

**Improving Characterization of Psychopathy within the DSM-5 AMPD:
Creation and Validation of PID-5 Triarchic Scales**

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Supplemental Material

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Supplemental Method

Participants and Testing Procedures

Development Sample. This sample consisted of 210 volunteers (105 men, 102 women, and 3 who declined to report their gender) recruited from a large southeastern university, and from the community via advertisements on Craigslist. Participants were 20.8 years old on average ($SD = 4.22$), and the sample was 79% White, 11.9% African American, 5.7% Asian American, 1.4% of mixed race, and 1.9% who declined to report their race; additionally, 31% of participants reported that they were of Hispanic or Latino origins. All participants were recruited for an in-person laboratory testing session based on scores on the Disinhibition and Boldness scales of the Triarchic Psychopathy Measure (TriPM; Patrick, 2010). These scales of the TriPM were administered to undergraduate participants as part of a mass screening protocol, and to community participants via a secure online administration system, as part of a larger questionnaire protocol. Participants with TriPM Boldness and Disinhibition scores in the highest and lowest quartiles were oversampled for recruitment, with some representation of individuals in the middle 50% of scores as well. This sampling strategy was undertaken to ensure higher-than average levels of salient personality pathology in the study sample (for information on levels of psychopathy in the same sample, see Strickland, Drislane, Lucy, Krueger, & Patrick, 2013). Community participants were administered the Personality Inventory for DSM-5 (PID-5; Krueger, Derringer, Markon, Watson, & Skodol, 2012) as part of their online screening protocol; undergraduate participants completed a separate online questionnaire protocol for which they were either paid \$15 or offered course credit. All participants were administered the full TriPM via pencil-and-paper during the larger in-person laboratory testing session, which also included other questionnaires, interviews, and psychophysiological testing; for this testing session they

were paid \$10 per hour or provided the option of receiving some or all of their compensation in the form of course credit.

Validation Sample. This sample consisted of 240 community volunteers (100 women and 140 men) recruited using advertisements for “adventurous, fearless, charming, and carefree people who’ve led exciting lives.” This recruitment strategy has been shown in prior research to draw a sample of individuals with higher-than-average levels of psychopathic traits (Belmore & Quinsey, 1994; Dematteo, Heilbrun & Marczyk, 2006; Widom, 1977; Widom & Newman, 1985). Participants ranged in age from 18 to 75 years (M age: 26.9[10.1]), and the sample was 55% White, 36% African American, and 9% other or mixed ethnicity. All participants provided informed written consent. Participants completed the research battery, which included questionnaires and interviews, individually and in person. They were paid \$75 for their participation.

Construct Definition Form

Boldness. The construct of boldness encompasses tendencies toward social dominance and efficacy, self-confidence, immunity to life stress, adventure-seeking, tolerance of novelty and uncertainty, and the ability to remain calm and focused in the face of threat. High boldness is associated with social poise/assertiveness, persuasiveness, low trait anxiousness/neuroticism, bravery in unfamiliar or challenging situations, enjoyment of exciting activities that entail physical risk (e.g., thrill sports), and an ability to recover quickly from fearful or stressful situations.

High Scorer: Individuals who are high on the dispositional dimension of boldness present as confident, self-assured, and interpersonally assertive. They appear comfortable and at-ease in most social situations, including being the center of attention in a group. They converse with ease, present as interpersonally animated and engaging, and revel in telling stories. They possess

strong persuasive skills, and naturally assume leadership roles. In addition, individuals high in boldness report experiencing lower than average levels of fear or distress when faced with threatening, dangerous, or stressful situations. They enjoy the challenge of participating in adventurous activities that entail elements of danger or risk. They are optimistic, hard to discourage, recover quickly from misfortune, and may exhibit a nonchalant attitude toward the possibility of future problems. They appear relatively immune to many of the stresses of everyday life, and cope readily with (and recover rapidly from) emergencies or other serious adversity.

Low Scorer: Individuals low in boldness present as reserved or even shy, show a lack of confidence in encounters with new people or in groups, and become easily flustered or embarrassed in social situations. They find conversation with unfamiliar (and at times even familiar) people to be a strain, and tend to avoid situations involving performance or social evaluation. They are interpersonally submissive, lacking in persuasive skills, tend not to assume positions of leadership or authority, and feel awkward or uncomfortable when forced to accept roles of this kind. In addition, individuals low in boldness report high levels of distress or fear in relation to threatening, dangerous, or stressful situations, and may describe themselves as panicky or “jumpy” in unfamiliar situations. They perceive adventurous activities (particularly those entailing physical risk) as scary rather than enjoyable, and avoid participation in such activities. Low-bold individuals also tend to worry about possible misfortunes, exhibit heightened negative emotional reactivity to everyday stresses, and readily become overwhelmed and demoralized when confronted with emergencies or other serious adversity.

Meanness. The construct of meanness entails callous disregard and lack of concern for the welfare of others, a perception of oneself as superior, disdain for and lack of emotional

attachments with others, interpersonal exploitativeness, predatory/instrumental aggression, and deliberate cruelty or destructiveness. It is associated with arrogance, verbal derisiveness, aggressive competitiveness, contemptuousness toward authority, a lack of close personal relationships, active pursuit of pleasure or satisfaction without regard for/at the expense of others, insensitivity to the distress or pain of others, and attainment of excitement and empowerment through risk-taking, destructiveness, or cruelty toward people or animals.

High Scorer: Individuals who are high in meanness present as tough, egocentric, emotionally insensitive, and lacking in genuine affection for others. Their social relationships center around gaining things from others and demonstrating superiority through competition rather than affiliativeness and cooperation. They tend to be cynical and view others as essentially selfish and “dog-eat-dog,” and rely on this perspective to justify their own exploitative behavior. They exhibit indifference to the suffering or discomfort of others, in some cases to the point of expressing contempt for what they perceive as weakness. Individuals high in meanness may also derive excitement or feelings of power from acts of destruction or cruelty to others (particularly in the context of retaliation) or from engagement in dangerous or risky activities.

Low Scorer: Individuals low in meanness would be described as kind, affectionate, sincere, and sensitive to the feelings and needs of others. Their social relationships are based around genuine emotional connections and a perception of people as valuable in and of themselves. They prefer cooperating with others to achieve mutual goals rather than competing against others for common resources. Individuals low in meanness are compassionate and inclined to help others who are hurting or in need. Individuals of this type readily experience guilt or remorse if they do things to hurt or take advantage of others.

Disinhibition. The construct of disinhibition entails impulsivity, inadequate self-monitoring and behavioral restraint, disregard for distant consequences of behavior, failure to plan for the future, impatience, reduced capacity to cope with frustration or negative moods, and tendencies to respond to provocation/frustration with aggression. Disinhibition is associated with a lack of foresight/planfulness, insistence on immediate gratification, irresponsibility, distrust of others, aggressive behavior, untrustworthiness, and engagement in antisocial behaviors.

High Scorer: Individuals who are high in disinhibition present as impulsive, easily bored, unreliable, and quick-tempered. A history of rule-violating and/or law-breaking behavior is likely to be present. Individuals of this sort are prone to be dishonest and lie frequently in order to attain objectives or avoid consequences for misdeeds. Their lives are likely to be disorganized if not chaotic, with little or no evidence of planning for the future. Potentially life-altering decisions are made without appropriate forethought or deliberation. Obligations to employers, family, friends, or significant others are often neglected. Irresponsibility in the form of frequent tardiness, absenteeism, or irresponsible conduct at work and failure to pay debts is also characteristic of individuals high in disinhibition. Individuals of this sort are also likely to insist on immediate gratification of urges and desires and are prone to become impatient or irritable if their impulses are not satisfied quickly. More generally, they have difficulty regulating emotional states, particularly negative moods/emotions. They tend to be short-tempered and respond to frustration or provocation with overt displays of anger or aggression. They may resort to using mood-altering substances as a means of regulating negative emotions. They tend to perceive the world as unfair, distrust the motives of others, blame others for their problems, and feel that they have frequently been the victim of maltreatment by others.

Low Scorer: Individuals who are low in disinhibition would be considered playful and reflective, appropriately cautious, responsible, trustworthy, and honest. They typically adhere to rules and social norms, and avoid involvement in illegal activity. Their lives tend to be well-planned and organized, with important decisions made after due forethought and deliberation. Both formal and informal obligations to others are regarded as important and binding. Individuals low in disinhibition are also able to restrain impulses to behave aggressively or improperly, and are readily able to delay gratification. Even when upset or angered, they are able to keep their behavior in check and rarely (if ever) respond to provocation with overt aggression.

Criterion Measures and Hypotheses

Following development of the PID-5-Tri scales, we evaluated their convergent and discriminant validity in the two above-noted samples using criterion measures of various types, including measures of externalizing problems (i.e., substance use and antisocial behavior), other psychopathy measures, internalizing problems, and personality traits. The criterion measures available for each sample are listed (with accompanying citations) in Table 1, which also shows specific hypotheses for each measure.

Supplemental Results

Final PID-5 Triarchic Scales: Psychometric Properties

Intercorrelations among final versions of the PID5-Tri scales are presented, along with basic descriptives (Ms/SDs) and internal consistencies for each individual scale, in Supplemental Table B.

Evaluation of Effectiveness of PID-5 Triarchic Scales as Indicators of Latent Triarchic Model Dimensions

To further examine the convergence between scores on the PID5-Tri scales with alternative operationalizations of the triarchic model constructs, we evaluated the fit of a

correlated three-factor model (cf. Drislane & Patrick, 2017) in which higher-order factors of Boldness, Meanness, and Disinhibition were modeled using the PID-5-Tri scales along with the TriPM and MPQ-Tri scales as indicators. The fit of alternative CFA models specifying one and two factors were also evaluated as nested alternatives to the three-factor, triarchic model. All models were identified, indicating that a unique set of parameter estimates was obtained. Fit indices for the differing models are presented in Supplemental Table B.

Both a one-factor ($\chi^2[27] = 676.44$, RMSEA = .34, CFI = .41, and TLI = .21) and an uncorrelated two-factor model ($\chi^2[26] = 273.97$, RMSEA = .21, CFI = .77, and TLI = .69) provided inadequate fit to the data. By contrast, a three-factor model fit the data significantly better than either the one factor ($\Delta\chi^2[3] = 561.16$, $p < .001$) or the two-factor model ($\Delta\chi^2[2] = 158.69$, $p < .001$); however, the fit of this model was still inadequate ($\chi^2[24] = 215.28$, RMSEA = .13, CFI = .92, and TLI = .88). To address this, modification indexes (MIs) were evaluated and applied to improve the overall fit of the model (Drislane & Patrick, 2017). The largest MIs were between PID-5 Meanness and Disinhibition (39.37) and between TriPM-Meanness and Disinhibition (17.50). Including correlated residual terms for each of these scale pairs significantly improved model fit ($\Delta\chi^2[2] = 55.65$, $p < .001$), resulting in near-adequate fit for the modified three-factor model ($\chi^2[22] = 59.63$, RMSEA = .09, CFI = .96, and TLI = .94). The covariance among the latent factors was highly similar to that reported by Drislane and colleagues (2018): Latent meanness covaried moderately with latent disinhibition (.50) and more modestly with latent boldness (.20), whereas the covariance between latent boldness and disinhibition was minimal (.13). The three-factor model including two correlated error terms is depicted, with standardized factor loadings, in Supplemental Figure A.

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Supplemental Table A.

Criterion Measures and Hypotheses

Measure	Sample	Items/type	Content/subscales	Hypothesized associations with PID-5-Tri scales			Source of hypotheses
				Boldness	Meanness	Disinhibition	
Triarchic Psychopathy Measure (TriPM; Drislane et al., 2014)	Both	58-item/SR	Boldness, Meanness, Disinhibition	+ (Boldness, Meanness), 0 (Disinhibition)	+ (Boldness, Meanness, Disinhibition)	+ (Meanness, Disinhibition), 0 (Boldness)	Patrick & Drislane, 2015; Strickland et al., 2013
Multidimensional Personality Questionnaire-Triarchic Scales (MPQ-Tri; Brislin et al., 2015, 2017)	D	54-item/SR	Boldness, Meanness, Disinhibition	+ (Boldness, Meanness), 0 (Disinhibition)	+ (Boldness, Meanness, Disinhibition)	+ (Meanness, Disinhibition), 0 (Boldness)	Brislin et al., 2015, 2017
Trait Fear Inventory (TFI; Kramer et al., 2012)	D	45-item/SR	Measures fear/fearlessness with higher scores reflecting greater dispositional fearfulness	-	0	+	Drislane et al., 2015
Short Drug Abuse Screening Test (SDAST; Skinner, 1982)	D	20-item/SR	Drug-related problems	0	0	+	Brislin et al., 2015; Nelson et al., 2016; Venables & Patrick, 2012
Alcohol Dependence Scale (ADS; Skinner & Allen, 1982)	D	29-item/SR	Alcohol-related problems	+	0	+	Brislin et al., 2015; Nelson et al., 2016; Venables & Patrick, 2012
Positive and Negative Affect Schedule (PANAS; Watson, Clark & Tellegen, 1988)	D	20-item/SR	Trait version; positive affect (PA) and negative affect (NA)	+ (PA), - (NA)	0 (PA, NA)	+ (NA), - (PA)	Brislin et al., 2015
State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983)	D	20-item/SR	Trait anxiety	-	0	+	Brislin et al., 2015; Nelson et al., 2016
State-Trait Anger Expression Inventory (STAXI; Spielberger, 1988)	D	20-item/SR	Total trait anger, which encompasses all dispositional aspects of anger (inward experience of anger, outward expression of anger, and ability to regulate anger outbursts)	0	+	+	Patrick & Drislane, 2015
Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996)	D	20-item/SR	Past two weeks depressive symptoms	-	0	+	Brislin et al., 2015; Nelson et al., 2016
Psychopathic Personality Inventory-Revised (PPI-R; Lilienfeld & Widows, 2005)	V	154-item/SR	Fearless Dominance (FD); Self-Centered Impulsivity (SCI); Coldheartedness (CH)	+ (FD), 0 (SCI, CH)	+ (SCI, CH), 0 (FD)	+ (SCI), 0 (FD, CH)	Drislane et al., 2014; Patrick & Drislane, 2015; Sellbom & Phillips, 2013

Psychopathic Personality Inventory-Revised Triarchic Scales (PPIR-Tri; Hall et al., 2014; Sellbom, Wygant, & Drislane, 2015)	V	66-item/SR	Boldness, Meanness, Disinhibition	+ (Boldness, Meanness), 0 (Disinhibition)	+ (Boldness, Meanness, Disinhibition)	+ (Meanness, Disinhibition), 0 (Boldness)	Drislane & Patrick, 2017; Hall et al., 2014; Sellbom et al., 2015
Levenson Self-Report Psychopathy Scale (LSRP; Levenson, Kiehl, & Fitzpatrick, 1995)	V	26-item/SR	Total; F1, F2; Egocentricity, Callousness, Antisociality	+ (Total, F1, Egocentricity), 0 (Callousness, Antisociality)	+ (Total, F1, F2, Egocentricity, Callousness, Antisociality)	+ (Total, F1, F2, Egocentricity, Callousness, Antisociality)	Drislane et al., 2014; Sellbom & Phillips, 2013
Interpersonal Reactivity Index (IRI; Davis, 1983)	V	28-item/SR	Empathic Concern, Personal Distress, Perspective Taking, Fantasy	0 (Empathic Concern, Perspective Taking, Fantasy), - (Personal Distress)	- (Personal Distress, Empathic Concern, Perspective Taking, Fantasy)	+ (Personal Distress), 0 (Fantasy), - (Perspective Taking, Empathic Concern)	Patrick & Drislane, 2015
Antisocial Behavior Questionnaire (ABQ; Wall, Sellbom, & Goodwin, 2013)	V	16-item/SR	Total score on delinquency and antisocial acts	+	+	+	Nelson et al., 2016; Venables & Patrick, 2012
Fear Questionnaire (FQ; Marks & Matthews, 1979)	V	15-item/SR	Total score of phobic avoidance	-	-	0	Drislane et al., 2015
Background Interview	V	0-4 rating/ Structured Interview	Alcohol Use, Marijuana Use, Other Drugs	+ (Alcohol Use), 0 (Marijuana Use, Other Drug Use)	0 (Alcohol Use, Marijuana Use, Other Drug Use)	+ (Alcohol Use, Marijuana Use, Other Drug Use)	Venables & Patrick, 2012

Note: D = Development Sample; V = Validation Sample; SR = Self-report; + = positive hypothesized association; - = negative hypothesized association; 0 = negligible hypothesized association.

Supplemental Table B.*PID-5 Triarchic Scales: Intercorrelations and Sample Descriptives, by Participant Sample*

Development Sample ($N = 210$)				
	PID-5 Boldness	PID-5 Meanness	M (SD)	$Alpha$
PID-5 Boldness	----	----	1.55 (.48)	.83
PID-5 Meanness	.20*	----	.69 (.46)	.89
PID-5 Disinhibition	.12	.48**	.74 (.51)	.88
Validation Sample ($N = 192$)				
	PID-5 Boldness	PID-5 Meanness	M (SD)	$Alpha$
PID-5 Boldness	----	----	1.74 (.39)	.66
PID-5 Meanness	.27**	----	.72 (.47)	.89
PID-5 Disinhibition	.26**	.51**	.78 (.45)	.85

Note. M = mean, SD = standard deviation.

* $p < .01$, ** $p < .001$.

Supplemental Table C.*Model Fit Indices for Alternative CFA Models in Development Sample*

<i>Model</i>	χ^2	<i>df</i>	<i>p</i>	RMSEA	CFI	TLI	BIC	χ^2 Diff	<i>df</i> Diff	<i>p</i> -value
1. 1 Factor	676.44	27	<.001	.337	.409	.212	-232.67	561.16	3	<.001 (1 vs. 3)
2. 2 Factor (Boldness and Externalizing)	273.97	26	<.001	.212	.774	.688	-629.78	158.69	2	<.001 (2 vs. 3)
3. 3 Factor Triarchic Model	115.28	24	<.001	.134	.917	.875	-777.21	--	--	--
4. 3 Factor with 2 Mod. Ind.	59.63	22	<.001	.092	.964	.941	-820.59	55.65	2	<.001 (4 vs. 1)

Note: $N = 210$; RMSEA = root mean squared error of approximation; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; Mod. Ind. = Modification Indices; *df* = degrees of freedom; BIC = Bayesian Information Criterion. The best fitting model is highlighted in bold font.

Figure Caption

Figure A. Three-factor confirmatory model of the triarchic psychopathy constructs with standardized parameter estimates for the Development Sample ($N = 210$). PID-5 = Personality Inventory for DSM-5; MPQ = Multidimensional Personality Questionnaire; TriPM = Triarchic Psychopathy Measure; Disin = Disinhibition; Mean = Meanness; Bold = Boldness.

Supplemental Figure A. *CFA Model of Latent Triarchic Dimensions.*