Psychopathic Predators? Getting Specific About the Relation Between Psychopathy and Violence

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Objective: The Psychopathy Checklist–Revised (PCL–R; Hare, 1991, 2003) is often used to assess risk of violence, perhaps based on the assumption that it captures emotionally detached individuals who are driven to prey upon others. This study is designed to assess the relation between (a) core interpersonal and affective traits of psychopathy and impulsive antisociality on the one hand and (b) the risk of future violence and patterns of motivation for past violence on the other. *Method:* A research team reliably assessed a sample of 158 male offenders for psychopathy, using both the interview-based PCL–R and the self-report Psychopathic Personality Inventory (PPI: Lilienfeld & Andrews, 1996). Then, a second independent research team assessed offenders' lifetime patterns of violence and their motivation. After these baseline assessments, offenders were followed in prison or the community for up to 1 year to assess their involvement in 3 different forms of violence. Baseline and follow-up assessments included both interviews and reviews of official records. *Results:* First, the PPI manifested incremental validity in predicting future violence over the PCL–R (but not vice versa)—and most of its predictive power derived solely from impulsive antisociality. Second, impulsive antisociality—not interpersonal and affective traits specific to psychopathy—were uniquely associated with instrumental lifetime patterns of past violence. The latter psychopathic traits are narrowly associated with deficits in motivation for violence (e.g., lack of fear or lack of provocation). *Conclusions:* These findings and their consistency with some past research led us to advise against making broad generalizations about the relation between psychopathy and violence.

Keywords: psychopathy, instrumental violence, violence prediction, Psychopathy Checklist-Revised, Psychopathic Personality Inventory

In recent years, a single measure of psychopathy, the Psychopathy Checklist–Revised (PCL–R; Hare, 1991, 2003), has become highly regarded and widely applied in justice contexts. Although purpose-built risk assessment tools predict violent behavior as well as, or better than, the PCL–R (Singh, Grann, & Fazel, 2011; Yang, Wong, & Coid, 2010), clinicians often select this measure of psychopathy to assess an offender's risk of violence (Tolman & Mullendore, 2003; see also Archer, Buffington-Vollum, Stredney,

& Handel, 2006) and to inform decisions about whether to incarcerate, treat, indefinitely detain, or even execute him or her (De-Matteo & Edens, 2006; Edens, Petrila, & Buffington-Vollum, 2001; Lloyd, Clark, & Forth, 2010).

According to the author of the PCL–R, psychopaths are "intraspecies predators who use charm, manipulation, intimidation, and violence to control others and to satisfy their selfish needs" (Hare, 1996, p. 26). Although this description certainly holds for some psychopathic individuals, there is little evidence that those with high PCL–R scores are at risk for committing violence chiefly because they are cold-hearted, callous, or emotionally detached. The PCL–R consists of two basic scales that can be subdivided into four subscales: the Factor 1 *Interpersonal–Affective Scale* (Hare, 2003) assesses core features of psychopathy, or the "selfish, callous, and remorseless use of others" (Hare et al., 1990, p. 340), whereas the Factor 2 *Social Deviance Scale* (Hare, 2003) assesses a "chronically unstable, antisocial . . .lifestyle" (Hare et al., 1990, p. 340). Research robustly indicates that the relation between the PCL–R and violence is largely attributable to its Social Deviance Scale (Skeem & Mulvey, 2001; Walters, 2003) and Antisocial subscale (Walters, Knight, Grann, & Dahle, 2008). This may be partly because of Meehl's maxim that past behavior is typically the best predictor of future similar behavior (Meehl, 1954; see also Gendreau, Goggin, & Smith, 2003) and partly because the scale taps broad traits like antagonism, anger, and impulsivity that are not specific to psychopathy but place people at risk for involvement in violence (Skeem, Miller, Mulvey, Tiemann, & Monahan, 2005). Moreover, a recent meta-analysis indicated that the utility of the Social Deviance Scale in predicting violence did not vary as a function of traits measured by the Interpersonal–Affective Scale (or vice versa; Kennealy, Skeem, Walters, & Camp, 2010). This challenges the view (see Hare & Neumann, 2008) that specific psychopathic traits combine with antisocial behavior in a manner that is informative beyond the simple sum of parts.

Still, important questions remain about the relation between psychopathy and violence. First, from a practical point of view, the traits assessed with PCL's Interpersonal–Affective subscales occasionally are associated with violence (e.g., Douglas, Strand, Belfrage, Fransson, & Levander, 2005; Serin, 1996), which raises questions about the conditions under which the subscales could be useful. Do these aspects of psychopathy predict rare forms of violence? If so, what kinds? Second, from a theoretical standpoint, there are unanswered questions about the relation between psychopathy and violence. Although most theories of psychopathy would not feature prediction of violent behavior as a central test (see Skeem & Cooke, 2010a, 2010b), adopting a more nuanced view of violence—one that includes the motivation for such behavior—could help one to evaluate some theories. Does psychopathy predict the inadequately motivated criminal behavior that Cleckley referenced (as cited in Patrick, 2006a), including capricious, goalless, self-defeating violence with "a peculiarly aimless quality" (Patrick, 2006b, p. 609)? Or does psychopathy predict the goal-driven, predatory violence that Karpman (1941) associated with primary psychopathy and that Hare (1999) viewed as characteristic of psychopathy generally?

This study was the first in which alternative conceptualizations of psychopathy were applied to address such questions. Because the contribution of psychopathy to criminal behavior may be "an empirical question that can only be answered if the two are identified independently" (Blackburn, 1988, p. 507), we went beyond the PCL–R to also examine the self-report Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996; Lilienfeld & Widows, 2005). Although it does not explicitly reference criminal behavior, the PPI consists of two primary scales labeled *Fearless Dominance* and *Impulsive Antisociality* (Benning, Patrick, Hicks, Blonigen, & Krueger, 2003) that are conceptually analogous to the two factors in the PCL.

How overlapping are the views of psychopathy distilled by the PCL–R and PPI? This question can be addressed both with data and theory. Based on a meta-analysis of nine studies, Marcus, Fulton, and Edens (in press) found moderate overlap between the two measures in their assessment of Factor 2 antisocial traits and behavior (i.e., the PPI's Impulsive Antisociality Scale correlated .41 and .20 with the PCL–R's Social Deviance Scale and Interpersonal–Affective Scale, respectively). The overlap between the two measures' assessment of Factor 1 psychopathic traits, however, was relatively weak (i.e., the PPI's Fearless Dominance Scale correlated .21 and .15 with the PCL–R's Interpersonal–Affective Scale and Social Deviance Scale, respectively).

As noted by Marcus et al. (in press), the modest correspondence between the two measures' assessment of Factor 1 traits is "not particularly troubling" (p. 9) when viewed through the lens of Patrick, Fowles, and Krueger's (2009) triarchic framework. According to this framework, historic conceptualizations and modern measures of psychopathy encompass (a) disinhibition (i.e., impulsivity, negative affectivity), (b) boldness (e.g., emotional resilience, social potency), and/or (c) meanness (i.e., "resource-seeking without regard for others," p. 913). The PCL–R chiefly emphasizes disinhibition (particularly in its Social Deviance Scale) and meanness (particularly in its Interpersonal–Affective Scale) to produce a picture of psychopathy that highlights aggressive externalizing traits (Patrick et al., 2009). The PPI also comprises disinhibition (particularly in its Impulsive Antisociality Scale), but, unlike the PCL–R, emphasizes boldness more than meanness (particularly in its Fearless Dominance Scale). The initial list of constructs used to develop the PPI included (but was not specific to) Cleckley's (1982) theory of psychopathy. Partially for this reason, the PPI includes adaptive features like low anxiety and capacity for resilience to stress (see Lilienfeld et al., in press).

Like the PCL–R, the PPI significantly predicts violence. Most of the PPI's predictive validity derives from its assessment of disinhibition or Impulsive Antisociality ($r = .34$), rather than Fearless Dominance ($r = -.03$; Edens, Poythress, Lilienfeld, Patrick, & Test, 2008; see also Edens, Poythress, Lilienfeld, & Patrick, 2008). But this raises the question mentioned earlier: Do interpersonal and affective traits of psychopathy relate to particular forms of violence, as articulated by some theorists?

Although some have criticized the distinction (Bushman & Anderson, 2001), much research distinguishes between reactive and instrumental violence (e.g., Berkowitz, 1993; Dodge, 1991). Reactive violence is motivated by the desire to harm someone and typically occurs in response to frustration, a threat to safety, or other perceived provocation, whereas instrumental violence is committed to achieve a secondary reward (e.g., money, drugs, or power) by harming someone (Buss, 1961; Feshbach, 1970). Some hypothesize that interpersonal and affective traits of psychopathy promote instrumental violence, whereas impulsive antisociality

promotes reactive violence (Patrick et al., 2009; Patrick & Zempolich, 1998).

It appears that the PCL–R or PPI have been applied to test these relationships in only nine published studies, and the results do not neatly conform to intuition. Eight studies operationalized psychopathy using the PCL (scored based on records and sometimes interviews), sampled offenders with- or without mental illness, and relied upon records to code aggression (with the exception of Walsh, Swogger, & Kosson, 2009, who relied solely on self-report). Studies that focused on the two PCL–R major scales yielded mixed results regarding whether instrumental violence relates specifically to the PCL's Interpersonal–Affective Scale (Hart & Dempster, 1997; Vitacco et al., 2009; Woodworth & Porter, 2002), the Social Deviance Scale (Cornell et al., 1996, Study 1), or both (Cornell et al., 1996, Study 2). Similarly, findings of studies that focused on the four PCL–R subscales suggest that instrumental violence relates only to the Interpersonal subscale (Laurell, Belfrage, & Hellstrom, 2010), only to the Interpersonal and Lifestyle subscales (McDermott, Quanbeck, Busse, Yastro, & Scott, 2008), or only to the Interpersonal and Antisocial subscales (Walsh et al., 2009). These mixed and sometimes counterintuitive results may have been obtained because these six studies were differentially affected by (a) criterion contamination (e.g., PCL–R Interpersonal–Affective items reference "cold-blooded murder" [Hare, 1991, p. 22] and "schemes and scams motivated by a desire for personal gain [money, sex, status, power, etc.]" [p. 20], which overlap with the criterion of instrumental violence) and (b) impoverished measures of violence motivation, given predominant reliance on sometimes incomplete records to address the difficult question of why violence occurred. The ninth study operationalized psychopathy using the PPI, sampled undergraduates, and assessed aggression based on self-report. In that investigation, Ostrov and Houston (2008) found that Impulsive Antisociality—but not Fearless Dominance—was significantly associated with both instrumental and reactive physical aggression. However, firm conclusions are precluded by the study's mono-method reliance upon self-report.

In the present study, we applied alternative conceptualizations of psychopathy and complementary measures of violence to assess the relation between the two. Our utilitarian objective was to assess the relation between the PPI and PCL–R on the one hand and future violence on the other. We focused on testing the common assumptions that interpersonal and affective features assessed by these measures (a) predict violence above and beyond impulsive antisociality and (b) interact statistically with impulsive antisociality to predict violence. Our theory-oriented objective was to assess the relation between psychopathic and antisocial traits on one hand and the motivation or goals that underpin an individual's pattern of lifetime violence on the other. We examined how the PCL and PPI scales uniquely relate to past patterns of violence. Although past findings have been mixed, we expected interpersonal and affective features to relate to an instrumental pattern of violence, but impulsive antisociality to relate to a reactive pattern. As noted earlier, the PPI was designed to capture primary or Cleckleyan psychopathy, and Cleckley (1982) viewed inadequately motivated antisocial behavior as a feature of the disorder. For those reasons, we tentatively expected the PPI to relate uniquely to inadequately motivated violence.

Method

Participants

Baseline data were collected as part of a multisite study on variants of psychopathy (Poythress et al., 2010). The present follow-up study, which focused on violence, was conducted at one study site that comprised two prisons and one residential substance abuse facility. Recruitment focused on White and African American individuals who spoke English, were over age 21, had an estimated IQ of 70 or more, and had not been prescribed antipsychotics.

Of the 349 participants eligible for follow up, we completed in-person follow-up interviews in institutions (e.g., prison) or the community with 210 offenders (60%): 16% had moved out of the region, 14% could not be located, and 10% refused participation. Because the vast majority of those interviewed were male (90%) and prison inmates (83%), we excluded women and substance abuse clients, leaving a final sample of 158 male prison inmates.

Of these 158 inmates, 56% were African American and 44% were White; their average age was 31 years ($SD = 6.41$). There were no statistically significant differences between these participants and eligible nonparticipants ($n = 122$ male inmates) in their rates of recidivism ($\phi = .05$, ns) or demographic characteristics other than race; participants were modestly more likely to be African American (56% vs. 52%), $\chi^2(1) = 6.93$, $p < .01$, $\phi = .15$. Similarly, although participants obtained slightly higher PPI total scores than eligible nonparticipants, $t(244) = -2.031$, $p < .05$, $\eta = .13$, there were no significant group differences in PPI subscale scores (Fearless Dominance $\eta = .06$, ns; Self Centered Impulsivity $\eta = .06$, ns; Coldheartedness $\eta = .03$, ns); nor were there differences in PCL–R total scores ($\eta = .04$, ns) or PCL–R subscale scores (Interpersonal–Affective $\eta = .05$, ns; Social Deviance $\eta = .04$, ns; Interpersonal $\eta = .06$, ns; Affective $\eta = .03$, ns; Lifestyle $\eta = .06$, ns; Antisocial $\eta = .00$, ns).

Procedure

Research assistants (RAs) for the multisite study recruited randomly selected prison inmates and administered that study's protocol, including the PCL–R and PPI. Approximately 3 months later, participants who provided permission to be contacted for future studies were located in institutions, by phone, or by mail and invited to participate in the present study. A new, independent group of RAs obtained participants' informed consent and permission to access relevant records and administered the present study's protocol. Participants were paid $20 for their time. The study procedures were approved by multiple institutional review boards.

Measures

Measures of demographics and psychopathy were assessed as part of the multisite study, whereas those of violence and motivation for violence chiefly were assessed as part of the present follow-up study. Each of these four domains is reviewed next.

Demographics and intelligence screen. Demographic information (e.g., age, ethnicity, gender) was obtained from each participant via self-report and verified through record review. Because

time limitations did not permit more intensive measures, the Quick Test (QT; Ammons & Ammons, 1962) was used as a screening test to ensure that participants met eligibility criteria (estimated IQ > 70).

Psychopathy. The PCL–R (Hare, 1991, 2003) consists of 20 items that were scored from 0 (*does not apply*) to 2 (*definitely applies*) on the basis of an interview and review of file information. Given that two- (Harpur, Hare, & Hakstian, 1989), three- (Cooke & Michie, 2001), and four- (Hare, 2003) factor PCL–R models have been reported, we inclusively present results for the (a) two-factor (i.e., Interpersonal–Affective; Social Deviance) model and the (b) four facet (i.e., Interpersonal, Affective, Lifestyle, and Antisocial) model.

Participants' average total PCL–R score was 25.00 ($SD = 7.01$). These total scores were internally consistent ($\alpha = .82$). Previous research suggests that the four PCL–R subscales have acceptable internal consistency ($\alpha = > .66$; Hare, 2003). In this sample, the Interpersonal ($\alpha = .78$) and Affective ($\alpha = .84$) subscales were more internally consistent than the Lifestyle ($\alpha = .43$) and Antisocial ($\alpha = .54$) subscales.

The PPI (Lilienfeld & Andrews, 1996) is a 187-item self-report measure. PPI items are scored on a 4-point Likert scale (responses ranging from *false* to *true*) and summed to yield a total score as well as eight subscale scores. PPI total scores are moderately correlated with interview ratings of psychopathy based on Cleckleyan criteria ($r = .60$; Lilienfeld & Widows, 2005) and demonstrate discriminant validity from measures of schizotypy, depression, and social desirability (see Lilienfeld & Fowler, 2006).

The present study uses PPI total scores and scores on three PPI scales: Fearless Dominance (sum of Social Potency, Stress Immunity, and Fearlessness subscales; $\alpha = .88$), Impulsive Antisociality (sum of Impulsive Nonconformity, Blame Externalization, Machiavellian Egocentricity, and Carefree Nonplanfulness subscales; $\alpha = .92$), and Coldheartedness (i.e., lack of social emotions like guilt and empathy; $\alpha = .77$). The Coldheartedness subscale is treated as a separate scale because it tends to load by itself in factor analyses (Lilienfeld & Widows, 2005). These three dimensions emerged in factor analyses of the eight PPI subscales (Benning et al., 2003) and have generally been replicated in offender (Patrick, Edens, Poythress, Lilienfeld, & Benning, 2006; Ross, Benning, Patrick, Thompson, & Thurston, 2009) and student (Benning, Patrick, Salekin, & Leistico, 2005; Ross et al., 2009) samples.

However, Neumann, Malterer, and Newman (2008) did not replicate this structure.

We used these three scales for two reasons. First, although they are conceptually related, the empirical correspondence between the two major scales of the PCL–R and PPI is modest (see Table 1). Both measures must be examined to capture their unique variance. Second, all three PPI scales manifest a coherent pattern of relationships with other measures. For example, Fearless Dominance and Coldheartedness are negatively associated with measures of depression and anxiety, whereas Impulsive Antisociality is positively associated with these variables (Benning et al., 2005; Blonigen, Hicks, Krueger, Patrick, & Iacono, 2005; Lilienfeld & Widows, 2005; Patrick et al., 2006). Coldheartedness is negatively associated with social closeness (Lilienfeld & Andrews, 1996), agreeableness, and warmth (Lilienfeld & Widows, 2005).

In this study, four cases (2%) were excluded from PPI analyses because their self-report was technically invalid. Although PPI validity scales were not significantly elevated, these four cases had t scores of greater than 79 on the Personality Assessment Inventory's (Morey, 1991) Inconsistency Scale and/or Infrequency Scale.

Future violence. Three measures of future violence were used in this study. Each one referenced different information sources, severity, and follow-up periods. Each has different strengths and limitations—for example, self-reports (in this study, proximate violence) tend to reveal more violence than official records (in this study, arrest records; Monahan et al., 2001).

First, we assessed *serious proximate violence* based on 90-day follow-up interviews with offenders and record reviews. Given that the vast majority of violence occurred in prison (80.6%), proximate violence largely indexes institutional violence. The measure (from Monahan et al., 2001) assessed whether participants had engaged in any one of eight categories of violent acts (e.g., pushing, hitting) in the past 90 days. Serious proximate violence was defined as physical aggression resulting in injury, sexual assault, threats made with a weapon in hand, or use of a weapon within 90 days of study recruitment (base rate = 8.9%).

Second, we assessed *verbally or physically aggressive infractions* based on disciplinary reports obtained from prisons for a period of 1 year following study recruitment. This measure was available for 83 participants who were incarcerated for at least a

Table 1

Pearson Correlations: Psychopathy Checklist–Revised (PCL-R) and Psychopathic Personality Inventory (PPI) Scores

Scale	1	2	3	4	5	6	7	8	9	10	11
1. PCL-R Total	—										
2. PCL-R Interpersonal–Affective	.86**	—									
3. PCL-R Social Deviance	.79**	.42**	—								
4. PCL-R Interpersonal	.76**	.90**	.36**	—							
5. PCL-R Affective	.80**	.90**	.39**	.62**	—						
6. PCL-R Lifestyle	.70**	.47**	.77**	.46**	.39**	—					
7. PCL-R Antisocial	.60**	.24**	.86**	.16*	.26**	.33**	—				
8. PPI Total	.44**	.31**	.46**	.26**	.30**	.43**	.35**	—			
9. PPI Fearless Dominance	.29**	.29**	.20*	.34**	.19*	.24**	.12	.60**	—		
10. PPI Impulsive Antisociality	.35**	.21*	.42**	.14	.24**	.38**	.32**	.87**	.18*	—	
11. PPI Coldheartedness	.22*	.12	.27**	.02	.20*	.14	.28**	.28**	−.01	.12	—

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

year during the study period. Although this subsample was modestly more likely to be African American than the larger sample of 195 male inmates incarcerated for less than a year (66% vs. 53%), $\chi^2(1) = 4.572$, $p < .05$, $\phi = .12$, there were no significant differences in PCL–R scores (total $\eta = .00$, ns; Interpersonal–Affective $\eta = .02$, ns; Social Deviance $\eta = .04$, ns; Interpersonal $\eta = .10$, ns; Affective $\eta = .06$, ns; Lifestyle $\eta = .03$, ns; Antisocial $\eta = .04$, ns), PPI scores (total $\eta = .01$, ns; Fearless Dominance $\eta = .02$, ns; Self-Centered Impulsivity $\eta = .02$, ns; Coldheartedness $\eta = .01$, ns), or age. Disciplinary reports were coded to indicate whether an infraction had been recorded for verbal aggression/acts of defiance (e.g., "spoken or written threats") or physical aggression (e.g., "assault or battery with a deadly weapon"; base rate = 21.7%).

Third, we assessed *violent arrest in the community* using Federal Bureau of Investigation arrest records spanning 1 year after prison release. This measure was available for a subset of 47 participants who were released and either rearrested within 1 year or at risk of rearrest for at least 1 year. This subsample obtained modestly lower PPI scores than the larger sample of 230 male inmates who were not rearrested within 1 year or at risk of rearrest for at least 1 year: total $t(244) = -3.26$, $p < .01$, $\eta = .20$; Fearless Dominance, $t(244) = -2.74$, $p < .01$, $\eta = .17$; Self-Centered Impulsivity, $t(244) = -2.26$, $p < .05$, $\eta = .14$; Coldheartedness, $t(244) = -0.62$, ns, $\eta = .04$. However, there were no significant group differences in PCL–R scores ($\eta = .08$, ns; Interpersonal-Affective $\eta = .10$, ns; Social Deviance $\eta = .04$, ns; Interpersonal $\eta = .06$, ns; Affective $\eta = .11$, ns; Lifestyle $\eta = .00$, ns; Antisocial $\eta = .06$, ns), age ($\eta = .11$, ns), or ethnicity ($\phi = .01$, ns). *Community violence* was defined as an arrest for any act involving assault (e.g., murder, battery, or assault), robbery (which typically involves physical force), or sexual assault or rape (base rate = 21.3%).

Motivation and goals for lifetime violence. At the 90-day interview, participants completed the Lifetime Violence Interview, which was derived from previous research (Cornell et al., 1996) to assess motivation for violence. Participants were asked to recall and describe the three most serious physical conflicts they had ever had. Information obtained from this interview was combined with data gleaned from institutional files to code seven dimensional items on the Aggressive Incident Coding Sheet (AICS; Cornell, 1993): (a) planning, (b) goal directedness, (c) provocation, (d) arousal, (e) severity of violence, (f) relationship with the victim, and (g) intoxication (each was rated on a scale having between 4 and 7 points). In addition, an overall rating of instrumental versus. reactive motivation for violence was made on a 4-point scale (from 1, *clearly reactive*, to 4, *clearly instrumental*).

An additional 10 ratings (each on a 4-point scale) were added to capture specific variations in motivation and risky behavior, based on prior elaborations of the AICS (manual available from the primary author). Five ratings were intended to capture specific goals for violence including power/domination, respect, material gain, anger, and fear; four to capture the extent to which violence was accompanied by substance abuse, drug dealing, gang involvement, or sensation seeking; and one to capture Cleckleyan (Cleckley, 1982) lack of motivation. As shown in Table 2, these ratings correlated in a coherent manner with the AICS global "instrumental versus reactive" rating. For instance, violence motivated by fear and anger related to reactive ratings, whereas that motivated by power, material gain, and drug dealing related to instrumental ratings.

Most (78%) participants had been involved in at least three violent incidents. The majority of these incidents were characterized by clearly reactive motivation (59%; 14% primarily reactive; 14% primarily instrumental; 13% clearly instrumental). In past research, investigators have used either categorical or dimensional measures of instrumentality. Because (a) single incidents of violence commonly include both instrumental and reactive qualities (Anderson & Bushman, 2002; Bushman & Anderson, 2001), (b) a single offender may commit multiple acts of violence over time that vary in the extent to which they are instrumental or reactive, and (c) dichotomized variables can result in a loss of information and statistical power, we used dimensional ratings in this study rather than categorical classifications of offenders. Specifically, we averaged participants' scores on each item across three lifetime violent incidents. Using Parkerson, Broadhead, and Tse's (1993) classification ranges for intraclass correlation coefficient (ICC),

Table 2
*Pearson Correlations Between Total Instrumentality and Specific Goals or Risky Behavior (*n = *158)*

Variable	Total instrumentality
Specific goal	
Power (desire to dominate others; control, domination, or humiliation of victim)	.34[*]
Respect (desire to obtain or maintain respect of others; save face or preserve honor)	−.14
Material gain (desire to obtain material goods, like money, drugs, or cars; victim may be "in the way" of gain)	.61[*]
Anger (angry desire to hurt someone in response to perceived insult or threat)	−.32[*]
Fear (fearful desire to escape perceived threat of harm)	−.16
Risky behavior	
Substance abuse (intoxication or goal of obtaining substances for personal use contributes to involvement in violence)	.15
Drug dealing (trying to obtain or sell drugs contributes to involvement in violence)	.32[*]
Gang involvement (affiliation with gang contributes to involvement in violence)	.15
Sensation seeking (thrill-seeking behavior contributes to involvement in violence)	.02
Inadequately motivated (incident is aimless, occurs on a whim, or otherwise cannot be understood by a reasonable person)	−.06

Note. Total instrumentality based on the Aggressive Incident Coding Sheet (AICS): 4-point scale ranges from 1 (*completely reactive*) to 4 (*completely instrumental*).
[*] $p < .05$, Bonferroni-corrected error rate within either specific goal or risky behavior family (each consisting of five tests, requiring individual $\alpha < .01$).

these ratings manifested fair to good agreement with single ratings based on the most serious violent incident (ICC > .66 for all ratings), but include multiple points of data that reduce error variance.

Interviewer Training and Interscorer Reliability

PCL–R psychopathy and patterns of violence were measured at two different time points based on independent interviews conducted by different groups of RAs. First, PCL–R psychopathy was assessed during the multisite study. Prior to data collection, two graduate RAs received extensive didactic and experiential training on the PCL–R and subsequent supervised scoring of 10 training tapes. RAs were required to obtain an ICC greater than .80 before starting data collection. Generally, ICC values greater than .75 are considered excellent, values between .40 and .75 are fair–good, and values below .40 are poor (Parkerson et al., 1993). To avoid "rater's drift," the project coordinator made regular site visits to observe RAs' interviews and to independently score the PCL–R. Interscorer reliability of PCL–R total scores, obtained on the basis of 12 cases for the two RAs, was good (ICC = .91 two-way mixed effects analysis of variance model; raters as a fixed factor; agreement defined as absolute).

Second, violence was assessed 3 months after the baseline interview by a new research team. Prior to data collection, seven RAs completed extensive didactic and experiential training in administration and coding of violence measures. Throughout data collection, the project coordinator ensured adherence to the coding guidelines. As shown in Table 3, based on 26 randomly selected and independently rated cases, interscorer reliability for AICS ratings and goal/behavior ratings ranged from fair to excellent (ICCs > .67).

Results

Overview

Study objectives were to (a) examine whether the PCL's and PPI's measurement of interpersonal and affective features of psychopathy (Factor 1) predicted violence above and beyond impulsive antisociality (Factor 2) and whether the two scales of each measure interacted statistically to predict violence, and (b) explore the unique relation between dimensions of psychopathic and antisocial traits on the one hand and patterns of motivation for violence on the other. The violence prediction objective ("a") was achieved via correlational, receiver operating characteristic (ROC), and hierarchical logistic regression analyses; the violence motivational pattern objective ("b") was achieved via partial correlations that controlled for the shared variance between psychopathy scales to isolate unique relationships between psychopathy dimensions and violence motivation.

PCL–R, PPI, and Violence Prediction

The utility of the PCL–R and PPI scales in predicting the three forms of future violence used in this study is shown in Table 4. As explained earlier, these three indices of violence are associated with different sample sizes. Given that a sample size of 88 provides .80 power to detect a medium sized effect with alpha set at .05 (Faul & Erdfelder, 1992), statistical power appears adequate for the proximate violence and violent infraction variables but limited for the violent arrest variable. To permit an assessment of consistency in the pattern of relationships between the psychopathy indices and the violent indices, we signify statistical trends in Table 4.

Table 3
Interrater Reliability and Descriptive Statistics for Violence Motivation

Rating	ICC	Mean	SD	Skew	Kurtosis
Total instrumentality (AICS)	.81	1.84	0.82	0.84	−0.08
AICS Scales					
Planning	.80	1.28	0.44	2.30	5.91
Goal Directedness	.75	1.83	0.82	0.78	−0.21
Arousal	.73	2.51	0.53	−0.48	−0.35
Provocation	.78	2.76	0.78	0.58	0.78
Severity of Violence	.85	3.06	0.63	−0.06	0.50
Relationship With Victim	.93	2.47	0.96	0.45	−0.31
Intoxication	.96	1.72	0.68	0.51	−1.04
Specific goals					
Power	.74	1.31	0.56	1.95	3.56
Respect	.80	2.13	0.95	0.47	−0.81
Material gain	.85	1.34	0.62	2.31	5.74
Anger	.72	2.04	0.92	0.65	−0.45
Fear	.68	1.06	0.21	3.92	14.37
Risky behavior					
Substance abuse	.77	1.03	0.15	5.77	34.01
Drug dealing	.85	1.25	0.54	2.67	8.44
Gang involvement	.94	1.28	0.58	2.18	4.42
Sensation seeking	.99[a]	1.04	0.19	4.71	21.19
Inadequately motivated	.91	1.07	0.33	6.05	43.95

Note. ICC = intraclass correlation coefficient; AICS = Aggressive Incident Coding Sheet.
[a] Because one rater had no variability in ratings of sensation-seeking behavior, percentage of agreement (rather than an ICC) was calculated and indicated 99% agreement.

Table 4
Utility of Psychopathy Checklist–Revised and Psychopathic Personality Inventory in Predicting Violence and Aggression

Variable	η	Partial r	AUC
Proximate serious violence (N = 158, prison, 90 days)			
Psychopathy Checklist–Revised			
Total scores	.15†	—	.65
Interpersonal–Affective	.14†	.10	.64
Social Deviance	.12	.06	.61
Interpersonal	.17*	.12	.67
Affective	.08	−.04	.57
Lifestyle	.14†	.07	.64
Antisocial	.06	.02	.55
Psychopathic Personality Inventory			
Total scores	.26**	—	.81
Fearless Dominance	.17*	.14	.70
Impulsive–Antisociality	.24**	.21*	.76
Coldheartedness	.00	−.02	.51
Infraction for verbal or physical aggression (n = 83, prison, 12 months)			
Psychopathy Checklist–Revised			
Total scores	.03	—	.48
Interpersonal–Affective	−.00	−.04	.48
Social Deviance	.09	.09	.54
Interpersonal	−.05	−.09	.47
Affective	.05	.07	.49
Lifestyle	.01	−.02	.50
Antisocial	.12	.10	.56
Psychopathic Personality Inventory			
Total scores	.07	—	.53
Fearless Dominance	−.02	−.03	.49
Impulsive–Antisociality	.11	.12	.55
Coldheartedness	−.01	−.04	.49
Arrest for violence (n = 47, community, 12 months)			
Psychopathy Checklist–Revised			
Total scores	.15	—	.60
Interpersonal–Affective	.09	−.01	.57
Social Deviance	.19	.17	.66
Interpersonal	.07	−.06	.55
Affective	.09	.01	.54
Lifestyle	.19	.18	.63
Antisocial	.11	.08	.58
Psychopathic Personality Inventory			
Total scores	.27†	—	.69
Fearless Dominance	.13	.09	.59
Impulsive–Antisociality	.29†	.31*	.72
Coldheartedness	−.14	−.20	.44

Note. Partial r = partial correlation between the psychopathy scale and violence criterion, with shared variance among scales on each psychopathy measure controlled. AUC = area under the curve.
† $p < .10$.   * $p < .05$.   ** $p < .01$.

As shown in Table 4, the area under the ROC curve (area under the curve, or AUC) for the PPI total and PCL–R total reveals an 81% and 65% chance, respectively, that an inmate who became involved in proximate serious violence had a higher total score than one who did not. In some fields, AUC values of .90 or greater are considered excellent, .80–.90 good, .70–.80 fair, and below .70 poor (e.g., Compton, Fuchs, Fuchs, & Bryan, 2006).

Given that eta may be interpreted as a correlation coefficient, the pattern of relationships in Table 4 indicates that although neither psychopathy measure significantly predicted aggressive infractions, the two main scales of the PPI significantly predicted violence more often than the two main scales of the PCL–R. In fact,

of the seven PCL scale and subscale scores examined in relation to three forms of violence, only one reached significance. Specifically, the Interpersonal subscale predicted proximate violence. As a subsidiary analysis unrelated to the main study aims, we statistically compared the magnitudes of the correlations between the PPI- and PCL–R scales on the one hand and violence on the other. The differences did not reach statistical significance, although it should be noted that these difference tests tend to be insensitive.

Next, we tested the incremental utility of the PPI in predicting violence, above and beyond the PCL–R, and vice versa. To do so, we conducted separate hierarchical logistic regression analyses for each of three forms of violence and each of three main correspond-

ing psychopathy scales: total, Interpersonal–Affective Scale (Factor 1), and Impulsive–Antisociality Scale (Factor 2, $n = 9$ regressions). The results indicate that the PCL–R scales add no incremental utility to the PPI scales in predicting any form of violence, and neither measure's Factor 1 scale adds utility to the Factor 1 scale of the other measure in predicting any form of violence. However, for proximate violence, PPI total scores add incremental utility to PCL–R total scores, $\chi^2(2, N = 136) = 9.44$, $p < .01$; $\Delta R^2 = .14$, and PPI Impulsive Antisociality scores add incremental utility to PCL–R Social Deviance scores, $\chi^2(2, N = 136) = 5.37$, $p < .05$; $\Delta R^2 = .10$. For violent arrests, nonsignificant trends ($p = .10$) suggested that the PPI added incremental utility to the PCL–R at both the total score and Factor 2 level.

To address the first study objective, we examined the incremental predictive utility of factors that assessed core interpersonal and affective psychopathic traits beyond those that assessed general disinhibition or antisocial behavior. Although PCL–R facets and factors that assessed impulsive antisociality did not significantly predict any form of violence, we still completed a series of hierarchical logistic regressions for this measure. In keeping with the data in Table 3, the results indicated that the Interpersonal–Affective factor did not add incremental utility to the Social Deviance factor in predicting any violent outcome. Similarly, shifting to the PPI, we found that Fearless Dominance did not add incremental utility to Impulsive Antisociality in predicting any form of violence. For example, although Impulsive Antisociality significantly predicted proximate serious violence, $\chi^2(1, N = 137) = 7.82$, $p < .01$, Fearless Dominance added no incremental predictive utility to that factor, $\chi^2(1, N = 137 = 2.31$, *ns*.

Next, we assessed whether Factor 1 and Factor 2 of each measure (PCL–R and PPI) interacted statistically to predict each form of violence. Specifically, we conducted a series of six hierarchical logistic regressions, entering the two factors on the first step (Factor 1 and Factor 2) and the two-way interaction term on the second step. The interaction term did not significantly predict any form of violence for either measure. For example, taken together, the PPI's Impulsive Antisociality and Fearless Dominance factors significantly predicted proximate violence, $\chi^2(2, N = 137) = 10.13$, $p < .01$, but the interaction term ($\beta = .00$) did not add any incremental predictive utility, $\chi^2((1, N = 137) = 0.52$, *ns*. Similar analyses were performed at the facet level for the PCL–R: the results again revealed no significant interactions among any facets in predicting any form of violence.

Psychopathy and Patterns of Motivation for Violence

Our second objective was to examine the unique relationships between dimensions of psychopathy and motivation for violence. Recall that motivation and goals for violence were assessed at the 90-day follow-up based on the three most serious violent incidents that occurred across participants' lifetimes. Because most lifetime incidents occurred prior to participants' psychopathy assessments, this portion of the study is retrospective.

AICS instrumental vs. reactive scores. PCL–R total scores related weakly but significantly to instrumental motivation for violence. Contrary to predictions, this relationship was largely attributable to the Social Deviance factor and its Antisocial subscale, as shown in Table 5. Although tests of the difference in correlations between PCL–R factors and violence revealed no

statistically significant differences, as noted earlier such tests tend to be insensitive. In contrast, a multiple regression analysis revealed that Social Deviance significantly predicted overall instrumental ratings of violence, $F(2, 151) = 5.31$, $p < .01$, $\beta = .24$, $p < .05$, unlike the Interpersonal-Affective scale ($\beta = .03$, *ns*). The interaction between the two scales did not significantly improve the model ($\Delta R^2 = .00$, *ns*) or "postdict" motivation for violence ($\beta = -.18$, *ns*). Unlike the Interpersonal–Affective Scale (which showed no significant relations with any AICS subscales), the Social Deviance Scale significantly related to higher levels of goal-directed violence (e.g., for financial gain).

At the level of the four PCL–R subscales, there were few significant relationships. Although the PCL–R Interpersonal Scale was significantly associated with instrumental violence at the bivariate level, it bore no significant independent association with instrumental violence when its shared variance with other subscales was controlled. The PCL–R Lifestyle Scale was uniquely associated with intoxication (e.g., severe impairment from alcohol and drugs).

As shown in Table 6, PPI scores were not significantly related to overall instrumental motivation for violence. However, PPI total scores related to intoxication, and at the scale level, PPI Fearless Dominance related negatively to provoked violence.

Specific goals and risky behaviors. As shown in Tables 5 and 6, the interpersonal or affective factors of both measures (PCL–R and PPI) were uniquely negatively associated with fear, suggesting that the violence of individuals with more of these core psychopathic features was less motivated by feeling afraid or threatened. PPI total scores related inversely to anger as a motivation for violence (and there was a similar trend for PCL–R total scores). PPI Impulsive Antisociality scores related positively to gang involvement (with a similar trend for PCL–R total scores). PCL–R Social Deviance was uniquely positively associated with material gain. Together, these findings suggest that individuals with greater disinhibition and past criminal behavior are more likely to commit violence for material gain (e.g., money, drugs, or cars) or as part of gang involvement and less likely to commit violence as an angry response to provocation.

Supplemental Analyses

We conducted two sets of supplemental analyses. First, to explore whether ethnicity moderated the predictive utility of the psychopathy measures, we performed a series of six logistic regressions (see Baron & Kenny, 1986). Although we found that ethnicity did not significantly moderate the effect of PCL–R or PPI total scores in predicting proximate violence, aggressive infractions, or violent arrests, a trend ($\beta_{interaction} = .05$, $p = .05$) suggested that PPI scores predicted proximate violence more strongly among African Americans ($\eta = .42$, $p < .01$) than among Whites ($\eta = .17$, *ns*). Parallel analyses revealed that ethnicity did not significantly moderate the relation between (a) PCL–R and PPI total and Factor scores and (b) instrumental versus reactive ratings of motivation for violence.

Second, because the distributions of some motivational variables were significantly skewed or kurtotic (see Table 3), we tested the robustness of our findings by computing nonparametric tests of association between the PCL–R and PPI on one hand and patterns of motivation for violence on the other. These nonparametric tests

Table 5

*Partial Correlations (and Zero-Order Pearson Correlations) Between Psychopathy Checklist–Revised Scales and Lifetime Violence Patterns (*n *= 152)*

| | | Psychopathy Checklist–Revised measure | | | | | |
| | | Primary scales | | Subscales | | | |
Variable	Total	Int–Aff	Soc D	IP	A	LS	ANT
Total instrumentality (AICS)	.23**	.05 (.14)	.21* (.26**)	.15 (.18*)	−.09 (.07)	.06 (.19*)	.19* (.23**)
AICS Scales							
Planning	.16	.03 (.08)	.12 (.15)	.10 (.10)	−.05 (.04)	−.02 (.08)	.16 (.17)
Goal directedness	.19	.04 (.11)	.18 (.23a)	.16 (.17)	−.13 (.03)	.07 (.18)	.16 (.19)
Provocation	−.12	.00 (−.05)	−.12 (−.14)	.01 (−.02)	−.03 (−.05)	.01 (−.06)	−.15 (−.16)
Arousal	−.11	−.09 (−.09)	−.03 (−.08)	−.03 (−.08)	−.05 (−.08)	−.03 (−.10)	−.00 (−.04)
Severity of violence	.04	−.08 (−.03)	.13 (.11)	.11 (.04)	−.17 (−.09)	.01 (.04)	.16 (.13)
Relation to victim	−.11	.07 (−.03)	−.21 (−.20)	.02 (−.04)	.07 (−.01)	−.19 (−.20)	−.09 (−.13)
Intoxication	.06	−.09 (−.03)	.13 (.11)	−.15 (−.06)	.02 (.00)	.23a (.17)	−.05 (.01)
Specific goals							
Power	.11	.10 (.11)	−.01 (.04)	.06 (.09)	.06 (.11)	−.08 (−.00)	.06 (.07)
Respect	.14	.08 (.12)	.07 (.12)	−.01 (.08)	.09 (.14)	.02 (.09)	.06 (.10)
Material gain	.06	−.14 (−.05)	.21a (.17)	.07 (.03)	−.23a (−.12)	.17 (.17)	.11 (.11)
Anger	−.19	−.03 (−.12)	−.19 (−.23a)	−.03 (−.12)	.01 (−.10)	−.10 (−.18)	−.14 (−.19)
Fear	−.20	−.22a (−.23a)	.04 (−.07)	−.16 (−.23a)	−.06 (−.18)	.06 (−.06)	−.00 (−.04)
Risky behavior							
Substance abuse	−.09	−.12 (−.12)	.04 (−.02)	−.11 (−.12)	−.02 (−.09)	.11 (.03)	−.05 (−.05)
Drug dealing	.15	.12 (.15)	.02 (.09)	.09 (.16)	.01 (.11)	.05 (.12)	−.02 (.03)
Gang involvement	.19	.03 (.11)	.16 (.19)	.10 (.13)	−.05 (.07)	.00 (.11)	.18 (.20)
Sensation seeking	.14	.05 (.10)	.10 (.14)	.11 (.14)	−.08 (.04)	.09 (.15)	.04 (.08)
Inadequately motivated	−.03	.01 (.01)	−.01 (−.00)	−.01 (.01)	.00 (.01)	.06 (.05)	−.06 (−.04)

Note. AICS = Aggressive Incident Coding Sheet; Int–Aff = Interpersonal–Affective; Soc D = Social Deviance; IP = Interpersonal; A = Affective; LS = Lifestyle; ANT = Antisocial.
[a] $p < .05$, Bonferroni-corrected error rate within family of AICS scales (eight tests, individual $p < .007$), specific goal (five tests, individual $p < . 01$), or risky behavior (five tests, individual $p < .01$).
* $p < .05$. ** $p < .01$.

yielded a pattern of effect sizes and significance levels consistent with the parametric findings reported in Tables 5 and 6, and lend confidence to the findings we have summarized . For example, total AICS instrumentality was associated with PCL–R total scores (Kendall's $\tau = .20^{**}$), but correlated less strongly with the Interpersonal–Affective Scale ($\tau = .14$) than Social Deviance ($\tau = .23^{**}$). On a more pointed note, the nonparametric tests detected no more significant relationships between indices of instrumental violence and interpersonal-affective features of psychopathy (i.e., PCL–R Interpersonal–Affective, PCL–R Interpersonal, PCL–R Affective, PPI Fearless Dominance, and PPI Coldheartedness) than parametric tests.

Discussion

This multimethod, multimeasure study was designed to (a) determine the extent to which the PCL–R's and PPI's assessment of interpersonal and affective traits of psychopathy predict future violence among offenders, either uniquely or through statistical interactions with impulsive antisociality and (b) examine how different dimensions of psychopathy and antisociality relate to specific patterns of motivation for violence. The results may be summarized in two general points. First, the PPI possesses incremental validity for proximate violence over the PCL–R, but not vice versa. More important, the PPI's utility chiefly is based on its assessment of Impulsive Antisociality, which does not interact statistically with Fearless Dominance (or Coldheartedness) to pre-

dict violence. Second, impulsive and antisocial features (as assessed by the PCL–R) are directly associated with lifetime patterns of violence that reflect instrumental qualities (i.e., total instrumentality, lack of anger, goal of material gain, and general goal directedness). Interpersonal and affective features of psychopathy manifest fewer and more specific associations, relating *inversely* to violence that arises out of fear (PCL–R, PPI trend) or provocation (PPI). As shown in the following, these findings challenge common notions but are consistent with some (but not all) past research on psychopathy and violence.

Psychopathy Measures and Violence Prediction

This study involved three different criterion measures of violence, each with different strengths and weaknesses. The pattern of results was fairly consistent across measures. In contrast with our hypotheses, PCL–R total scores did not significantly predict violence. Indeed, of seven PCL–R scores examined in relation to three indices of violence and aggression (i.e., 21 comparisons), only the interpersonal facet significantly predicted proximate violence (most of which occurred in prison). In keeping with our expectations, however, scores on the PPI significantly predicted both proximate violence and arrests for violence in the community 1 year after release (though statistical power for this variable was limited). Moreover, the Interpersonal and Affective Scales of both measures did not interact statistically with or add incremental utility to their impulsive or antisocial factors in predicting vio-

Table 6

*Partial Correlations (and Zero-Order Pearson Correlations) Between Psychopathic Personality Inventory and Lifetime Violence Patterns (*n = 137*)*

	Psychopathic Personality Inventory scales			
Variable	Total	Fearless Dominance	Impulsive Antisociality	Coldheartedness
Total instrumentality (AICS)	.09	.02 (.03)	.09 (.10)	.05 (.04)
AICS Scales				
Planning	.11	.08 (.08)	.04 (.07)	.07 (.07)
Goal directedness	.10	.07 (.08)	.06 (.08)	.05 (.03)
Provocation	−.14	−.22[b] (−.21[b])	.03 (−.03)	−.15 (−.12)
Arousal	−.10	−.07 (−.08)	−.06 (−.08)	−.02 (−.00)
Severity of violence	.08	.06 (.07)	.05 (.06)	−.04 (−.04)
Relation to victim	−.19	−.12 (−.13)	−.10 (−.14)	−.11 (−.12)
Intoxication	.25[a]	.15 (.19)	.18 (.21)	.03 (.05)
Specific goals				
Power	−.10	−.08 (−.09)	−.05 (−.07)	−.02 (−.03)
Respect	.18	.16 (.18)	.06 (.10)	.08 (.08)
Material gain	.08	−.07 (−.04)	.15 (.14)	−.02 (−.01)
Anger	−.22[a]	−.11 (−.15)	−.19 (−.21)	.06 (.04)
Fear	−.10	−.20 (−.18)	.11 (.04)	−.24[a] (−.22[a])
Risky behavior				
Substance abuse	−.01	−.05 (−.05)	.01 (.04)	.02 (.03)
Drug dealing	.11	−.07 (−.04)	.16 (.16)	.03 (.05)
Gang involvement	.20	.01 (.06)	.24[a] (.24[a])	−.09 (−.06)
Sensation seeking	.11	.00 (.03)	.13 (.13)	−.05 (−.03)
Inadequately motivated	−.11	.09 (.06)	−.18 (−.16)	−.01 (−.03)

Note. AICS = Aggressive Incident Coding Sheet.
[a] $p < .05$, Bonferroni-corrected error rate within family of AICS scales (eight tests, individual $p < .007$), specific goal (five tests, individual $p < .01$), or risky behavior (five tests, individual $p < .01$).
* $p < .05$.   ** $p < .01$.

lence. This lack of statistical support for common assumptions about the relationship between psychopathy and violence is not necessarily evidence for the null hypothesis. Nevertheless, particularly when combined with the results of past research (see introduction), the present findings challenge the notion that what distinguishes psychopathy from general antisocial deviance—namely, its interpersonal and affective traits—are what predict violence.

Although practitioners probably are most familiar with the bottom line results of early meta-analytic studies on the relation between the PCL–R and violence, "the 'average' association between psychopathy and violence in these meta-analyses belies the fact that across studies the strength of this relationship is remarkably heterogeneous" (Edens, 2006, p. 60). For example, Walter's (2003) meta-analysis suggests that the PCL's Social Deviance Scale ($rs = .22–.26$), but perhaps not the Interpersonal–Affective Scale ($rs = .12–.18$), is reliably associated with violence. These estimates are more in line with the present study's results for the main PPI factors ($rs = .24$ and $.17$, respectively) than the PCL–R. However, taking factors like methodological quality into account reduces such apparent discrepancies. Specifically, Walters (2003) isolated a homogeneous group of effect sizes only after focusing on the 12 most methodologically sound studies, four of which focused on violent recidivism in the community. The average predictive validity estimates across these four studies (i.e., Interpersonal–Affective $r_m = .13$; Social Deviance, $r_m = .17$) are similar to those of the present study ($rs = .09$ and $.19$, respectively).

Moreover, recent meta-analytic reviews (see Singh et al., 2011; Yang et al., 2010) have produced relatively conservative estimates of the PCL–R's predictive utility. Such findings argue against drawing global conclusions that "psychopathy equals violence" (see Edens, 2006, p. 61, who criticized this common notion). The results of this study contribute to a growing body of literature that suggests that the relation between PCL–R psychopathy and violence is heterogeneous across methodologically diverse studies and may apply less well to prisons and other institutional settings (Guy, Edens, Anthony, & Douglas, 2005).

Perhaps more important, this literature suggests that when measures of psychopathy predict violence, this usually is because they assess disinhibition, heightened negative affectivity, and a tendency toward externalizing behavior (e.g., Skeem & Mulvey, 2001; Walters, 2003). Our results suggest that the PPI's Impulsive Antisociality Scale–by itself—holds promise in predicting offenders' institutional and community violence. This finding is appealing, given that the PPI (a) is a self-report tool that requires relatively few resources to administer and (b) does not directly reference past violent and criminal behavior, thereby avoiding potentially tautological explanations of risk (see Skeem & Cooke, 2010a, 2010b). If clinicians apply the PPI as a measure of violence risk, however, they should clearly conceptualize and communicate the basis of assessed risk. Broad traits like disinhibition are not specific to psychopathy, but place individuals at risk for involvement in violence (see Skeem et al., 2005). Attributions of risk to "disinhibition" or "psychopathy" will differentially inform both legal decision making and risk management strategies (see Skeem, Polaschek, & Manchak, 2009).

Psychopathy and Patterns of Motivation for Violence

The present study went beyond typical distinctions between instrumental and reactive violence to examine specific goals (or a lack thereof) that might motivate violent behavior. For example, Cleckley (1982) suggested that psychopathic individuals' violence was not calculated or goal directed but instead reflected "a relatively weak emotion breaking through even weaker restraints" (p. 150). Traits assessed by the PPI related somewhat more strongly to Cleckleyan "inadequately motivated" violence (Impulsive Antisociality r_p = .18) than those assessed by the PCL–R (all rs < .06).

More broadly, contrary to our prediction, impulsive or antisocial features were generally associated with lifetime patterns of violence that reflect instrumental qualities, whereas interpersonal and affective traits of psychopathy manifested few such associations. There was one exception to this general finding—at the subscale level only. Specifically, in keeping with all past facet-level research we could find (Laurell et al., 2010; McDermott et al., 2008; Walsh et al., 2009), the PCL–R interpersonal (but not affective) facet manifested a significant bivariate relationship with instrumental violence. Although this result is also consistent with a larger literature that links narcissism with aggression (see Baumeister, Bushman, & Campbell, 2000), the relationship was reduced to nonsignificance when the shared variance among the PCL–R facets was controlled. Perhaps more striking was the lack of a significant bivariate or partial relationship between the affective facet and instrumental violence, which counterintuitively suggests that "instrumental aggression does not reflect callousness and lack of emotional depth" (Walsh et al., 2009, p. 422; see also Laurell et al., 2010; McDermott et al., 2008).

The general pattern of PCL–R findings is consistent with PPI-based findings that Fearless Dominance is not associated with instrumental and premeditated physical aggression (Ostrov & Houston, 2008). However, it contradicts some PCL–R-based findings that the Interpersonal–Affective Scale as a whole is associated with instrumental violence (Hart & Dempster, 1997: 75 forensic inpatients; Vitacco et al., 2009: 152 forensic inpatients; Woodworth & Porter, 2002: 125 homicide offenders; see also Cornell et al., 1996, Study 2: 50 pretrial forensic patients). Differences between the results of the present study and previous PCL–R research may stem from differences in methodology (e.g., forensic vs. general offender samples; depth of information available to code violence; protection against criterion contamination in scoring the PCL–R). Given methodological variation across previous studies, it is difficult to identify consistent differences. The only feature that consistently distinguishes the present study from the four listed is its use of independent teams of interviewers to complete intensive assessments of PCL psychopathy or patterns of violence at separate time points, using information from interviews with participants along with reviews of official records.

Although more research is needed, the results of this study challenge the commonplace view that psychopathic individuals are driven toward predatory violence for material gain. In this study, interpersonal and affective traits of psychopathy related uniquely to few aspects of motivation for violence, and these chiefly represented a *deficit* rather than surplus in motivation. Specifically, for those with high scores on Interpersonal–Affective (PCL–R) or Coldheartedness (PPI) scales, violence rarely was based on fear (i.e., a perceived threat and desire to escape harm through physical

aggression). For those with high scores on Fearless Dominance (PPI), violence was rarely provoked by others. These deficits are in keeping with (a) Lykken's (1995) emphasis on the role of fearlessness in primary psychopathy, (b) Karpman's (1941, 1948) notion that primary psychopathy involves an emotional *deficit* rather than an emotional *disturbance,* and (c) research indicating that interpersonal-affective features are associated with decreased emotional arousal and reactivity (e.g., Harpur et al., 1989; Patrick, 1995; Vanman, Mejia, Dawson, Schell, & Raine, 2003).

In contrast with interpersonal and affective traits of psychopathy, disinhibition and antisocial behavior were associated with a surplus of instrumental motivation for violence, that is, violence that was instrumental overall (PCL–R), was driven less by anger (PPI) than clear goals (PCL–R) that included material gain (PCL–R), and tended to be directed toward acquaintances and strangers (PCL–R). Although most of these relationships involved the PCL–R, they are consistent with past PPI-based findings that impulsive antisociality is associated with instrumental and premeditated physical aggression (Ostrov & Houston, 2008), and with past PCL–R based findings that the Social Deviance Scale or Lifestyle or Antisocial Behavior subscales are associated with instrumental violence (Cornell et al., 1996; McDermott et al., 2008; Walsh et al., 2009).

What does this pattern of findings mean? Consider that (a) long criminal histories that consist mostly of nonviolent crime are associated with violence (Miethe & McCorkle, 2001), (b) violence often is characterized by both reactive and instrumental features (Berkowitz, 1993; Cornell et al., 1996), and (c) the PCL–R often references past violent and criminal behavior (Hare & Neumann, 2010; Skeem & Cooke, 2010b; Widiger, 2006). Given these facts, when an individual has a dense history of criminal behavior, that history is likely to include instrumental violence and to result in a high PCL–R score. If so, instrumental violence may be less attributable to the specific features of psychopathy than to more general disinhibitory traits that promote criminal behavior.

These general factors include general personality traits and social disadvantage. First, as noted earlier, the PCL's Social Deviance Scale seems to capture general traits that may predispose an individual toward a criminal lifestyle that happens to include instrumental violence (see Skeem et al., 2005). Second, according to theories that enjoy some empirical support (see Miethe & McCorkle, 2001), social disadvantage can contribute to criminal behavior that is intended to obtain goals that cannot be attained through traditional means. According to Agnew's (2002) strain theory:

> Money is perhaps the central goal in the United States. All people, poor as well as rich, are encouraged to work hard so that they might make a lot of money. Further, money is necessary to buy many of the things we want, including the necessities of life and luxury items. Many people, however, are prevented from getting the money they need through legal channels, such as work. . . . As a consequence, such people experience strain, and they may attempt to get money through illegal channels—such as theft, selling drugs, and prostitution. (paragraph 5 under Strain Theory)

These illegal channels may include instrumental violence directly (e.g., robbery), or may begin as nonviolent crimes (e.g., burglary, theft) that increase the likelihood of instrumental violence, if the victim resists or others attempt to intervene. These ideas are

consistent with Mealey's (1995) theory that secondary psychopaths develop antisocial tendencies chiefly because of factors that place them at a disadvantage for competing with others, including low socioeconomic status, poor intellectual and social skills, and disrupted family life (e.g., abuse, inconsistent discipline). She linked secondary psychopathy with crime that "may function to obtain desirable resources, increase an individual's status in a local referent group, or provide the stimulation that the more privileged find in more socially acceptable physical and intellectual challenges" (p. 582).

Taken together, the overarching message of these findings is that instrumental violence is not necessarily emblematic of psychopathy. Here, interpersonal and affective traits of psychopathy were associated with specific deficits in motivation for violence (e.g., fear or provocation), but disinhibition and antisocial behavior related to prototypic instrumental features (e.g., material gain,). Because criminal behavior in general, and instrumental violence in particular, are most likely the product of multiple interacting factors (e.g., disinhibition, social disadvantage, and social learning), clinicians and researchers should avoid conveying the impression that psychopathy-specific traits cause "predatory" violence. Moving beyond studying the predictive utility of measures of psychopathy to test competing hypotheses from alternative perspectives (e.g., psychological, sociological) will help researchers to more precisely explain violence and inform useful intervention and prevention strategies.

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