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The interplay of traits and motives on volunteering: agreeableness, extraversion and prosocial value motivation

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Abstract

Social psychology and personality theorists have proposed that our understanding of prosocial behavior will be enhanced by examining the interplay of traits and motives. The present study was designed to test several pathways by which agreeableness, extraversion, and prosocial value motivation to volunteer influence volunteerism. A sample of 796 college students completed measures of the Big Five traits, prosocial value motivation to volunteer, and volunteering. Results of path analyses showed that prosocial value motivation to volunteer partially mediated the relations between agreeableness and extraversion, and volunteering. Furthermore, as agreeableness decreased, extraversion was more strongly related to prosocial value motivation to volunteer. In contrast, there was no support for the pathway in which extraversion and prosocial value motivation to volunteer jointly affect volunteering. Discussion focuses on the utility of examining the links among traits and motives in predicting volunteering.

Keywords: Agreeableness; Extraversion; Volunteering; Motivation; Prosocial behaviors; Personality; Traits; Motives

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1. Introduction

During the past 20 years, there has been a renaissance of interest in personality and motivational concepts in personality and social psychology (Little, 1983). Scholars continue to develop conceptual models to account for the links between traits, motives, and behaviors. Traits and motives can be conceptualized as representing different levels of personality functioning (McAdams, 1994; McClelland, 1985a). McCrae and Costa (1999) posited that traits are "enduring patterns of thoughts, feelings, and actions . . ." (p. 140). Traits are organized hierarchically from narrow to broad traits. At the broadest level, researchers have identified five common traits: agreeableness, extraversion, openness, neuroticism, and conscientiousness. Motives reflect the tendency to strive for a general class of incentives that are highly fused with affect (McClelland, 1985b). Several classes of motives have been identified in the research literature on volunteering (Clary et al., 1998; Okun, Barr, & Herzog, 1998).

However, the relations between traits and social behaviors are often relatively modest in magnitude (cf., Bem & Funder, 1978; Kenrick & Funder, 1988). This is also the case for the relations between personality traits and volunteering behavior (Omoto & Snyder, 1995). Several explanations for the relatively modest and inconsistently significant relations have been posited (Carlo, Knight, Eisenberg, & Rotenberg, 1991; Eisenberg, 1986; Kenrick & Funder, 1988; Knight, Johnson, Carlo, & Eisenberg, 1994). First, investigators may not have focused upon the traits that are conceptually most relevant to the specific social behavior being studied. Second, the relations between traits and social behaviors may be mediated by motives. Third, traits might interact with other traits to jointly influence motives, which in turn, are causally more proximal to social behaviors. Fourth, traits might interact with motives to jointly influence social behaviors.

With regard to the first explanation, Graziano and Eisenberg (1997) suggest that agreeableness might be the core dispositional trait contributing to prosocial behaviors. Agreeable individuals are altruistic, straight-forward, trusting, soft-hearted, modest, and compliant (Graziano, 1994; McCrae & Costa, 1999). There is empirical evidence of the link between agreeableness and prosocial behaviors (see Graziano & Eisenberg, 1997). Furthermore, researchers have found significant positive relations between agreeableness and volunteering (e.g., Smith & Nelson, 1975). Similarly, extraversion is associated with sociability, gregariousness, assertiveness, positive emotions, warmth, and activity (McCrae & Costa, 1999); and has been shown to predict volunteering (Burke & Hall, 1986; Kosek, 1995; Smith & Nelson, 1975). Because volunteerism often requires extensive social interactions, scholars have linked it to extraversion (e.g., Burke & Hall, 1986). Hence, in the present study we have made predictions regarding the relations of personality traits (i.e., agreeableness and extraversion) that are clearly conceptually related to a social behavior (i.e., volunteering). Specifically, we predict that agreeableness and extraversion will be positively associated with volunteering behavior.

With regard to the second explanation, scholars have noted that traits may be indirectly related to social behaviors. A number of possible mediating variables have been posited that might help account for the relations between traits and prosocial behaviors such as volunteering. Among those possible mediating variables are motives. Clary and his associates (Clary et al., 1998) identified a set of six motives for volunteering including: career enhancement, learning new skills, social interaction, escape from negative feelings, personal development, and expressing prosocial values. Of these motives, the

prosocial value motive to volunteer (hereafter referred to as prosocial value motive) is clearly conceptually related to volunteering because it reflects the endorsement of care-based values to voluntarily assist others (Allison, Okun, & Dutridge, 2002; Clary et al., 1998; Clary & Orenstein, 1991; Okun, 1994; Omoto & Snyder, 1995; Penner & Finkelstein, 1998). Further, both agreeableness and extraversion reflect a positive orientation towards others, which conceptually forges a link between these personality dispositions and prosocial value motives. Hence, it is reasonable to presume that individuals who are altruistic, trusting, warm, and emotionally positive may value prosocial behaviors. In the present study we examined the degree to which the effects of agreeableness and extraversion on volunteering behavior were mediated by prosocial value motives.

With regard to the third explanation, extraverted individuals may seek warm and positive social interactions, but these desires may really facilitate volunteering behavior when combined with the altruistic orientation inherent in agreeableness. Further, this joint effect may be mediated through prosocial value motivation as described above. Therefore, we also examined the degree to which the interaction effect of agreeableness and extraversion on volunteering behavior was mediated by prosocial value motives.

With regard to the fourth explanation, extraversion may provide the affiliative disposition needed to volunteer. However, volunteerism may be jointly determined by whether there is a match between the personality traits associated with volunteerism and the motives that are most salient (Carlo, Allen, & Buhman, 1999; Clary & Snyder, 1999). For example, extraverted individuals may be more likely to volunteer than introverted individuals only when their prosocial value motivation is high. Prosocial value motives are conceptually related to individual differences in sympathy (see Graziano & Eisenberg, 1997) which are linked to prosocial behaviors including altruism (Batson, 1999; Eisenberg & Fabes, 1998; Staub, 1978). Consequently, we examined the degree to which prosocial value motivation moderates the relation between extraversion and volunteering.

2. Method

2.1. *Participants and procedures*

A sample of 849 college students was drawn from 1,272 students enrolled in sections of Introduction to Psychology at a large southwestern state university. Students completed a battery of measures in classes as a prelude to participating in studies that can be used to fulfill a course requirement. To reduce respondent burden, students were randomly assigned to one of three versions of the battery with the constraint that approximately one-third of the students received each version of the battery.

To assess sample biases, we compared students in the sample with those who were not in the sample on demographic and main variables. Students in the sample ($M = 4.29$, $SD = 1.18$; $N = 849$) had significantly lower prosocial value motivation to volunteer than students who were not in the sample ($M = 4.45$, $SD = 1.12$; $N = 423$), $t(1248) = -2.41$, $p < 0.05$. Similarly, we compared students in the sample who had missing data ($N = 53$) with those who did not ($N = 796$) and found that students with missing data ($M = 5.01$, $SD = 0.83$) had significantly higher openness to experience scores, $t(847) = 2.78$, $p < 0.01$, than students without missing data ($M = 5.44$, $SD = 1.08$). Sample biases were weak in

magnitude of effect and sparse. The final sample consisted of 796 undergraduates (Median age = 19 years; 56% were women; 75% were White, non-Hispanic, 8% were Hispanic, 5% were Asian, 3% were African American).

2.2. Measures

2.2.1. Volunteering

We created a measure of volunteering based upon responses to four items. Students were asked whether they had ever volunteered (0 = no, 1 = yes), were currently volunteering (0 = no, 1 = yes), planned on volunteering during the next two months (0 = no, 1 = yes), and the likelihood that they would volunteer at the campus-based community service program if asked (0 = definitely no, 1 = probably no, 2 = may be, 3 = probably yes, and 4 = definitely yes). Students were provided the following definition of volunteering: "By volunteering, we mean performing a service without compensation for an organization or agency. This may include church/religious groups, social service agencies, schools, not-for-profit organizations (e.g., American Red Cross), cause-oriented organizations (e.g., a political campaign and/or environmental conservation group), or for profit corporation (e.g., hospital)". The percentage of students who ever volunteered, were currently volunteering, and planned on volunteering in the next two months were 90%, 19%, and 45%, respectively. The mean rating for likelihood of volunteering at the campus-based community program if asked was 2.20 (SD = 0.98).

To determine whether a composite index of volunteer behavior could be created, a principal components analysis was carried out after standardizing the scores on the four items. The results of this analysis indicated that the eigenvalue for the first factor was 1.81. The eigenvalues for the remaining factors were all below 1.00. The lowest factor loading on the first factor was 0.52. Factor scores were created using the regression method. Higher scores indicate greater involvement in volunteering. Furthermore, prior studies have shown validity evidence for self-report, aggregate measures of about past, present, and future volunteerism (e.g., Clary et al., 1998; Penner & Finkelstein, 1998). Descriptive statistics for this measure and the other study measures are presented in Table 1.

2.2.2. Prosocial value motive

We employed the Value-Expressive Scale from the Volunteer Functions Inventory (VFI) to assess prosocial value motive (Clary, Snyder, & Ridge, 1992). Participants indicated on a 7-point scale how important/accurate each of five prosocial value reasons is for why they volunteer or would be if they were to volunteer (sample item, "I feel compassion toward people in need"). Anchor points on the scale were from: 0 = "not at all important/accurate for you", through 6 = "extremely important/accurate for you". Scale scores were formed by averaging the responses to the five items. Higher scores on the scale are associated with greater prosocial value motive to volunteer. Adequate psychometric properties of this measure have been reported elsewhere (Allison et al., 2002; Clary et al., 1992; Okun et al., 1998).

2.2.3. Big Five traits

Traits were assessed using the 44-item version of the Big Five Inventory (BFI-V44; John, Donahue, & Kentle, 1991). This commonly used inventory was originally constructed to allow for the efficient

assessment of the big five dimensions of personality without providing for the more elaborate measurement of the various facets associated with each dimension (Benet-Martinez & John, 1998). BFI items consist of short phrases that are used to assess the most prototypical traits associated with each of the Big Five dimensions (John et al., 1991).

In the present study, students indicated how much they agreed or disagreed that each statement applied to them. Ratings were made on a 9-point scale with anchor points ranging from 0 = "strongly disagree" to 8 = "strongly agree". A sample item for extraversion was "Outgoing, sociable", and a sample item for agreeableness was "Is generally trusting". Scale scores were formed by averaging the responses to the items associated with each personality dimension. The number of items on each scale ranged from 8 (Extraversion and Neuroticism) through 10 (Openness to Experience). As scores on each scale increase, individuals are describing themselves as being higher on each personality dimension. Prior researchers have presented adequate evidence of the reliability and validity of the BFI scales (Benet-Martinez & John, 1998; Okun & Finch, 1998).

3. Results

3.1. Preliminary analyses

According to our first explanation for the inconsistent and relatively small relations between personality variables and volunteering, researchers may not have focused on those traits that are most conceptually relevant to volunteering. As predicted (see Table I), among the Big Five dimensions, agreeableness had the strongest correlation with volunteer behavior, followed by extraversion. Consistent with our second explanation, among the Big Five dimensions, agreeableness exhibited the strongest correlation with prosocial value motive, followed by extraversion, and prosocial value motive was the strongest overall correlate of volunteer behavior.

Among the control variables, females had higher prosocial value motives and engaged in volunteer behavior to a greater degree than males. The correlations among the Big Five dimensions ranged

Table 1
Means, standard deviations, internal consistency coefficients, and interrelations among the variables

Variables	1	2	3	4	5	6	7
1. Volunteerism	—						
2. Prosocial value motive	0.38***	0.85					
3. Agreeableness	0.23***	0.36***	0.74				
4. Extraversion	0.14***	0.18***	0.16***	0.86			
5. Conscientiousness	0.12**	0.13***	0.33***	0.16***	0.80		
6. Neuroticism	-0.06	0.03	-0.29***	-0.22***	-0.25**	0.80	
7. Openness	0.09**	0.14***	0.07*	0.19**	0.08*	-0.06	0.78
8. Gender	0.17***	0.31***	0.22***	0.12**	0.12**	0.21***	-0.05
<i>M</i>	0.00	4.27	5.70	5.36	4.95	3.58	5.44
<i>SD</i>	1.00	1.19	1.06	1.11	1.44	1.33	1.08

Note. Cronbach's alpha coefficient estimates are indicated on the diagonal.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

from -0.29 to 0.33 . In light of the hypotheses of the present study, it is noteworthy that the correlation between agreeableness and extraversion was modest.

3.2. *Data analytic approach*

In testing our second, third, and fourth explanations for the weak and mixed findings regarding the relation between personality dimensions and volunteering, we carried out five regression models. We included conscientiousness, neuroticism, and openness as covariates in these analyses because they are often significantly correlated with agreeableness and/or extraversion. In addition, because gender differences in prosocial behaviors and personality variables have been found in prior research (e.g., Eagly & Crowley, 1996; Penner & Finkelstein, 1998), we also controlled for gender, neuroticism, openness to experience, and conscientiousness. Including neuroticism, openness to experience and conscientiousness as covariates did not alter the results with respect to the hypotheses that we tested.

3.3. *Testing the mediation explanation*

The second possible explanation for the prior weak and inconsistent relations between personality traits and prosocial behaviors posited that agreeableness and extraversion predicted prosocial value motives, and that prosocial value motive is the strongest predictor of volunteer behavior. We tested this explanation by carrying out two regression analyses. In the first analysis, we regressed volunteering behavior on the control variables (gender, conscientiousness, neuroticism, openness to experience), agreeableness, extraversion, and prosocial value motive. In the second analysis, we regressed prosocial value motives on the control variables, agreeableness, and extraversion. The standardized partial regression coefficients from the first regression analysis constitute the direct effects of the variables on volunteer behavior whereas the standardized partial regression coefficients (betas) from the second regression analysis constitute the direct effects of the variables on prosocial value motives.

These effects are presented in Table 2 (columns 1–2) and Fig. 1 (the coefficients in parentheses). There it can be seen that only two variables were significant predictors of volunteer behavior—prosocial value motives ($\beta = 0.32$) and agreeableness ($\beta = 0.08$). Together, the seven predictors explained 16.3% of the variation in volunteer behavior, $F(7, 788) = 21.86, p < 0.001$. The strongest predictors of prosocial value motives were agreeableness ($\beta = 0.31$) and gender ($\beta = 0.22$). In concert, the six predictors accounted for 21.7% of the variation in prosocial value motives, $F(6, 789) = 36.45, p < 0.001$.

To examine the extent to which the effects of agreeableness and extraversion on volunteer behavior were mediated by prosocial value motives, we computed their indirect effects. The indirect effects were computed by multiplying the beta for the path from the predictor to prosocial value motives by the beta for the path from prosocial value motives to the criterion variable (i.e., volunteering). For extraversion, the indirect effect was $0.031 (0.096 \times 0.318; Z = 2.68, p < 0.01, \text{ using the Sobel, 1982 procedure})$ whereas for agreeableness, the indirect effect was $0.099 (0.312 \times 0.318; Z = 6.15, p < 0.001)$. Consequently, agreeableness and extraversion both exhibited significant indirect effects on volunteer behavior via prosocial value motives. One index of effect size for a mediated effect is the proportion of the variable's total effect (indirect effect plus direct effect) that is indirect (see MacKinnon, Warsi, & Dwyer, 1995).

The total effect for extraversion on volunteer behavior was 0.076 (0.031 + 0.045) and the total effect for agreeableness on volunteer behavior was 0.178 (0.099 + 0.079). For extraversion 40.8% of the total effect was indirect ($[0.031/0.076] \times 100$) whereas for agreeableness 55.6% of the total effect was indirect ($[0.099/0.178] \times 100$).

Table 2
Direct effects (standardized partial regression coefficients) on prosocial value motives and volunteerism

Predictor	Mediation model		Moderated mediation model	
	Volunteerism	Prosocial value motive	Volunteerism	Prosocial value motive
Gender	0.055	0.22***	0.058	0.224***
Conscientiousness	0.020	-0.001	0.020	-0.001
Neuroticism	-0.046	0.096**	-0.050	0.088*
Openness	0.031	0.121***	0.033	0.125***
Extraversion	0.045	0.096**	0.045	0.095**
Agreeableness	0.079*	0.312***	0.080*	0.312***
Prosocial value motive	0.318***	NA	0.315***	NA
Agreeableness × extraversion	NA	NA	-0.040	-0.076*

Note: See Fig. 1.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, NA = not applicable.

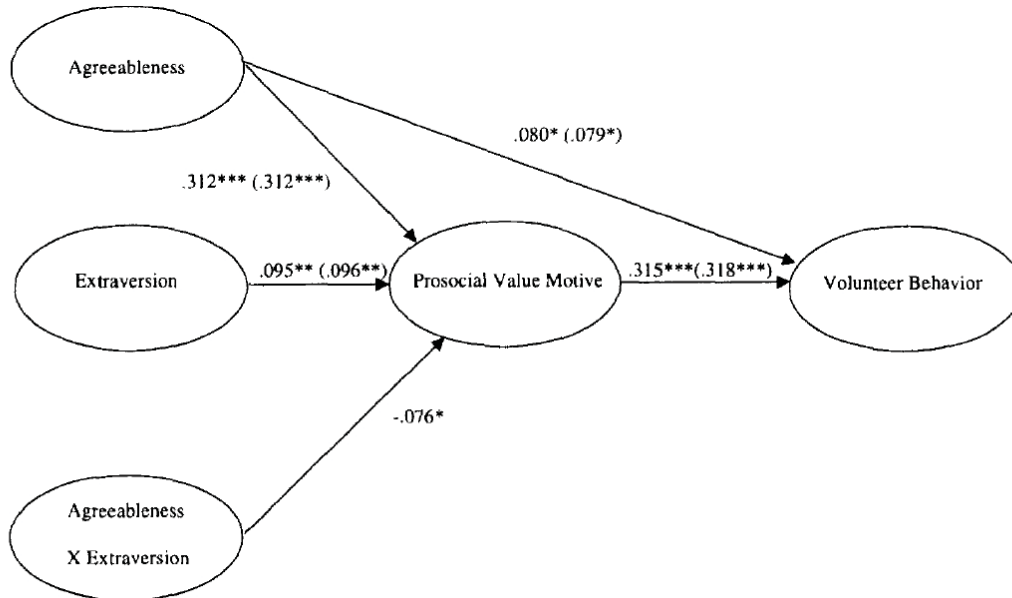


Fig. 1. Agreeableness, extraversion, and prosocial value motive as predictors of volunteerism (coefficients in parentheses depict the mediation model).

3.4. Testing the moderated mediation explanation

According to the third possible explanation, extraversion and agreeableness exert a joint effect on prosocial value motives, which in turn, predicts volunteer behavior. Prior to testing this explanation, extraversion scores and agreeableness scores were centered (i.e., the mean was subtracted from each score) to reduce non-essential collinearity when computing interaction terms, see Aiken and West, 1991. The interaction term was created by multiplying each participant's centered extraversion score by his or her centered agreeableness score. We tested this model by carrying out two multiple regression analyses. In the first analysis, we regressed volunteer behavior on the control variables, agreeableness, extraversion, prosocial value motives, and the extraversion by agreeableness interaction effect. In the second analysis, we regressed prosocial value motive on the control variables, agreeableness, extraversion, and the extraversion by agreeableness interaction effect. The direct effects of the variables on prosocial value motive and on volunteer behavior are presented in Table 2 (columns 3–1) and Fig. 1 (the coefficients not in parentheses).

As expected, the extraversion by agreeableness interaction effect did not have a significant direct relation to volunteer behavior ($\beta = -0.04$). However, as predicted, the extraversion by agreeableness interaction effect exerted a significant ($p < 0.05$) effect on prosocial value motive ($\beta = -0.08$). The interaction of extraversion and agreeableness exerted a significant ($Z = 2.29, p < 0.05$, using Sobel, 1982) indirect effect on volunteer behavior. The indirect effect of the extraversion by agreeableness interaction effect equals $-0.024(-0.076 \times 0.315)$. For the extraversion by agreeableness interaction, the total effect on volunteer behavior was $-0.064(-0.024 + -0.040)$, and 37.5% of the total effect was indirect.

To examine the form of the extraversion by agreeableness interaction effect on prosocial value motive, we followed procedures outlined in Aiken and West (1991). More specifically, we computed the unstandardized regression coefficient for extraversion and the y -intercept separately for individuals who were low on agreeableness (one standard deviation below the mean) and for individuals who were high on agreeableness (one standard deviation above the mean). For individuals who were low on agreeableness, the unstandardized regression coefficient for extraversion was 0.16 and the y -intercept was 3.89. In contrast, for individuals who were high on agreeableness, the unstandardized regression coefficient for extraversion was 0.04 and the y -intercept was 4.69. Next, using these two equations, we generated predicted prosocial value motive scores separately for individuals low and high on agreeableness. These predicted scores are depicted graphically in Fig. 2. There it can be seen that prosocial value motive is highest when individuals are high on both agreeableness and extraversion. Furthermore, the Figure indicates that the effect of extraversion on prosocial value motive is larger among disagreeable as opposed to agreeable individuals. It should be pointed out that although the interaction effect was significant, it uniquely accounted for only 0.6% of the variation in prosocial value motivation to volunteer.

3.5. Testing the moderation explanation

According to our final possible explanation, extraversion and prosocial value motive jointly predict volunteerism. We tested this model by carrying out a hierarchical regression analysis. In the first step of the regression analysis, we regressed volunteer behavior on the control variables, extraversion, agreeableness, and

prosocial value motive. In the second step, we added the extraversion by prosocial value motive interaction effect. The conditional F test of the interaction effect was not significant, $F(1, 787) = 1.00, p = 0.96$.

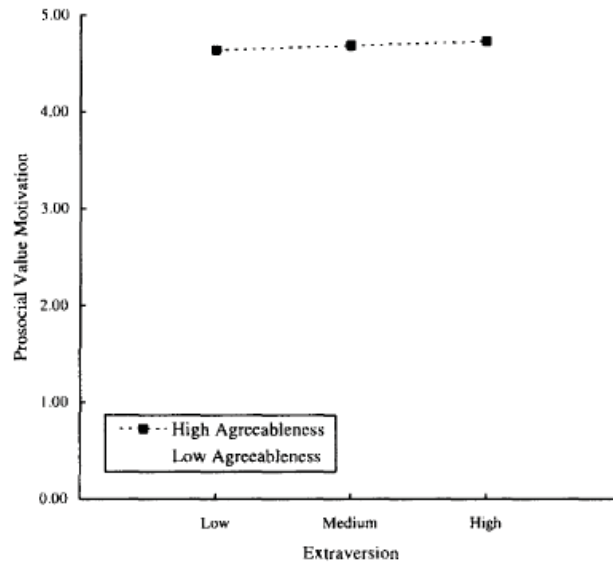


Fig. 2. Plot of agreeableness by extraversion interaction on prosocial value motivation to volunteer.

4. Discussion

Personality and social psychologists have recently focused upon mediational, moderational, and mediated moderation models of behavior (Baron & Kenny, 1986; Batson, 1999). Further, these more complex models of human behavior have provided a basis for considering more sophisticated linkages between personality traits, motives, and social behaviors. In the present study we examined the interplay of the Big Five personality traits, prosocial value motivation to volunteer and volunteerism behavior.

Overall, the findings show some support for three of the four proposed explanations of the relatively modest and inconsistent relations between personality and behavior. As a caveat, a prospective design using a more observational assessment of volunteering behavior would provide a more stringent test of these explanations. First, personality traits that are conceptually linked to volunteerism (i.e., agreeableness and extraversion) were more strongly related to volunteerism behavior than less conceptually related traits (i.e., conscientiousness, neuroticism, and openness to experience). Second, prosocial value motivation partially/fully mediated the relations between agreeableness/extraversion and volunteerism. Third, extraversion and agreeableness interacted to influence prosocial value motive, which in turn, predicted volunteerism. In contrast, there was no supportive evidence for the direct interaction effect of agreeableness and extraversion on volunteerism. The findings are consistent with Functional Approach theorists (Omoto &

Snyder, 1995) who suggest that prosocial value motives can partially account for the effects of traits on volunteerism. Moreover, the findings are consistent with personality researchers who espouse the importance and relevance of agreeableness on prosocial behaviors (Graziano, 1994; Graziano & Eisenberg, 1997); however, the present findings suggest the need to examine both direct and indirect effects of agreeableness.

The findings supported the explanation that the relations between traits and behavior can be better accounted for by investigating the mediating effect of motives. Indeed, nearly 56% of the total effect of agreeableness on volunteerism was mediated through prosocial value motivation. Individuals who are agreeable with others and who seek social stimulation are oriented toward, and motivated to respond to, the needs of others. In most prior studies of volunteerism, individual differences in motivation to respond prosocially towards others were not considered. These findings suggest that traits might be necessary but insufficient to predict volunteerism. Prosocial value motives might provide the impetus for volunteerism among individuals who have an agreeable (and extraverted) disposition.

Agreeableness also had a significant direct effect on volunteering. Why should agreeableness predict volunteer behavior, even when prosocial value motive is taken into account? One facet of agreeableness involves being compliant with requests from others. Volunteer behavior is often triggered by requests from others for assistance (Murk & Stephan, 1991). Thus, high agreeable individuals may be more likely than low agreeable individuals to volunteer, holding prosocial value motive constant, because they are more likely to comply with requests to volunteer.

Although extraversion did not exert a significant direct effect on volunteering, it was significantly indirectly related to volunteering. In addition, extraversion and agreeableness exerted a joint effect on prosocial value motivation, which in turn, predicted volunteer behavior. Thus, the joint effect of extraversion and agreeableness on volunteer behavior was indirect (rather than a direct interactive effect). We had proposed that extraverted individuals may be prone to social situations but this tendency would not necessarily predispose them to engage in volunteer behavior unless they also valued helping others. In other words, we posited that the tendency of extraverts to seek social interaction would be channeled into the prosocial value motive only when they also were high in agreeableness. However, although the interaction effect was significant, the form of the interaction was unexpected. It suggests that the influence of extraversion on prosocial value motive increases as agreeableness decreases. Specifically, the moderation effect showed that extraversion is related to prosocial value motives the most among individuals who are low in agreeableness. Perhaps in the absence of a predisposition to be good-natured, extraverted individuals are encouraged by others to engage in acts that help others and this leads to higher motivation to respond to other people's concerns or needs. It is possible that those individuals who are high in agreeableness may already be so high in prosocial value motive that the relative increase in motivation associated with being high in extraversion is marginal. Clearly, future research is needed to closely examine this finding.

Consistent with this notion, in the present study, agreeableness was a relatively stronger predictor of both prosocial value motive and volunteerism than extraversion. This, of course, does not suggest that extraversion is less useful than agreeableness as an explanatory predictor of social behaviors. It is possible that extraversion could better predict other social behaviors that are more relevant to this trait than to agreeableness. For example, one might expect that extraversion would better predict social interaction skills than agreeableness. Moreover, agreeableness might not be a consistent predictor of all types

of prosocial behaviors such as prosocial behaviors that are motivated by selfish motives (e.g., gaining other people's approval).

There has been some discussion surrounding the utility of using global (e.g., agreeableness from the Big Five) versus trait specific (e.g., empathy) personality variables as predictors of social behaviors such as volunteerism (Funder, 1991; Graziano & Eisenberg, 1997; Knight et al., 1994). In much of the previous research on prosocial behaviors, measures of relatively specific traits or sociocognitive skills such as empathy, sympathy, and perspective taking have been employed (e.g., Allen & Rushton, 1983; Batson, 1999; Carlo et al., 1999; Knight et al., 1994). However, the present study provides evidence of the link between global trait measures and volunteerism. It may be useful to integrate global and trait-specific approaches in future research examining the linkage between personality and behavior. Further, a fuller understanding of the complex relations among traits (both global and specific), motivation, and social behavior will likely require a more careful consideration of the specific social behavior being examined (see Carlo et al., 1999; Knight et al., 1994).

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