an active contributor of the parent-child relationship.

Kochanska (1993) discussed a model in which temperamental differences in fearfulness and effortful control underlie the two components of conscience in early childhood, affective discomfort and behavioral control, particularly in early childhood, when prosocial behaviors are affect-based. Temperamental differences also call for different parental socialization strategies (Kochanska, 1994). Socialization of conscience interacts with temperament, and takes place within a mutually responsive parent-child relationship. The parent-child relationship moderates the effectiveness of disciplinary practices, such that mutually responsive parenting creates a willingness in the child to embrace parental values (Kochanska & Aksan, 2004), whereas a negative relationship undermines parental discipline strategies (Patterson, DeBaryshe, & Ramsey, 1989). For children with fearful temperaments, gentle discipline is enough for children to internalize moral values, because some apprehension is already present. For children with fearless temperaments, a mutually responsive orientation is a necessary for internalization of values. In both cases, power assertion undermines internalization, by creating guilt in fearful children and resentment in fearless children (Kochanska & Aksan, 2006).

In sum, temperament and parental disciplinary strategies interact within the relational context of the child and parent. Socialization is not "one size fits all" as demonstrated by the effectiveness of some discipline techniques over others with temperamentally different children.

A Bioecological Model of Prosocial Behavior

The present study takes a bioecological systems approach (Bronfenbrenner & Morris, 2006) to understanding prosocial motivations and helping behavior. According to this approach, development occurs through a process of dynamic interactions between an individual and his or her multi-level context. The relationship between the individual and the context vary

systematically as a function of both the individual's characteristics and the environment over time, in a relational feedback loop which increases in complexity over time.

Thus, the bioecological approach has four properties: Process, Person, Context and Time (PPCT; Bronfenbrenner & Morris, 2006). The *Process* is the transactional relationship between the individual and the context, where growth or change occurs. *Person* properties are those of the individual, which include dispositional characteristics, bioecological resources (such as cognitive ability or experience), and demand characteristics (such as attractiveness). The *Context* is the nested structure of environments as described by Bronfenbrenner's (1977) earlier ecological systems theory. The most immediate environment to the person is the microsystem, which contains process, or dynamic interactions, between the person and the context (social or physical). The mesosystem contains the interactions among the settings which also contain the individual (a child's classroom), whereas the exosytem contains interactions among setting in which some do not contain the individual (parent's workplace). The macrosystem contains contextual prototypes, or "overarching institutional patterns of the culture or subculture, such as the economic, social, educational, legal, and political systems, of which micro-, meso-, and exosytems are the concrete manifestations" (Bronfenbrenner, 1977, p. 515). Finally, *Time* includes maturation level, historical time, or generational time in which the individual exists.

Previous studies have neglected to look at the combined effects of situational, dispositional and developmental influences on whether an individual will help, and whether they help due to empathic or egoistic motivations, or both. The present study tested a bioecological approach to prosocial motivation and behavior which includes temperament, maturation level, socialization history, and prosocial dispositions in the prediction of emotional response and helping behaviors within differing social contexts and need situations. This is a comprehensive

model

model which includes the entire PPCT of the bioecological framework. Person influences in the model will include temperament, socialization history, dispositional empathy and helpfulness. Contextual influences will include the socialization history, relational context and severity of need. Time will be examined with socialization history, level of moral development and past helping behavior. Finally, the process will examine the influence of all of these developmental, dispositional, and social factors within a single model, with all factors tested simultaneously. As noted by Eisenberg et al. (2002, pg. 994), "...prosocial actions in different contexts may often reflect different motives." The proposed study will seek to find those differential relationships.

The present study was guided by two broad questions. First, what is the predictive utility of the model? What bioecological influences, when included simultaneously within a single model, significantly predict intent to help, and whether that intent is selfishly or selflessly motivated? The second question is structural in nature: how do each of the constructs in the model 'behave' with all of the other factors included? Or, how do dispositional, developmental, and contextual factors influence the motives and responses of prosocial individuals when tested simultaneously?

More specifically, the present study tested a bioecological approach to prosocial intentions which included temperament, parental disciplinary practices, level of moral reasoning, prosocial dispositions (empathy, perspective taking and personal distress) and helping behaviors, relational context (closeness, nurturance and antipathy) and severity of need as predictors of emotional response (empathy, personal distress and sadness) to an imagined need situation, felt-oneness with the victim, and intent to help (see Appendix A, Figure 1). This model took a bioecological approach, such that person effects, context effects, time and history, and the process were all considered, and tested simultaneously within a single model. The model

examined the predictive utility of each of the factors in emotional response, felt-oneness and intent to help, and how each of the components influenced one another when included in a single path analysis. The contextual influences, and their interactions, were further examined with a factorial design.

Based on Kochanka's (1993) model of prosocial development which includes fearfulness and effortful control as underlying early conscience, it was expected that temperament would predict several variables in the model. Because withdrawal is associated with affective discomfort (Kochanska, 1993), more withdrawal temperament should predict less situational empathy and more situational personal distress. This is due to the temperamentally withdrawn individual becoming over-aroused by the need situation, and his or her focus moving from the victim onto the self. It was also hypothesized that temperament would predict helpfulness, because individuals who are less withdrawn should be more likely to approach and offer help to others.

Parental discipline was also hypothesized to predict dispositional empathy and helpfulness. Because warm, inductive maternal discipline has been associated with more prosocial behaviors and punishing or negative discipline tends to have a negative effect on prosocial behaviors (Dekovic & Janssens, 1992; Dlugokinski & Firestone, 1974; Zahn-Waxler et al., 1979) it was hypothesized that more warm and supportive discipline will positively predict both dispositional empathy and helpfulness, whereas more harsh and negative discipline was hypothesized to negatively predict dispositional empathy and helpfulness.

Level of moral reasoning was hypothesized to positively predict dispositional empathy and perspective taking, due to individuals with higher levels of moral reasoning reporting more

altruistic tendencies, along with internalization of values which consider others (Carlo et al., 2003), and perspective taking and emotional reaction to the plight of others (Eisenberg, 1986).

Next, it was predicted that dispositional empathy and perspective taking would predict situational empathy, and dispositional personal distress would predict situational personal distress. Dispositional helpfulness was also hypothesized to predict intent to help. Thus, it was expected that dispositional factors and helping behaviors should account for at least some of the variability in motive and helping behavior in a given situation.

The social factors, relationship closeness, nurturance and severity of need were hypothesized to predict the emotional responses of participants. Specifically, relationship closeness should positively relate to both oneness and empathy, replicating Maner & Gailliot's (2007) findings. Nurturance was expected to positively predict empathy, per Batson et al.'s (2005) nurturance hypothesis. Severity of need was expected to predict situational empathy, personal distress and sadness, replicating Cialdini et al.'s (1997) previous results. Based on Maner & Gailliot's (2007) model, both felt-oneness and empathy are hypothesized to predict intent to help. Antipathy was included in order to test Batson et al.'s (2005) suggestion that it is a possible confound with oneness by similarity. This was an exploratory test in the model, and there were no specific hypotheses made regarding this variable. Finally, it was predicted that these contextual variables would interact with one another, influencing the outcome variables of negative affect, empathy, oneness, and intent to help.

If support is found, it would suggest that whether an individual has egoistic or altruistic intentions, or both, to help in a need situation is the result of a complex dynamic system of person influences, social and situational context, and historical time. Support of a bioecological systems approach to helping would thus demonstrate that a comprehensive, interactive approach

is best in understanding motivation and intent to help. Further, it would indicate the relative importance of several developmental, dispositional and contextual factors to predict emotional response and helping behaviors.

CHAPTER 2

METHODS

Participants

Participants were 339 (231 Female, 48 Male, 60 missing) Wayne State University undergraduates recruited through SONA, an experiment management system, in order to earn research credit. There were no restrictions for participation; however, participants were only permitted to complete one condition of the study. Sixty-three participants were excluded from analyses (total recruited N = 402) because the duration of their participation was under 15 minutes, leading the author to suspect that the participants were answering randomly.

Procedure

Participants completed one of ten conditions, based on when they enrolled in the study. The first 8 conditions comprised a High/Low Severity of Need X High/Low Relationship Closeness X High/Low Nurturance factorial design. The last 2 conditions included the High Antipathy manipulation, with either High Severity or Low Severity of Need.

Participants completed all questionnaires online through SONA. Because SONA does not support .jpg formats, participants were directed by a link to an outside website (Photo Bucket or Picassa) in order to view the felt-oneness measure. Participants reported a number (7209) given on the image itself in order for the author to verify that the participant viewed the measure, and then completed the question regarding felt-oneness.

First, participants completed the developmental self-report measures which examined their temperament, the discipline strategies their parent used, and a measure of their current stage of moral development. Next, participants completed the dispositional self-report measures empathy, perspective taking, personal distress and helpfulness, in addition to a measure of social

desirability. At this point in the survey, participants completed the experimental manipulation of the study, and were asked to imagine one of five individuals: a child they do not know (high nurturance/low closeness), a child in their family (high nurturance/high closeness), a stranger in class they have never spoken with (low nurturance/low closeness), someone their age with whom they have a close positive relationship (low nurturance/high closeness), or someone they know well but strongly dislike (high antipathy). They then briefly described the target's physical and personality attributes in order to vividly bring this person to mind. Next, based on the condition, participants were asked to imagine a situation in which the target was in need. In the low-severity condition, participants were asked to imagine that the individual was without a car (or his/her parents were without a car if the target was a child) and needed a ride to work or school. In the high-severity condition, the target was either orphaned (if he or she was a child) or orphaned his or her child (if the imagined individual was an adult). Next, participants indicated the amount of help they were willing to give the needy individual. Finally, participants were measured on felt-oneness with the imagined victim and situational empathy, situational personal distress and situational sadness felt due to the imagined need condition.

Measures

Temperament. The Emotionality Activity Sociability (EAS) Temperament Scale (see Appendix C; Buss & Plomin, 1984) is a 20-item scale with five factors (Sociability, Activity, Fearfulness, Anger and Distress). Participants rated themselves on a 5-point scale (1 = *Not very characteristic of me*; 5 = *Very characteristic of me*). Test-retest correlations range from .61 to .72 (Naerde, Roysamb & Tambs, 2004). From this measure, the fearfulness and distress dimensions were used to create a single measure of withdrawn temperament. An example of a fearfulness item is "When I get scared, I panic," and an example of a distress item is "Everyday events make

me troubled and fretful." This withdrawn temperament measure was used in later path analyses due to its similarity with the Fearfulness/Fearlessness dimension noted by Kochanska (1993). Items included in the present analyses are noted with an asterisk (see Appendix C).

Parental discipline. The Parent Practices Questionnaire (see Appendix C; Devereaux, Bronfenbrenner & Rodgers, 1969) asked participants to rate their primary childhood caregiver on his or her use of several disciplinary strategies. The questionnaire has been modified from present- to past-tense in order to reflect the retrospective ratings of parental discipline. Participants rated the use of strategies on a 5-point scale (1 = *Never*, 5 = *Almost always/Very often/Almost every day*).

A factor analysis using principal axis factoring with varimax rotation yielded four factors which explained 42.02% of the variance. The rotated factor matrix can be seen in Table 1 (Appendix A). The first factor, which explained 21.19% of the variance, describes parental supportive behavior. This included parental comforting, openness, availability, reasoning and explanation in discipline, encouragement, trust, and helping behaviors. The second factor explained 14.71% of the variance, and measured parental punishing behaviors. This included punishing by isolating the child from friends or favorite activities, nagging, scolding, slapping, spanking, threats of physical punishment, and letting the child off easily or not punishing at all (negative loading). The third factor measured 7.33% of the variance and described parent and child expectations of one another. This factor included several items which cross-loaded with other factors. Items include the child expectation of parental availability and explanation of punishment, expectations of how the child was to behave, expectations of consequences for misbehavior, expectations of the child keeping belongings in order and keeping the parent informed of his/her whereabouts, expectation that the child would do well in school and help

with chores, and letting the child off lightly in punishment (negative loading). The fourth factor, parental controlling, explained 6.30% of the variance. This measured control over the child's pocket money, pushing the child to do better than other children, doubt that the child could take care of or go places by him/herself. It also included more passive or manipulative parental controlling behaviors, such as acting hurt and disappointed in the child's behavior, or the attempt to make the child feel guilty and ashamed. Because of the cross-loadings of items between factors, a regression was computed for each factor to create new scores for each participant, weighting each item based on its factor loading. Thus, there were four new variables created from these factors: Parental Support, Parental Punishing, Parent-Child Expectations and Parental Controlling. These four factors were included in further analyses.

Stage of moral development. The participant's current stage of moral development was measured with the Objective Measure of Prosocial Moral Reasoning (PROM; Carlo, Eisenberg & Knight, 1992). The PROM includes five story dilemmas (see Appendix C) in which participants indicated the action they would perform, and the reasoning behind the response. For example, "One day Mary was going to a friend's party. On the way, she saw a girl who had fallen down and hurt her leg. The girl asked Mary to go to the girl's house and get her parents so the parents could come and take her to a doctor. But if Mary did run and get the girl's parents, Mary would be late to the party and miss the fun and social activities with her friends." Participants then indicated what the person in the story should do, for example: "Mary should run and get the girl's parents," "Not sure," or "Mary should go to her friend's party."

Finally, participants rated how important each reason was in making the decision on a 1 – 7 scale (1 = *not at all*, 7 = *greatly*). Each story had at least one hedonistic or direct reciprocity item (in Eisenberg's, 1986 model, level 1;e.g., "It depends how much fun Mary expects the party

to be, and what sorts of things are happening at the party"), one needs-oriented item (level 2; e.g., "It depends whether the girl really needs help or not"), one approval-oriented item (level 3; e.g., "It depends whether Mary's parents and friends will think she did the right or she did the wrong thing"), and one stereotypic item (Level 3; e.g., "It depends if Mary thinks it's the decent thing to do or not"). Each of the stories also contained one item which reflected higher-level moral reasoning (internalized, sympathetic) at levels 4 or 5 (e.g., "It depends how Mary would feel about herself if she helped or not"). The lie/nonsense item of the scale was not included (e.g., "It depends whether Mary believes in people's values of metacognition or not"). In a young-adult sample (age 21-22), alphas for the hedonistic, needs-oriented, approval, stereotypic, internalized, and lie scales were .90, .70, .78, .95, .89 and .88 (Eisenberg et al., 2002).

Next, sums were created for participant responses across each story based on the moral reasoning strategy (category) used, and then the sums were divided by the total sum of all the participant's category scores. This created a proportion score for each type of prosocial moral reasoning used, for each participant. These proportions were then converted to an overall composite score, which was used in data analysis. The composite gave more influence to higher levels of moral reasoning, such that it was calculated by weighting the internalized category by 3, the needs-oriented and stereotyped categories by 2, and the hedonism and approval-oriented categories by 1. This composite of each participant's moral reasoning was used in all analyses.

Prosocial dispositions. The Interpersonal Reactivity Index (see Appendix C; IRI; Davis, 1983) was used to measure dispositional prosocial response, and contains four 7-item sub-scales: Fantasy, Empathic Concern, Perspective Taking and Personal Distress. Per Penner et al. (1995), only empathy, perspective taking, and personal distress scales were used in the present study. Examples of perspective taking items include "I believe that there are two sides to every question

and try to look at them both" and "When I'm upset at someone, I usually try to 'put myself in his shoes' for a while". Examples of empathic concern items include "I am often quite touched by things that I see happen" and "I would describe myself as a pretty soft-hearted person." Typical personal distress items include, "In emergency situations, I feel apprehensive and ill-at-ease," and "When I am with a friend who is depressed, I become so uncomfortable that I can't really talk to him." Internal consistencies for the empathic concern scale is .68 for males and .73 for females, for the perspective taking scale .71 for males and .75 for females, and for the personal distress scale .77 for males and .75 for females.

Helpfulness. The Self-Report Altruism Scale (see Appendix C; Rushton, Chrisjon & Fekken, 1981) is a 20-item measure, of which several items were removed because the present author did not feel the items had utility for the present study. This measure was included in Penner et al's (1995) Prosocial Personality Battery, and was therefore included in the present study. Examples of items include "I have given money to a charity," "I have offered my seat on a bus or train to a stranger who was standing" and "I have delayed an elevator and held the door open for a stranger." Participants respond on a 5 point scale which corresponds to the frequency with which they have performed each behavior (1 = *Never*, 5 = *Very often*). Chronbach's alphas for five samples ranged from .78 to .87 (Rushton et al., 1981).

Social Desirability. The Social Desirability scale (see Appendix C; Crowne & Marlowe, 1960) is a 33-item scale which measures the extent to which participants respond to questions in a socially desirable way. Examples of items include "Before voting I thoroughly investigate the qualifications of all the candidates," and "I have never intensely disliked someone." Participants respond to each statement with either *True* or *False*. Internal consistency for the scale is .88 (Crowne & Marlowe, 1960).

Felt-Oneness. The Inclusion of Self in Other scale (IOS; Aron, Aron & Smollan, 1992) is a single item measure in which participants indicate which Venn-like diagram best describes their relationship with an individual. The degree of overlap between two circles (Self and Other) progress linearly and participants can select one of seven pictures, ranging from no overlap to nearly complete overlap (see Appendix C). Alphas are .93 for overall, .87 for family, .92 for friendship and .95 for romantic relationships. Test-retest reliabilities (2 week post-test) are .83 (n = 97) overall, .85 (n = 13) for family, .86 (n = 31) for friends, and .85 (n = 48) for romantic relationships (Aron et al., 1992).

Emotional response. Situational empathy, personal distress and sadness were measured with the Emotional Response Scale (Appendix C; see Fultz et al., 1988 for full scale and analyses). Participants responded on a 1 – 7 scale (1 = *not at all*, 7 = *extremely*) how much each response applied to them after the imagined need manipulation. The measure includes three sub-scales: Empathy (4 items; sympathetic, touched, softhearted and compassionate), Personal Distress (4 items; distressed, disturbed, troubled, uneasy) and Sadness (4 items; low-spirited, heavyhearted, sad, feeling low). Reliabilities for the full scale are .88 for empathy, .93 for sadness and .91 for distress (Fultz et al., 1988).

Intent to help. The measure of intent to help (see Appendix C) was similar to those used by Cialdini et al. (1997) and Maner & Gailliot, (2007). For the low-severity condition, a car scenario was created, in which the target (or his/her parents if the target is a child) is without a car and needs a ride to school or work. Participants indicated the highest level of help they would be willing to give ranging from *nothing* (1), *to driving the individual to school or work for the rest of the semester or several months* (6). Weighting for the options, per Cialdini et al (1997) and Maner & Gailliot (2007)'s similar scenario, is as follows: (1 = 0.0, 2 = 1.2, 3 = 8.7, 4

$= 14.4, 5 = 35.4, 6 = 58.1$). For the high-severity condition, an orphan scenario was used. For a child target, his or her parents had been killed in an auto accident and the child is left with no one to care for him or her (Maner & Gailliot, 2007). For adult targets, he or she had been killed in an auto accident, and his or her child is left with no one to care for him or her. Participants chose the highest form of aid they would provide ranging from (1) *nothing* to (7) *have child come live with you and raise the child as you would your own*. Weights were the same as those used by Cialdini et al. (1997) for the seven options ($1 = 0.0, 2 = 6.0, 3 = 12.6, 4 = 22.8, 5 = 30.0$ $4 = 48.0$, $5 = 64.4$).

CHAPTER 3

RESULTS

Zero-order correlations were computed for the developmental variables (see Appendix A, Table 2), disposition variables (see Appendix A, Table 3) and outcome measures (see Appendix A, Table 4). The analyses for the present study were completed in three parts. First, a path analysis including the developmental, dispositional and contextual effects on emotional response (oneness, empathy, personal distress and sadness) and intent to help was tested. Next, because only the direct effects of the contextual variables were included in the path analysis, analyses of variance were conducted for each of the contextual variables to generate both the main effects and interactions. The effects of severity of need, relationship closeness and nurturance were tested in a 2 X 2 X 2 factorial analysis of variance (see Appendix A, Tables 5 − 7 for means, standard deviations and tests of main effects), in order to include the effect of nurturance in addition to those found previously with severity and relationship closeness (Cialdini et al., 1997; Maner & Gailliot, 2007). Finally, the effect of antipathy was tested with high antipathy/high severity and high antipathy/low severity conditions, so that the main effect of antipathy (see Appendix A, Table 8 for means, standard deviations, and tests of main effects) and the Antipathy X Severity of Need interaction could be tested (note that low antipathy comprised all of the other conditions). The outcomes for these two analyses included oneness, empathy, personal distress, sadness and intent to help.

A Model Testing a Bioecological Approach to Helping Emotions and Intentions

Data analysis. Because of the complexity of the model, the author initially tested the model in two halves: first, development predicting disposition and second, dispositions and context predicting outcomes. Once both halves of the model had achieved adequate fit, the

author combined the two halves and tested the full model. Weak paths were deleted from the model. Thus, the author used a model generation approach. Although this approach can lead to the potential for overspecification to a particular data set, it was considered necessary for several reasons. First, the present analyses were the first to include these variables together simultaneously, and much of the model was therefore exploratory. Second, modifications were not made if the author felt they did not make sense. Respecification was based on the significance of specific pathways, rather than the overall fit of the model. As seen in the following analyses, several paths were not significant, however, they were kept in the final model based on previous research and theory. Third, it is advised that models developed under this approach should be replicated (MacCallum, 1995). Because this is the first study of its type, the present author calls for replication and further testing. The findings for context and outcomes in the following path analyses are also replicated in the follow-up ANOVA analyses, and many of the findings below also replicate previous findings. Thus, although the present study uses a model generation approach, the author feels that it is justified and has attempted to remain as conservative as possible in model respecification.

Path analyses were computed with Mplus version 6 (Muthen & Muthen, 2010) using maxiumum likelihood estimation. Model fit was based on the χ^2 Goodness of Fit index (Bollen, 1989b, pp. 263-269; Satorra & Bentler, 1994), which evaluates the lack of fit for fixed parameters in the model. Because the calculation of χ^2 is reliant upon sample size, it may demonstrate poorness of fit (with a significant value) with larger sample sizes. It also tends to show a lack of fit for more complex model designs. Because of these characteristics, it is advisable to use other goodness of fit measures as well (Hu & Bentler, 1995). The Comparative Fit Index (CFI; Bentler, 1989; 1990) and the Root Mean Square Error of Approximation

(RMSEA; Browne & Cudeck, 1993) were included as additional fit indices. The CFI is an index of the reduction in lack of fit of the specified model versus a baseline model. The advantage of the RMSEA is that it is not sample dependent, and also considers model complexity (more complex models tend to have poorer fit). For both the CFI and the RMSEA, values less than .08 are considered adequate fit, and values less than .05 have reasonably good fit (Bentler, 1989, 1990; Browne & Cudeck, 1993).

Preliminary analyses. Independent sample *t*-tests were computed for gender on all continuous study variables. As seen in Table 9, females reported significantly more withdrawn temperament (*t* (275) = 3.17, *p* = .002), greater parent-child expectations (*t* (266) = 4.24, *p* < .001), more dispositional empathy (*t* (277) = 3.51, *p* = .001), and more dispositional personal distress (*t* (277) = 2.08, *p* = .039). Next, in order to test the impact of gender in the final model, it was specified to predict the endogenous variables of empathy and personal distress. Both path coefficients were non-significant, and fit of this model which included gender was not a better fit than the final study model, discussed below (χ² (88, *N* = 339) = 150.32, *p* < .01, CFI = .96, RMSEA = .05). Thus, gender is not included in further analyses.

Zero-order correlations were computed for social desirability and all other continuous variables included in the following analyses (see Appendix A, Table 10). Answering in a socially desirable way was associated with less withdrawn temperament (*r* = -.31, *p* < .001), more parental support (*r* = .25, *p* < .001), higher levels of moral reasoning (*r* = .18, *p* = .001), more perspective taking (*r* = .33, *p* < .001), greater dispositional empathy (*r* = .14, *p* = .009), less dispositional personal distress (*r* = -.14, *p* = .012), and more helpfulness (*r* = .24, *p* < .001). Social desirability was not correlated with any of the outcome measures. To test the influence of social desirability in the final model, it was set to predict the emotional response, oneness and

intent to help measures. None of the paths from social desirability to the outcomes were significant, and the fit of a model including social desirability (χ^2 (81, $N = 339$) = 146.08, $p < .01$; CFI = .96, RMSEA = .05) did not yield a fit better than the final model discussed below. Thus, social desirability was not included in further analyses.

Development and Dispositions. First, a path analysis examining the relations between developmental and dispositional variables was conducted. An initial model contained the exogenous variables of withdrawn temperament, the parenting variables (supportive, punishing, parent-child expectations and control) and the PROM composite score. It was specified that each of these developmental variables predict each of the dispositional variables, which included dispositional empathy, dispositional personal distress, perspective taking and helpfulness. Dispositional empathy, personal distress and perspective taking were allowed to correlate. This initial model yielded a poor fit to the data (χ^2 (1, $N = 339$) = 17.27, $p < .01$; CFI = .96; RMSEA = .15).

Based on both significant and non-significant relationships between the variables, the initial model was modified (see Appendix B, Figure 2). This modification yielded a model with excellent fit (χ^2 (14, $N = 339$) = 18.65, $p = .18$, CFI = .998, RMSEA = .01). Withdrawn temperament significantly predicted dispositional empathy ($\beta = .17$, $p < .001$), dispositional personal distress ($\beta = .55$, $p < .001$) and helpfulness ($\beta = -.14$, $p < .001$). Supportive parenting significantly predicted perspective taking ($\beta = .13$, $p = .006$). Punishing parenting significantly predicted dispositional empathy ($\beta = -.20$, $p < .001$), dispositional personal distress ($\beta = -.10$, $p = .020$) and perspective taking ($\beta = .13$, $p = .006$). Parent-child expectations significantly predicted dispositional empathy ($\beta = .18$, $p < .001$). Controlling parenting significantly predicted dispositional personal distress ($\beta = .14$, $p = .002$). The overall PROM composite score

significantly predicted dispositional empathy (β = .31, p < .001), helpfulness (β = .16, p = .003) and perspective taking (β = .24, p < .001). There were significant correlations between perspective taking and dispositional empathy (β = .37, p < .001), perspective taking and helpfulness (β = .23, p < .001), dispositional empathy and dispositional personal distress (β = .18, p < .001) and dispositional empathy and helpfulness (β = .23, p < .001). Thus, overall it appears that the developmental influences of temperament, socialization history and moral reasoning each significantly predict individual differences in prosocial personality characteristics.

Dispositions, Context and Outcomes.

Next, a path analysis examining the influences of dispositional and contextual factors on emotional response, felt-oneness and helping intentions was tested. The contextual variables (severity of need, nurturance, relationship closeness and antipathy) were contrast coded such that *high* conditions were coded as 1 and *low* conditions were coded as 0. This allows the contextual variables to be included in the model without running multi-group analyses. The contextual factors were thus treated as predictors in the model. The initial model was specified such that each of the dispositional variables (dispositional empathy, dispositional personal distress, perspective taking and helpfulness) predicted each of the emotional responses (situational empathy, situational personal distress, sadness), oneness, and intent to help. Each of the contextual variables (severity, nurturance, relationship closeness and antipathy) was also set to predict all emotional responses, oneness and intent to help. Next, situational empathy, situational personal distress, sadness and oneness were each specified to predict intent to help, and these emotional responses and oneness measures were allowed to correlate. This initial model yielded a poor fit to the data (χ^2 (4, N = 339) = 20.06, p < .01; CFI = .98; RMSEA = .11).

As before, based on significant and non-significant paths, another model was specified (see Figure 3), which yielded excellent model fit (χ^2 (21, N = 339) = 30.40, p = .08; CFI = .99; RMSEA = .04). Several of the prosocial personality variables were predictive of the emotional responses and helping intentions. Dispositional empathy and perspective taking were non-significant predictors of situational empathy (β = .08, p = .074 and β = .08, p = .072, respectively. When either path was deleted, the other became significant, indicating both are explaining the same variance in situational empathy. Both paths were retained in the model for theoretical reasons). Dispositional empathy significantly predicted intent to help (β = .12, p = .005). Dispositional personal distress did not significantly predicted situational personal distress (β = .05, p = .077). Helpfulness significantly predicted situational empathy (β = .26, p = .009) and oneness (β = .15, p = .009). Overall, the contextual variables were predictive of helping motives and intentions. Severity of need significantly predicted situational empathy (β = .26, p < .01), oneness (β = -.15, p < .001), situational sadness (β = .46, p < .001), situational personal distress (β = .39, p < .001) and intent to help (β = .36, p < .001). Relationship closeness significantly predicted oneness (β = .24, p < .001), sadness (β = .12, p = .007), situational personal distress (β = .17, p < .001) and intent to help (β = .39, p < .001). Antipathy significantly predicted situational empathy (β = -.30, p < .001) and sadness (β = -.09, p = .002). There were significant correlations between the emotional response and felt-oneness measures. Situational empathy was significantly correlated with oneness (β = .28, p < .001), situational sadness (β = .48, p < .001) and situational personal distress (β = .39, p < .001). Oneness was significantly correlated with sadness (β = .08, p = .009). Sadness was significantly correlated with situational personal distress (β = .84, p < .001). Nurturance was not a significant predictor in the model.

Test of full model with development, dispositions, context, emotional response and intent to help. At the final step, the previous two models were combined together, such that developmental variables predicted dispositional variables, dispositional variables predicted the emotional response, felt-oneness and helping intentions, and contextual variables predicted the emotional responses, oneness and intentions. This model (see Appendix B, Figure 4) yielded a good fit (see Figure 4; χ^2 (95, $N = 339$) = 123.96, $p < .01$; CFI = .97, RMSEA = .04; see Appendix A, Table 11 for unstandardized final model parameters). Similar to what was found in the first model, the developmental variables examining temperament, socialization history and moral reasoning significantly predicted individual differences in prosocial characteristics. Withdrawn temperament significantly predicted dispositional empathy ($\beta = .17$, $p < .001$), dispositional personal distress ($\beta = .55$, $p < .001$) and helpfulness ($\beta = -.14$, $p = .006$). Supportive parenting significantly predicted perspective taking ($\beta = .13$, $p = .006$). Punishing parenting significantly predicted dispositional empathy ($\beta = -.20$, $p < .001$), dispositional personal distress ($\beta = -.10$, $p = .022$) and perspective taking ($\beta = -.13$, $p = .009$). Parent-child expectations significantly predicted dispositional empathy ($\beta = .18$, $p < .001$). Controlling parenting significantly predicted dispositional personal distress ($\beta = .14$, $p = .002$). The PROM composite of moral reasoning significantly predicted dispositional empathy ($\beta = .31$, $p < .001$), helpfulness ($\beta = .16$, $p = .003$), and perspective taking ($\beta = .24$, $p < .001$). Additionally, the dispositional variables significantly predicted the emotional responses, felt-oneness and intentions to help. As found in the previous model, dispositional empathy and perspective taking did not significantly predict situational empathy ($\beta = .09$, $p = .074$ and $\beta = .08$, $p = .079$, respectively). Dispositional Empathy did predict intent to help ($\beta = .12$, $p < .001$), however. Dispositional personal distress did not significantly predict situational personal distress ($\beta = .05$,

$p = .077$). Helpfulness significantly predicted situational empathy ($\beta = .12$, $p = .009$) and oneness ($\beta = .15$, $p = .008$), but not intent to help. Some dispositional variables were significantly correlated as well: perspective taking was significantly correlated with dispositional empathy ($\beta = .37$, $p < .001$) and helpfulness ($\beta = .23$, $p < .001$). Dispositional empathy was significantly correlated with dispositional personal distress ($\beta = .18$, $p < .001$) and helpfulness ($\beta = .23$, $p < .001$). Next, the contextual factors predicted the outcomes of emotional responses, felt-oneness and helping intentions. Severity of need significantly predicted situational empathy ($\beta = .26$, $p < .01$), situational personal distress ($\beta = .39$, $p < .001$), situational sadness ($\beta = .46$, $p < .001$) and intent to help ($\beta = .37$, $p < .001$). Relationship closeness significantly predicted oneness ($\beta = .24$, $p < .001$), situational personal distress ($\beta = .17$, $p < .001$), situational sadness ($\beta = .12$, $p = .007$) and intent to help ($\beta = .40$, $p < .001$). Antipathy significantly predicted situational empathy ($\beta = -.30$, $p < .001$), oneness ($\beta = -.15$, $p = .008$) and situational sadness ($\beta = -.09$, $p = .002$). Nurturance did not significantly predict any of the outcome variables. Finally, the emotional responses of oneness ($\beta = .11$, $p < .001$) and situational empathy ($\beta = .17$, $p < .001$) both significantly predicted intent to help. Several of the outcome measures were significantly correlated in the path model: oneness was correlated with situational empathy ($\beta = .28$, $p < .001$) and situational sadness ($\beta = .08$, $p = .008$). Situational empathy was significantly correlated with situational sadness ($\beta = .48$, $p < .001$) and situational personal distress ($\beta = .39$, $p < .001$). The negative affect responses of situational personal distress and sadness were strongly correlated ($\beta = .84$, $p < .001$). Thus, the overall hypothesis that developmental factors would influence dispositional factors, and these dispositional factors would in turn influence emotional responses and intent to help, in addition to contextual variables influencing those outcomes, was supported.

Severity, Nurturance and Closeness on Oneness, Emotional Response and Intent to Help

Data analysis. Factorial analyses of variance were computed in order to assess both main effects and interactions of the contextual variables on outcome measures. Because these analyses yielded a high number of statistical tests and a possible inflation of Type I Error, alpha was reduced to .01 for each analysis, including interaction effects (because each variable only had two levels, post hoc corrections could not be calculated). All main effects and their significance levels are reported in (Appendix A) Tables 5 – 8. Significant main effects and interactions are described below. The effect size was calculated with partial η^2, which measures the variance accounted for in the outcome measures by each of the contextual factors and their interactions. Cohen's (1988) guidelines indicate that $\eta^2 = .0099$ is considered small, .0588 is considered medium, and .1379 is considered large. These criteria may be an overestimate of effect size, however. Cohen's guidelines are based on the η^2, whereas SPSS calculates the partial η^2, which is the same as a squared partial correlation in regression, and is the portion of unique variance which is accounted for in the dependent variable that is also unexplained by any other variable (see Levine & Hullett, 2002 for explanation of misuse of η^2 in effect size reporting). Using *r* guidelines instead, $\eta^2 = .01$ is small, .09 is medium and .25 is large.

Personal distress. There was a significant main effect of relationship closeness on personal distress ($F (1, 330) = 11.14$, $p = .001$; $\eta^2 = .03$; see Appendix B, Figure 5), with participants feeling more distress close relationships (M = 15.67, SD = 7.10) than in stranger relationships (M = 13.19, SD = 6.05). There was also significant main effect of severity of need ($F (1, 330) = 67.87$, $p < .001$; $\eta^2 = .17$; see Appendix B, Figure 6), with greater distress in high severity conditions (M = 16.54, SD = 6.76) than low severity conditions (M = 11.36, SD = 5.14).

A significant Relationship Closeness X Severity of Need interaction was also found (F(1, 330) = 8.70, p = .003; η^2 = .03; see Appendix B, Figure 7). In the low severity condition, relationship closeness is not important in influencing personal distress (high closeness/low severity M = 11.38, SD = 6.07; low closeness/low severity M = 11.35, SD = 5.20). In the high severity condition, however, personal distress is significantly greater for close relationships (M = 19.12, SD = 6.63) than stranger relationships (M = 14.78, SD = 6.29).

Sadness. There was a significant main effect of relationship closeness on sadness (F (1, 330) = 9.33, p = .002; η^2 = .03; see Appendix B, Figure 8), with greater sadness for targets who are close to the participant (M = 16.43, SD = 6.97) than those who are near strangers (M = 14.15, SD = 5.66). A significant main effect for severity of need was found (F (1, 330) = 102.71, p < .001; η^2 = .24; see Appendix B, Figure 9), with participants reporting more sadness in high severity conditions (M = 17.74, SD = 6.40) than low severity conditions (M = 11.86, SD = 4.22). A Relationship Closeness X Severity of Need interaction was detected (F (1, 330) = 9.38, p = .002; η^2 = .01; see Appendix B, Figure 10). As with the personal distress findings, in low severity conditions, relationship closeness is not important in determining sadness (high closeness/low severity M = 11.78, SD = 4.68; low closeness/low severity M = 11.90, SD = 4.28). In the high severity condition, greater sadness was found for close relationships (M = 20.12, SD = 6.24) than for near strangers (M = 16.09, SD = 6.00). Additionally, there was a significant Nurturance X Relationship Closeness X Severity of Need interaction (F (1, 330) = 6.75, p = .01; η^2 = .02). When imagining children, the impact of closeness and severity are less important when compared to imagining adults (see Appendix B, Figure 11). In the low nurturance condition, the greatest amount of sadness was felt for the high closeness and high severity of need cell (M = 21.85, SD = 5.85), and the least amount of sadness was felt for the high closeness

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and low severity condition (M = 11.00, SD = 4.66), with low closeness/low severity (M = 12.00, SD = 4.48) and low closeness/high severity (M = 15.88, SD = 6.17) falling between and mirroring the previous main effects and interactions. For the high nurturance condition, the effects of severity and closeness have been slightly muted. However, the results are similar. The high closeness and high severity condition yielded the greatest sadness (M = 18.09, SD = 6.17). The low severity/low closeness condition yielded the greatest sadness this time (M = 11.69, SD = 4.11), though this difference is small. The high closeness/low severity (M = 12.68, SD = 4.62) and the low closeness/high severity (M = 16.53, SD = 5.70) fell between.

Oneness. There was a significant effect of relationship closeness on felt-oneness (F(1, 272) = 20.80, p < .001; η² = .07; see Appendix B, Figure 12), with greater oneness reported for closer relationships (M = 3.50, SD = 1.92) than for strangers (M = 4.70, SD = 1.61). There was also a non-significant Nurturance X Relationship Closeness interaction (F (1, 272) = 6.62, p = .011; η² = .02; see Appendix B, Figure 13). For close relationships, nurturance has less of an effect on oneness (high closeness/high nurturance M = 4.48, SD = 1.71; high closeness/low nurturance M = 4.89, SD =1.50). For strangers, however, more oneness is felt for children (M = 4.00, SD = 1.68) than adults (M = 3.28, SD = 1.98).

Empathy. The effect of nurturance on empathy was non-significant (F (1, 330) = 3.64, p = .057, η² = .01), but there was greater empathy for children (M = 20.18, SD = 5.28) than adults (M = 18.86, SD = 5.75). There was a significant main effect of severity of need on empathy (F (1,330) = 23.29, p < .001; η² = .07; see Appendix B, Figure 14), with greater empathy felt for high severity conditions (M = 20.84, SD = 5.43) than low severity conditions (M = 17.67, SD = 5.34). There were no significant interactions.

Intent to help. There was a significant effect of relationship closeness on intent to help (F (1, 330) = 85.67, *p* < .001; η² = .21; Appendix B, Figure 15), with greater intent to help for close relationships (M = 38.37, SD = 19.97) than for strangers (M = 33.41, SD = 22.87). There was a significant main effect of severity of need on intent to help (F (1,330) = 98.33, *p* < .001; η² = .23; Appendix B, Figure 16), with greater helping intentions in the high need condition (M = 43.91, SD = 20.49) than the low need condition (M = 24.95, SD = 18.97). There was a significant Nurturance X Relationship Closeness interaction (F (1,330) = 14.15, *p* < .001; η² = .04; Appendix B, Figure 17). Again, the high nurturance seems to mute the effect of relationship closeness. Low nurturance/high closeness yielded the greatest intent to help (M = 50.44, SD = 18.24), and low nurturance/low closeness yielded the least intent (M = 24.41, SD = 19.77), with the high nurturance means falling between them (high nurturance/high closeness M = 44.08, SD = 18.95; high nurturance/low closeness M = 32.92, SD = 19.52).

Antipathy and Severity on Oneness, Emotional Response and Intent to Help

Personal distress. The effect of Antipathy on personal distress was not significant. Additionally, there was no significant interaction between antipathy and Severity of Need on personal distress.

Sadness. There was a non-significant effect of Antipathy on sadness (F (1, 334) = 6.41, *p* = .012; η² = .02; see Appendix B, Figure 18), with less sadness felt in the high antipathy condition (M = 13.46, SD = 6.12) than the low antipathy condition (M = 15.47, SD = 6.30). There were no significant interactions.

Oneness. There was a significant main effect of antipathy on oneness (F (1, 276) = 23.84, *p* < .001; η² = .08; see Appendix B, Figure 19), with greater oneness in a low antipathy condition (M = 4.22, SD = 1.81) than a high antipathy condition (M = 3.05, SD = 1.92). There

was also a significant Antipathy X Severity of Need interaction on oneness ($F (1, 276) = 9.09$, p = .003; η^2 = .03; see Appendix B, Figure 20). For the low antipathy condition, there was little difference between high and low severity on oneness (high severity/low antipathy $M = 4.18$, $SD = 1.83$; low severity/low antipathy $M = 4.27$, $SD = 1.80$). When combined with high antipathy, severity of need was much more influential: less oneness was felt in a low severity condition ($M = 2.24$, $SD = 1.64$) than a high severity condition ($M = 3.69$, $SD = 1.89$).

Empathy. Antipathy had a significant effect on empathy ($F (1, 334) = 36.59$, $p < .001$; η^2 = .10; see Appendix B, Figure 21), with greater empathy felt in the low antipathy condition ($M = 20.23$, $SD = 5.10$) than the high antipathy condition ($M = 16.10$, $SD = 6.32$). There was not a significant interaction.

Intent to help. There was a significant effect of antipathy on intent to help ($F (1, 334) = 30.40$, $p < .001$; η^2 = .08; see Appendix B, Figure 22). High antipathy led to less intent to help ($M = 24.95$, $SD = 18.94$) compared to low antipathy ($M = 38.12$, $SD = 21.11$). There was not a significant interaction.

CHAPTER 4

DISCUSSION

The present study was guided by two broad questions. First, what was the predictive utility of the model as a whole, and of the individual predictors? Second, how do the predictors in the model influence one another when all are included simultaneously? Based on previous research, it was hypothesized that the developmental variables of temperament, socialization and moral reasoning would influence the dispositional factors of perspective taking, empathic concern, personal distress and helpfulness. These dispositional influences, in turn, would predict the situational responses of empathy, oneness, personal distress and sadness, and intent to help. Additionally, the contextual factors of the severity of need, relationship closeness between the participant and target, nurturance and antipathy would also influence the situational responses. It was also hypothesized that there would be significant simple and interaction effects between the situational variables, which was tested separately using a factorial design. Finally, the situational responses of empathy and felt-oneness were hypothesized to predict intent to help. Overall, this model was supported.

Temperament

Because withdrawn temperament is associated with affective discomfort in novel or upsetting situations (Kochanska, 1993), it was predicted to have several dispositional influences within the model. Withdrawn temperament was hypothesized to predict greater dispositional personal distress, and this prediction was supported: more fear and distress temperamentally is associated with greater personal distress in emergency situations. Surprisingly, withdrawn temperament was also a positive predictor of situational empathy, although this was a smaller effect. Because personal distress is correlated with empathy, both situationally (Cialdini et al.,

1997; Maner et al., 2002), and dispositionally (as found in the present study), this may be a reflection of the temperament measure's distress component correlating with dispositional empathy. This may also be due to the affective arousal of withdrawn temperament influencing the emotional arousal associated with empathic concern, however, this is currently unclear. It was also hypothesized that withdrawn temperament would negatively predict helpfulness, and this prediction was supported. Individuals who are more withdrawn are less likely to engage in approach behaviors, and therefore were less likely to help. Although Kochanska's (1993) model discussed temperament's influence as embedded within the interactions between child and parent, these were not tested in the present study. However, even without looking at these parent-child interactions, temperament is still an important predictor within the model. Thus, withdrawn temperament is associated several of the dispositional influences on prosocial behavior, supporting the model hypotheses.

Socialization

Parental discipline strategies, particularly warm supportiveness and authoritative discipline, were previously found to influence prosocial emotions, cognitions and behaviors (Dekovic & Janssens, 1992; Dlugokinski & Firestone, 1974; Zahn-Waxler et al., 1979). These parental influences were thus hypothesized to predict dispositional empathy and helpfulness within the model. The hypothesis that parental socialization would influence prosocial dispositions was supported. Supportive, responsive parenting strategies were associated with greater perspective taking, a cognitive componenet of dispositional prosocial behavior. Mutual parent-child expectations were associated with greater dispositional empathy. Thus, more supportive and authoritative discipline, which includes reasoning and warmth, leads to greater understanding and empathy in adulthood. Punishing parenting, similar to authoritarian

strategies, included grounding and physical punishment. This parenting strategy was associated with less empathic concern and perspective taking, and more personal distress. Parental controlling behaviors, which included both active controlling (doubt in child's ability to take care of him/herself) and passive or manipulative controlling (acting hurt or disappointed), were associated with greater personal distress in emergency situations.

Thus, the predictive utility of parental socialization strategies on later prosocial dispositions replicates previous findings. Authoritative discipline with reasoning predicts a more kind, considerate child disposition, prosocial behavior and altruism, whereas power assertion and punishing discipline decrease prosocial dispositions (Dekovic & Janssens, 1992; Dlugokinski & Firestone, 1974; Zahn-Waxler et al., 1979). The findings of the present study are also supportive of Kochanska and Aksan's (2006) discussion of the socialization of conscience in early childhood. They point out that gentle discipline, warmth and sensitivity predict child internalization of parental values. Conceptually overlapping with the supportive parenting and to some extent the parent-child expectations factor, is the Mutually Responsive Orientation (MRO; Kochanska, 1997; 2002), in which there is a relationship of trust and cooperation between the parent and child. This supportive relationship moderates the effectiveness of discipline: without a supportive, warm parent-child relationship, discipline is less likely to be internalized. Thus, the present analysis replicates previous findings that parenting strategies influence prosocial dispositions, even with other developmental factors included in the same model.

Moral Reasoning

Higher levels of moral reasoning have been associated with more internalized values, altruistic behaviors and empathy (Eisenberg & Fabes, 1998; Eisenberg et al., 2002). Thus, it was predicted that a greater overall composite of moral reasoning would be associated with greater

dispositional prosocial behavior. This hypothesis was supported with several significant model paths. The moral reasoning composite was a significant positive predictor of empathic concern and perspective taking, and was associated with more helpful behaviors. Thus, higher level reasoning, with more internalized values, predicted more prosocial dispositions. These findings are in support of Eisenberg's (1986) model of prosocial development, in which internalized moral reasoning is associated with more empathy and altruism, and Carlo et al.'s (2003) findings that higher prosocial moral reasoning is associated with more altruism and lower levels of reasoning are associated with less altruism. The present findings also replicate those by Strayer and Roberts (2004) in which age (which is positively correlated with more mature moral reasoning) is predictive of perspective taking and empathy in adolescents. Thus, moral reasoning is positively associated with the prosocial dispositions of empathy, perspective taking and helpfulness, supporting the present model's hypotheses and replicating previous findings.

Prosocial Dispositions

Because it was expected that at least some of the variance in situational emotional responses and helping intentions would be due to dispositional prosocial emotional responses and helpfulness, there were several hypotheses regarding the predictive utility of prosocial dispositions. First, it was expected that dispositional empathic concern would predict situational empathy regarding the imagined need situation. There was only a weak association between dispositional and situational empathy, which was non-significant. There was also a weak, nonsignificant influence of perspective taking on situational empathy. If either path was deleted, the other became significant, indicating that both were explaining the same variability in situational empathy. For theoretical reasons, both were kept in the model as non-significant paths. Next, it was hypothesized that dispositional personal distress would predict situational

personal distress. This also yielded a weak, non-significant prediction. Additionally, the dispositional helpfulness scale was not predictive of intent to help in the imagined need situation.

Some of the associations between prosocial dispositions and situational responses were significant, however. Dispositional helpfulness was significantly predictive of both situational empathy and felt-oneness. Dispositional empathic concern also positively predicted intent to help. Thus, it appears that prosocial dispositions do influence situational emotional responses and intent to help, but not in a straight-forward manner.

Penner et al.'s (1995) study yielded similar non-predictive findings when using independent measures to predict several aspects of helping. However, the two factors Other-Oriented Empathy (empathic concern, ascription of responsibility, other-oriented moral reasoning, perspective taking and mutual concerns moral reasoning) and Helpfulness (personal distress and self-reported helpfulness), significantly predicted prosocial emotions, cognitions, and behaviors. The present study only included a portion of the PSB measures, and those larger factors were not included in the model, which may be why these path coefficients were not significant. This possibility is discussed shortly.

Contextual Factors

As noted previously, the situational factors of severity of need, relationship closeness, nurturance and antipathy were contrast coded (0 = low, 1 = high) and set to predict the situational emotional response and intent to help measures. Thus, only the main effects, and not the interactions, were included in the path analysis. The findings will only briefly be discussed here, because they will be examined in depth shortly. Severity of need significantly predicted situational empathy, personal distress, sadness and intent to help, and relationship closeness predicted felt-oneness, personal distress, sadness, intent to help. Thus, the present model

replicates previous findings that both severity of need and relationship closeness are important factors influencing prosocial motivations and behaviors. Based on Batson's (2005) nurturance hypothesis, it was expected that nurturance would evoke situational empathy in a need situation. This hypothesis was not supported. In fact, nurturance did not significantly predict any of the situational emotional responses or intent to help. However, because only direct effects were tested in the path analysis, interactions with nurturance and the other factors will be discussed shortly. Finally, antipathy was included in the path analysis, to examine the possibility that it is an influence on situational emotional responses and intent to help. This was offered previously as a possible confound with felt-oneness (Batson et al., 2005) when oneness is conceptualized as similarity. Antipathy was associated with less empathy, less sadness and less felt oneness. Interestingly, antipathy was not predictive of intent to help, at least when looking at antipathy as a direct predictor. Whether or not the imagined target is disliked, participants were just as likely to help in a need situation. In sum, the contextual factors of need severity, relationship closeness and antipathy each had significant direct influences on situational emotional responses, oneness and intent to help.

Emotional Responses and Felt-Oneness

There were several significant correlations between felt-oneness, empathy, personal distress and sadness. These results replicate previous findings (Cialdini et al., 1997; Maner et al., 2002; Maner & Gailliot, 2007). Additionally, based on Maner and Gailliiot's (2007) results, it was hypothesized that only the emotional response of situational empathy and felt-oneness would predict intent to help. These hypotheses were supported, such that both paths were significant. Situational empathy was the stronger of the two predictors, whereas previous studies

have found felt-oneness to be the stronger predictor of intent to help. In all cases, however, the effect sizes were small to moderate for both oneness and empathy (r's between .11 and .27).

Contextual Influences and Their Interactions

A factorial design was included in the analyses in order to test the effects of the contextual variables and their interactions. These designs were similar to those used previously (Cialdini et al., 1997; Maner & Gailliot, 2007) to test the effects of high and low severity of need and relationship closeness. In addition to including these two variables, the present analyses also included nurturance, in order to test a nurturance hypothesis, and antipathy to test its effects as a possible confound for oneness (Batson et al., 2005).

Closeness and Severity. The egoistic negative affect responses of personal distress and sadness were both predicted by several of the contextual variables. Individuals were significantly more likely to feel sadness and personal distress when imagining someone with whom they had a close personal relationship and when imagining the target in a higher need, orphan scenario. There was an additional relationship closeness and severity of need interaction for both sadness and personal distress: for a low severity condition, in which the target needed a ride, relationship closeness was not important in determining sadness and personal distress. In the orphan scenario, however, greater sadness and distress were found for targets whom were close to the participant, rather than near strangers. The interaction of relationship closeness and severity of need replicates Cialdini et al.'s (1997) previous findings. Participants were also more likely to report greater empathy for closer relationships, and for the higher severity condition. The importance of relationship closeness on motivation and helping replicate both Maner & Gailliot's (2007) and DeWall et al.'s (2008) results which demonstrate that closer relationships evoke greater response and greater helping. Relationship closeness significantly predicted felt-

oneness that the participant reported with the target, replicating Maner & Gailliot's (2007) results.

Participants indicated significantly greater helping intentions under conditions of close relationships and high severity of need. Additionally, there was a non-significant interaction ($p = .04$) between relationship closeness and severity of need. When the participant imagined that the target individual needed a ride, relationship context was not important, and participants were just as likely to help those who were close to them as those who were near strangers. With the orphan scenario, however, relationship context was important: participants reported greater helping intentions for targets who were closer to them than those who were near strangers. Although this interaction was non-significant and yielded a small effect size ($\eta^2 = .01$), the direction of the findings do replicate Cialdini et al.'s (1997) results.

Overall, when examining the severity of the need situation and the closeness of the relationship, the findings replicate those that were found previously (Cialdini et al., 1997; DeWall et al., 2008; Maner & Gailliot, 2007; Maner et al., 2002). In general, greater emotional response is felt for targets in high need situations, especially if they share a close relationship with the target. The relational context is important in determining whether severity of need influences emotional response and helping intentions, replicating earlier findings (Maner & Gailliot, 2007).

Nurturance. Batson et al. (2005) offered a nurturance hypothesis to explain helping for strangers. According to this hypothesis, empathy is the urge to care for one's kin, and that nurturance allows individuals to feel empathy for non-kin as well, both human and non-human. Thus, the present study included nurturance as an additional factor which may predict the emotional response of empathy, sadness and personal distress, felt-oneness, and eventual intent

to help. Nurturance was evoked by asking participants to consider a child when imagining the need scenarios.

Surprisingly, nurturance did not have direct effects on any of the emotional responses, oneness, or intent to help, which is why it was not significant within the path analysis. There was only a very small, non-significant effect of nurturance on empathy. When including the other factors of relationship closeness and severity of need, nurturance is no longer an important predictor of empathy, and so the present findings do not replicate Batson et al.'s (2005) results. Nurturance was involved in several interactions, however. There was a significant Nurturance X Relationship Closeness X Severity of Need interaction which predicted sadness. When imagining adults, there is a greater influence on sadness due to need severity and relationship closeness. However, the effects of severity and closeness seem to be dampened by imagining a child in the need situation. There was a significant interaction between nurturance and relationship closeness on the felt-oneness measure. The impact of relationship closeness on oneness was greater when imagining adults than when imagining children – again, there appears to be a dampening effect when imagining children. Finally, there was a significant interaction between nurturance and relationship closeness on helping intentions, which replicates the previous findings with nurturance: nurturance again dampened the effects of relationship closeness on helping intentions. In sum, the effects of nurturance are limited only to the strength in which the other factors affect the outcome measures. When imagining children, emotional response and intent to help tend to be more moderate than when imagining adults.

It is unclear, however, why this should be the case. It would seem intuitive that imagining a child would lead to greater emotional response and helping intentions than imagining an adult, according to a nurturance hypothesis and Batson et al's (2005) results. If one

feels nurturance, then he or she would feel toward the victim as one would feel toward kin, leading to greater empathy and emotional responding. The dampening effects of nurturance may actually be due to less variability in the imagined child victim. For instance, it is likely that most undergraduate students do not have a relationship with a child that is as close as one they would share with an adult, decreasing the impact of high relationship closeness and perhaps high severity on the outcome measures. Additionally, college-age participants may not feel the same way about children as older individuals, who may have children of their own. In other words, participants may not care as much about a child in need than an adult, because they have had less exposure to young children than to adults. Further, the manipulation in the present study was different from that which was used previously. The participants in Batson et al.'s (2005) study believed that the target was really in need, whereas the participants in the present study imagined a need scenario. Further, Batson's study only measured empathy, and did not include a helping measure. In the present study, participants completed the intent to help measure prior to completing the emotional response measures. Due to the high responsibility of caring for a child, participants may have less intent to help. The reluctance to help may have translated to reporting less empathy reporting later, in order to minimize inconsistencies. This effect was not found with any of the other measures, however, so it is unlikely that this occurred.

Antipathy. Batson et al. (2005) discussed antipathy as a possible confound with similarity (or oneness, in their explanation) in predicting intent to help. This suggestion was never tested, however, and so it was included in the present study. Some participants were presented with a high antipathy condition, in which they were asked to imagine someone they knew well but disliked, in either a high or low severity scenario. This gave the opportunity to

examine both the main effects of antipathy and the interactions between antipathy and severity of need.

Participants felt significantly less sadness when imagining someone they disliked in need. Although there was no main effect of antipathy on personal distress, there was a significant interaction between antipathy and severity of need. In the low severity condition, whether the target is disliked or not has little impact on distress. In the high severity condition, however, participants felt less personal distress when imagining a disliked individual. Participants felt significantly less oneness with disliked target individuals, and there was a significant interaction between severity and antipathy on oneness. In a low antipathy condition, oneness was similar whether imagining a low or high severity scenario. When imagining a disliked individual, greater oneness was felt in a high severity condition. Thus, greater need creates more oneness, even if the person is someone the participant dislikes. Antipathy also had a significant effect on empathy. Participants felt significantly less empathy when imagining someone they disliked. Finally, antipathy had a significant effect on intent to help. Participants would give significantly less help to individuals they disliked.

In sum, antipathy does play a role in emotional response, oneness and intent to help. Participants are less upset, less empathic, feel less oneness and are less willing to give help to those who they do not like. Batson et al.'s (2005) assertion that antipathy may be confounded with oneness through dissimilarity is not supported.

General Discussion

One goal of the present study was to study both an altruism and an egoism hypothesis from a bioecological perspective. When taking a bioecological approach to helping, it becomes clear that oneness and empathy are indicators of the same phenomenon: because the bystander

and victim are both within the same bioecological system, any help which the bystander offers to the victim will in turn feed back to the helper. Any felt-oneness that individuals feel toward the imagined victim may actually reflect that shared conceptual space within the system. As noted by Aron, Aron, Tudor and Nelson (1991), the IOS measure taps the interdependency in relationships and the interconnected system individuals share with others. The present findings similarly support this bioecological approach. When including both oneness and empathy in the same model, both significantly predicted intent to help, and both predicted similar variance in intent to help (situational empathy β = .170; oneness β = .114).

Maner & Gailliot (2007) had found a large effect of relationship closeness on oneness (η^2 = .54), and the present study yielded similar results. These findings point to the possibility of the IOS measure reflecting shared conceptual or relational space which the individual may have with the target individual. This makes sense when considering that the original intent of the IOS was to measure the closeness of relationships (Aron et al., 1992). The blurring between the self and other that the IOS is intended to measure is what often occurs during close relationships: a communal sharing of resources (such that helping the other is now helping the self), a confusion in self and other's perspectives, and the adoption of the other's characteristics as one's own. Cialdini et al. (1997), Maner et al. (2002) and Maner & Gailliot (2007) assume that this self-other overlap can occur in strangers as well, but it is likely that the IOS is not measuring the same phenomenon in both cases. For high closeness conditions, higher scores on the IOS may reflect the actual closeness of the relationship, as intended. But what is it measuring in stranger relationships? Is the person really including the other in the self? According to Aron and colleagues' (1991) criteria (and Batson, 1991), individuals are not actually adopting the others' characteristics into the self. Endorsement of higher values on the IOS may be reflecting the

interconnectedness of the relationship between the self and the victim in a need situation, but not a true adoption of that person into the self. Further, Maner et al.'s (2002) study attempted to manipulate oneness with supposed *similarity* in brain waves between the participant and the target, and similarity has also been used as a measure of oneness by Batson, Sager et al. (1997). Similarity is not necessary for prosocial behavior, as demonstrated by Batson et al.'s (2005) nurturance study. Self-other overlap has also been measured with a "we-ness" measure (Cialdini, et al., 1997; Maner et al., 2002), in which participants are asked to indicate how much they would use the word "we" to describe themselves and a target. Is a grouping of individuals an appropriate measure of the blurring between the self and another? Finally the felt-oneness hypothesis (Cialdini et al., 1997) assumes that perspective taking creates oneness, however, Aron et al.s (1991; 1992) work would suggest that oneness creates changes in perspective taking. The direction of this relationship between oneness and perspective taking is important when considering a felt-oneness hypothesis – perspective taking must come first for the hypothesis to make sense. In sum, the author feels that the IOS is intended for measuring self-other overlap in close relationships, and it likely does not work the same way with those who are near strangers. Future research is needed to demonstrate whether the IOS is actually measuring the blurring between the self and other when that other is a stranger, and if not, what it actually is measuring. It is quite possible that the overlap between self and other reflects the interconnection between people, similar to that interconnection between individuals and significant others within a bioecological system. As demonstrated in the present study, felt-oneness is only influenced directly by relationship closeness, replicating Cialdini et al.'s (1997) results. It is possible that the oneness measure is a reflection of closeness in a relationship, rather than the blurring

between the self and the other. In turn, the influence of oneness on intent to help may be a reflection of relationship closeness or similarity on predicting intent to help.

However, empathy and oneness do not exist within a vacuum, and neither do the helper and victim. By taking a bioecological approach, the importance of including the effects of the helper in addition to those of the situation becomes clear. The present study demonstrates that the developmental influences of temperament, socialization and moral reasoning maturity each predict prosocial individual differences. In general, positive parenting and more internalized reasoning are associated with more prosocial dispositions. Surprisingly, withdrawal temperament is associated with greater dispositional empathy and perspective taking, in addition to personal distress, perhaps because these individuals are more emotionally aroused in general. However, even though they may feel emotional arousal, temperamentally withdrawn individuals are dispositionally less helpful.

These prosocial dispositions do have some influence on situational responses, but not in a straightforward way. Empathy and perspective taking do not necessarily predict situational empathy (although with either variable removed, the other becomes significant), and dispositional personal distress does not predict situational personal distress. Dispositional empathy does, however, predict intent to help, and does so just as well as the situational influence of felt-oneness, and nearly as well as situational empathy. The larger factors which were used previously by Penner et al. (1995), were not included, and should be examined with the emotional response and oneness outcomes in the future. However, it is clear that dispositional empathy, and situational empathy and oneness, predict intent to help in an imagined need scenario, suggesting that a person by situation approach may be more useful in understanding helping behavior than either alone.

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Finally, context is an important influence on helping motivation and intent. Severity of need and relationship closeness appear to be the most important situational factors in predicting negative affect (personal distress and sadness) and intent to help. Closeness clearly predicts felt-oneness, whereas severity influences empathy. However, antipathy influences the emotional responses surrounding helping, notably empathy (greater than severity) and sadness, and it also negatively predicts oneness. The influence of nurturance is less clear, as it only works as a moderator with closeness and severity of need.

Taken as a whole, it is clear the person effects of development and dispositions, and the situational and relational contexts are each influencing emotional response, oneness and intentions to help. The present study supports a bioecological approach to understanding prosocial behavior. Person and context effects are both important contributors, in addition to time (socialization history, maturation, past helpful behaviors), in the simultaneous prediction of prosocial emotions and intentions. By including all within the same study, it allows a comprehensive view of why an individual would choose to help in a specific situation. Including each of these influences simultaneously allows for some interpretation of the process which is involved in helping in a given situation: person and situation influences both appear to be predictive in helping motivations and intentions.

Limitations and Future Directions

The present analysis is the first of its kind to take a comprehensive approach to understanding prosocial behavior. Whereas specific relationships were expected to replicate previous findings, the overall structure of the model was exploratory, a starting point for future research and a generator of new questions.

There are several limitations related to the measures used in the present study. The temperament measure used did not include a measure of approach-withdrawal, which would more directly map onto Kochanska's (1993) conceptualization of fearfulness and fearlessness in the socialization of conscience. For present purposes, the fear and distress dimensions of the EAS Temperament Scale (Buss & Plomin, 1984) were used. Whereas this does a decent job at measuring more withdrawal behaviors, it does not measure more approach behaviors, and these should be included in future research. Even still, the fear and distress dimensions combined did predict multiple prosocial dispositions and helpfulness. Additionally, Kochanska's (1993) work was conducted on children, whereas the present study was conducted on a young adult sample and at least methodologically assumed that temperament's influence would be equivalent for both groups. Affect in socialization of prosocial behaviors is most important in early childhood (Garner et al., 1994; Kochanska, 1993), and though temperament appears to be important in adulthood according to present results, it should not be assumed that the same construct is being measured.

Similarly, the Parents Practices Questionnaire (PPQ; Devereaux et al., 1969) was also reconfigured based on a factor analysis, and these factors were used to predict prosocial dispositions. The present study used retrospective ratings of past parental behaviors, which may be vulnerable to memory effects. Other measures are available which have been well-validated, however, the present analyses replicate previous findings (Dekovek et al., 1992; Dlugokinski & Firestone, 1974; Zahn-Waxler et al., 1979) and so using the factor scores for the PPQ does not appear to be a problem. The factor analysis yielded four factors, which were not the same factors as those in the original conception of the measure, and there were several cross-loadings of items between factors. Because of these cross-loadings participant scores were created by

using factor scores.   Each of the parenting factors do, however, significantly predict the dispositional measures, and overall the findings replicate previous findings that socialization influences prosocial dispositions.   Finally, there was little control in who the individual was considering when answering the questionnaire (mother, father, grandparent, etc). The author left this open in order to be inclusive of differing family structures, but it may have introduced additional variability which may be attenuating path coefficients.

Penner and colleagues (Penner et al., 1995) discuss a prosocial personality battery which includes two factors which are made of several measures. The present study did not include three measures which were included in the battery (ascription of responsibility, other-oriented moral reasoning, group-oriented moral reasoning), and therefore did not include these overarching factors in predicting situational responses and intent to help. As demonstrated in the present study, the dispositional prosocial measures did not predict the situational emotional responses. It is possible that because the entire battery and the overarching factors were not included, these findings may not replicate when using the full measure. It is also possible that individual differences in empathy, perspective taking and personal distress are independent of situational emotional responses of empathy and personal distress. As noted previously, both dispositional empathy and situational empathy significantly predicted intent to help – just not in a meditational pathway as expected.

An additional issue is that of the lack of ecological validity in the present study. The experimental manipulations required participants to imagine an individual whom they knew, or would at least recognize, in either a high or low severity of need situation. Using an imagined individual, and an imagined situation, was necessary in order to vary relationship closeness, and had been used previously (Cialdini et al., 1997; Maner & Gailliot, 2007). The imagined need

situations may not have truly evoked the emotional responses which were later measured. Additionally, intent to help may not be an accurate proxy of true behavior in a real need situation Several studies have included a fictional character whom the participants believed was real, and participants were actually given the opportunity to help (Batson, Sager et al., 1997, Maner et al., 2002). Similar to this is the possibility that the empathy measure is not truly measuring empathy. Previous researchers have included physiological measures of empathy and emotional response (Eisenberg et al., 1990; Eisenberg et al., 1994; Eisenberg, Fabes, Schaller, Carlo & Miller, 1991), and using these types of measures may help to understand how these responses are interpreted in terms of emotional responses for participants. Future research should measure the relationship between self-reports of situational empathy and their physiological correlates, in order to better measure and understand this response, and its relationship with actual helping behaviors. Similarly, the present study is limited by its use of only self-report measures. Previous research has also included parent and peer-reports (Eisenberg et al., 2002), however, these ratings tend to converge and so a decent self-report rating may be all that is necessary.

The current study sought to understand the bioecological process, which occurs between the helper and his or her context, by including all variables simultaneously. This allows for an evaluation of the impact of each variable with all others included in the same model. It does not, however, measure the interactions of these variables amongst themselves, or the actual dynamic interactions of an individual with his or her context, over time. It would be pertinent, from a bioecological perspective, to understand the feedback loops which occur between an individual and the context or victim, and under what circumstances these reciprocal relationships lead to helping or not helping, empathy or egoism. Additionally, the model only tested the direct effects of the variables. An important next step would be to examine the interactions between the

dispositional and contextual variables, and how those interactions influence helping motivations and intentions. Again, this will bring clarity to the dynamic interactions which take place between a bystander and victim in a need situation.

The effects of nurturance were not clear in the present study. Nurturance only appears to be influential in its interactions with severity of need and relationship closeness. Nurturance very clearly predicted empathy previously (Batson, et al., 2005), but why not here? Under which circumstances is nuturance important, and under which circumstances is it not? As discussed previously, the lack of direct effects may be due to methodological factors, such as a lack of ecological validity. Using an imagined need scenario was necessary in the present study because the author desired to vary relationship closeness and severity of need within the same study. Because the effect size for severity of need is so large, it is possible to include lesser need situations within a laboratory setting, while at the same time varying relationship closeness by bringing in pairs of participants who may or may not know one another. By creating a laboratory manipulation, it would be possible to increase both increase ecological validity and maintain more control. This would give some indication of whether using an intent to help measure, as opposed to actually volunteering help, yields different emotional responses and helping behaviors. Although the current study did reconcile many discrepancies between previous studies, it is impossible to do so within a single study. The present findings should be replicated with either realistic, fictitious narratives (as used in Batson et al., 2005, Batson, Sager et al., 1997, Maner et al., 2002), or with real individuals, in order to further reconcile the methodological differences with previous studies.

Despite the present study's notable limitations, it is the first of its kind. It took a comprehensive bioecological framework and applied it to helping in a specific situation. This

goes beyond the personality approaches, the situational approaches, and person x situation approaches, because it also includes these factors simultaneously while also considering developmental influences and time within the model. Being the first of its kind, the present study also is a starting point for future research.

Conclusions

By taking a bioecological systems approach (Bronfenbrenner & Morris, 2006), it has been demonstrated that person effects, such as the developmental factors of temperament, socialization history and level of moral development, and the dispositional factors of empathy, personal distress, perspective taking, and helpfulness are important predictors, in addition to contextual influences, of emotional response and helping intentions in a need situation. Additionally, there are interactions between contextual factors which influence prosocial outcomes. Because both felt-oneness and empathy significantly predict intent to help, within the bioecology of the person effects and context, support is found for both hypotheses in addition to demonstrating the importance of including the effects of individual differences, development and maturation or historical time when studying prosocial behavior.

APPENDIX A

TABLES

Table 1

Factor Loadings for Factor Analysis with Varimax Rotation of Parent Practices Questionnaire

Abbreviated Question	Supportive	Punishing	Expectations	Control
1) Comforted me	0.642			
2) Talk about everything	0.713			
3) There when needed	0.717		0.328	
4) Explained punishment	0.579		0.32	
5) Explained requests	0.570			
6) Expectations - behavior	0.301		0.705	
7) Expectations - misbehavior			0.573	
8) Encouragement	0.706			
9) Allowed to make own plans	0.511			
10) Expectations - neatness			0.527	
11) Know location			0.597	
12) Spending money				0.373
13) Let off lightly		-0.332	-0.319	
14) Unable to punish		-0.428	-0.393	
15) Do well in school	0.521		0.322	
16) Better than other children	0.316			0.357
17) Cannot take care of self				0.676
18) Unable to go places				0.557
19) Act hurt and disappointed				0.543
20) Guilt and shame				0.468
21) Help with homework	0.644			
22) Taught what I wanted to learn	0.745			
23) Expectations - Chores			0.438	
24) Punish - Remove friends		0.518		
25) Punish - Remove favorite things		0.662		
26) Nagged		0.374		0.339
27) Scolded		0.504		
28) Slapped		0.511		
29) Spanked		0.779		
30) Threatened spanking		0.751		

* Note loadings < .30 not displayed.

Table 2

Zero-Order Correlations between Withdrawal Temperament, Socialization and Moral Reasoning Variables

	1	2	3	4	5	6
Withdrawal Temperament	1					
Supportive Parenting	-0.14*	1				
Punishing Parenting	0.02	-0.04	1			
Parent-Child Expectations	-0.09	0.08	0.01	1		
Parental Controlling	0.20**	-0.02	0.06	0.07	1	
Moral Reasoning	-0.14**	0.03	0.04	0.30**	-0.07	1

*$p < .05$ **$p < .01$

Table 3

Zero-order correlations between prosocial disposition variables

	1	2	3	4
Perspective Taking	1			
Empathy	0.42**	1		
Personal Distress	-0.10	0.15**	1	
Helpfulness	0.27**	0.21**	-0.19**	1

*p < .05 **p < .01*

Table 4

Zero-Order Correlations Between Oneness and Emotional Response Variables

	1	2	3	4
Oneness	1			
Empathy	0.39**	1		
Sadness	0.21**	0.57**	1	
Personal Distress	0.14*	0.46**	0.87**	1

* *p* < .05 ** *p* < .01

Table 5

Main Effects of Severity of Need on Outcome Measures

	Low Severity M (SD)	High Severity M (SD)	F	Sig	Partial Eta Squared
N	154	184			
Oneness	3.79 (1.95)	4.06 (1.85)	0.37	0.543	0.00
Empathy	17.67 (5.34)	20.84 (5.43)	23.29	$< .001$	0.07
Sadness	11.86 (4.42)	17.74 (6.40)	102.71	$< .001$	0.24
Personal Distress	11.36 (5.14)	16.54 (6.76)	67.87	$< .001$	0.17
Intent to Help	24.95 (18.97)	43.92 (20.49)	98.33	$< .001$	0.23

Table 6

Main Effects of Relationship Closeness on Outcome Measures

	Low Closeness M (SD)	High Closeness M (SD)	F	Sig	Partial Eta Squared
N	203	135			
Oneness	3.50 (1.92)	4.70 (1.61)	20.80	< .001	0.07
Empathy	18.67 (5.67)	20.48 (5.36)	5.60	0.019	0.02
Sadness	14.15 (5.66)	16.43 (6.97)	9.33	0.002	0.03
Personal Distress	13.19 (6.05)	15.67 (7.10)	11.14	0.001	0.03
Intent to Help	27.13 (20.04)	47.52 (18.77)	85.67	< .001	0.21

Table 7

Main Effects of Nurturance on Outcome Measures

	Low Nurturance	High Nurturance	F	Sig	Partial Eta Squared
	M (SD)	M (SD)			
N	211	127			
Oneness	3.79 (1.99)	4.23 (1.70)	0.65	0.423	0.00
Empathy	18.86 (5.75)	20.28 (5.28)	3.64	0.057	0.01
Sadness	15.10 (6.58)	14.99 (5.85)	0.50	0.479	0.00
Personal Distress	14.38 (6.73)	13.85 (6.37)	1.63	0.202	0.00
Intent to Help	33.41 (22.87)	38.37 (19.97)	0.21	0.647	0.00

Table 8

Main Effects of Antipathy on Outcome Measures

	Low Antipathy	High Antipathy	F	Sig	Partial Eta Squared
	M (SD)	M (SD)			
N	270	68			
Oneness	4.22 (1.81)	3.05 (1.92)	23.84	< .001	0.08
Empathy	20.23 (5.10)	16.10 (6.32)	36.59	< .001	0.10
Sadness	15.47 (6.30)	13.46 (6.12)	6.41	0.012	0.02
Personal Distress	14.39 (6.66)	13.35 (6.28)	1.19	0.276	0.00
Intent to Help	38.12 (21.11)	23.98 (21.61)	30.40	< .001	0.08

Table 9

Means, standard deviations and t-tests for males and females on study variables

Variable Name	Gender	N	M	SD	*t*-score	*df*	Sig.
Withdrawn Temperament	F	230	21.86	6.39	3.17	275	0.002
	M	47	18.68	5.60			
Parental Support	F	221	0.01	0.94	0.66	266	0.510
	M	47	-0.09	0.89			
Parent Punishing	F	221	0.00	0.90	-1.81	266	0.071
	M	47	0.27	1.07			
Parent-Child Expectations	F	221	0.13	0.84	4.25	266	< .001
	M	47	-0.44	0.86			
Parental Control	F	221	-0.02	0.86	0.50	266	0.620
	M	47	-0.09	0.85			
Moral Reasoning	F	231	1.90	0.07	1.01	277	0.314
	M	48	1.89	0.08			
Perspective Taking	F	231	18.83	4.10	1.07	277	0.285
	M	48	18.10	5.04			
Dispositional Empathy	F	231	21.36	4.36	3.51	277	0.001
	M	48	18.88	4.97			
Dispositional Personal Distress	F	231	12.39	4.98	2.08	277	0.039
	M	48	10.75	4.90			
Helpfulness	F	231	50.79	10.33	0.55	277	0.581
	M	480	49.88	10.81			
Social Desirability	F	231	17.37	5.06	0.20	277	0.840
	M	48	17.21	5.29			
Intent to Help	F	230	34.46	21.48	1.21	276	0.229
	M	48	30.31	22.57			
Oneness	F	187	3.83	1.94	-0.95	224	0.346
	M	39	4.15	2.01			
Situational Empathy	F	230	19.27	5.44	1.25	276	0.211
	M	48	18.15	6.58			
Situational Sadness	F	230	15.01	6.39	1.00	276	0.317
	M	48	14.00	6.14			
Situational Personal Distress	F	230	14.12	6.40	1.11	276	0.268
	M	48	12.98	6.75			

Table 10

Zero-Order Correlations between Social Desirability and Study Variables

	r	Sig.
Withdrawn Temperament	-0.31	< .001
Supportive Parenting	0.25	< .001
Punishing Parenting	-0.06	0.266
Parent-Child Expectations	0.10	0.073
Parental Control	0.00	0.988
Moral Reasoning	0.18	< .001
Perspective Taking	0.33	< .001
Dispositional Empathy	0.142	0.009
Dispositional Personal Distress	-0.14	0.012
Dispositional Helpfulness	0.236	< .001
Oneness	0.04	0.516
Situational Empathy	0.06	0.242
Situational Sadness	-0.02	0.734
Situational Personal Distress	-0.05	0.359
Intent to Help	0.085	0.117

Table 11

Final Model Parameters Estimates, Standard Errors and Statistics

Predictor Variable			
Outcome Variable	Estimate	S.E.	Est/S.E.
Withdrawn Temperament			
Dispositional Empathy	0.126	0.035	3.618
Dispositional Personal Distress	0.449	0.036	12.475
Dispositional Helpfulness	-0.243	0.090	-2.715
Supportive Parenting			
Dispositional Perspective Taking	0.602	0.220	2.732
Punishing Parenting			
Dispositional Empathy	-1.013	0.245	-4.141
Dispositional Personal Distress	-0.558	0.245	-2.28
Dispositional Perspective Taking	0.619	0.239	-2.589
Parent-Child Expectations			
Dispositional Empathy	0.941	0.247	3.807
Controlling Parenting			
Dispositional Personal Distress	0.795	0.261	3.048
Moral Reasoning			
Dispositional Empathy	20.543	3.294	6.237
Dispositional Perspective Taking	14.317	3.110	4.604
Dispositional Helpfulness	23.171	7.888	2.938
Dispositional Empathy			
Situational Empathy	0.100	0.055	1.799
Intent to Help	0.556	0.196	2.837
Dispositional Perspective Taking			
Situational Empathy	0.105	0.060	1.761

Dispositional Personal Distress

Situational Personal Distress	0.062	0.035	1.785

Dispositional Helpfulness

Situational Empathy	0.061	0.023	2.61
Oneness	0.026	0.010	2.606

Severity of Need

Situational Empathy	2.826	0.521	5.42
Situational Personal Distress	5.097	0.644	7.912
Situational Sadness	5.810	0.592	9.816
Intent to Help	15.782	1.835	8.598

Relationship Closeness

Oneness	0.917	0.231	3.976
Situational Personal Distress	2.211	0.612	3.609
Situational Sadness	1.489	0.551	2.704
Intent to Help	17.408	1.899	9.167

Antipathy

Situational Empathy	-4.070	0.627	-6.487
Oneness	-0.712	0.271	-2.622
Situational Sadness	-1.336	0.434	-3.075

Oneness

Intent to Help	1.302	0.565	2.304

Situational Empathy

Intent to Help	0.668	0.182	3.670

*Note: Est/S.E. > ±1.96 are considered significant

APPENDIX B

FIGURES
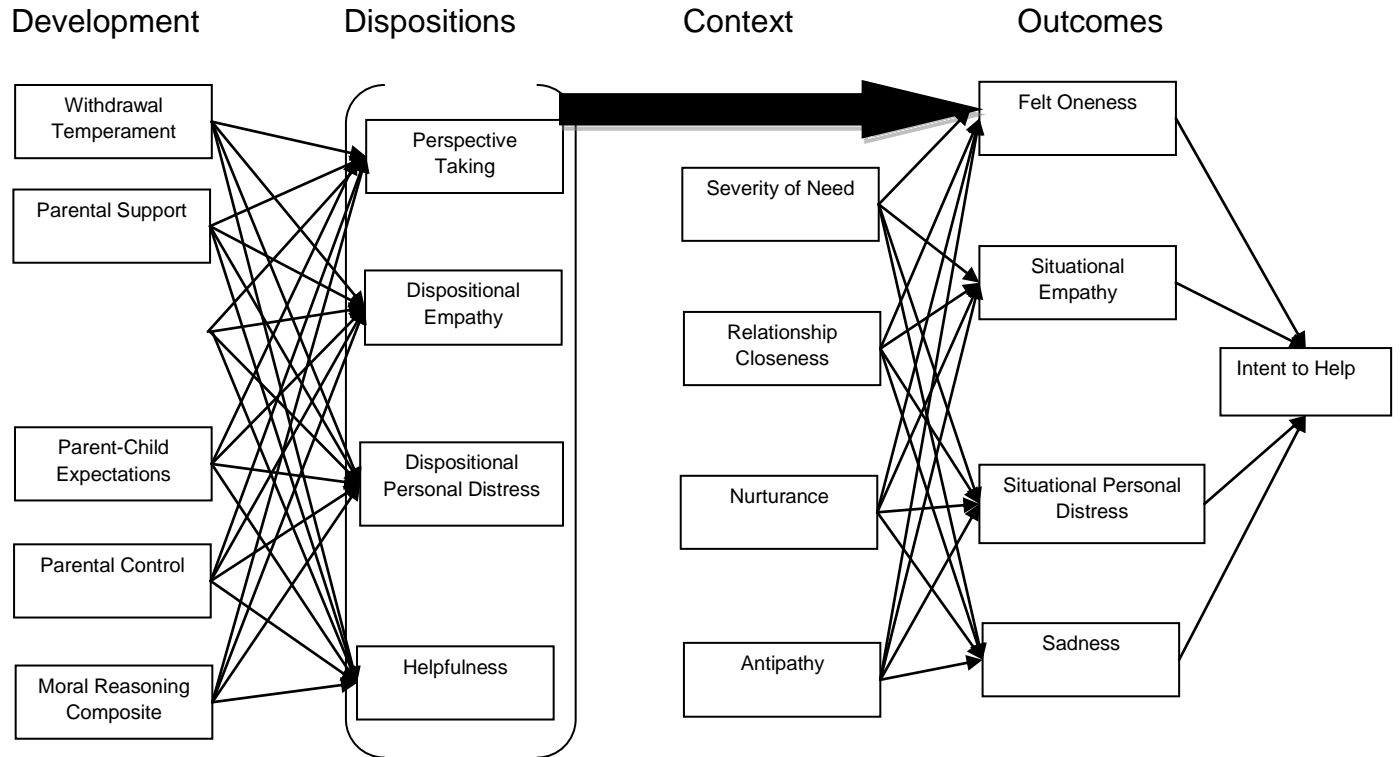
Figure 1: A model testing a bioecological systems approach to prosocial behavior. This includes the developmental, dispositional and contextual factors involved in felt-oneness, empathy, negative affect and intent to help.
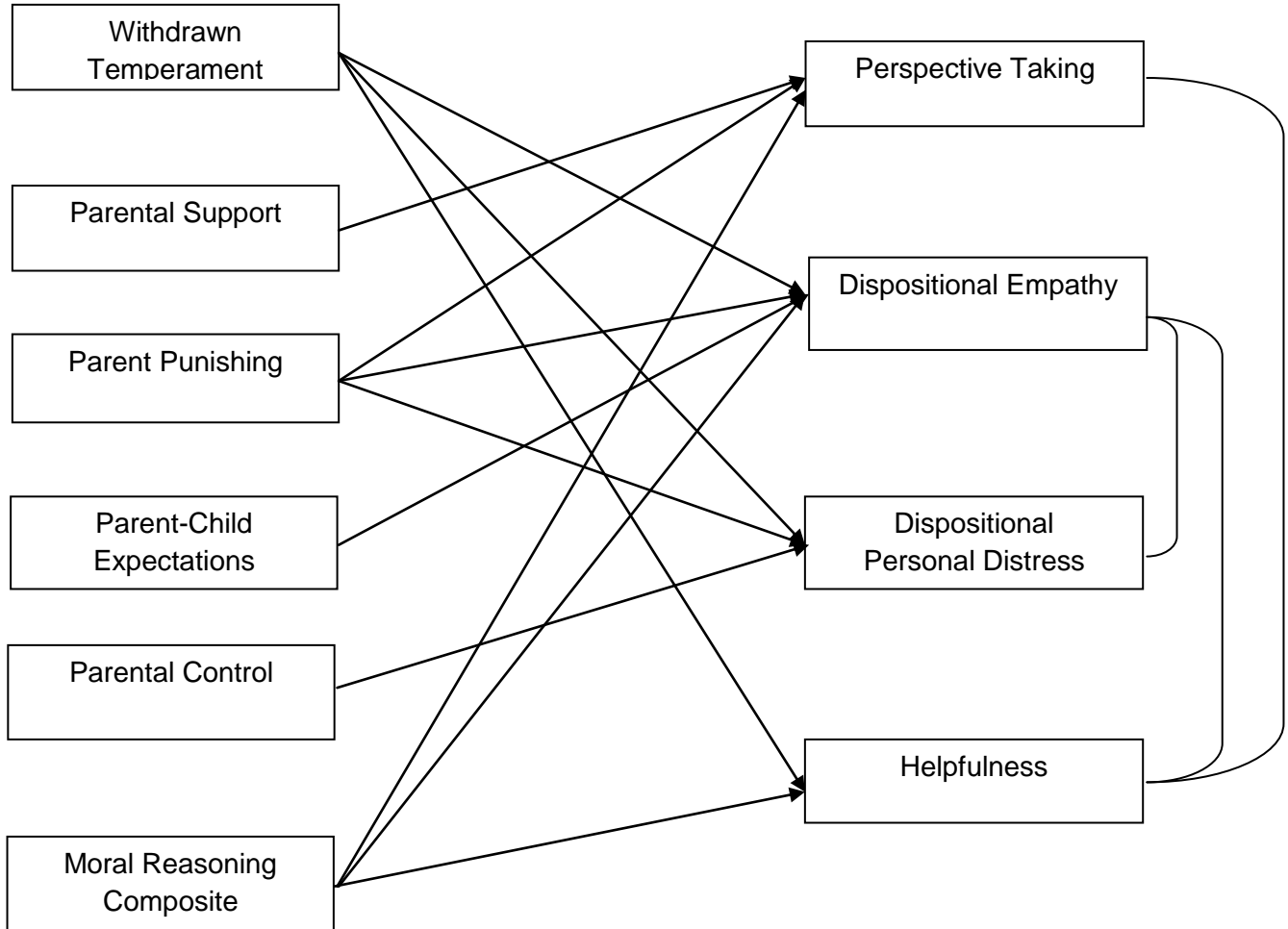
Figure 2: A model demonstrating the developmental influences on prosocial dispositions. This model had excellent fit (χ^2 (df, N = 339) = 18.654, *p* = .18, CFI = .99, RMSEA = .03).
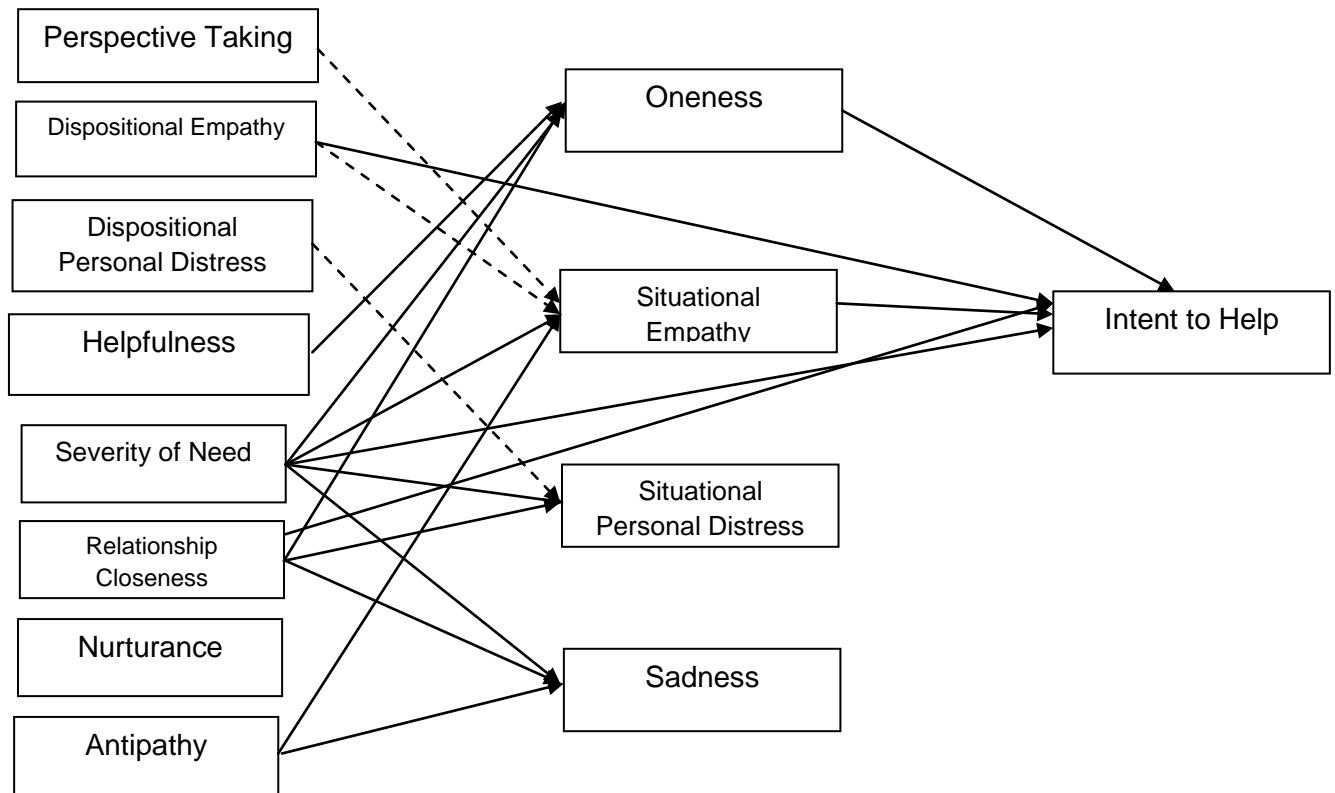
Figure 3: Dispositional and contextual influences on oneness, empathy, negative affect and intent to help. This model yielded excellent fit (χ² (df, N = 339) = 30.40, *p* = .08, CFI = .99, RMSEA = .04). Non-significant path coefficients are denoted with a dashed arrow.
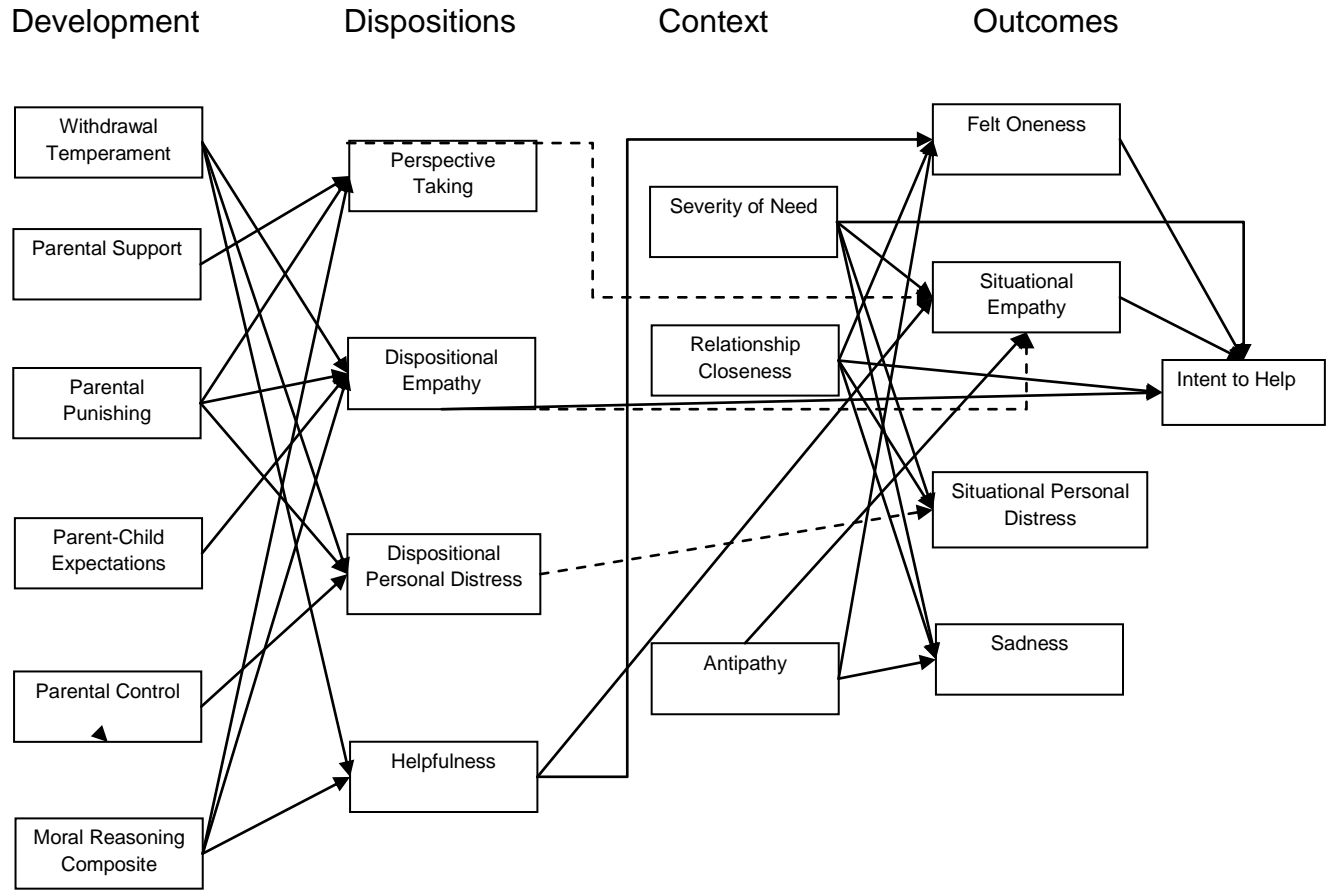
Figure 4: Developmental, dispositional and contextual influences on oneness, empathy,

negative affect and intent to help. This model yielded a good fit to the data (χ^2 (df, N =

339) = 123.96, *p* < .01, CFI = .97, RMSEA = .04). Non-significant path coefficients are

denoted with a dashed arrow.
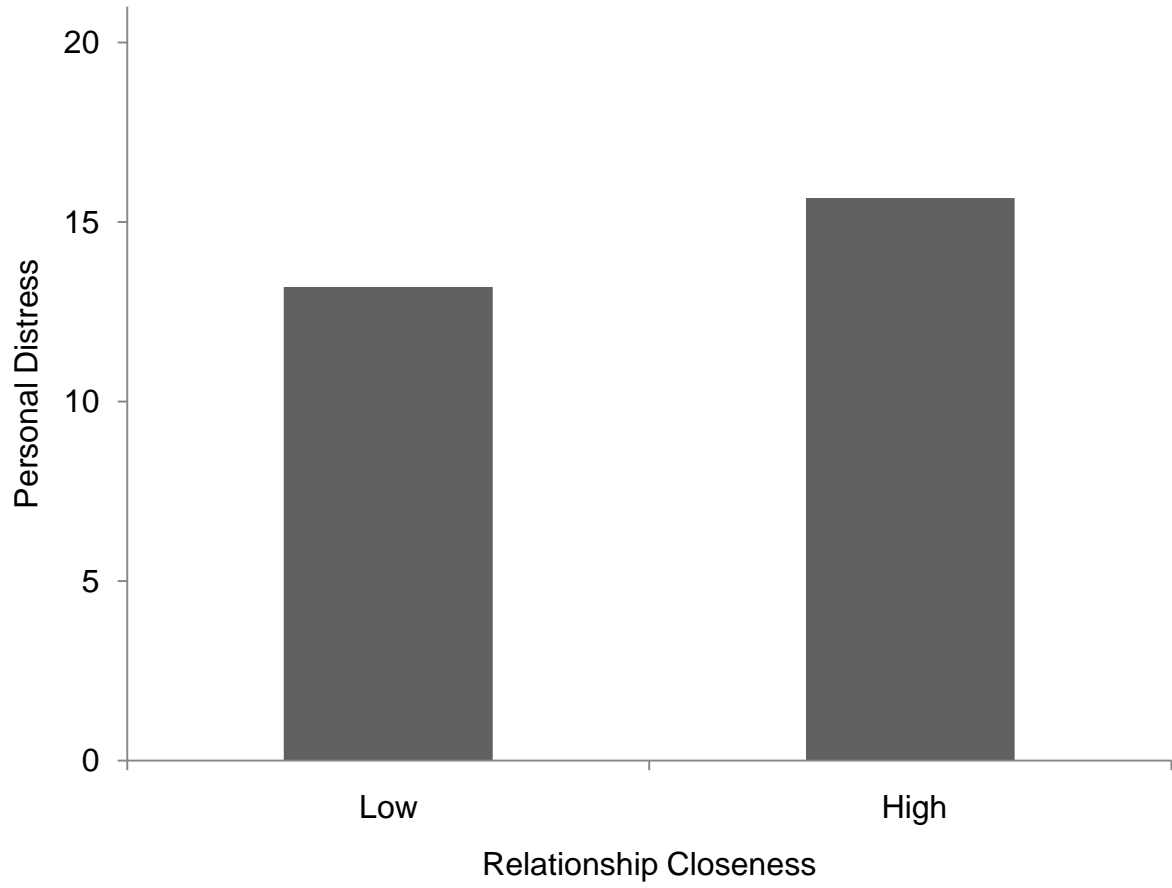
Figure 5: Main effect of relationship closeness on personal distress.
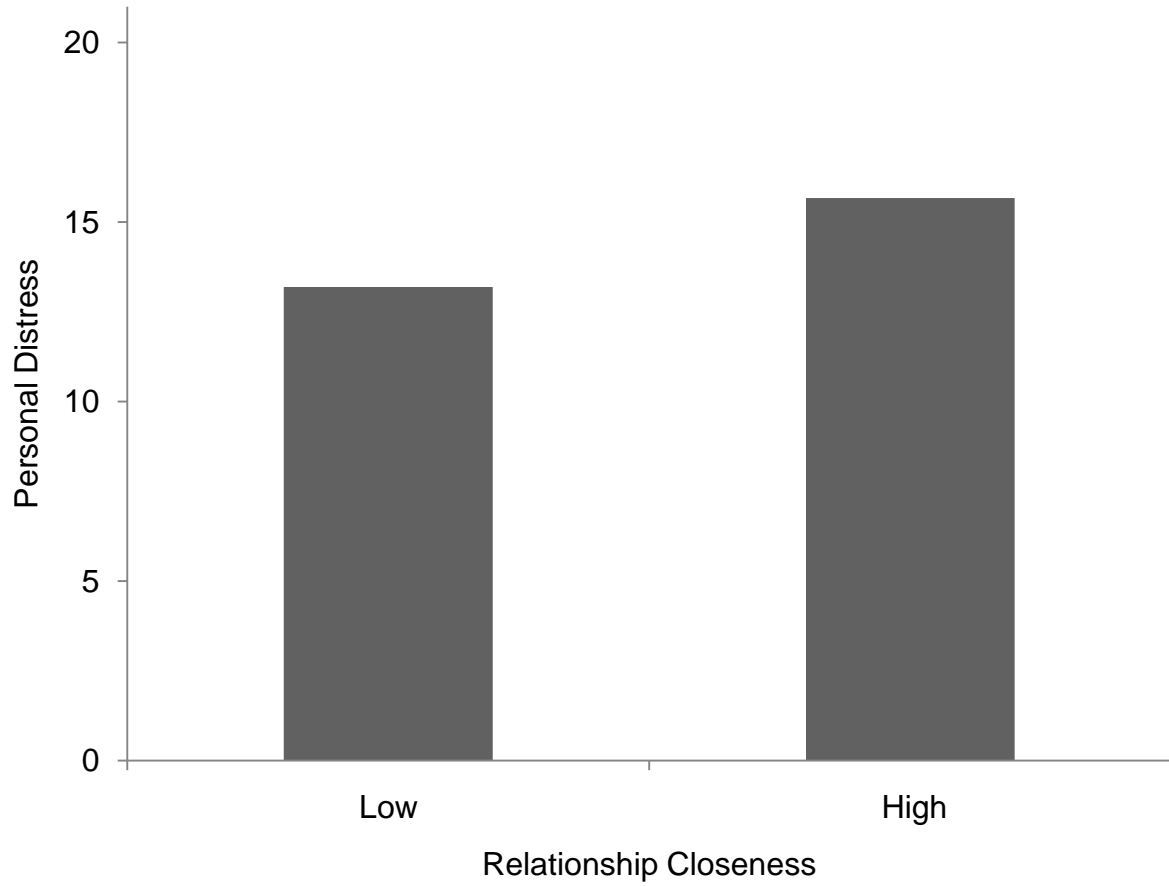
Figure 6: Main effect of severity of need on personal distress.
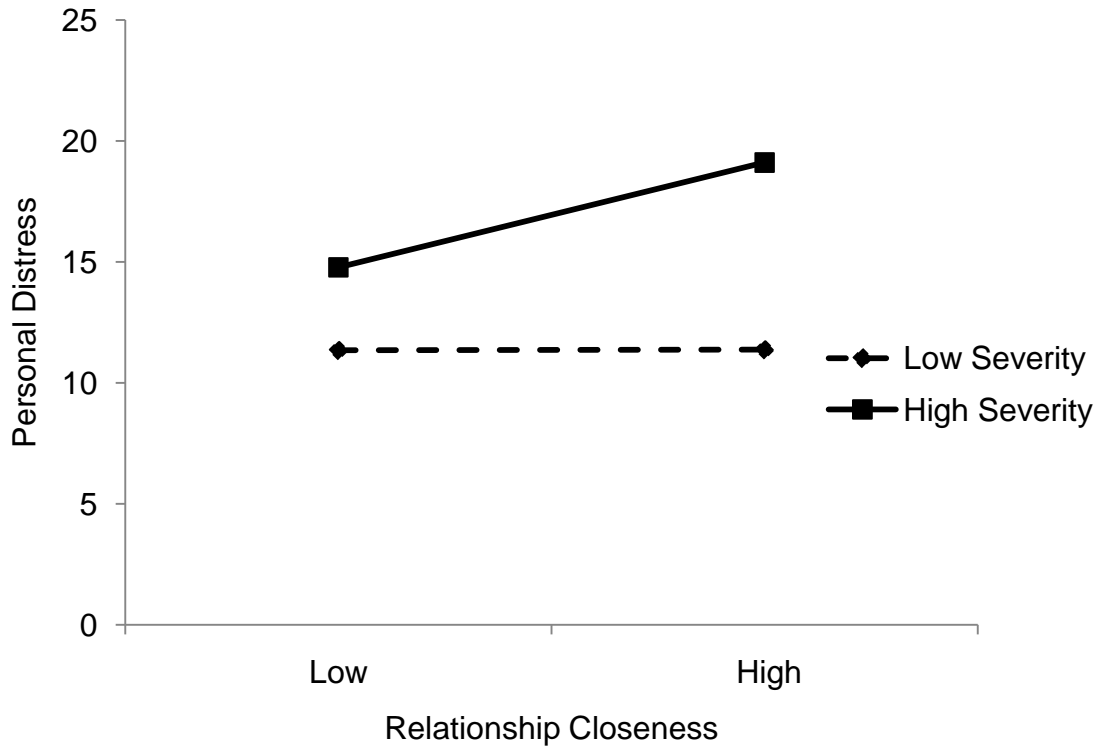
Figure 7: Relationship Closeness X Severity of Need interaction on personal distress.
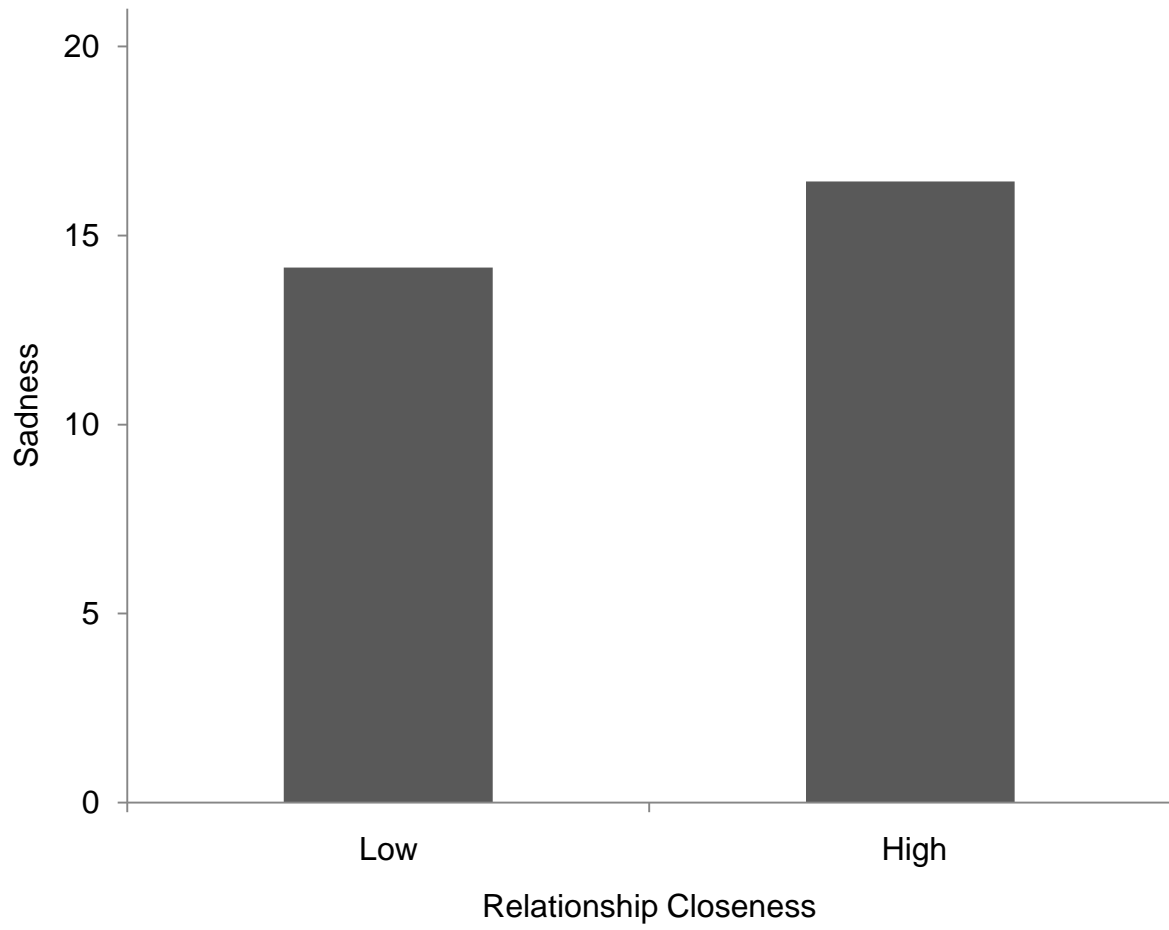
*Figure 8:* Main effect of relationship closeness on sadness.
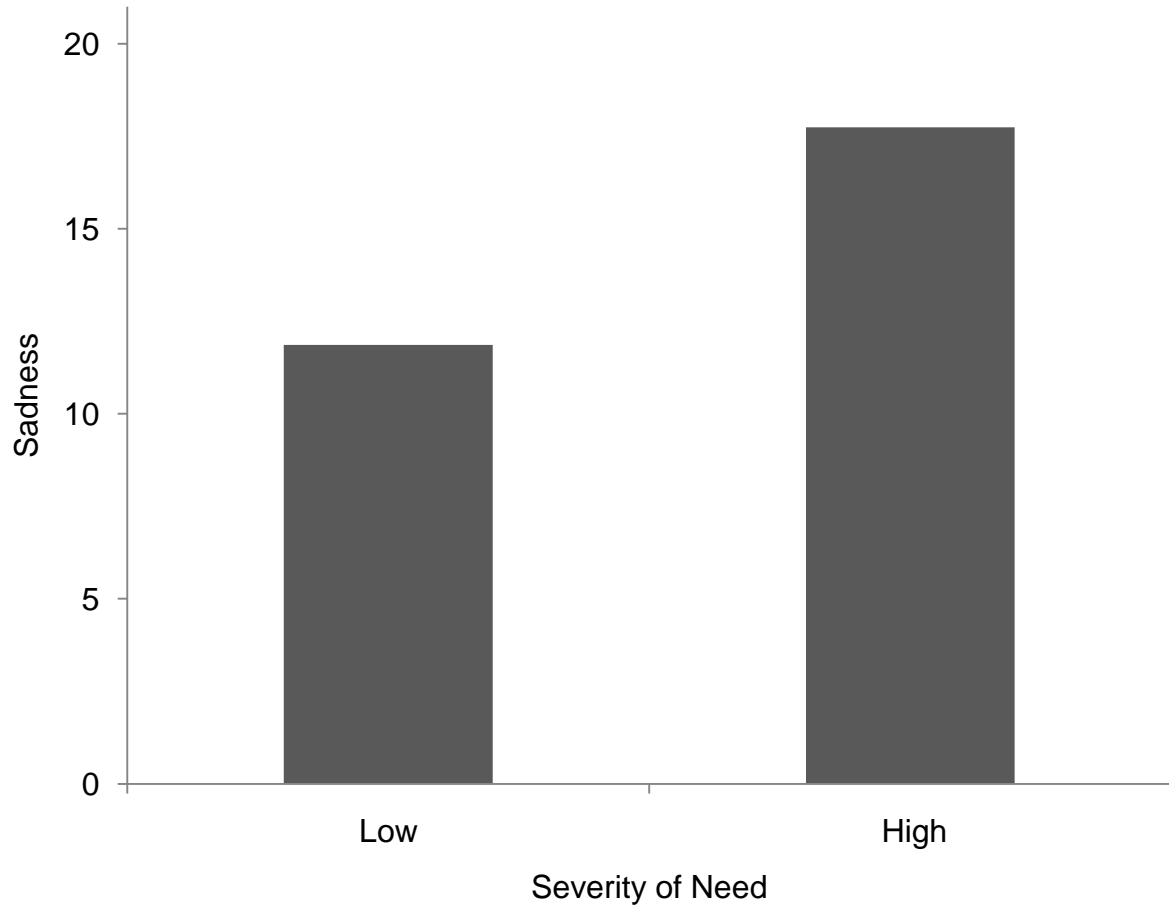
Figure 9: Main effect of severity of need on sadness.
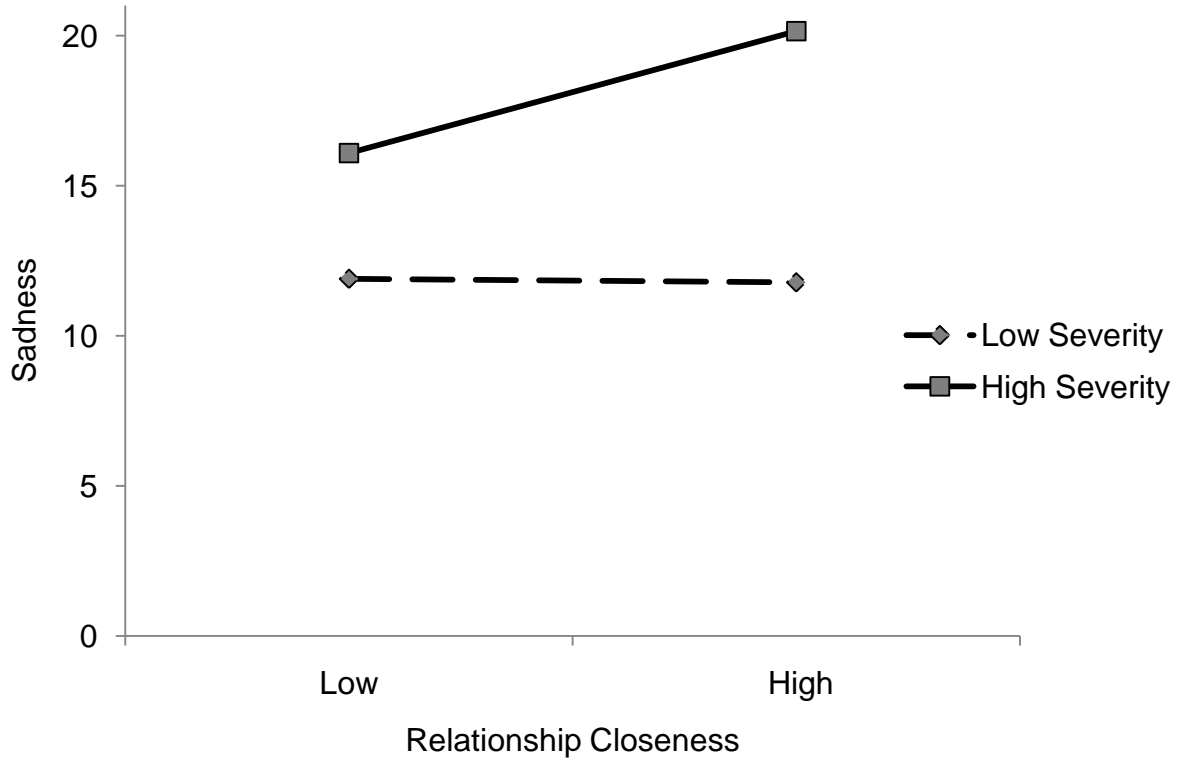
Figure 10: Relationship Closeness X Severity of Need interaction on sadness.
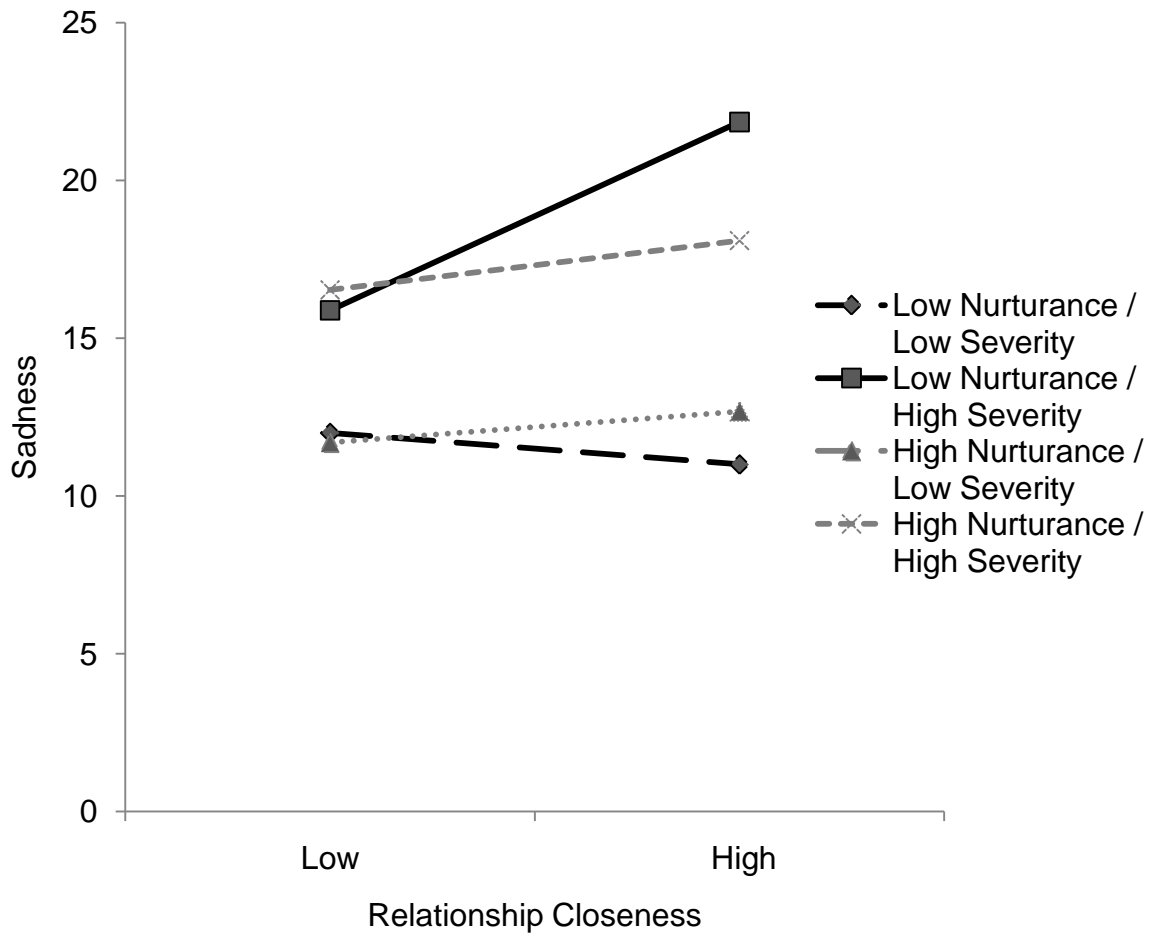
Figure 11: Nurturance X Relationship Closeness X Severity of Need interaction on sadness.
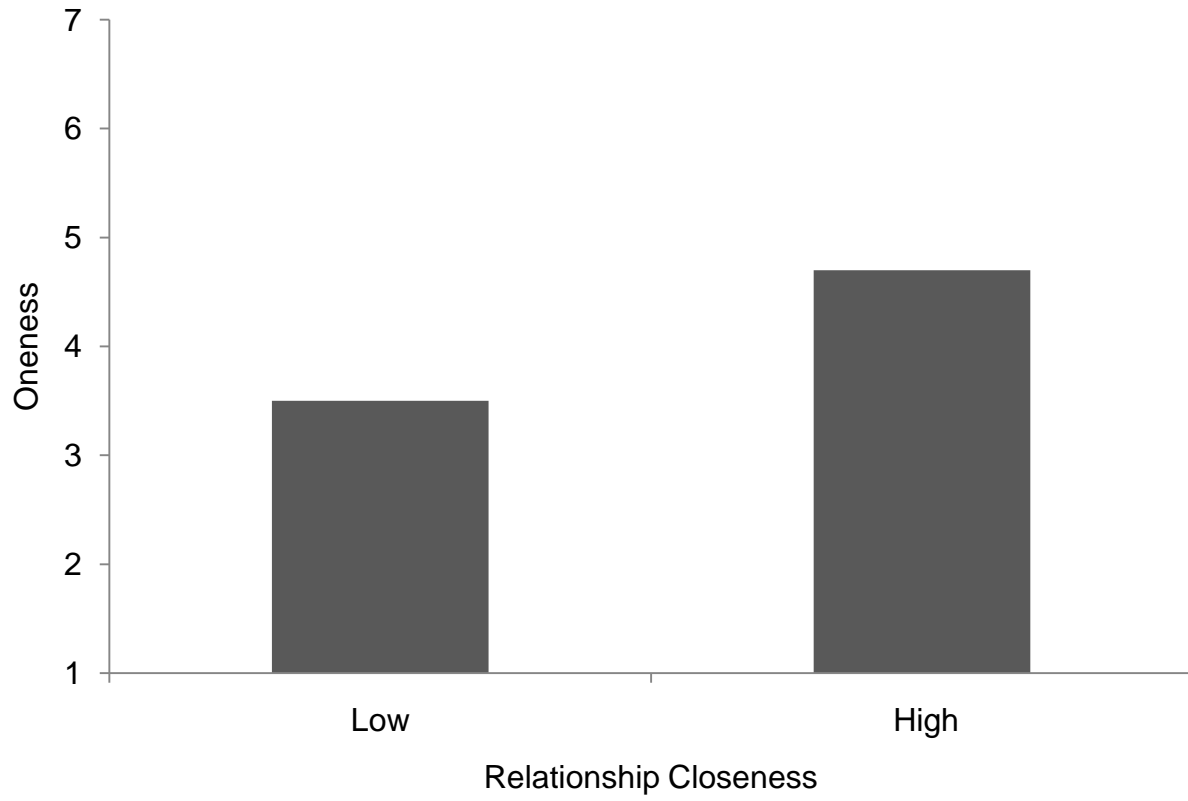
Figure 12: Main effect of relationship closeness on oneness.
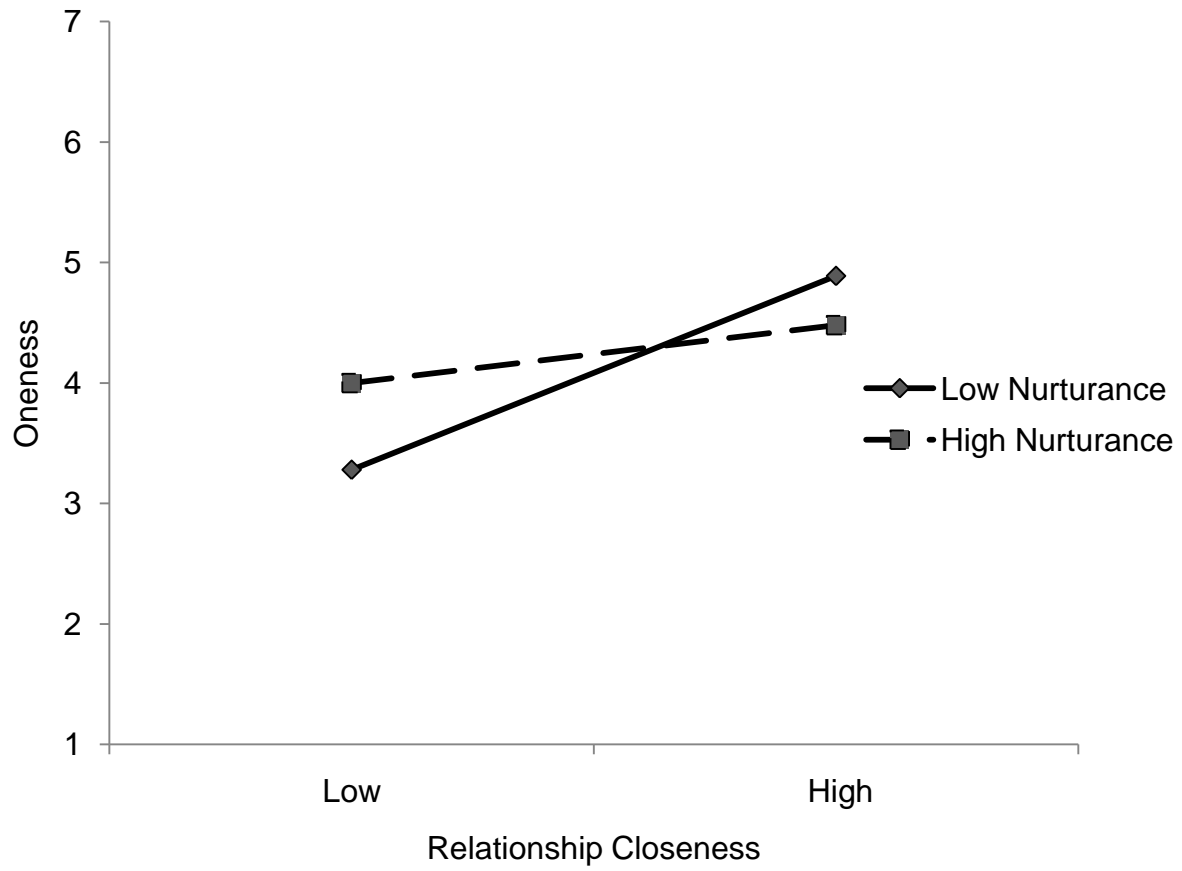
Figure 13: Nurturance X Relationship Closeness interaction on oneness.
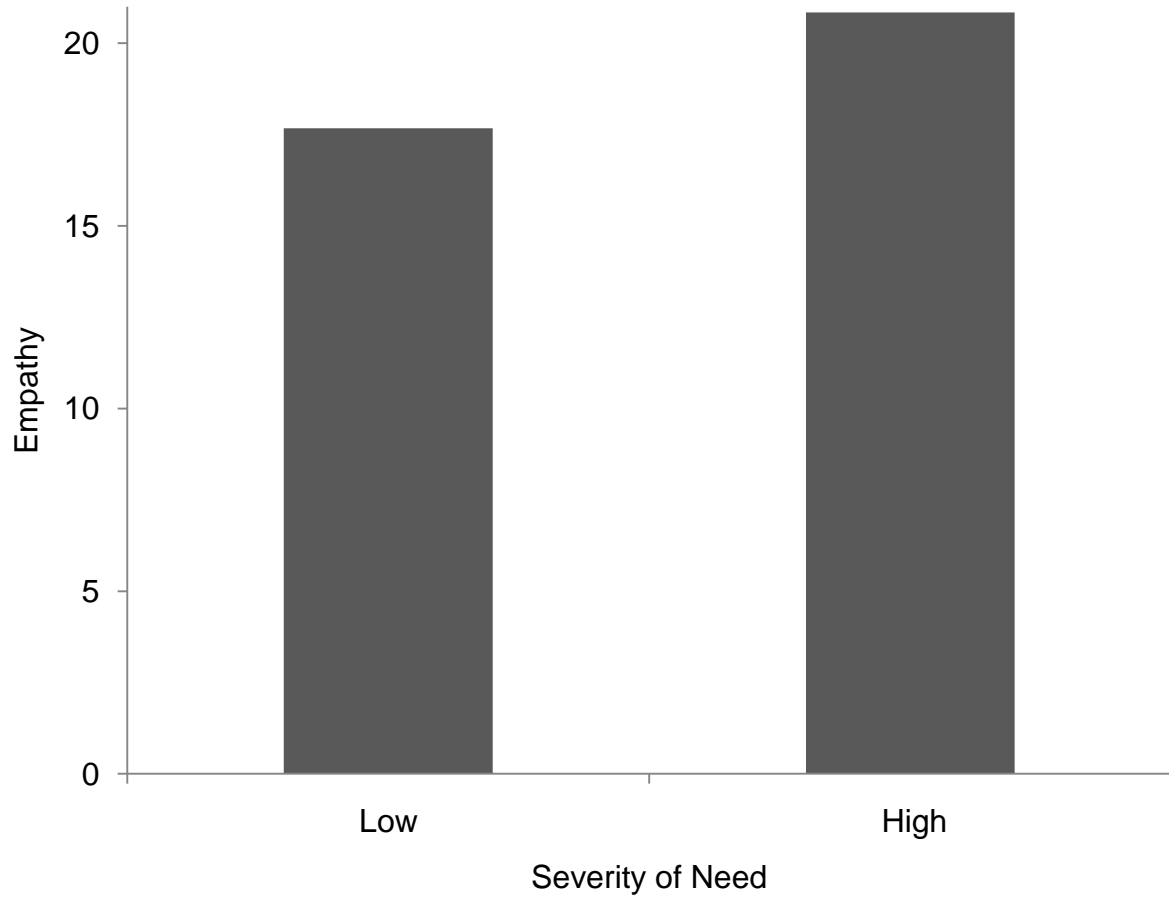
Figure 14: Main effect of severity of need on empathy.
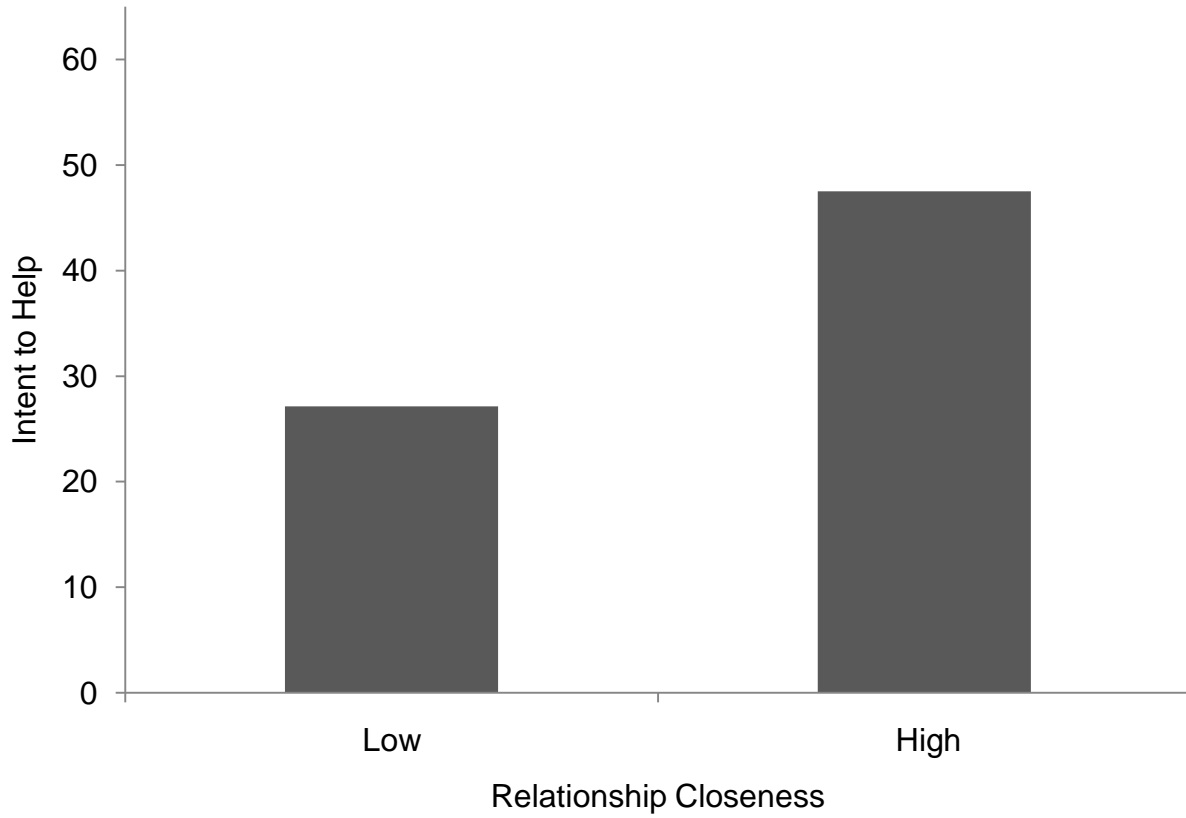
Figure 15: Main effect of relationship closeness on intent to help.
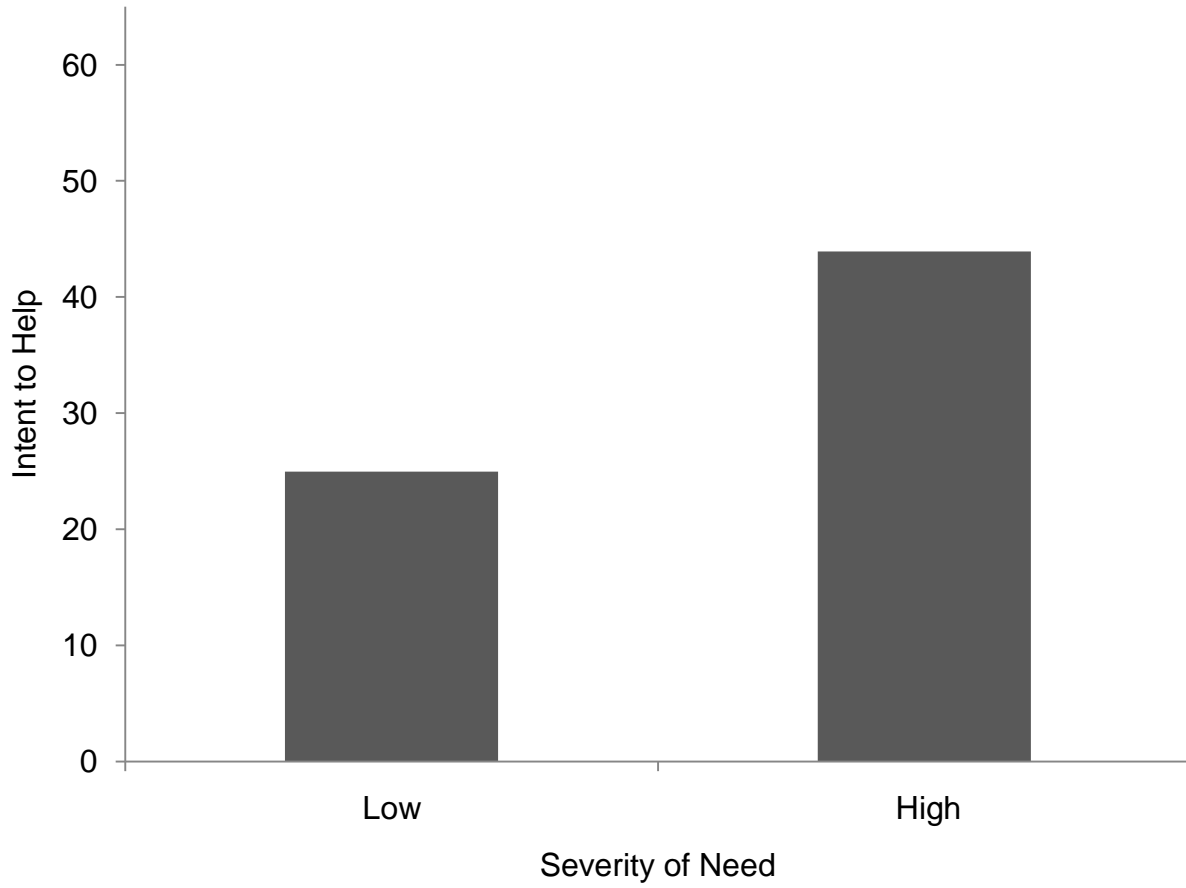
Figure 16: Main effect of severity of need on intent to help.
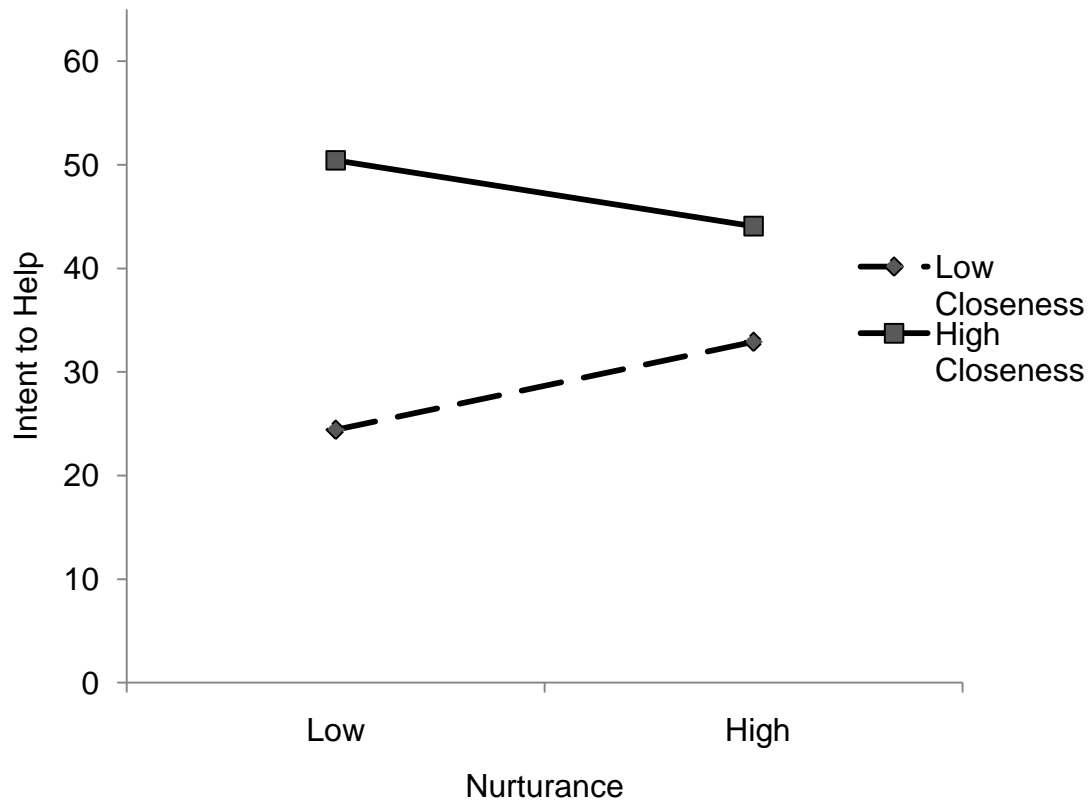
Figure 17: Nurturance X Relationship Closeness interaction on intent to help.
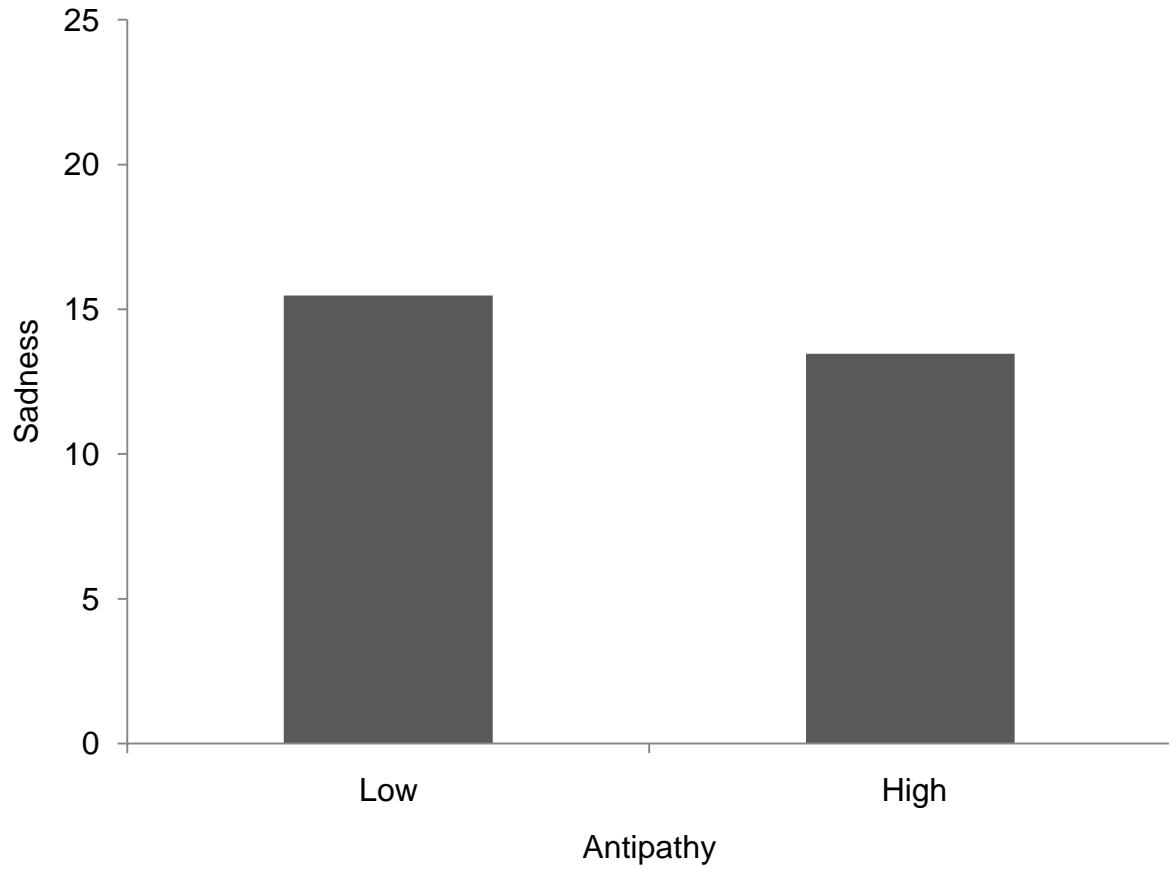
Figure 18: Main effect of antipathy on sadness. Note that this is a non-significant effect (p = .012).
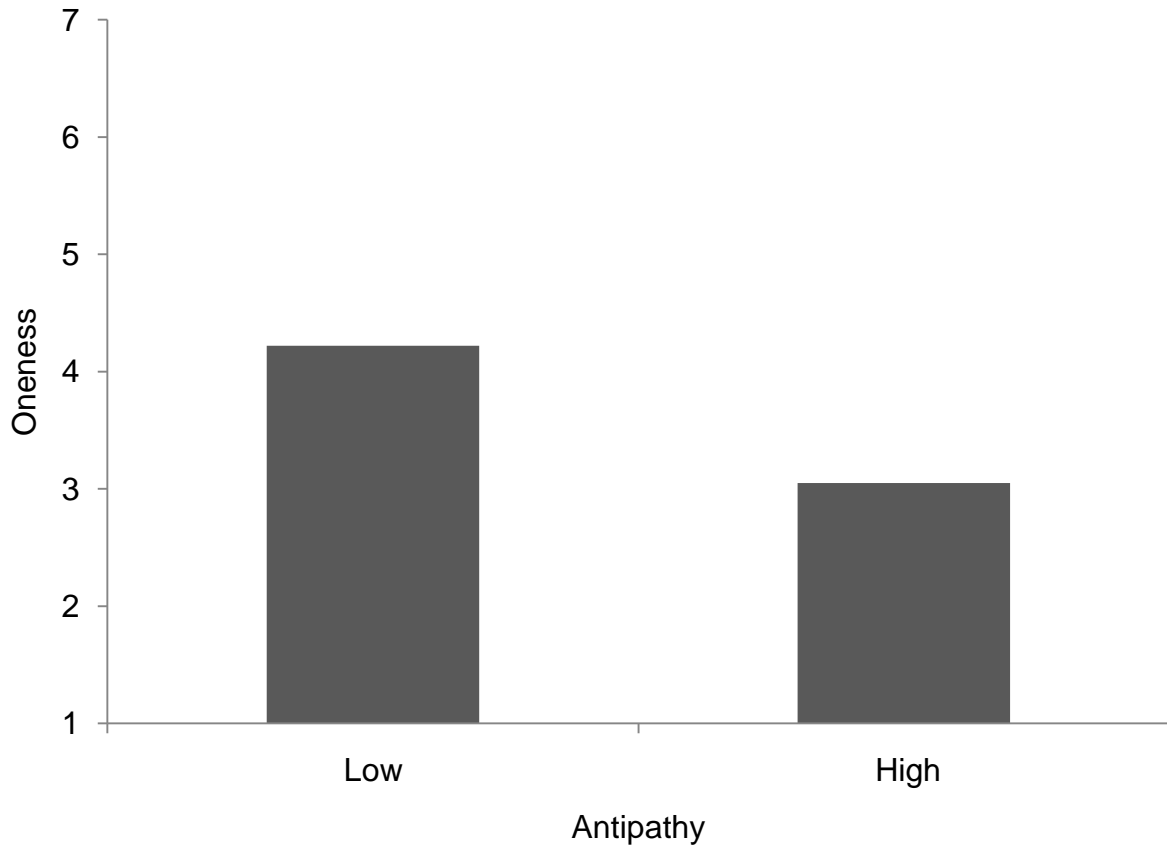
Figure 19: Main effect of antipathy on oneness.
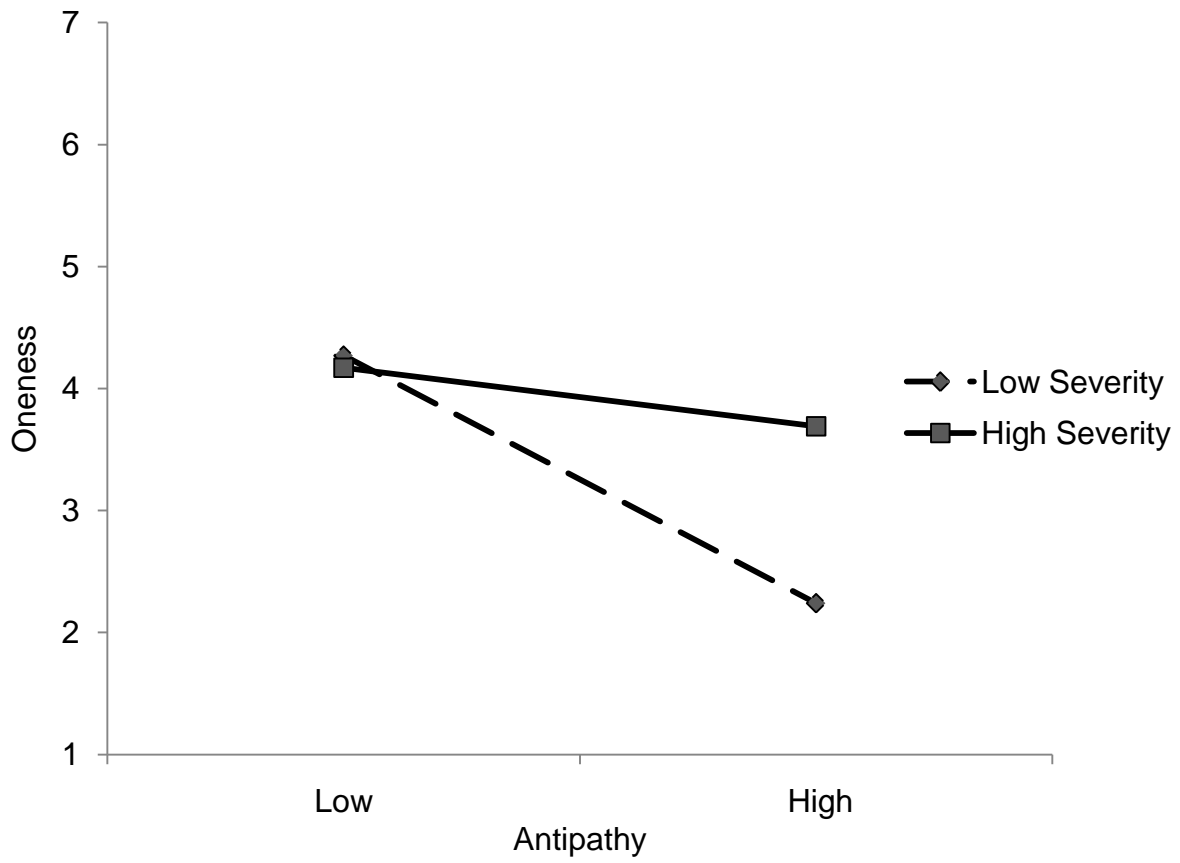
Figure 20: Antipathy X Severity of Need interaction on oneness.
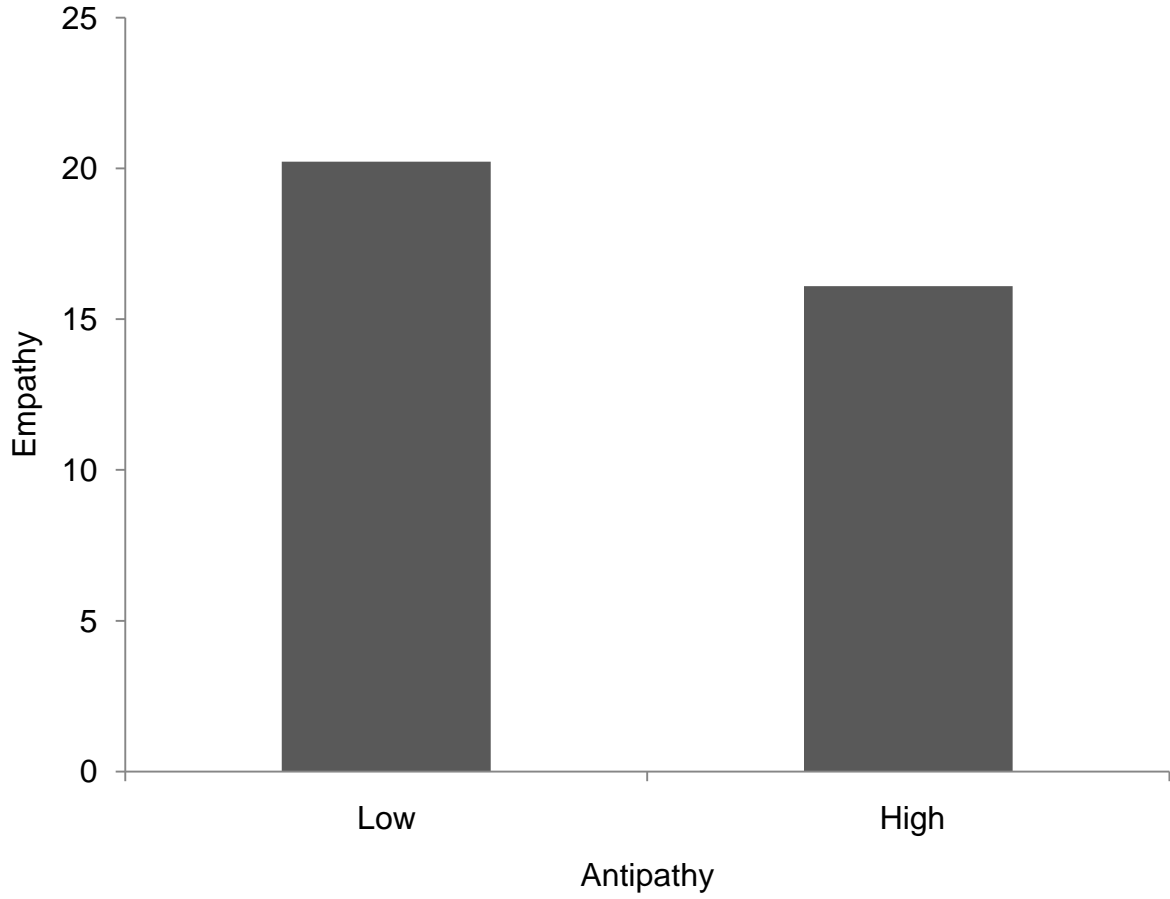
Figure 21: Main effect of antipathy on empathy.
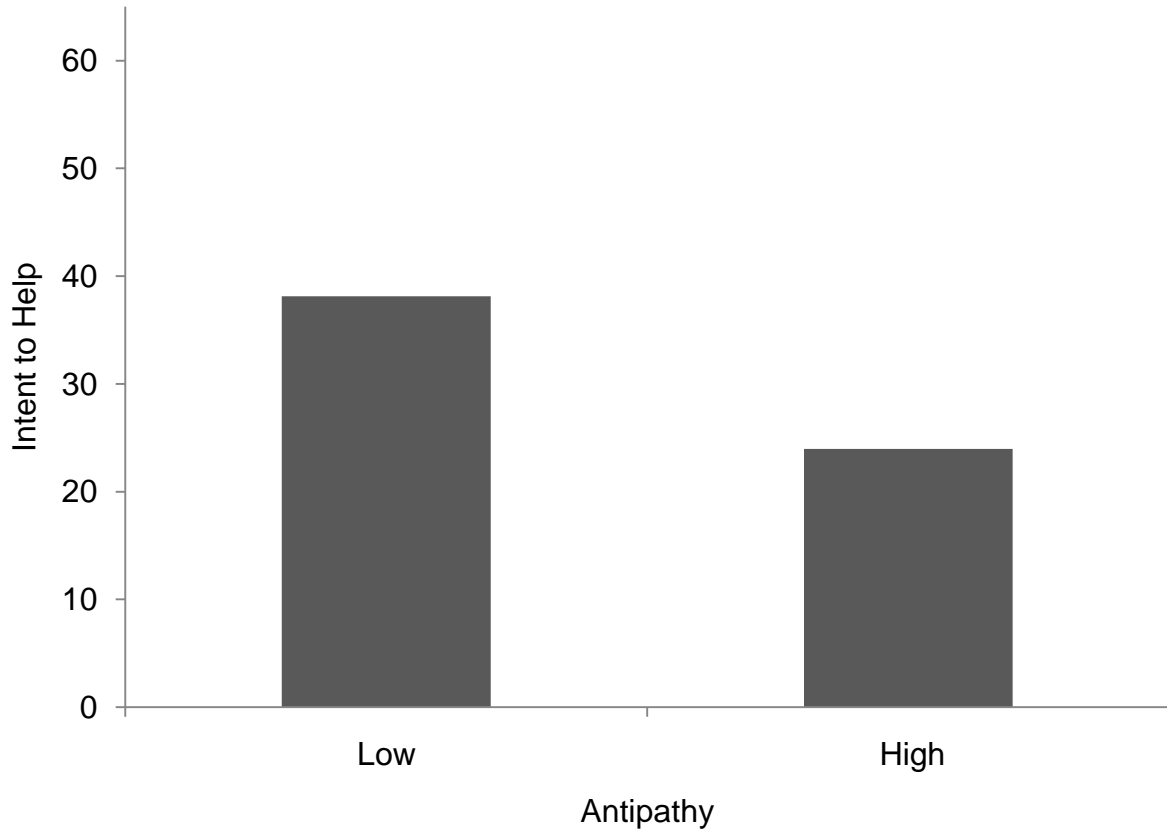
Figure 22: Main effect of antipathy on intent to help.

APPENDIX C

MEASURES

EAS Temperament Survey for Adults (Buss & Plomin, 1984)

Directions: Please respond to the statements below regarding how you characteristically feel or

behave. Use the five-point scale given below, in which 1 = *Not characteristic* and 5 = *Very*

characteristic.

1. I like to be with people.
2. I usually seem to be in a hurry.
3. *I am easily frightened.
4. *I frequently get distressed.
5. When displeased, I let people know it right away.
6. I am something of a loner.
7. I like to keep busy all the time.
8. I am known as hotblooded and quick-tempered.
9. *I often feel frustrated.
10. My life is fast paced.
11. *Everyday events make me troubled and fretful.
12. *I often feel insecure.
13. There are many things that annoy me.
14. *When I get scared, I panic.
15. I prefer working with others rather than alone.
16. *I get emotionally upset easily.
17. I often feel as if I am bursting with energy.
18. It takes a lot to make me mad.
19. *I have fewer fears than most people my age.
20. I find people more stimulating than anything else.

Parent Practices Questionnaire (Devereaux et al., 1969)

<u>Directions:</u> Think back to *one person* who *primarily* took care of you while you were growing up (for example, your mother or father). In the following questionnaire, you will be asked to rate that person on a series of behaviors regarding your child-rearing. Please select on the scale which response best describes this primary caregiver for each question.

<u>For the following statements, these are the responses you will use:</u>

1 = *Never*   2 = *Only once in awhile*   3 = *Sometimes*   4 = *Usually*   5 = *Almost Always*

1. She/he comforted me and helped me when I had troubles.

2. She/he made me feel like I could talk with her/him about everything.

3. She/he made me feel she/he was there if I needed her/him.

4. When she/he punished me, she/he explained why.

5. When she/he wanted me to do something, she/he explained why.

6. I knew what she/he expected of me and how she/he wanted me to behave.

7. When I did something she/he didn't like, I knew exactly what to expect of her/him.

8. She/he encouraged me to try new things on my own.

9. She/he let me make my own plans about things I wanted to do, even though I might have made a few mistakes.

10. She/he expected me to keep my things in good order.

11. She/he wanted to know exactly where I was going and when I went out.

12. She/he expected me to tell him/her exactly how I spent my pocket money.

<u>For the following statements, these are the responses you will use:</u>

1 = *Never*   2 = *Only once in awhile*   3 = *Sometimes*   4 = *Often*   5 = *Very often*

13. She/he let me off lightly when I did something wrong.

14. She/he could not bring her/himself to punish me.

15. She/he kept after me to do well in school.

16. She/he kept after me to do better than other children.

17. She/he worried that I could not take care of myself.

18. She/he wouldn't let me go places because something might have happened to me.

19. When I did something she/he didn't like, she/he acted hurt and disappointed.

20. She/he punished me by trying to make me feel guilty and ashamed.

<u>For the following statements, these are the responses you will use:</u>

      1 = *Never*   2 = *Only once or twice a year*   3 = *About once a month*

         4 = *About once a week*   5 = *Almost every day*

21. She/he helped me with homework or lessons, if there was something I didn't understand.

22. She/he taught me things I wanted to learn.

23. She/he expected me to help around the house or yard.

24. She/he punished me by not allowing me to be with my friends.

25. She/he punished me by not letting me use my favorite things for awhile.

26. She/he nagged at me.

27. She/he scolded me.

28. She/he slapped me.

29. She/he spanked me.

30. She/he said she/he would give me a spanking if I didn't behave better.

Objective Measure of Prosocial Reasoning (Carlo et al., 1992)

Directions: For the following questionnaires you will be asked to read a series of short stories about characters who are presented with some problems. After reading the short story, answer the question about what the character in the story should do. Next, rate how important several reasons were in making the decision that you made.

<u>Blood Donation Story</u>

      A young woman named Lucy had a very unusual type of blood. One day right after Lucy had begun school and was accepted on the baseball team, a doctor called Lucy to ask her to give a large amount of blood to a girl who was very sick and needed more blood of the same kind as Lucy's to get well. Because Lucy was the only person in the town with the sick girl's type of blood, and since this was a rare and serious sickness, the blood would have to be given a number of times over a period of several weeks. So, if Lucy agreed to give her blood, she would have to go into the hospital for several weeks. Being in the hospital would make Lucy feel weak for a while, she would lose her spot on the team, and she would be very far behind in school or work.

```
What should Lucy do?  (Check one)
_____ Lucy should give blood
_____ Not sure
_____ Lucy should not give blood
```

How important were each of the following reasons in making your decision? Please rate <u>each</u> reason using the following 7-point scale (Circle your answers):

```
Not
at all        Somewhat        Greatly
_____
1     2     3     4     5     6     7     a. it depends whether Lucy thinks
                                             that helping is nice or not
_____
1     2     3     4     5     6     7     b. it depends whether Lucy
                                             believes her friends or parents
                                             will like what she does
_____
1     2     3     4     5     6     7     c. it depends whether Lucy
                                             feels that losing her spot on
                                             the team is important or not
_____
1     2     3     4     5     6     7     d. it depends whether Lucy
                                             can understand how badly the
                                             other girl is feeling
_____
1     2     3     4     5     6     7     e. it depends how sick the
                                             other girl will get
_____
```

1	2	3	4	5	6	7	f. it depends whether Lucy would feel badly because the person would still be ill
1	2	3	4	5	6	7	g. it depends whether her friends will be disappointed if she didn't help
1	2	3	4	5	6	7	h. it depends on how far behind Lucy will get in school or work

Math Story

Eric knows a lot about math. One day a boy who had just moved into Eric's class asked Eric to help him with his math homework that weekend. The boy was having a hard time catching up with his math class, he had only the weekend to prepare for the math test the next Monday, and the boy needed to pass. If Eric helps the boy with his math homework, then he will not be able to go to the beach with his friends that weekend.

What should Eric do? (Check one)
_____ Eric should help the boy with the math homework
_____ Not sure
_____ Eric should go to the beach with his friends

How important were each of the following reasons in making your decision? Please rate each reason using the following 7-point scale (Circle your answers):

Not
at all   Somewhat   Greatly

1	2	3	4	5	6	7	a. it depends whether Eric's parents and friends think he did the right thing or the wrong thing
1	2	3	4	5	6	7	b. it depends if Eric thinks its the decent thing to do or not
1	2	3	4	5	6	7	c. it depends if Eric thinks the boy really needs help or not
1	2	3	4	5	6	7	d. it depends if Eric really wants to go to the beach or not
1	2	3	4	5	6	7	e. it depends whether Eric feels that everyone is better off if each person helps each other

1	2	3	4	5	6	7	f. it depends whether Eric would be embarrassed if other people found out

1	2	3	4	5	6	7	g. it depends whether Eric felt concern about the other boy's situation

1	2	3	4	5	6	7	h. it depends whether helping the other boy would also better prepare Eric for the test

Swimming Story

Scott was very good at swimming. He was asked to help young handicapped children who could not walk, learn to swim so that they could make their legs strong for walking. Scott was the only one in town who could do the job because he was a good swimmer and a swimming teacher. But helping the crippled children would take much of Scott's free time left after work and Scott wanted to practice swimming very hard for an important swimming contest coming up. If Scott could not practice swimming in all his free time, he would probably lose the swimming contest and not receive the prize for winning, which was money. Scott was planning to use the prize money for his college education or for other things he wanted.

What should Scott do? (Check one)
_____ Scott should teach the swimming class
_____ Not sure
_____ Scott should practice for the swimming contest

How important were each of the following reasons in making your decision? Please rate each reason using the following 7-point scale (Circle your answers):

Not
at all   Somewhat   Greatly

1	2	3	4	5	6	7	a. it depends whether Scott believes teaching the children is the decent thing to do

1	2	3	4	5	6	7	b. it depends if Scott really wants to win the swimming contest

1	2	3	4	5	6	7	c. it depends if the handicapped children's legs hurt or not

1	2	3	4	5	6	7	d. it depends whether Scott's parents and the community will think he did the right thing or he did the wrong thing

1	2	3	4	5	6	7	e. it depends whether or not Scott would feel good about the children being able to walk better

_____

1	2	3	4	5	6	7	f. it depends whether the community would support his decision

_____

1	2	3	4	5	6	7	g. it depends if Scott really needs the money for college

_____

1	2	3	4	5	6	7	h. it depends if Scott thinks every person deserves an equal chance in life

_____

The Accident

One day Mary was going to a friend's party. On the way, she saw a girl who had fallen down and hurt her leg. The girl asked Mary to go to the girl's house and get her parents so the parents could come and take her to a doctor. But if Mary did run and get the girl's parents, Mary would be late to the party and miss the fun and social activities with her friends.

What should Mary do? (Check one)
_____ Mary should run and get the girl's parents
_____ Not sure
_____ Mary should go to her friend's party

How important were each of the following reasons in making your decision? Please rate each reason using the following 7-point scale (Circle your answers):

Not
at all   Somewhat   Greatly

_____

1	2	3	4	5	6	7	a. it depends how Mary would feel about herself if she helped or not

_____

1	2	3	4	5	6	7	b. it depends how much fun Mary expects the party to be and what sorts of things are happening at the party

_____

1	2	3	4	5	6	7	c. whether Mary's parents and friends will think she did the right or she did the wrong thing

_____

1	2	3	4	5	6	7	d. it depends whether the girl really needs help or not

_____

1	2	3	4	5	6	7	e. it depends whether Mary thinks its the decent thing to do or not

1	2	3	4	5	6	7	f. it depends whether she believes people have an obligation to help others in the community

1	2	3	4	5	6	7	g. it depends whether helping would throw off her schedule for the rest of the day

1	2	3	4	5	6	7	h. it depends if her parents or her friends would be mad at her for missing the party

The Flood

One day, in a town near a big river, there was a big rain storm and the river started to overflow. The water from the river got into the streets and houses and everywhere. Because of the flooding, there was no way for food to be brought into the town from far away. Lisa had some food, and lived close to the town. But if Lisa took food to the town's people, then she would not have enough food for herself and she may not be able to get anymore food for a long time. If Lisa had no food she would not die, but she would get sick.

What should Lisa do? (Check one)
_____ Lisa should take the food
_____ Not sure
_____ Lisa should stay home

How important were each of the following reasons in making your decision? Please rate each reason using the following 7-point scale (Circle your answers):

Not
at all   Somewhat   Greatly

1	2	3	4	5	6	7	a. it depends whether Lisa's parents and her friends would approve or disapprove of what she does

1	2	3	4	5	6	7	b. it depends whether the people in the flooded town would get sick or not

1	2	3	4	5	6	7	c. it depends whether Lisa would feel bad if the people in the town got sick

1	2	3	4	5	6	7	d. it depends whether Lisa thinks it would be mean not to help
1	2	3	4	5	6	7	e. it depends if Lisa thinks she will get some help from the town's people in the future
1	2	3	4	5	6	7	f. it depends whether Lisa thinks members of society have a responsibility for one another
1	2	3	4	5	6	7	g. it depends whether her own community will think her decision is right or wrong
1	2	3	4	5	6	7	h. it depends on how sick Lisa herself will get

Empathy Scales (Davis, 1980)

<u>Directions:</u> For each of the following statements, rate how much each describes you.

0 = *Does not describe me well*   1   2   3   4 = *Describes me very well*

<u>Perspective-Taking Scale</u>

1. Before criticizing somebody, I try to imagine how <u>I</u> would feel if I were in their place.

2. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (-)

3. I sometimes try to understand my friends better by imagining how things look from their perspective.

4. I believe that there are two sides to every question and try to look at them both.

5. I sometimes find it difficult to see things from the "other guy's" point of view. (-)\

6. I try to look at everybody's side of a disagreement before I make a decision.

7. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

<u>Empathic Concern Scale</u>

1. When I see someone being taken advantage of, I feel kind of protective toward them.

2. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.(-)

3. I often have tender, concerned feelings for people less fortunate than me.

4. I would describe myself as a pretty soft-hearted person.

5. Sometimes I don't feel sorry for other people when they are having problems. (-)

6. Other people's misfortunes do not usually disturb me a great deal. (-)

7. I am often quite touched by things that I see happen.

Personal Distress Scale

1. When I see someone who badly needs help in an emergency, I go to pieces.

2. I sometimes feel helpless when I am in the middle of a very emotional situation.

3. In emergency situations, I feel apprehensive and ill-at-ease.

4. I am usually pretty effective in dealing with emergencies. (-)

5. Being in a tense emotional situation scares me.

6. When I see someone hurt, I tend to remain calm. (-)

7. I tend to lose control during emergencies.

The Self-Report Altruism Scale (Rushton et al., 1981)

Directions: Select the response which best describes how often you have carried out the

following acts.

	Never	Once	More Than Once	Often	Very often
1. I have helped push a stranger's car out of the snow.					
2. I have given directions to a stranger.					
3. I have made change for a stranger.					
4. I have given money to a charity.					
5. I have given money to a stranger who needed it (or asked me for it).					
6. I have donated goods or clothes to a charity.					
7. I have donated blood.					
8. I have helped carry a stranger's belongings (books, parcels, etc.).					
9. I have delayed an elevator and held the door open for a stranger.					
10. I have done volunteer work for a charity.					
11. I have allowed someone to go ahead of me in a lineup (at copy machine, in the supermarket).					
12. I have pointed out a clerk's error (in a bank, at the supermarket) in undercharging me for an item.					
13. I have let a neighbor whom I didn't know too well borrow an item of some value to me (e.g., a dish, tools, etc.)					
14. I have bought 'charity' holiday cards deliberately because I knew it was a good cause.					
15. I have helped a classmate who I did not know that well with a homework assignment when my knowledge was greater than his or hers.					
16. I have offered to help a handicapped or elderly stranger across a street.					
17. I have offered my seat on a bus or in a waiting room to a stranger who was standing.					

Personal Reaction Inventory (Crowne & Marlow, 1960)

Directions: Listed below are a number of statements concerning personal attitudes and traits.

Read each item and select whether the statement is *true* or *false* as it pertains to you personally.

1. Before voting I thoroughly investigate the qualifications of all the candidates.

2. I never hesitate to go out of my way to help someone in trouble.

3. It is sometimes hard for me to go on with my work if I am not encouraged.

4. I have never intensely disliked anyone.

5. On occasion I have had doubts about my ability to succeed in life.

6. I sometimes feel resentful when I don't get my way.

7. I am always careful about my manner of dress.

8. My table manners at home are as good as when I eat out in a restaurant.

9. If I could get into a movie without paying and be sure I was not seen I would probably do it.

10. On a few occasions, I have given up doing something because I thought too little of my ability.

11. I like to gossip at times.

12. There have been times when I felt like rebelling against people in authority even though I knew they were right.

13. No matter who I am talking to, I'm always a good listener.

14. I can remember "playing sick" to get out of something.

15. There have been occasions when I took advantage of someone.

16. I'm always willing to admit it when I make a mistake.

17. I always try to practice what I preach.

18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.

19. I sometimes try to get even rather than forgive and forget.

20. When I don't know something I don't at all mind admitting it.

21. I am always courteous, even to people who are disagreeable.

22. At times I have really insisted on having things my own way.

23. There have been occasions when I felt like smashing things.

24. I would never think of letting someone else be punished for my wrong-doings.

25. I never resent being asked to return a favor.

26. I have never been irked when people expressed ideas very different from my own.

27. I never make a long trip without checking the safety of my car.

28. There have been times when I was quite jealous of the good fortune of others.

29. I have almost never felt the urge to tell someone off.

30. I am sometimes irritated by people who ask favors of me.

31. I have never felt that I was punished without cause.

32. I sometimes think when people have a misfortune they only got what they deserved.

33. I have never deliberately said something that hurt someone's feelings.

Inclusion of the Other in the Self Scale (IOS; Aron et al., 1992)

Which picture best describes your relationship? There are letters which coincide with the series

of overlapping circles on the web page. Select the letter which coincides with the picture that

best describes your relationship with the individual you are imagining.

A   **B**   **C**   **D**

Self   Other   Self   Other   Self   Other   Self   Other

E   **F**   **G**

Self   Other   Self   Other   Self   Other
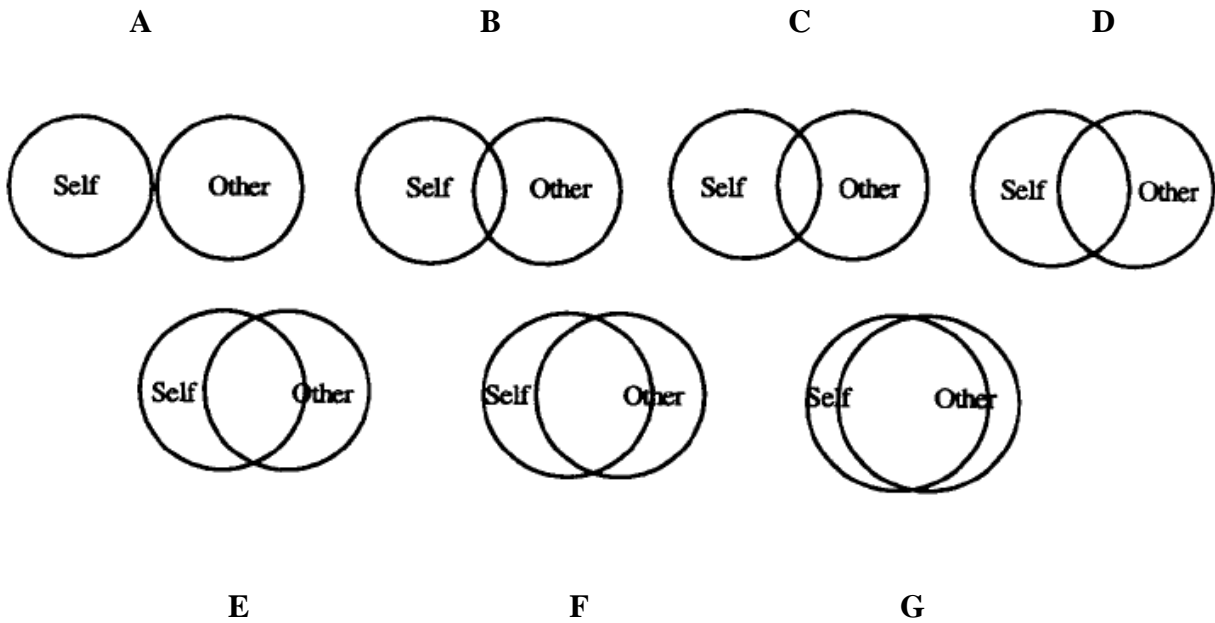
Emotional Response Questionnaire

<u>Directions:</u> Regarding the situation you just imagined, please select how much each of the following words describes how you would feel if the situation actually took place.

1 = *Not at all*   2   3   4   5   6   7 = *Extremely*

Sympathetic	1	2	3	4	5	6	7
Low-Spirited	1	2	3	4	5	6	7
Distressed	1	2	3	4	5	6	7
Touched	1	2	3	4	5	6	7
Heavyhearted	1	2	3	4	5	6	7
Disturbed	1	2	3	4	5	6	7
Softhearted	1	2	3	4	5	6	7
Sad	1	2	3	4	5	6	7
Troubled	1	2	3	4	5	6	7
Compassionate	1	2	3	4	5	6	7
Feeling Low	1	2	3	4	5	6	7
Uneasy	1	2	3	4	5	6	7

Car Scenario - Child

Directions: Imagine that the child's parents are without a vehicle, and the child needs to be driven to school. The child's home and school is within a short driving distance of your home. Please choose the highest form of aid you would provide.

1 – Nothing

2 – Send his/her parents a link to a car sales website that you had a good experience with

3 – Help his/her parents find a new car by driving him/her to car sales lots for a few hours.

4 – Offer to drive him or her to school for a couple of days

5 – Offer to drive the child to school until his or her parents find a new car

6 – Offer to drive the child to school daily for the rest of the school year

Car Scenario – Adult

Directions: Imagine the he or she is without a vehicle, and needs a ride to work or to campus. Giving this person a ride to work or campus would not be out of your way. Please choose the highest form of aid you would provide.

1 – Nothing

2 – Sind him/her a link to a car sales website that you had a good experience

3 – Help him/her find a new car by driving him/her to car sales lots for a few hours.

4 – Offer to drive him/her to work or school for a couple of days.

5 – Offer to drive him/her to work or campus until he or she finds a new car.

6 - Offer to drive him/her to work or campus for the rest of the semester/for several months.

Orphan Scenario - Child

DIRECTIONS: Imagine the child's parents died in an auto accident, and he or she is left with no one to care for them. Please choose the highest form of aid you would provide.

1 – Nothing

2 – Donate $10 toward a fund for the child

3 – Donate $25 toward a fund for the child

4 – Donate $50 toward a fund for the child

5 – Start a fund-raising campaign for the child's welfare

6 – Have the child come live with you until a permanent home is found

7 – Have the child come live with you and raise them as you would your own

Orphan Scenario - Adult

DIRECTIONS: Imagine he or she had been killed in an auto accident, and his or her child is left with no one to care for them. Please choose the highest form of aid you would provide.

1 – Nothing

2 – Donate $10 toward a fund for the child

3 – Donate $25 toward a fund for the child

4 – Donate $50 toward a fund for the child

5 – Start a fund-raising campaign for the child's welfare

6 – Have the child come live with you until a permanent home is found

7 – Have the child come live with you and raise them as you would your own

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ABSTRACT

A BIOECOLOGICAL APPROACH TO EMPATHY, ALTRUSIM AND INTENT TO HELP: DEVELOPMENTAL, DISPOSITIONAL AND CONTEXTUAL FACTORS INFLUENCING PROSOCIAL MOTIVATIONS AND INTENTIONS

by

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August, 2011

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Whether one helps due to altruistic empathy or egoistic motivators has been debated in the social psychological literature most recently with the Felt-Oneness (Cialdini et al., 1997) and the Empathy-Altruism (Batson 1991) hypotheses. For strangers, it appears that helping intentions are predicted by felt-oneness, except in circumstances in which a bystander feels nurturance toward a target, in which case empathy is found to predict helping. For close relationships, however, empathy predicts helping, particularly in high need situations. Antipathy has been presented as a possible confound as well (Batson et al., 1997), but has not been tested. The present study took a bioecological systems approach (Bronfenbrenner & Morris, 2006) in creating a model which includes severity of need, relational closeness, nurturance and antipathy as contextual factors in the prediction of altruistic empathy or egoistic motivations (oneness, personal distress and sadness) and intent to help. Additionally, the model included person effects, with the developmental factors of temperament, socialization history and level of moral development, and the dispositional factors of dispositional empathy, personal distress, perspective-taking, and helpfulness. A path analysis with good model fit indicated that

development influences prosocial dispositions. These dispositions, in addition to the contextual influences, predict outcomes of empathy, oneness, negative affect and intent to help. Follow up analyses were conducted to test the interaction of the contextual variables.   There were significant main effects and interactions between these situational variables in predicting emotional response, oneness and intent-to-help. Relationship Closeness and Severity of Need were important factors, replicating previous findings (Cialdini et al. 1997), whereas nurturance is only important as a moderator. Antipathy, and its interactions with Severity of Need, is also an influential factor which does not appear to be a confound with oneness as previously suggested (Batson et al., 1997). Both felt-oneness and empathy significantly predict intent-to-help, within the bioecology of the person effects and context. Thus, support for both hypotheses was found by taking a bioecological approach, in addition to demonstrating the importance of including the effects of the individual and time when studying prosocial behavior.

AUTOBIOGRAPHICAL STATEMENT

Michelle Beechler was raised outside of Detroit, Michigan and attended Wayne State University for both her undergraduate and graduate degrees. She has always desired to become a teacher, but became interested in teaching psychology in 2001. She majored in Social Development, focusing on issues of socioemotional development, developmental systems theories, and later became interested prosocial behaviors. In her free time, she enjoys running, cooking, reading, and spending time with her husband and children.