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Who cares when nobody is watching? Psychopathic traits and empathy in prosocial behaviors

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ABSTRACT

Prosocial behaviors are voluntary acts intended to benefit others. Lack of empathy is a core feature of psychopathy, a constellation of personality traits that includes callousness, egocentricity, and antisociality. While psychopathy is often associated with antisocial behavior, its relation to prosociality may depend upon the class of prosocial behavior and facet of psychopathy considered. Public prosocial behavior may be more motivated by extrinsic social rewards than anonymous prosociality, which may be more motivated by empathy and altruistic motives. It was hypothesized that primary psychopathy, especially affective callousness, would be positively and uniquely associated with public prosociality, and inversely associated with anonymous and altruistic prosociality, and that these associations would be mediated by empathy. In contrast, secondary psychopathy was expected to be weakly and inversely associated with all three types of prosocial behavior and with empathy. In an undergraduate student sample (n = 539), unique and interaction effects were tested in hierarchical regression. Predictions were supported for primary psychopathy. Gender did not moderate associations. Theoretical and practical implications are considered.

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1. Introduction

Prosocial behaviors are voluntary behaviors that are intended to benefit or help others and include acts such as sharing and providing comfort or assistance (Eisenberg, Eggum, & Di Giunta, 2010; Zahn-Waxler & Smith, 1992). Empathy clearly contributes to prosocial behavior, yet prosocial behavior may stem from a variety of motives (Eisenberg et al., 2010). Empathy may play a stronger role in motivating altruistic prosocial behavior (i.e., selfless helping) or anonymous prosocial behaviors, whereas public prosocial behaviors (those performed in front of others) may be driven more by egoistic (self-serving) motives, such as desire for rewards, approval, or reciprocity (Eisenberg et al., 2010; McGinley & Carlo, 2006).

Lack of empathy is a core feature of psychopathy (e.g., Blair, Colledge, Murray, & Mitchell, 2001), a constellation of affective, interpersonal, and behavioral traits first described in contemporary terms by Cleckley (1941). Psychopathy is often measured in forensic settings using the Psychopathy Checklist-Revised (PCL-R; Hare et al., 1990), which comprises at least two distinguishable factors. Factor 1 consists of affective deficiencies and arrogant, deceitful interpersonal traits (e.g., callousness, lack of remorse, egocentrism,

insincerity, superficial charm), and Factor 2 consists of antisocial, dysregulated behavioral traits (e.g., impulsivity, irresponsibility, recklessness, boredom proneness, delinquency; Hare et al., 1990). Psychopathic traits occur on a continuum in community samples (e.g., Coid & Yang, 2008), and self-report measures have become the standard method for assessing psychopathy traits in the general population (e.g., Ray et al., 2013), with one popular measure being the Levenson Self-Report Psychopathy Scale (LSRP, Levenson, Kiehl, & Fitzpatrick, 1995). Prior research on the LSRP identified two factors - "primary" (callous, selfish, manipulative tendencies) and "secondary" (impulsive, irresponsible, dysregulated behavior; Brinkley, Schmitt, Smith, & Newman, 2001; Levenson et al., 1995; Lynam, Whiteside, & Jones, 1999). However, psychopathy models distinguishing additional factors (e.g., Cooke & Michie, 2001) have increasingly received support. In particular, factor analyses of the LSRP in male and female forensic and college samples suggest a three-factor model that includes 19 of the 26 LSRP items, in which 14 of the original 16 primary psychopathy items load separately onto a four-item affective "callous" factor and a 10-item interpersonal "egocentricity" factor, and in which five of the original 10 secondary psychopathy items load onto the third, "antisocial" factor (Brinkley, Diamond, Magaletta, & Heigel, 2008; Sellbom, 2011).

Psychopathy is typically conceptualized broadly as a predictor of antisocial rather than prosocial behavior, but relationships between antisocial and prosocial behavior are complex, and not always inverse. For instance, some individuals engage in a

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relatively high level of both antisocial (e.g., aggression) and prosocial behaviors (McGinley & Carlo, 2006). Although the term "successful psychopath" has been operationalized in various ways (e.g., college students who are high in psychopathic traits; Gao & Raine, 2010), individuals with psychopathic traits manage to function and achieve success in mainstream society, despite potential affective, interpersonal, and behavioral deficits and dysfunction. Such individuals may exhibit minimal overt erratic and antisocial behavior, and generally be more socially adept, than those with clinical psychopathy. Nevertheless, they may still resort to significant levels of covert antisocial behavior (e.g., relational rather than physical aggression) to achieve their goals (Gao & Raine, 2010).

Despite obvious links to antisociality, little is known about how psychopathy impacts particular types of prosocial behaviors. Individuals elevated on primary psychopathy are presumably more superficial and selfishly motivated by extrinsic rewards, such as expectations of reciprocity or social recognition and status. Such rewards should be more frequent in public contexts, where opportunities exist to charm and manipulate others via superficially prosocial acts for sake of reaping desired social rewards (e.g., to be seen as a "hero"). In such contexts, empathy could even lead one to refrain from overt "helping" behaviors, particularly in instances where one's assistance is not clearly needed or could upset, embarrass, or physically harm the recipient (e.g., a risky rescue attempt). Relatedly, McGinley and Carlo (2006) found empirical support for their assertion that, because public prosocial behaviors are focused on benefiting the self, they should be negatively related to empathy. Individuals high in primary psychopathy should be less likely, however, than those low in primary psychopathy to behave prosocially in anonymous contexts, which require genuine empathic concern and altruistic motives. Using the three-factor model of the LSRP, Sellbom (2011) demonstrated that, among the three factors, callousness is most strongly associated with low empathy based upon the Emotional Empathy Scale (Mehrabian & Epstein, 1972), and similarly with coldheartedness based on the Psychopathic Personality Inventory (Lilienfeld & Andrews, 1996). Thus for individuals with elevated primary psychopathic traits, callousness in particular may predict higher levels of public prosocial behavior, yet lower levels of anonymous and altruistic prosociality, via its inverse relationship with empathy. Although egocentricity was not uniquely related to emotional empathy, it was related to coldheartedness, although not as strongly as was callousness (β = .15 vs. .34; Sellbom, 2011). Thus it might show weaker but still significant associations to public, anonymous, and altruistic prosocial behaviors, than would callousness.

Secondary psychopathy is represented as antisociality in the three-factor conceptualization of the LSRP, which in contrast to primary psychopathy is more strongly associated with anger proneness, impulsivity, externalizing behavior, substance abuse, as well as emotional distress (Sellbom, 2011). Such antagonistic tendencies likely interfere broadly with all types of prosocial functioning. In particular, personal distress has been found to be either unrelated or inversely related to prosocial behavior in emotionally reactive individuals, who tend to cope with others' signals of neediness or distress by avoiding or responding negatively to the distressed or needy individual, rather than by helping (Eisenberg et al., 2010).

Based on these conceptual and empirical foundations, several predictions were tested. First, after controlling for secondary psychopathy, primary psychopathy was predicted to be positively and uniquely associated with public prosocial behavior, and inversely associated with empathy as well as with anonymous and altruistic prosocial behaviors. Per Sellbom's (2011) work on the 3-factor model, these associations were expected to be explained primarily by callousness, and to a lesser extent by egocentricity. Based on the work of McGinley and Carlo (2006), public prosocial

behavior was expected to be inversely associated with empathy, whereas anonymous and altruistic prosocial behavior was expected to be positively associated with empathy. It was further predicted that empathy (or lack thereof) would mediate the inverse relationship between primary psychopathy and anonymous and altruistic prosocial behaviors, as well as the positive relationship between primary psychopathy and public prosocial behavior. In contrast, secondary psychopathy (and antisociality in the threefactor model) was expected to be weakly and inversely associated with all three types of prosocial behavior (public, altruistic, and anonymous) and with empathy. Because prior research has also shown gender differences in empathy, prosocial behaviors, and psychopathy (e.g., McGinley & Carlo, 2006; Miller, Watts, & Jones, 2011; Sevecke, Lehmkuhl, & Krischer, 2009), gender was explored as a potential confound and moderator of associations between psychopathy, empathy, and prosocial behavior.

2. Method

2.1. Participants

We recruited an undergraduate, mixed-gender sample (N = 539, 75.5% female) at a public mid-Atlantic university ranging in age from 18 to 21 years (M = 19.37, SD = 7.59). The sample was 81.0% White, 10.0% Asian or Pacific Islander, 3.9% multiracial, and 2.8% African American, and 2.4% Hispanic or Latino.

2.2. Measures

2.2.1. Psychopathy

Levenson Primary and Secondary Psychopathy Scales (LPSP; Levenson et al., 1995). The LPSP is a 26-item self-report instrument assessing psychopathic tendencies in community samples. The 16item primary psychopathy scale corresponds with Factor 1 of the PCL-R (affective and interpersonal traits), whereas the 10-item secondary scale corresponds to Factor 2 of the PCL-R (irresponsible, impulsive, antisocial traits). The 26 LSRP items are rated on a 4point scale (1 = disagree strongly, 2 = disagree somewhat, 3 = agree somewhat, and 4 = agree strongly), with 7 reversed scored items designed to control for various response style or test-taking sets. In the present study, Cronbach's α = .86 for the primary psychopathy scale and α = .73 for the secondary scale. The three-factor LSRP model (Sellbom, 2011) was also examined, with α = .86 for the 10item Callous scale (hereafter referred to simply as "callousness"), α = .62 for the 4-item Egocentricity scale (hereafter "egocentricity"), and α = .64 for the 5-item Factor 3 Antisocial scale (hereafter "antisociality").

2.2.2. Empathy

Interpersonal Reactivity Index (IRI; Davis, 1983). The IRI is a 28-item self-report questionnaire assessing both cognitive and affective aspects of empathy which has been well-validated in adolescent and college student samples (Konrath, O'Brien, & Hsing, 2011). Following McGinley and Carlo (2006), an Empathy scale was created by combining two 7-item IRI subscales, Perspective Taking, which measures the tendency to consider the point of view of others, and Empathic Concern, which measures the tendency to experience feelings of concern and compassion for others (Davis, 1983). In the present study, α = .86 for the combined Empathy scale.

2.2.3. Prosocial behavior

Prosocial Tendencies Measure-Revised (PTM; Carlo, Hausmann, Christiansen, & Randall, 2003; Carlo & Randall, 2002). The PTM assesses six prosocial tendencies emphasizing the contexts in which

they are performed: emotional (emotionally evocative situations), dire (emergency situations), compliant (when requested or demanded), altruism (primarily for the benefit of others), public (in front of an audience), and anonymous (without others knowing). The following subscales were used: public (four items; e.g., "I can help others best when people are watching me"), anonymous (five items, e.g., "I tend to help others in need when they do not know who helped them"), and altruism (six items; e.g., "I often help even if I don't think I will get anything out of helping"). Responses are made on a five-point scale, where 1 = "does not describe me at all" and 5 = "describes me greatly". Prior research demonstrates adequate reliability and validity for college student samples, including support for a six factor model (Carlo, McGinley, Hayes, & Martinez, 2011). In the present study, $\alpha = .86$ for the Public subscale (hereafter "public prosocial"). α = .83 for the Anonymous subscale ("anonymous prosocial"), and $\alpha = .79$ for the Altruism subscale ("altruism").

2.3. Procedure

The study was approved by the university institutional review board, and participants gave consent prior to participation. All measures were completed as part of a larger, confidential online survey for which participants earned extra credit in their Psychology classes and a chance to enter a raffle drawing for nominal cash prizes.

2.4. Data analyses

Due to the limited diversity of the sample, race was dichotomized as majority and minority group membership. Zero-order correlations were examined first. To test the hypothesis that empathy mediates predicted relationships between dimensions of psychopathy and prosocial behaviors, hierarchical regression analyses of total and direct effects of psychopathy and bootstrapped 95% confidence intervals of the indirect effect through empathy were computed using the PROCESS macro in SPSS (Hayes, 2012) with 5000 bootstrapped samples. Confidence intervals that do not contain zero indicate a significant indirect effect (mediation). To test for unique associations of empathy and prosocial behaviors with primary psychopathy, secondary psychopathy was included as a covariate, and vice versa for unique effects of secondary psychopathy. Likewise, when testing for unique effects of each factor of the three-factor model, scores on the other two factors were covaried. In initial models, two-way interaction terms between gender and each psychopathy factor score were also added to test for moderation by gender.

3. Results

3.1. Preliminary analyses and descriptive statistics

Descriptive statistics for the sample and zero-order correlations among all variables are provided in Table 1. Males were higher than females on all psychopathy factors, and lower on empathy and altruism, but higher on public prosocial behavior (all ps < .05). Racial majority group membership was associated with higher self-reported empathy, lower reported psychopathy (except egocentricity, which was n.s.), and higher altruism (ps < .05). Age was uncorrelated with other variables. The empathy subscales (empathic concern and perspective taking) were highly correlated

with one another and showed the same patterns of relationship to other variables. All psychopathy factor scores correlated positively with one another and with public prosocial behavior, and they correlated inversely with empathy, altruism, and anonymous prosocial behavior (all ps < .05), with the exception of secondary psychopathy and anonymous prosocial behavior, which were not significantly associated (p = .109). Because racial group correlated with both criterion variables and altruism, it was controlled in analyses in which altruism was the outcome variable.

3.2. Primary analyses

Results of regression analyses and bootstrapped indirect effects are presented first for the two-factor (primary/secondary) model of psychopathy, followed by the three-factor model. Gender did not moderate associations between psychopathy and empathy or prosocial behavior, thus only simple mediation models are presented. Consistent with predictions, primary psychopathy was uniquely and inversely related to altruism, above and beyond racial group status, gender, and secondary psychopathy (total effect b = -.30, SE = .02, t = -12.47, p < .001). This effect was significantly mediated by empathy (indirect effect b = -.05, Boot SE = .01, $CI_{95\%} = -.08$ to -.02). Primary psychopathy was also uniquely and inversely related to anonymous prosocial behavior (total effect b = -.13, SE = .03, t = -4.42., p < .001), and this effect was mediated by empathy (indirect effect b = -.04, Boot SE = .01, $CI_{95\%} = -.07$ to -.01). In contrast, but also consistent with predictions, primary psychopathy was uniquely and positively related to public prosocial behavior (total effect b = .22, SE = .02, t = 10.451., p < .001), and this effect was mediated by empathy (indirect effect b = .03, Boot SE = .01, $CI_{95\%}$ = .01 to .05).

Predictions for unique associations for secondary psychopathy were examined next. The negative trend between secondary psychopathy and altruism was not statistically significant after racial group status, gender, and primary psychopathy were controlled (total effect b = -.07, SE = .04, t = -1.74, p = .083). However, there was a significant indirect effect of secondary psychopathy on altruism through empathy (b = -.04, Boot SE = .01, CI_{95%} = -.06 to -.02). Secondary psychopathy also failed to uniquely predict anonymous prosocial behavior (total effect b = .03, SE = .05, t = 0.63., p = .530), but again there was an indirect effect via empathy (b = -.03, Boot SE = .01, $CI_{95\%}$ = -.06 to -.01). The negative trend between secondary psychopathy and public prosocial behavior was also not significant (total effect b = -.07, SE = .03, t = -1.94., p = .053). However, in this case empathy showed inconsistent mediation, a form of statistical suppression in which direct effect (b = -.09, t = -2.50, p = .013) and indirect effect (b = .02, Boot SE = .01, CI_{95%} = .01 to .04) are opposite in sign, and the X-Y relationship is more evident when the suppressor is considered in the model (MacKinnon, Krull, & Lockwood, 2000).

Analyses were repeated for the three-factor LSRP model (Sellbom, 2011) to test the prediction that primary psychopathy associations are explained by callousness rather than by egocentricity. Like primary psychopathy, callousness was uniquely inversely related to both altruism and anonymous prosocial behaviors, and uniquely positively associated with public prosocial behaviors, as indicated by the total effects in Fig. 1. Furthermore, these effects were mediated by empathy, for all three types of prosocial behavior: altruism (indirect effect b = -.06, Boot SE = .01, $CI_{95\%} = -.09$ to -.03), anonymous (indirect effect b = -.04, Boot SE = .01, $CI_{95\%}$ = -.08 to -.02), and public (indirect effect b = .03, Boot SE = .01, $CI_{95\%}$ = .01 to .06). As illustrated in Fig. 2, a similar pattern was observed in the association between the egocentricity and altruism, which was mediated by empathy (indirect effect b = -.09, Boot SE = .03, $CI_{95\%} = -.15$ to -.04). However, egocentricity showed no direct unique associations with either anonymous or

¹ In light of potential interpretive difficulties that can arise with partialling (Lynam, Hoyle, & Newman, 2006), zero-order correlations among all study variables are also reported.

Table 1 Descriptive statistics and zero-order correlations among study variables.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Racial group	.19	.39	_												
2. Gender	.24	.43	.04	_											
3. Age (years)	19.37	.97	03	07	_										
4. Empathy	42.88	7.59	09^{*}	25**	.02	_									
5. Persp. Taking	21.45	4.48	06	13 ^{**}	.04	.88**	_								
6. Emp. Concern	21.36	4.38	08	30**	.00	.87**	.52**	_							
7. Primary	28.73	7.18	.12**	.26**	.01	55**	40^{**}	58**	_						
8. Secondary Psychopathy	19.71	4.19	.14**	.13**	.02	40^{**}	33**	36**	.48**	_					
9. Callousness	17.50	5.06	.14**	.29**	.00	50**	37**	53**	.94**	.48**	_				
10. Egocentricity	6.99	2.27	.05	.13**	01	41**	32**	42**	.69**	.35**	.44**	_			
11. Antisociality	9.87	2.48	.11**	.06	.03	31 ^{**}	28**	27 ^{**}	.42**	.88**	.41**	.31**	_		
12. Public	8.53	3.31	.04	.18	.01	36^{**}	29**	26**	.45**	.15**	.46**	.24**	.10*	_	
13. Anonymous Prosocial	15.05	4.11	.08	.00	01	.20**	.19**	.12**	19 ^{**}	07	16**	10^{*}	10^{*}	12**	_
14. Altruism	23.79	4.07	09^{*}	.13*	02	.45**	.39**	.38**	56 ^{**}	33 ^{**}	55 ^{**}	33 ^{**}	28 ^{**}	66 ^{**}	.19**

Note. Racial group membership was coded minority = 0, majority = 1; Gender was coded female = 0, male = 1. Persp Taking = Perspective Taking, Emp Concern = Empathic Concern, Primary = Primary Psychopathy, Secondary = Secondary Psychopathy. p < .05.

p < .01.

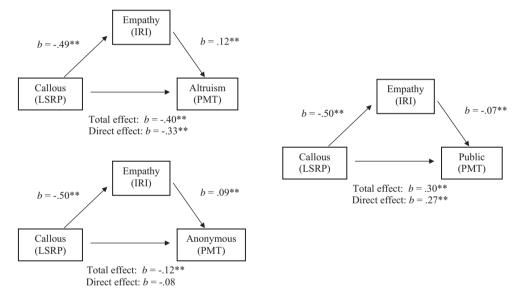


Fig. 1. Empathy as a potential mediator of the association between callousness and prosocial behaviors. Note. Gender and alternate LSRP psychopathy factors were controlled to examine unique associations. Racial group membership was also controlled in analyses on altruism behavior. *p < .05. **p < .05.

public prosocial behavior, despite significant indirect effects through empathy for both anonymous (indirect effect b = -.07, Boot SE = .02, $CI_{95\%}$ = -.12 to -.02) and public (indirect effect b = .05, Boot SE = .02, CI_{95%} = .02 to .08).

As illustrated in Fig. 3, like secondary psychopathy, the reduced-item antisociality factor of the 3-factor model did not show direct unique associations with altruism or anonymous prosocial behavior, despite significant indirect effects through empathy for both altruism (indirect effect b = -.04, Boot SE = .02, CI_{95%} = -.07 to -.01) and anonymous prosocial behavior (indirect effect b = -.03, Boot SE = .02, CI_{95%} = -.06 to -.01). But in contrast to secondary psychopathy, antisociality was uniquely inversely associated with public prosocial behavior - an effect that was mediated by lack of empathy (indirect effect b = .02, Boot SE = .01, $CI_{95\%}$ = .003 to .044). But like secondary psychopathy, there was evidence of suppression by empathy on the association between antisocial psychopathy and public prosocial behavior (indirect effect b = .02, Boot SE = .01, $CI_{95\%} = -.28$ to -.06; Fig. 3).

4. Discussion

The findings of the present study generally supported the predictions, providing new insight into associations between psychopathy and subtypes of prosocial behavior, as well as the role played by empathy in these associations. Considering psychopathy from both the conventional 2-factor and a newer 3-factor framework, and investigating the potential role of gender, further clarified relationships and the nomological network of psychopathy, empathy, and prosociality.

When psychopathy was considered from the conventional, twofactor framework (Levenson et al., 1995), primary psychopathy was found to be positively associated with public prosocial behavior and inversely associated with anonymous and altruistic prosocial behaviors. These associations were mediated by lack of empathy seen in elevated primary psychopathy. Overall, and as predicted based on the three-factor model (Sellbom, 2011), the affective callousness facet of primary psychopathy accounted for these associations better than did egocentricity. Nevertheless, B.A. White/Personality and Individual Differences xxx (2013) xxx-xxx

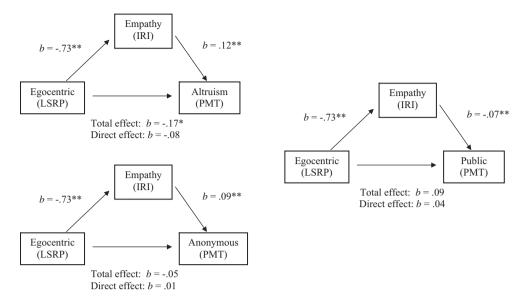


Fig. 2. Empathy as a potential mediator of the association between egocentricity and prosocial behaviors. *Note.* Gender and alternate LSRP psychopathy factors were controlled to examine unique associations. Racial group membership was also controlled in analyses on altruism behavior. *p < .05, **p < .01.

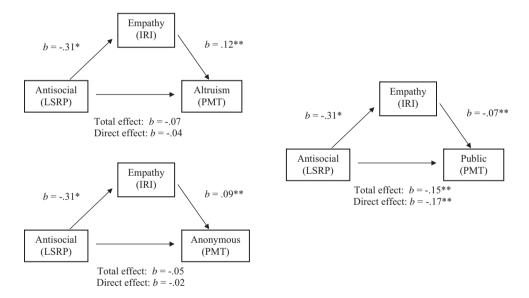


Fig. 3. Empathy as a potential mediator of the association between antisociality and prosocial behavior. *Note.* Gender and alternate LSRP psychopathy factors were controlled to examine unique associations. Racial group membership was also controlled in analyses on altruism behavior. *p < .05, **p < .01.

egocentricity was also inversely related to altruism, and empathy also mediated this relationship.

After controlling for primary psychopathy, there was no total or direct association between secondary psychopathy and altruism or anonymous prosocial behaviors. However, secondary psychopathy was inversely associated with empathy, which accounted for indirect relationships between secondary psychopathy and altruism and anonymous prosocial behaviors. In contrast, the inclusion of empathy revealed a direct association between secondary psychopathy and public prosocial behavior. Caution is warranted in interpreting inconsistent mediation effects (Maassen & Bakker, 2001). But because secondary psychopathy is inversely related to both public prosocial behavior and empathy, and empathy itself is inversely associated with public prosocial behavior, the effects of secondary psychopathy and empathy appear to cancel each other out when it comes to public prosocial behavior. This picture was clearer for the three factor model (Sellbom, 2011), which

showed that antisocial psychopathy traits are inversely related to public prosocial behavior, an association that was also enhanced by an inconsistent mediation effect of empathy. Collectively, these findings highlight the importance of considering empathy when examining links between psychopathy and prosocial behavior.

The present study also supported past findings of gender differences in empathy, prosocial behaviors, and psychopathy (e.g., McGinley & Carlo, 2006; Miller et al., 2011; Sevecke et al., 2009). Nevertheless, gender did not account for associations between psychopathy, empathy, and prosocial behaviors, as either a confounding variable or moderator, suggesting that the observed patterns of associations are consistent across men and women.

Like all studies, the present one is not without limitations. Since only concurrent self-report measures were used, further investigation should consider designs that confirm causal directionality and reduce potential shared method variance (e.g., adding behavioral observations). The 3-factor LSRP egocentricity and antisocial

subscales were less reliable than was callousness, potentially influencing relative associations. The present study used a fairly homogeneous college sample, thus future investigations should test for generalization of these prediction models to other populations (e.g., forensic, child) as well as to other cultures. Future studies should also consider potential mechanisms that may underlie differential associations between empathy and subtypes of prosocial behaviors, including different aspects of empathy (affective, cognitive), and the extent to which prosocial behaviors are intrinsically vs. extrinsically motivated (Deci & Ryan, 1985).

Although necessarily tentative, results from the present study have several conceptual and practical implications. Findings suggest that the lack of empathy associated with callousness may partially account for an increase in public prosocial behaviors and a reduction in anonymous and altruistic prosocial behavior, whereas the egocentric-interpersonal dimension of primary psychopathy. although also associated with reduced empathy, may be more relevant to acts of altruism than to public or anonymous prosociality. Although psychopathy is often viewed as untreatable and some have even proposed that treating psychopaths may make them worse (Harris & Rice, 2006), others suggest a more optimistic view, especially for early and intensive interventions (e.g., Salekin, Worley, & Grimes, 2010). It may also be important to consider findings in the present study against a broader cultural backdrop. Over the past decade, narcissism has measurably increased (Twenge & Foster, 2010) and empathy has decreased (Konrath, O'Brien, & Hsing, 2011) in college samples. Nevertheless, evidence exists that children and adults can be taught to be more empathic (e.g., Gordon, 2003; Hatcher et al., 1994). Findings from the present study illustrate the importance of empathy in the link between psychopathic traits and specific classes of prosocial behavior, thereby suggesting potential foci for assessment, prevention, and intervention efforts.

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