


# Searching for the Prosocial Personality: A Big Five Approach to Linking Personality and Prosocial Behavior

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## Abstract

The search for the prosocial personality has been long and controversial. The current research explores the general patterns underlying prosocial decisions, linking personality, emotion, and overt prosocial behavior. Using a multimethod approach, we explored the links between the Big Five dimensions of personality and prosocial responding. Across three studies, we found that agreeableness was the dimension of personality most closely associated with emotional reactions to victims in need of help, and subsequent decisions to help those individuals. Results suggest that prosocial processes, including emotions, cognitions, and behaviors, may be part of a more general motivational process linked to personality.

## Keywords

personality, emotion, prosocial, agreeableness, empathy

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The search for the prosocial personality has a long history. According to Haidt and Kesebir (2010), it would be hard to find evidence of this search, however, from looking at social psychology or personality textbooks. They note that until relatively recently, morality and prosocial actions were rarely seen in social psychology and personality. These authors say, “the field we now call ‘moral psychology’ was until recently a part of developmental psychology” and it “focused on the cognitive-developmental theory of Lawrence Kohlberg (1969)” (p. 79).

Graziano and Habashi (2015) proposed that the modern foundation for a distinctive social-psychological approach to morality and prosocial action can be traced to Roger Brown (1965) in his analysis of moral socialization. In Brown’s critical review of Freud’s account of morality and personality development, he noted Freud’s restricted view of morality. He spotlighted the empirical findings of Hartshorne and May (1928) on children’s moral character, noting a lack of cross-situational consistency and potent situational influences on children’s cheating. By implication, there was reason to be skeptical of the consistency of moral character. If a person who helps others (or cheats) in one situation does not do so in another, what sense does it make to talk of a prosocial personality? Brown (1965) said,

Conduct is not an agency of the mind at all but is a battleground on which moral feelings and moral theory meet. They contend for control of conduct, contend with one another, and contend with other values . . . (p. 413)

Brown’s analysis seems to imply that “moral character” and associated prosocial cognition, affect, and behavior are not special modules, dedicated primarily to a single set of moral, or even prosocial, functions. Like other forms of social behavior, they were acquired and maintained in habit through social learning.

Another approach to the prosocial personality can be found in the subsequent work on the acquisition of moral reasoning (e.g., Eisenberg, Eggum-Wilkens, & Spinrad, 2015; Turiel, 2015). Haidt and Kesebir (2010) noted that this work induced a shift in the questions being asked, moving from the earlier focus on the acquisition and expression of moral character (“What should I become?”) to a later focus on consequences of moral actions (“What is the right thing to do?”). The shift was toward questions dealing with thinking and reasoning about situated decisions and consequences. Graziano and Habashi (2015) observed that despite differences in focus, Brown and the cognitive-developmental researchers came to similar conclusions: Differences in prosocial thinking, feeling, and responding are merely one set of effects coming from more general processes.

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Precisely, what are the processes at work in prosocial expression? Do they implicate a more general process? If so, how broad are the general processes described by Brown and by the cognitive developmentalists? The processes can be arrayed conceptually on a continuum from very broad and comprehensive to very specific and narrow. At one end, the process could be very broad: In the words of one eminent cognitive-development researcher, the same head that solves math problems also solves social relations problems, too (see Heyman & Legare, 2013). The process could be constrained by level of cognitive development, but the general process applies its operation to different content (e.g., centered, ego-centric thought, and moral reasoning). At the other end, the process could be general, but only to other cases of specific behaviors (e.g., thinking, but not acting; sharing, but not helping strangers). Between the two bipolarities is a position that the process could be dedicated to prosocial content, but integrated and modularized to deal with sets of related prosocial behaviors including helping, sharing, cooperating, and aiding strangers.

In discussions of this sort, it is useful to have defining guideposts. The textbook definitions of “prosocial” describe a summary term for a broad category of interpersonal actions, defined within a given socio-cultural system, as bringing benefits to other people (e.g., Dovidio, Piliavin, Schroeder, & Penner, 2006; Penner, Dovidio, Piliavin, & Schroeder, 2005). This definition focuses on consequences of action for other people, not on the actor’s intent. The term *altruism* is reserved for a subset of prosocial actions done without the actor anticipating any rewards from external sources. By this definition, altruism shifts focus away from the recipients to the actors, and from overt behavior to covert intent. Some acts could be prosocial but not altruistic (Dovidio et al., 2006). One implication is that if there is a prosocial personality, its underlying psychological structure is likely to be different, although overlapping, from that of the altruistic personality (e.g., Oliner & Oliner, 1988/1992). The search for an altruistic personality will be more difficult in that it faces a higher hurdle if it requires knowledge of an actor’s expectations for rewards and intent (Campbell, 1963). This interpretation in no way disputes the potential importance of reward expectation or intent in influencing the expression of prosocial actions in many, if not most, situations.

There are important differences between prosocial and altruistic processes, but at the conceptual level, Batson (1991) provided a bridge for linking them (also see Batson, 1987). A critical element in the link is empathy. Empathy refers to a set of psychological processes related to a perceiver’s emotional reactions to the problems of others (Davis, 1996, 2015). Witnessing another person in need can induce sadness and personal distress, an unpleasant aversive state. In some circumstances, however, it can elicit a different emotion, empathic concern. The first emotional reaction, personal distress, is self-centered and motivates a desire to reduce that distress. The second reaction, empathic concern, is other-centered

and motivates a desire to reduce the distress of the victim. According to the empathy–altruism hypothesis (Batson, 1991; Batson, Lishner, & Stocks, 2015; Dovidio et al., 2006), there are at least three main paths to helping. In one path, if perceivers can be induced to experience empathic concern, that process will activate altruistic motivation, which will lead to helping “in ways that cannot be explained by expectations of rewards or norms for helping” (Dovidio et al., 2006, p. 132). In this path, empathic concern can be activated through the use of perspective taking, a third, cognitive component of empathy (Davis, 1996). It is a process in which the perceiver is asked to place herself or himself in the situation of the victim. In some studies, the variable is described as “role taking.” In this path, the cognitive process of perspective taking can activate an emotional component of empathy, empathic concern. In doing so, it creates not just prosocial motivation, but something less common, altruistic motivation.

There are at least two other paths. When personal distress is activated, observers of the distress of others are motivated to reduce their own distress. In an experimental study, Toi and Batson (1982) predicted that in the absence of perspective taking, personal distress would lead to egoistical motivation to reduce distress in whatever way was less costly. Toi and Batson manipulated cost by the ease/difficulty of escaping from the helping situation. They found that when escape was easy, perceivers who experienced personal distress, but no perspective-taking manipulation, helped at less than half the rate of their peers for whom escape was difficult. By contrast, those perceivers induced to experience empathic concern through perspective taking helped at high rates regardless of ease/difficulty of helping.

Other researchers have explored the role of empathy on systematic forms of helping outside the laboratory. Building on the previous landmark research on heroic rescuers aptly named *The Altruistic Personality* by Oliner and Oliner (1988/1992), Penner and colleagues (e.g., Penner, Fritzsche, Craiger, & Freifeld, 1995) used factor analysis to construct a Prosocial Personality Battery (PSB). It was based on 128 items taken from major instruments (e.g., Kohlberg, 1984; Mehrabian & Epstein, 1972). They identified two underlying factors, labeled “other-oriented empathy” and “helpfulness.” Other-oriented empathy concerns prosocial thoughts and feelings, whereas the helpfulness factor concerns a behavioral history of being helpful. Penner et al. (1995) found no evidence that other-oriented empathy predicted overt helping over a 1-month period, but helpfulness did. Penner and Fritzsche (1993) sent the PSB to volunteers for charity serving homeless individuals and families. Volunteers scored significantly higher on the PSB than did matched controls. Within that pattern, volunteers who had worked for more than 6 months scored significantly higher on both factors than volunteers who served for less than 6 months.

Taken together, these studies suggest that empathy may serve not only to identify prosocial behaviors motivated specifically by altruism, but also to operate as a critical

psychological mediator between prosocial dispositions and their resulting prosocial actions. Empathy is, however, a set of processes, the elements of which do not all operate in the same direction (Carlo, McGinley, Davis, & Streit, 2012; Graziano & Habashi, 2010). Empathic concern appears to motivate helping, even when ease of escape from the helping situation is an option and helping is costly. Empathic concern can be induced through social-cognitive manipulations of perspective taking. However, personal distress seems to generate self-centered egoistical motivation, and in the absence of perspective taking manipulations, or difficult escape, undermines prosocial action. Situational variables (e.g., perspective taking, cost of helping, easy/difficult escape) may activate different aspects of the empathy complex. If there is a prosocial personality, then it is reasonable to expect its components to have links to these three more proximal processes of empathy (personal distress, empathic concern, perspective taking) and the corresponding situational constraints.

If there is a prosocial personality, it will involve general processes that generate patterned differences in prosocial behavior. The list of potential candidates for inclusion in the prosocial personality is large (Leary & Hoyle, 2009). In the empirical literature on prosocial behavior, it is common to propose a basic process, coupled with a discussion of individual differences that could moderate that one process (Graziano & Habashi, 2015). For example, belief in a just world (Dalbert, 2009; Jost, Banaji, & Nosek, 2004) might be moderated by locus of control, authoritarianism, or religiosity. Implications for the prosocial behavior would be limited in scope, and ad hoc. Authoritarian beliefs would moderate prosocial actions in one way (e.g., out-group members deserve less help), whereas locus of control would moderate prosocial action in a different way (e.g., victim derogation). To resist diffusion of focus, here we concentrate on variables found in previous research that implicate a general process or tendency central to the prosocial personality, rather than specialized moderators of narrower processes. Several studies point to the Five Factor approach to personality. The Big Five dimensions of extraversion (E), agreeableness (A), neuroticism (N), conscientiousness (C), and openness to experience (O) represent five well-established hypothetical constructs in personality. At the minimum, they qualify as “empirical concepts.”

At least intuitively, several of the Big Five dimensions could lay claim to being some part of the prosocial personality (see Mooradian, Davis, & Matzler, 2011). Extraversion is associated with spontaneous, impulsive tendencies such as jumping into a frozen river to save others (e.g., Carlo, Okun, Knight, & de Guzman, 2005). Another candidate is neuroticism, in that high anxiety and vigilance to threat could undermine helping (e.g., Tobin, Graziano, Vanman, & Tassinari, 2000). Still another candidate is conscientiousness, through its presumed links to compliance with prosocial norms and rules and with “duty” (e.g., Jensen-Campbell et al., 2002).

Finally, openness might be related through receptivity to “unusual cases” such as victims in need of assistance. Rather than examining each of the potential variables one at a time, we focused on the variable most likely to generate a systematic pattern of prosocial differences, namely, agreeableness. Among the Big Five dimensions, agreeableness deserves special attention (Graziano & Habashi, 2010, 2015). In the first comprehensive review of agreeableness as a distinct psychological construct, Graziano and Eisenberg (1997) proposed that agreeableness could be defined in motivational terms that implicate the prosocial personality. In English, and in most other languages studied so far, the natural language trait words associated with agreeableness include both affective/cognitive and behavioral aspects of prosocial tendencies such as “helpful,” “generous,” “sympathetic,” and “forgiving” (Goldberg, 1992; Graziano, Jensen-Campbell, Steele, & Hair, 1998; Kohnstamm, Halverson, Mervielde, & Havill, 1998). In addition, agreeable people are sensitive to the prosocial actions of others. Agreeable people judge prosocial behaviors more positively and judge anti-social behaviors more negatively (Kammrath & Scholer, 2011). Furthermore, in their work on prosocial personality, Penner and colleagues (1995) found a significant correlation between agreeableness and other-oriented empathy, but not between agreeableness and helpfulness. Perhaps agreeableness is more closely tied to prosocial thoughts and feelings than to overt prosocial behavior.

Graziano, Habashi, Sheese, and Tobin (2007) reported a multimethod program of four studies ( $N = 1,334$ ) exploring the links among agreeableness, empathy, and overt helping behavior. At the level of simple correlations in self-report, agreeableness was related to Davis' (1996) summed empathy components ( $r = .60$ ), and specifically to the two components that promote prosocial action, namely empathic concern ( $r = .75$ ) and perspective taking ( $r = .48$ ). Agreeableness was unrelated to personal distress ( $r = .02$ ), the empathy component known to undermine prosocial action. Personal distress was correlated significantly with neuroticism. They also found a significant correlation with Penner's other-oriented empathy measure ( $r = .53$ ). Other research showed that agreeableness was systematically related to a wide range of prosocial behaviors (e.g., inter- and intra-group cooperation, fewer prejudices against out-group members, greater care for communal resources, in both adults and children; for a comprehensive review, see Graziano & Tobin, 2013). Overall, agreeableness is positively and uniquely related to processes presumed to promote prosocial acts (empathic concern, perspective taking) but is unrelated to processes presumed to undermine helping (personal distress).

Looking specifically at the agreeableness–empathy link, Graziano et al., 2007 (Study 2) manipulated perspective taking using Batson's Katie Banks paradigm (Coke, Batson, & McDavis, 1978). Participants were randomly assigned either to focus on the emotional aspect of the victim's communication or to focus on the techniques and devices used in communicating

the broadcast account of the victim's situation. Crossed with this manipulation, a random half was told Katie was a student at their own university (in-group member) or commuter student at another university (out-group member). Participants helped in-group victims more than out-group victims, but persons high in agreeableness offered more help to out-group victims than did persons low in agreeableness. In addition, persons low in agreeableness offered less help in the technical focus condition than did persons high in agreeableness. Apparently, the perspective-taking manipulation served as a "reminder"; persons low in agreeableness need to be reminded to engage in victim-focused empathy, whereas persons high in agreeableness do not. These results suggest that persons high in agreeableness are less responsive to perspective-taking inductions because they do not need reminders; they chronically experience empathic concern, even for out-group members, in ways that the persons low in agreeableness do not. One possible account for this difference is the accessibility of others' mental states. Individuals high in agreeableness are able to understand the mental states of others more easily (Nettle & Liddle, 2008), which may lead to more spontaneous perspective taking and other-focused responses.

A different picture of motivation emerged in a study using Batson's (1991) "Elaine paradigm" (Habashi & Graziano, 2009). In the difficult escape condition, persons high in agreeableness were 1.65 times more likely (as an odds ratio) to offer help than were persons low in agreeableness. In the easy escape condition, however, helping rates were significantly lower and there was no evidence that persons high in agreeableness offered more help than persons low in agreeableness. According to Batson, Bolen, Cross, and Neuringer-Benefiel (1986), this pattern suggests that persons high in agreeableness may help more than their peers, but the motivating force is probably egoistic, not altruistic.

## Overview of Current Research

The purpose of the research reported here is to explore the general patterns underlying prosocial decisions, linking personality, empathy, and overt prosocial behavior. We use a person X situation, mixed experimental/correlational design to explore how empathic concern and personal distress operate as mediators between personality and overt helping behavior. Based on the logic outlined previously, we hypothesize the following:

**Hypothesis 1:** When examining zero-order correlations among personality, prosocial emotion, and helping behavior, agreeableness will emerge as the most reliable predictor of prosocial actions (Preliminary Study).

In addition, when all five personality dimensions of the Big Five are included as predictors in a model examining the underlying motivators and emotions of helping decisions (Study 1), we hypothesize the following:

**Hypothesis 2a:** Agreeableness will be most strongly associated with empathic concern and with decisions to help a victim in need.

**Hypothesis 2b:** Neuroticism will be most strongly associated with personal distress.

**Hypothesis 2c:** Empathic concern and personal distress will be related to helping, with empathic concern promoting helping and personal distress undermining it.

**Hypothesis 2d:** The final model, best fitting decisions to help a victim will include agreeableness and neuroticism, mediated by their connections to empathic concern and personal distress, respectively.

Finally (Study 2), we hypothesize the following:

**Hypothesis 3:** When examining agreeableness and neuroticism individually as predictors of helping decisions, agreeableness will emerge as a more important determinant of decisions to help than neuroticism.

## Preliminary Study

We began by examining interrelations among personality, prosocial emotions, and a variety of helping behaviors. By examining self-reported responses to different helping situations, we can examine which personality dimension is most centrally related to the emotions and behaviors that are drawn out in helping situations. One could imagine that each of the Big Five dimensions might be related to specific helping behaviors. For example, helping that requires canvassing neighborhoods might be attractive to extraverts, whereas helping that involves solitude and less stimulation might be more appealing to introverts. To remove possible effects of idiosyncratic behaviors and instead measure broad tendencies, this study examines a variety of helping behaviors.

To explore these relationships, we collected data for all of the Big Five dimensions and correlated them with prosocial emotions and prosocial behavioral intentions. Using classic helping studies as a guide, we created two vignettes. The first vignette asked participants to imagine listening to an interview on the radio in which a college student is left to care for her younger siblings after the loss of her parents (based on the Katie Banks Paradigm; for additional details, see Coke et al., 1978). The second vignette asked participants to imagine meeting a close friend to attend a speech relevant to their job. Realizing they are late, participants hurry from the parking garage. On their way, they encounter an individual slumped down on the sidewalk, head down, eyes closed, and not moving (based on the Good Samaritan study; for additional details, see Darley & Batson, 1973). After reading each vignette, participants were asked to rate their prosocial emotions (i.e., empathic concern and personal distress). In addition, participants were asked to report their behavioral intentions for three helping behaviors specific to each vignette. When appropriate, follow-up questions asked the

specific amount of help participants were willing to donate (e.g., money, time). A total of 203 U.S. citizens (103 women) completed the study on Amazon's Mechanical Turk and received US\$0.45 for their participation.

Zero-order correlations were computed for each of the Big Five dimensions, prosocial emotions, and helping behavior intentions. Consistent with our hypotheses, zero-order correlations between prosocial motives and behavior and agreeableness were larger than corresponding correlations with the other Big Five dimensions (see Table 1 for all correlations). Agreeableness was the only dimension of personality related to both prosocial emotions and all three helping behaviors for each vignette. None of the other dimensions are related to all these outcomes.

The preliminary study has potential limitations. First, the outcomes were based on correlations among traditional verbal self-report measures. How these responses relate to overt behavior remains an empirical question. Prosocial behaviors and empathic responses are socially desirable, and when individuals believe they do not have to perform these behaviors they may report higher rates. Exposing participants to situations requiring "real" costs of helping is crucial to minimizing socially desirable responding. Second, correlations provide important information about the relationships between personality and prosocial decisions, but advanced methods and statistical techniques are needed to identify which of the Big Five dimensions predict helping behaviors. To overcome some of these limitations, and to gain a better picture of the role of personality in actual helping decisions, we conducted two additional studies that included different helping outcomes.

## Study 1

The preliminary study implicates agreeableness as a core component of the prosocial personality. It was the only dimension of the Big Five consistently related to helping motivations and behaviors. To examine more closely the role of each of the dimensions of personality in helping decisions, the current study used structural equation modeling (SEM). Given that the preliminary study found that different helping behaviors have different Big Five correlates, a preliminary comprehensive model was necessary. Based on the findings of this initial exploratory model, we examine additional structural models to winnow the presumed antecedents of prosocial emotion and behavior, and in so doing identify the prosocial personality.

In addition to examining empathic concern and personal distress, the third cognitive component of empathy, perspective taking, was also examined. To determine the effects of perspective taking on the relationship between personality and prosocial emotion, we manipulated observation instructions and asked participants either to take the perspective of the victim or not (see Coke et al., 1978). We expected to replicate past research (Graziano et al., 2007), finding that the

relationship between agreeableness and empathic concern would be moderated by perspective taking (i.e., observational instructions). For persons low in agreeableness, we expected that the manipulation of perspective taking would increase empathic concern, and in turn increase helping. For persons high in agreeableness, however, the manipulation of perspective taking would have little effect; their level of empathic concerns is chronically higher, with or without a "reminder." We did not expect observation instructions to moderate any other relationship.

## Method

**Participants.** A total of 233 Purdue University students (120 women) participated in return for partial fulfillment of their introductory psychology course requirement. Participants were randomly assigned to one of two observational instruction sets.

**Procedure.** Participants were brought into the laboratory one at a time for a 1-hr session. Based on an adaptation of Batson's Katie Banks paradigm (Coke et al., 1978), participants were instructed they would be listening to a pilot radio broadcast show used to test a new program for the university campus radio station. Participants were randomly assigned to one of two observational sets, namely *imagine-her* or *observe*.

Participants listened to an interview of a college senior, Katie Banks. The program informed participants that Katie had recently lost both her parents and one of her younger siblings in a car accident and was left with no money, no car, and two younger siblings (i.e., a sister and a brother) for whom to care. Katie was struggling to keep her family together while trying to graduate.

Immediately after listening to the recording, participants were asked to rate their emotional reactions toward Katie and their overall reaction toward the broadcast. The experimenter then left the participant with two letters. The first was a typed letter from the professor who organized the study. In this letter, participants were informed that as this was a pilot program used for research purposes, the program would never be aired and Katie would not have to opportunity to ask for help. The letter then explained to participants they would be given the opportunity to help Katie. The second letter was a handwritten letter from Katie, explaining her situation and what participants could do to help. While the experimenter went to gather additional forms, the participant read the letters, and filled out a help scheduling form, on which they could volunteer hours to help Katie.

After completing the help scheduling form, participants were given a short questionnaire evaluating the radio program and Katie. Finally, the experimenter used the funnel-debriefing format (Aronson & Carlsmith, 1968) to probe participants for suspiciousness, to debrief them, and to pledge them to secrecy.

**Table 1.** Intercorrelations Among the Personality Variables, Prosocial Emotions, and Helping Behavior in the Preliminary Study.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Extraversion	1																	
2. Agreeableness	.15*	1																
3. Conscientiousness	.29**	.39**	1															
4. Neuroticism	-.35**	-.38**	-.46**	1														
5. Openness	.25**	.16*	.18*	-.14	1													
6. Empathic concern (KB)	.03	.33**	.19**	-.03	-.02	1												
7. Personal distress (KB)	-.05	.18*	-.03	.19**	.03	.49**	1											
8. Willing to volunteer hours (KB)	.06	.25**	.07	-.02	-.01	.22*	.27**	1										
9. Number of hours (KB)	.11	.17*	.09	.01	.03	.17*	.24**	.59**	1									
10. Willing to donate money (KB)	.07	.18*	.05	-.02	.03	.27**	.26**	.25**	.22**	1								
11. Amount of money (KB)	.13†	.15*	.12†	.07	.07	.20**	.18*	.21**	.34**	.28**	1							
12. Willing to canvas for help (KB)	.10	.19**	.14*	.08	.09	.21**	.31**	.42**	.44**	.28**	.26**	1						
13. Number of hours canvassing (KB)	.06	.20**	.12†	.03	.13†	.20**	.34**	.31**	.59**	.27**	.28**	.62**	1					
14. Empathic concern (GS)	.15*	.43**	.18*	.00	.04	.60**	.48**	.24**	.24**	.28**	.22**	.28**	.28**	1				
15. Personal distress (GS)	-.05	.25**	-.03	.19**	.08	.45**	.67**	.22**	.20**	.20**	.14*	.23**	.26**	.55**	1			
16. Willing to ask if ok (GS)	.18**	.26**	.01	.03	.15*	.15*	.22**	.21**	.22**	.32**	.16*	.24**	.24**	.49**	.41**	1		
17. Willing to help to safe place (GS)	.15*	.30**	.02	.05	.08	.17**	.27**	.25**	.27**	.34**	.19**	.31**	.27**	.51**	.41**	.84**	1	
18. Willing to take to doctor (GS)	.17*	.21**	-.07	.09	.09	.02	.18**	.21**	.27**	.18**	.10	.28**	.25**	.35**	.29**	.47**	.54**	1

Note. Items marked KB are from the Katie Banks vignette. Items marked GS are from the Good Samaritan vignette.

† $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

### Manipulated variable

**Observational set.** Participants were randomly assigned to one of two listening perspective conditions, adapted slightly from Coke et al., 1978. Participants in the imagine-her condition were given written instructions directing them to focus on the emotional aspects of the broadcast by trying to imagine how the person in the broadcast, Katie, felt. Participants in the observe condition were given written instructions directing them to focus on the technical aspects of the broadcast by listening to the techniques and devices used by the programmers.

### Measures

**Personality dimensions.** All participants completed the Big Five Inventory (BFI; John & Srivastava, 1999) to obtain scores for extraversion, agreeableness, conscientiousness, neuroticism, and openness.

**Prosocial emotions.** Immediately following the broadcast radio program, but before participants were aware of the opportunity to help/not help, participants were asked to rate two of their own emotions, empathic concern and personal distress (1 = *not at all*, 9 = *extremely*; taken from Davis, 1996). Empathic concern was measured using five items, including the adjectives warm, tender, compassionate, soft-hearted, and sympathetic ( $M = 6.13$ ,  $SD = 1.36$ ,  $\alpha = .80$ ). Personal distress was also measured using five items, including the adjectives alarmed, upset, disturbed, distressed, and anxious ( $M = 4.69$ ,  $SD = 1.56$ ,  $\alpha = .80$ ). These items were intermixed to create one scale labeled Emotional Reaction Questionnaire. The overall zero-order correlation between empathic concern and personal distress was  $.53$ ,  $p < .05$  (for correlations among all variables, see Table 2).

**Hours volunteered.** To assess the main dependent variable, number of hours volunteered, each participant was given a help schedule. This schedule asked participants to circle the number of hours they were willing to volunteer (participants who did not volunteer circled 0). Students were asked to list their availability during the week and provide contact information if they were willing to help.

**Data analyses.** To provide the most precise evaluation of our hypothesis, and include multiple mediators (both prosocial emotions) simultaneously, all data were analyzed using maximum likelihood (ML) estimation in SEM. Data analyses were conducted in four phases. First, preliminary analyses were conducted and descriptive statistics were obtained to determine whether the data met the basic assumptions of SEM. Second, confirmatory factor analysis was conducted to determine the fit of the measurement model (Byrne, 2001). The third phase of data analysis included the simultaneous testing of the measurement and structural models. Finally, fit statistics were compared to evaluate which model provided the best fit for the data.

### Results

**Measurement model.** To specify the measurement model, we used multiple indicators for each of the Big Five personality traits. Indicators of these personality traits were constructed by forming item parcels from the items used to measure them. Specifically, for extraversion, the sum of the first three items from the BFI (John & Srivastava, 1999) constituted the first parcel, the sum of the second three constituted the second parcel, and the sum of the last two constituted the third and final parcel. This procedure was also used for the other Big Five dimensions (see also Graziano, Jensen-Campbell, & Finch, 1997). Item parcels were used to obtain estimates of sampling error across item content for each of the Big Five dimensions (Schriesheim, Solomon, & Kopelman, 1989). Confirmatory factor analysis procedures revealed satisfactory fit for the measurement model,  $\chi^2(40, N = 233) = 177.958$ ,  $p < .001$ ,  $\chi^2/df = 2.224$ , comparative fit index (CFI) =  $.935$ , Tucker–Lewis index (TLI) =  $.915$ , root mean square error of approximation (RMSEA) =  $.073$ , 90% confidence interval (CI) =  $[.058, .087]$ .

**Model specification.** In addition to the item parcels for the personality traits, we used single indicators for the constructs of helping behavior and each of the two prosocial emotions, empathic concern and personal distress. Each indicator for each of the prosocial emotions represented the mean of the participants' ratings of the five emotions described previously (taken from Davis, 1996).

In the present study, multiple indices were used to assess model fit. The chi-square to degrees of freedom ratio ( $\chi^2/df$ ; Wheaton, Muthen, Alwin, & Summers, 1977), the CFI (Bentler, 1990), the TLI (Tucker & Lewis, 1973), and the RMSEA (Browne & Cudeck, 1993) for each model is reported. For the chi-square to degrees of freedom ratio, values below 2 indicate adequate fit. For the CFI and TLI, values of  $.90$  or greater reflect adequate fit of the model. MacCallum, Browne, and Sugawara (1996) noted that RMSEA values of  $.05$  or less indicate good fit, values up to  $.08$  indicate reasonable fit, values ranging from  $.08$  to  $.10$  indicate mediocre fit, and values greater than  $.10$  indicate poor fit. (For additional fit statistics for each model, see Table 3.)

**Evaluating model fit.** To evaluate the relationship between personality and prosocial emotions and behavior, a model incorporating all five dimensions of the Big Five was examined (Big Five Model—see Figure 1). Based on the results of the Big Five Model, additional models were evaluated to identify the Big Five dimensions that play the most important role in prosocial behavior. Standardized path coefficients are presented to allow for comparison of effects across all models (Kline, 2005). We first estimated the Big Five Model, which incorporated all Big Five dimensions as predictors of prosocial emotions, which then predicted helping behavior<sup>1</sup>

**Table 2.** Intercorrelations Among the Personality Variables, Prosocial Emotions, and Helping Behavior in Study 1.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. extp1	1																			
2. extp2	.75**	1																		
3. extp3	.67**	.77**	1																	
4. nerp1	-.13*	-.18**	-.13	1																
5. nerp2	.004	-.13	-.10	.70**	1															
6. nerp3	-.18**	-.25**	-.25**	.51**	.62**	1														
7. agp1	.03	.09	.05	-.21**	-.24**	-.22**	1													
8. agp2	.24**	.24**	.17*	-.20**	-.19**	-.08	.51**	1												
9. agp3	.103	.18**	.16*	-.15*	-.16*	-.08	.56**	.59**	1											
10. comp1	.10	.13*	.09	-.16*	-.26**	-.18**	.37**	.29**	.35**	1										
11. comp2	.16*	.18**	.18**	-.16*	-.17**	-.14*	.15*	.13*	.13*	.56**	1									
12. comp3	.15*	.21**	.19**	-.31**	-.30**	-.23**	.27**	.22**	.23**	.53**	.69**	1								
13. opnp1	.20**	.23**	.09	-.14*	-.22**	-.28**	.12†	.07	.09	.15*	-.04	.03	1							
14. opnp2	.07	.19**	.07	-.07	-.16*	-.23**	.08	-.02	.11†	.03	-.11	-.05	.58**	1						
15. opnp3	.01	.08	.03	.07	-.02	-.08	.06	.03	.14*	-.02	-.08	-.13*	.50**	.61**	1					
16. Sex	.25**	.20**	.22**	.08	.18**	.23**	.08	.15*	.23**	.10	.18*	-.13*	-.22**	-.01	.08	1				
17. Empathic concern	.12	.11	.04	.04	.04	-.01	.23**	.21**	.25**	.05	.02	.08	.03	.01	.01	.01	1			
18. Personal distress	.05	-.06	-.05	.08	.16*	.16*	.08	.02	.12	-.11	-.04	.01	-.14*	-.12†	-.10	.03	.54**	1		
19. Helping behavior	.16*	.22**	.21**	.14*	.15*	.02	.06	.03	.06	-.11	-.09	-.06	.00	.08	.15*	.13	.17**	.03	1	
M	3.42	3.42	3.37	2.62	2.76	2.65	3.69	3.90	3.90	3.81	3.40	3.50	3.77	3.30	3.29	1.52	6.11	4.65	2.60	
SD	.79	.78	.93	.78	.86	.89	.62	.65	.68	.66	.87	.70	.62	.70	.84	.50	1.36	1.56	1.56	3.50

Note. Items 1 to 3 represent the three item parcels for extraversion. Items 4 to 6 represent the three item parcels for neuroticism. Items 7 to 9 represent the three item parcels for agreeableness. Items 10 to 12 represent the three item parcels for conscientiousness. Items 13 to 15 represent the three item parcels for openness.

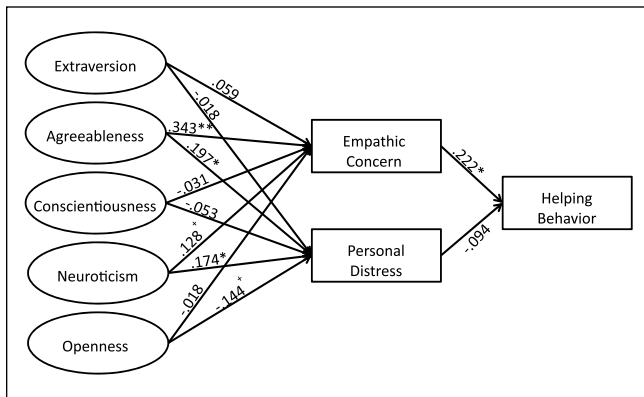
† $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .



**Table 3.** Comparison of Fit Indices for Models.

Model	$\chi^2$	df	p	$\chi^2/df$	AGFI	CFI	TLI	IFI	RMSEA	RMSEA 90% CI
Big Five Model	234.595	115	<.001	2.04	.859	.927	.903	.929	.067	[.055, .079]
Condensed Model	66.737	45	.019	1.48	.917	.974	.962	.975	.046	[.019, .068]
Prosocial Personality Model	27.497	22	.193	1.25	.949	.991	.985	.991	.033	[.000, .067]

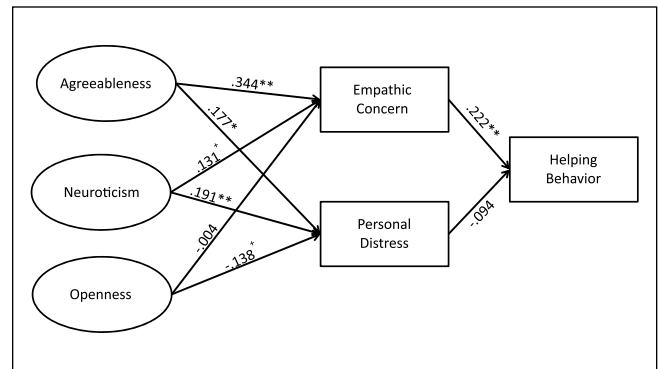
Note. AGFI = adjusted goodness of fit index; CFI = comparative fit index; TLI = Tucker–Lewis index; IFI = incremental fit index; RMSEA = root mean square error of approximation; CI = confidence interval.



**Figure 1.** The Big Five Model ( $N = 233$ ), incorporating all Big Five dimensions of personality as predictors of prosocial emotion. Note. Not pictured: All exogenous variables (personality dimensions) were allowed to correlate, and the errors of each emotion were also allowed to correlate. All coefficients are standardized. Consistent with standard notation, latent constructs are enclosed in ellipse. Indicators are not shown for reasons of simplification. † $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

(see Figure 1). Estimation of this model yielded marginally adequate fit,  $\chi^2(115, N = 233) = 234.595, p < .001, \chi^2/df = 2.04, CFI = .927, TLI = .903, RMSEA = .067, 90\% CI = [.055, .079]$ . Inspection of the path coefficients reported in Figure 1 reveals that agreeableness was positively related to both empathic concern,  $\beta = .343, p < .001$ , and personal distress,  $\beta = .197, p = .018$ . Neuroticism was positively related to personal distress,  $\beta = .174, p = .025$ , and marginally related to empathic concern,  $\beta = .128, p = .095$ . In addition, openness was marginally related to personal distress,  $\beta = -.144, p = .062$ , but not empathic concern,  $\beta = -.018, p = .811$ . No significant effects of extraversion or conscientiousness were found (all  $ps > .40$ ). Results also revealed that empathic concern was significantly related to the amount of time volunteered to help,  $\beta = .222, p < .01$ , but personal distress was not related to the amount of time volunteered,  $\beta = -.094, p = .22$ . We also examined the amount of variance explained for each of the prosocial emotions (empathic concern = 11% and personal distress = 7.5%) and in the resultant helping behavior (3.6%).

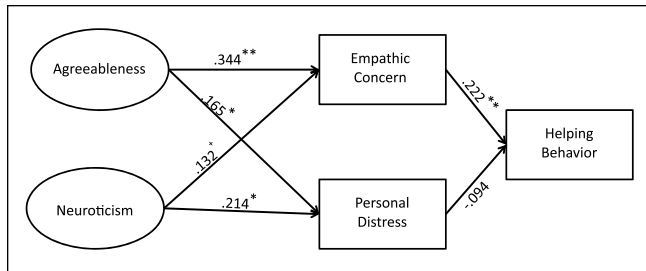
Based on the results of the Big Five Model, we dropped extraversion and conscientiousness from the model to see whether we could provide a better fit for the data. We estimated a model that incorporated agreeableness, neuroticism,



**Figure 2.** The Condensed Model ( $N = 233$ ), incorporating agreeableness, neuroticism, and openness as predictors of prosocial emotion. Note. Not pictured: All exogenous variables (personality dimensions) were allowed to correlate, and the errors of each emotion were also allowed to correlate. All coefficients are standardized. Consistent with standard notation, latent constructs are enclosed in ellipses. Indicators are not shown for reasons of simplification. † $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

and openness (Condensed Model, see Figure 2). Estimation of this model also yielded satisfactory fit,  $\chi^2(45, N = 233) = 66.737, p = .019, \chi^2/df = 1.48, CFI = .974, TLI = .962, RMSEA = .046, 90\% CI = [.019, .068]$ . Similar to the Big Five Model, results revealed that agreeableness was positively related to both empathic concern,  $\beta = .344, p < .001$ , and personal distress,  $\beta = .177, p = .021$ . Neuroticism was positively related to personal distress,  $\beta = .191, p = .009$ , and marginally related to empathic concern,  $\beta = .131, p = .069$ . Openness was marginally related to personal distress,  $\beta = -.138, p = .060$ . Identical to the Big Five Model, empathic concern,  $\beta = .222, p = .004$ , but not personal distress,  $\beta = -.09, p = .221$ , was significantly related to hours volunteered (see Figure 2 for all path coefficients). We also examined the amount of variance explained in each of the prosocial emotions (empathic concern = 11% and personal distress = 7.2%) and in the resultant helping behavior (3.6%).

Finally, we estimated the Prosocial Personality Model, which removed openness. Estimation of this model also yielded excellent fit,  $\chi^2(22, N = 233) = 27.497, p = .193, \chi^2/df = 1.25, CFI = .991, TLI = .985, RMSEA = .033, 90\% CI = [.000, .067]$ . Similar to the Big Five and Condensed Models, agreeableness was positively related to empathic concern,  $\beta = .344, p < .001$ , and personal distress,  $\beta = .165,$



**Figure 3.** The Prosocial Personality Model ( $N = 233$ ), incorporating agreeableness and neuroticism as predictors of prosocial emotion.

Note. Not pictured: All exogenous variables (personality dimensions) were allowed to correlate, and the errors of each emotion were also allowed to correlate. All coefficients are standardized. Consistent with standard notation, latent constructs are enclosed in ellipses. Indicators are not shown for reasons of simplification.

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ .

$p = .032$ . Neuroticism was positively related to personal distress,  $\beta = .214$ ,  $p = .003$ , and marginally related to empathic concern,  $\beta = .132$ ,  $p = .062$ . Results also revealed that empathic concern,  $\beta = .222$ ,  $p = .004$ , but not personal distress,  $\beta = -.094$ ,  $p = .221$ , was significantly related to amount of time volunteered to help (see Figure 3 for all path coefficients). We also examined the variance explained in each of the prosocial emotions (empathic concern = 11.0% and personal distress = 5.3%) and in the resultant helping behavior (3.6%).

**Model comparison.** Based on the fit statistics of each model (see Table 3), all three models seem to provide reasonable fit for the current data. To examine differences between the three models, the Akaike Information Criterion (AIC; Akaike, 1987) for each model was compared. Smaller values of AIC indicate a more parsimonious explanation of the data. The Prosocial Personality Model, revealed a slightly lower value, AIC = 73.497 (vs. Big Five Model AIC = 346.595, and Condensed Model AIC = 132.737), indicating that the Prosocial Personality Model provides both the best fit and the most parsimonious explanation for the data. It is important to note however, that the Condensed Model also provides a better and more parsimonious fit for the data than the Big Five Model (although the fit is similar to the Prosocial Personality Model). In addition, the Prosocial Personality Model had a CI for the RMSEA that included 0, whereas the other two models did not (see Table 3 for fit statistics).

**Moderation analysis.** In past research on agreeableness and helping behavior, we hypothesized that the relations among agreeableness, empathic concern, and helping behavior would be moderated by manipulated perspective taking (see Graziano et al., 2007).<sup>2</sup> To examine whether this was replicable, we conducted a multiple group analysis, but only for the best fitting model, the Prosocial Personality Model.

For path coefficients to be compared across groups, factor invariance, or measurement model equivalency, across the two groups must be established (Wegener & Fabrigar, 2000). First, the data were separated into two groups based on the observational set to which participants were assigned, either the imagine-her condition or the observe condition. Two separate analyses were conducted, one in which all factor loadings and error variances were constrained to be equal across the two groups, and another with nothing constrained to be equal. Results indicated that the constrained and unconstrained models both provided good fit (RMSEA = .050) for the measurement model,  $\chi^2$  difference (40) = 49.909,  $p > .05$ . These results indicate that the factors were invariant across the two groups and measurement equivalence can be assumed, allowing comparisons to be made in the structural models of the two groups.

To examine variation in the links of personality to empathic concern and personal distress, several multiple group analyses were conducted. First, we examined the variation in the impact of agreeableness on empathic concern by observational set by comparing two models. The first model constrained the path between agreeableness and empathic concern (and all other paths) to be equal across both groups. The second model allowed only the path between agreeableness and empathic concern to vary across groups, although all other paths in the model remained constrained across both groups. To compare the constrained model and unconstrained model, a chi-square difference test was conducted. The unconstrained model,  $\chi^2(55, N = 233) = 65.986$ , CFI = .982, TLI = .976, RMSEA = .029, provided a marginally better fit than the constrained model,  $\chi^2(57, N = 233) = 71.573$ , CFI = .976, TLI = .970, RMSEA = .033,  $\chi^2$  difference (2) = 5.587,  $p = .06$ . A marginally significant difference between the unconstrained and constrained model, and the finding that the unconstrained model provides a better fit than the constrained model, indicate that the effect of agreeableness on empathic concern is marginally stronger in one condition than in the other. Consistent with previous research and predictions, the effect of agreeableness on empathic concern was significant in the observe condition,  $\beta = .476$ ,  $p < .001$ . In the imagine-her condition, however, the effect of agreeableness on empathic concern was reduced,  $\beta = .176$ ,  $p = .082$ .

Next, we examined the variation in the impact of neuroticism on empathic concern by observational set by comparing two models. The first model constrained the path between neuroticism and empathic concern (and all other paths) to be equal across both groups. The second model allowed only the path between neuroticism and empathic concern to vary across groups, although all other paths in the model were constrained to be equal across both groups. To compare the constrained model and unconstrained model, a chi-square difference test was conducted. The unconstrained model,  $\chi^2(55, N = 233) = 64.238$ , CFI = .985, TLI = .980, RMSEA = .027, provided a better fit than the constrained model,  $\chi^2(57, N = 233) = 71.573$ , CFI = .976, TLI = .970, RMSEA = .033,

$\chi^2$  difference (2) = 7.335,  $p = .025$ . A significant difference between the unconstrained and constrained model, and the finding that the unconstrained model provides a better fit than the constrained model, indicates that the effect of neuroticism on empathic concern is stronger in one condition than in the other. The link between neuroticism and empathic concern was significant in the imagine-her condition,  $\beta = .294$ ,  $p = .002$ . In the observe condition, however, the link between neuroticism and empathic concern was diminished,  $\beta = -.001$ ,  $p = .991$ .

There was no evidence of moderation in the models examining variation in relationships among both personality dimensions and personal distress (all  $\chi^2$  difference  $ps > .90$ ).

## Study 2

Consistent with previous research (Graziano et al., 2007), Study 1 found that agreeableness and neuroticism were the two dimensions of personality most related to prosocial motives and behavior. In addition, a model incorporating only those two dimensions provided the best fit for the data. These findings narrow the search for the prosocial personality. To examine more closely which of these two dimensions is most important when predicting helping decisions, Study 2 considers the role of each of these dimensions separately. In addition, to control for idiosyncrasies associated with using only a single behavior, Study 2 examines a different type of helping outcome, donating money.

Consistent with Study 1, we expected that agreeableness would be related to helping behavior through empathic concern, but not personal distress, and this relationship would be moderated by observational set. In addition, we expected no relationship between neuroticism and helping behavior, even when both prosocial emotions were entered into the mediational model.

## Method

**Participants.** A total of 158 U.S. citizens (73 women) completed the study on Amazon's Mechanical Turk and received US\$0.65 for their participation. Identical to Study 1, participants were randomly assigned to one of two observational instruction sets.

**Procedure.** Procedures were identical to Study 1 with two exceptions. First, data were collected online using Amazon's Mechanical Turk. Second, the dependent measure was amount of money donated instead of number of hours volunteered. All other measures and manipulations were the same.

### Dependent measure

**Money donated.** Immediately after reporting prosocial emotions, participants were given the opportunity to help Katie. Similar to Study 1, participants were informed that Katie's story would not air on public radio as it was being

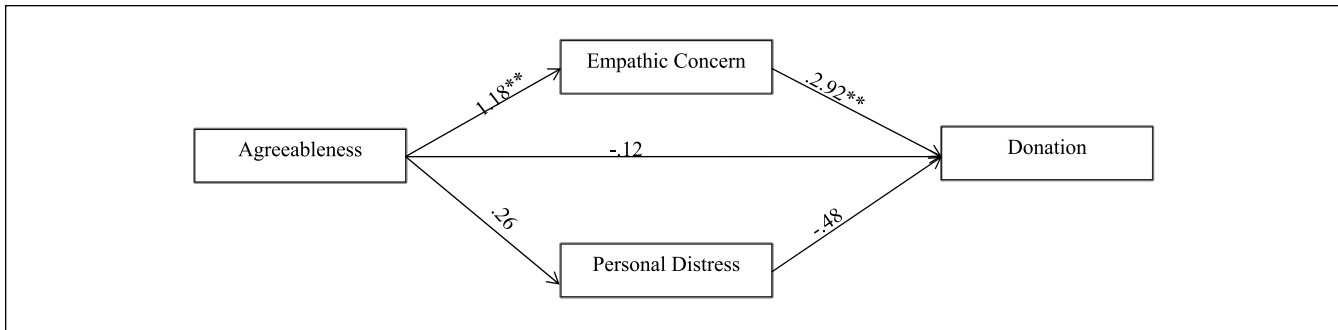
used for research purposes. The participants were then told they would be given a US\$0.30 bonus payment. Participants were offered the opportunity to donate any amount of the bonus to a fund the researcher created for Katie. Participants were informed that they would be allowed to keep any of the money they choose not to donate.

## Results

We examined the direct and indirect effects of each trait on helping behavior with prosocial emotions as the mediators in separate models. These relationships were tested using Model 7 of the PROCESS macro (Hayes, 2014). Each model allowed observational set to moderate the relationship between the personality dimension (as the independent variable) and each prosocial emotion (as the mediator), with amount of money donated included as the dependent variable. Furthermore, the data were treated as the population and 10,000 bootstrap samples were drawn (with replacement) to create 95% bias-corrected confidence intervals (BC CIs). However, results indicated no significant effects of observational set.<sup>3</sup> Based on these findings, we collapsed across observational set and tested the mediational model using Model 4 of the PROCESS macro. Each model examined the direct and indirect effects of each personality dimension on money donated with prosocial emotions as mediators. The results are presented in Figures 4 and 5. Consistent with Study 1 and our hypotheses, the effect of agreeableness on helping behavior was mediated by empathic concern (BC CI = [1.73, 5.84]) but not personal distress (BC CI = [-1.13, 0.19]). As depicted in Figure 4, agreeableness was positively related to empathic concern, and empathic concern predicted amount of money donated. In addition, neuroticism was unrelated to helping behavior, consistent with our predictions (see Figure 5).

## General Discussion

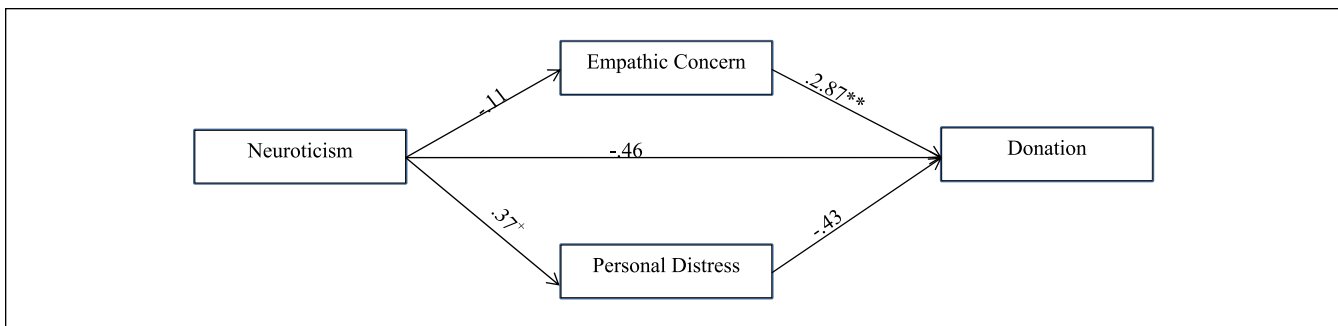
This research explored the links among personality dimensions, prosocial emotions, and helping behavior. Rather than examining variables one at a time, this research sought systematic, general patterns that could implicate the prosocial personality. Replicating and extending previous work, we found that agreeableness was connected to prosocial emotions, and through these emotions agreeableness was connected to prosocial behavior (see also Graziano & Habashi, 2010, 2015; Graziano et al., 2007). In addition, we found that neuroticism also played a role in determining reactions to victims in need of help. Consistent with past research, we found that neuroticism was directly related to self-focused negative responses (i.e., personal distress) in helping situations. However, these reactions were unrelated to decisions to offer help. Using SEM, we examined the differences among three possible models of prosocial personality—the Big Five Model, the Condensed Model, and the Prosocial



**Figure 4.** Mediation model incorporating empathic concern and personal distress as mediators of the relationship between agreeableness and helping behavior in Study 2.

Note. All coefficients are unstandardized.

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



**Figure 5.** Mediation model incorporating empathic concern and personal distress as mediators of the relationship between neuroticism and helping behavior in Study 2.

Note. All coefficients are unstandardized.

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

Personality Model. Results indicate that the best fit, and by implication the most parsimonious explanation of personality and prosocial behavior, was the Prosocial Personality Model, incorporating only agreeableness and neuroticism. Openness showed marginal relations with prosocial emotions, but did not significantly enhance the ability of the data to explain empathy-related prosocial emotions or prosocial behavior. In addition, when each dimension of personality was examined separately, we could isolate agreeableness as most important to helping decisions.

Furthermore, the current research replicates past findings that personality is related to helping not only through its link to empathy-related prosocial emotion but also through situational elicitation (see Graziano et al., 2007; Tobin & Graziano, 2011). More specifically, the relationship between personality and empathic concern, an other-focused emotional response to victims in need of help, is moderated by situational inductions of perspective taking (i.e., observational set). Concretely, persons low in agreeableness may offer less help not because they somehow lack the capacity for empathic concern, but because they do not generate empathic concern on their own without being reminded. In the terminology of cognitive-development theory, this looks

like a social-affective version of the “production deficiency problem” (Graziano et al., 2007). That is, some empathic capacity or abilities may be present in persons low in agreeableness, but remains latent until someone or some events explicitly activates the system.

Batson (1991) and Batson et al. (2015) argued that prosocial behavior was potentially undermined by self-focused emotions such as personal distress. The mirror image was the other-focused emotion of empathic concern, which promotes a wide array of helping. Based on the present data, we propose that some qualifications of Batson’s hypotheses are needed. Inducing empathic concern through perspective taking does promote helping, but only for some people, and only in some situations. There is no evidence here to support the hypothesis that personal distress is raised or lowered by manipulating perspective taking or that personal distress undermines prosocial behavior in an omnibus way.

From the perspective of the opponent process approach outlined in Graziano and Habashi (2010), personal distress remains an important prosocial process. Empathic concern and personal distress can be conceptualized as two opponent processes that come on-line at different times in different individuals. When perspective taking is manipulated,

the process induces empathic concern to come on-line and neutralizes the earlier appearing emotion of personal distress. That is, when the perspective-taking induction is successful, empathic concern becomes the dominant emotional reaction, diluting the initial reaction of personal distress. Once empathic concern is activated, helping behavior should begin (Batson et al., 2015). The current findings hint toward the possibility that this opponent process might be easier to observe when examining neuroticism, and may be more difficult to see when examining agreeableness. This could be due to the stronger link between neuroticism and personal distress. Individuals high in agreeableness do not need the situational induction of perspective taking. Instead, empathic concern comes on-line more naturally, and possibly more quickly. Future research should examine these possibilities.

It might be argued that the present research provides information about some Big Five personality variables, but not about a more general systematic process called the prosocial personality. Graziano and Habashi (2015) offered some reasons why the prosocial personality has proven so elusive. First, definitional issues constrain the search. If the research literature cannot agree on definitions of terms such as “prosocial” and “personality,” then consistent patterns will be difficult to detect. The criteria for defining the prosocial personality are considerably harder to meet than the criteria for single prosocial behaviors based on separate components such as prosocial feelings or prosocial cognition. Inferences about personality must be based ultimately on systematic patterns across responses and over time, not on one instance in a single slice of time (Carlo, Pytlik Zillig, Roesch, & Dienstbier, 2009; Eisenberg et al., 2002; Hartshorne, May, & Maller, 1929). One solution is to create sub-classes. What would constitute a “minimal prosocial personality,” as opposed to an “enhanced” or “altruistic personality?” That solution would probably require the manipulation of situation variables such as ease of escape from the victim’s presence (Batson, 1991). A second solution is to consider specific behavioral tendencies and patterns of prosocial behavior that might implicate an underlying prosocial personality. That is, what are the reliable behavioral correlates of the minimal or enhanced prosocial personality? We suggested that the processes associated with agreeableness provide a reasonable set (e.g., Graziano & Habashi, 2010; Graziano & Tobin, 2010, 2013). A third solution, the major one taken here, is to focus on specific cognitive, affective, and conative psychological mechanisms that might mediate the links among the specific personality variables of agreeableness, neuroticism, and prosocial behavior. If the prosocial personality is to be found, then what proximal psychological processes underlie it?

### Limitations

This research is based on only one variety of prosocial behavior, helping a stranger. There are many other forms

of prosocial behavior, including cooperating within and between groups, volunteering, and participating in communal actions. How the outcomes of the present study would apply to the other varieties of prosocial behavior is an open question. Furthermore, this helping behavior was assessed on only one occasion. Another limitation is that data were collected in a laboratory setting, thereby restricting the response options open to participants. How the outcomes would generalize to situations in which participants have a wider array of response options is unknown. These limitations are potentially serious, but should be considered in light of the larger nomological network linking agreeableness to a wide array of other prosocial actions. These links include greater cooperation, sustained volunteering, more constructive conflict tactics, greater efforts to control emotional reactions, fewer social prejudices, and fewer problems of self-regulation and social adjustment (for a comprehensive review, see Graziano & Tobin, 2013.)

### Concluding Comments

We opened with Roger Brown’s (1965) conceptual analysis. His analysis was perceptive, and our approach is consistent with his in several respects. Like Brown, we assume that prosocial cognition, affect, and behavior are not unique, special psychological modules, dedicated exclusively to prosocial functions. Instead, they are parts of a generalized system, the breadth of which is still an open question. It is the underlying process that gives a coherent, consistent, dispositional quality to prosocial tendencies. We also agree with Brown that multiple forces are in play in determining prosocial behavior. In any one situation, a variable not usually associated with prosocial activity can have disproportional influence. We differ from Brown, however, in that we specify empathy-related mediators that act as proximal motivational processes that induce or inhibit the helping aspect of prosocial action. If this line of reasoning is correct, then Brown may have not been completely correct in his pessimistic prospects for the prosocial personality.

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## Supplemental Material

The online supplemental material is available at <http://pspb.sagepub.com/supplemental>.

## Notes

1. We ran the model with a direct path from extraversion to helping behavior based on the significant correlation found between these two variables (see Table 2), and without the path to mirror the other Big Five dimensions, but found no difference in the two models. Therefore, the results for the model without the direct path from extraversion to helping behavior are presented here.
2. We first examined whether we replicated past research on induced empathy and helping by examining whether there was a main effect of observational set on helping behavior. Contrary to past research, we found no significant difference (as a main effect) between levels of helping in the imagine-her condition ( $M = 2.97$ ) and the observe condition ( $M = 2.25$ ),  $F(1, 231) = 2.45, ns$ .
3. An ANOVA analysis examining the effect of observational set on donation revealed no significant differences. However, participants in the imagine-her condition did donate slightly more money ( $M = 15.31\epsilon$ ) than participants in the observe condition ( $M = 13.1\epsilon$ ),  $F(1, 155) = 1.00, p = .32$ .

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