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Social status as one key indicator of successful psychopathy: An initial empirical investigation



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ABSTRACT

Psychopathy is a personality disorder that researchers have subdivided into two types: successful and unsuccessful. Nevertheless, little headway has been made regarding how to conceptualize and operationalize success. We consider various accounts of success from the existing literature and make the case for a two-dimensional view of successful psychopathy. Specifically, we contend that successful psychopathy can be conceptualized with two conditions in mind: (a) high social status and (b) lack of serious antisocial behavior. We emphasize that high social status, best described using socioeconomic status (SES), has been largely overlooked in the literature. We tested this idea using a sample of 591 participants who received measures of the triarchic model of psychopathy (i.e., boldness, meanness, and disinhibition), SES, and personality dysfunction. The results demonstrated that, as predicted, the putatively adaptive features of psychopathy (i.e., boldness) were positively related to SES and personality functioning. In contrast, the putatively maladaptive psychopathy features disinhibition and meanness were negatively related to personality functioning, and disinhibition was negatively related to SES. The relevance of boldness to psychopathy and the benefits of conceptualizing success as a continuous variable are discussed.

1. Introduction

Psychopathy is a personality disorder (albeit one not formally recognized in the main text of the *DSM-5*; American Psychiatric Association, 2013) characterized by, among other features, glibness, grandiosity, callousness (lack of empathy), dishonesty, irresponsibility, and largely unmotivated antisociality. The triarchic model of psychopathy (Patrick, Fowles, & Krueger, 2009) conceptualizes psychopathy in terms of three broad phenotypic domains that, in conjunction, comprise the full condition of psychopathy. These domains are boldness (i.e., social dominance, fearlessness, emotional resilience, and stress immunity), meanness (i.e., aggressiveness, social detachment, and callousness), and disinhibition (i.e., impulse control deficits and externalization of blame).

Traditionally, psychopathy has been studied mostly in forensic samples, especially those recruited from prisons and jails, and to a

lesser extent, non-forensic samples, such as those recruited from community and college samples. Nevertheless, beginning with Widom (1977), who placed advertisements for seemingly adaptive psychopathy traits (e.g., adventurousness, self-promotion) in underground Boston newspapers, the study of "subclinical" or "successful psychopathy" began in earnest. Both successful and unsuccessful psychopathy have been difficult to define, but the former has received less attention.

Particularly relevant in this literature is the often unappreciated lack of consensus regarding what constitutes success. The forensic and clinical psychopathy (i.e., unsuccessful) literatures are arguably more cohesive than the successful psychopathy literature, but they are still marked by heated debates surrounding, among other issues, the relevance of criminal behavior to psychopathy (Hare & Neumann, 2010; Skeem & Cooke, 2010): Is such behavior central to the construct or merely a correlated behavioral outcome? This issue is also relevant to the successful psychopathy literature, as will become evident in

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¹ The word "adaptive" in this context does not refer to evolutionary function, but rather what DeYoung and Krueger, (in press) refers to as cybernetic function (or dysfunction). That is, it refers to the extent to which an individual succeeds or fails to make progress toward important goals.

² "Successful psychopathy" has also been referred to as subclinical, noninstitutionalized, or adaptive psychopathy. Successful psychopathy can be viewed as the "default category" under study when the sample is not forensic or clinical. Throughout the present manuscript, we use the term "successful psychopathy."

subsequent sections.

In recent years, the psychopathy literature, and the personality disorder literature more generally, has become much more integrated with the normal personality literature (Hopwood et al., 2018; Markon, Krueger, & Watson, 2005), which has led to an influx of papers on successful psychopathy. This rapidly growing interest is most evident in the emerging Dark Triad literature (i.e., Machiavellianism, narcissism and psychopathy; Paulhus & Williams, 2002). A Google scholar search using the words "Dark Triad personality" (conducted on 2018-03-12) generated 17,600 hits since 2002. This newly integrated literature stems in part from research on the Five Factor Model (FFM; McCrae & John, 1992) or "Big Five" (Goldberg, 1990), which is a taxonomy for organizing both normal and abnormal personality traits into five broad domains (i.e., extraversion, conscientiousness, neuroticism, agreeableness, and openness to experience; e.g., De Fruyt et al., 2013). Using FFM terminology, global psychopathy is characterized by low levels of neuroticism, with the exception of the facets of angry hostility and impulsiveness, which are both pronounced in psychopathic individuals. It is also associated with high levels of some facets of extraversion, in particular assertiveness and excitement seeking, but also low levels of others, especially warmth. Furthermore, openness to emotions is low, and openness to actions is high. All facets of agreeableness are low. The only facet of conscientiousness on which psychopathic individuals typically obtain high scores is competence (which may be an artifact of self-enhancement on self-report measures), with dutifulness, self-discipline, and deliberation being unusually low (see, Brinkley, Newman, Widiger, & Lynam, 2004; Lynam & Miller, 2015).

Although an FFM approach allows for nuanced interpretations of psychopathy profiles (Lynam & Miller, 2015), a gap in the literature remains, namely, that a working definition of successful psychopathy remains elusive. Most current research refers to successful psychopathy without anchoring the term in any particular conceptualization, an omission that that has contributed to considerable ambiguity in the literature. The present study is an attempt to provide a way forward in conceptualizing, operationalizing, and measuring successful psychopathy. We achieve this goal via two steps. First, we analyze six alternative definitions of successful psychopathy to arrive at a proposed twodimensional view of successful psychopathy. We particularly emphasize that socioeconomic success has been largely overlooked in the literature. Second, we present data on the relations among the triarchic model domains of psychopathy, core adaptive personality functioning, and socioeconomic status (SES) to examine the hypothesis that various psychopathy phenotypes are differentially indicative of success in terms of elevated social status.

2. Conflicting conceptualizations of success

An array of conflicting definitions has been proposed in an effort to define successful psychopathy (Gao & Raine, 2010; Glenn & Raine, 2014). Based on previous literature, we identified six definitions of successful (or subclinical) psychopathy; each has either been previously used in research, been influential in the overarching literature, or both (see Table 1). There is considerable inconsistency among the definitions, which generates confusion in the literature, especially given that researchers are often not explicit about which concepts they have in mind. Without a reasonably explicit working definition of success, theoretical advances may be impeded given that they will be saddled with an ambiguous and perhaps heterogeneous concept.

The definitions differ with regards to whether they entail categorical or dimensional conceptualizations of success. Definitions 1, 2, 4, and 5 entail categorical thinking (i.e., successful versus unsuccessful), whereas 3 and 6, at least implicitly, construe success continuously (i.e., degrees of success). We argue that a dimensional approach to success is preferable from conceptual and psychometric perspectives given that such an approach tends to increase both reliability and validity relative to a discrete approach (Markon, Chmielewski, & Miller, 2011).

Table 1 An overview of definitions of successful psychopathy.

_	No.	Definition
-	1.	Individuals scoring high in psychopathy who have never been convicted of a crime.
	2.	Individuals scoring high in psychopathy who are not incarcerated.
	3.	Individuals with psychopathic traits and high social status.
	4.	Serial killers who have escaped detection for a significant period.
	5.	Individuals scoring high in psychopathy who refrain from serious antisocial
		behavior.

Note. Definitions 1-4 are adopted from Glenn and Raine (2014, p. 149). Definition 5 is adopted from Hall and Benning (2006), and Definition 6 originates in Cleckley (1941/1988).

Individuals scoring high in psychopathy and with high intelligence.

We next analyze these differing and, in some cases, largely incompatible definitions and offer a suggestion regarding which definition(s) is (are) preferable for future studies. A full delineation and comparison of these definitions is useful for two reasons: (a) to our knowledge, because such a comparison has never been undertaken in the published literature, our analysis should provide a useful resource for evaluating the often-confusing successful psychopathy literature and (b) it allows us to consider the strengths and shortcomings of competing definitions. In addition, our taxonomy of success may permit future researchers conducting meta-analyses to code competing definitions of successful psychopathy as moderators of effect size. As Definition 3 (cf. Table 1) is particularly important for our hypotheses and analyses, we examine it last and with reference to the other definitions.

2.1. Six definitions of successful psychopathy

Definitions 1, 2 and 5 are similar insofar as they all pertain to criminality or antisociality, although they differ in nontrivial ways as well. Definition 1 ("Individuals scoring high in psychopathy who have never been convicted of a crime") describes an intuitive conceptualization of successful psychopathy, as its opposite (i.e., unsuccessful, or clinical psychopathy) is strongly related to criminal behavior and conviction (Kiehl & Hoffman, 2011). The assumption is that individuals who are not convicted (or perhaps not caught) for their crimes are somehow different from those who are. This position is predicated on whether some psychopathic individuals are equipped with compensatory traits (e.g., high intelligence, intact impulse control) that either lead to less serious (e.g., less violent) criminality or criminality for which one is less likely to be convicted. This conceptualization, although defensible, has its drawbacks. First, it is unlikely that the criminal behavior of psychopaths generates straightforward results in terms of conviction or non-conviction: There are many levels of "noise" in the justice system (e.g., which country, state, type of crime) that can influence who is convicted, and for what. A corollary problem is that a large proportion of criminal activity goes undetected (Elliott, 1995). Arguably, relatively little variance of psychological relevance will be left when all other factors have been considered. Second, to be a useful definition, additional specificity is needed regarding what temporal domain is relevant for ascribing the status "successful." If two people commit the same type of crimes at the same rate - a 20-year-old and a 60-year-old - surely the 60-year-old has been more successful according to this definition, insofar as he or she has evaded capture for a longer time period. If the 60-year-old is convicted at some point, does he or she suddenly lose the status of being successful?

Regarding Definition 2 ("Individuals scoring high in psychopathy who are not incarcerated"), few clinical (i.e., "unsuccessful") psychopaths are imprisoned at all times. Thus, this description will merely reflect a shift in status that is time-contingent and is not necessarily psychologically meaningful. In other words, such a definition relies heavily on time having passed, as opposed to one or more underlying dispositions. This description creates a genuine possibility that an individual is considered an unsuccessful psychopath on Day 1, and a successful psychopath on Day 2, upon having been released from a criminal or psychiatric institution. Such a description leaves little room for psychological theory, as it negates the possibility of explaining why or how the successful psychopath differs from the unsuccessful psychopath. Needless to say, it also suffers from serious problems with temporal stability, as manifested psychometrically in test-retest reliability.

Definition 4 ("Serial killers who have escaped detection for a significant period") runs counter to Definition 5 (Hall & Benning, 2006), as serial killers are self-evidently highly antisocial (but not always psychopathic, see e.g., Lilienfeld, 1994; Skeem, Polaschek, Patrick, & Lilienfeld, 2011; but see Gao & Raine, 2010, for an alternative view). There are also practical problems. Very few people, indeed even very few psychopaths, are serial killers. For example, the Federal Bureau of Investigation (2005) reported that less than 1% of U.S. homicides can be attributed to serial offenders. Further, an unknown subset of this group escapes detection for a significant period of time. It seems that, by definition, this group of individuals are unsuccessful, insofar as they have experienced a period of success (i.e., avoided detection), with subsequent permanent lack of success (i.e., having been apprehended). Thus, this definition misses the mark. For both practical and theoretical reasons, this group of individuals is probably more appropriate to study as serial killers, and not as a special subset of psychopaths.

As noted previously, Definition 5 ("Individuals scoring high in psychopathy who refrain from serious antisocial behavior") is similar to Definitions 1 and 2, but is perhaps more psychologically interesting, as refraining from antisocial behavior probably relates to largely intact executive functions and cognitive control, and a lack of problems with disinhibition; attributes that are conspicuously absent in many or most clinical psychopaths (Patrick et al., 2009). One drawback is that what constitutes "serious" antisocial behavior remains unspecified. Although some have argued that antisocial behavior should not be central to the concept of psychopathy (Skeem & Cooke, 2010), there are also good reasons for why it should not be eliminated (Hare & Neumann, 2010). Ultimately, we construe most serious antisocial behavior as aggressive in nature. Thus, we argue that high levels of psychopathic traits and absent or limited aggressive antisocial behavior (cf. Burt, 2009) can be a useful indicator of successful psychopathy. Conceptualized in this way, this definition can be assessed on a continuum, so that a lesser degree of aggressive antisociality indicates greater success.

Regarding Definition 6 ("Individuals scoring high in psychopathy and with high intelligence"), most studies have revealed that intelligence does not display marked associations in either direction with psychopathy or psychopathy subdimensions (e.g., Walsh, Swogger, & Kosson, 2004; but see also Olderbak, Mokros, Nitschke, Habermeyer, & Wilhelm, 2018). One study provided evidence of small correlations between IQ and various self-reported psychopathy subdimensions in a large undergraduate sample (Watts et al., 2016). Another study laid out a detailed account of the relation between crime and exceptionally high IQ, where the traditional view that criminal behavior is largely associated with lower IQ was questioned. Specifically, Oleson (2016) compared a group of very high IQ individuals (n = 465, $M_{IO} = 148.7$) with individuals in a student sample (n = 756, $M_{IO} = 115.4$) and found that the high IQ group exhibited a higher crime rate relative to comparison participants (cf. Boccio, Beaver, & Schwartz, 2018). Although such accounts are certainly interesting, and should be investigated more closely, many issues remain, including the sole reliance on selfreported crimes (Oleson, 2016). Factors other than intelligence also need to be considered, such as emotion regulation and intact family relations, which are both predictors of refraining from antisocial behavior (Jaffee, Moffitt, Caspi, & Taylor, 2003; Trentacosta & Shaw, 2009). In conclusion, high intelligence may in some cases be a

moderating factor in conjunction with psychopathy, but by itself, seems unlikely to make someone successful.

We argue that Definition 3 ("Individuals with psychopathic traits and high social status") has been largely overlooked in the previous literature, which is surprising given that it is perhaps the most intuitive definition of success. Definition 3 has the important benefit that there is a large literature on indicators of social status, namely SES. SES measures one's overall position in society, often operationalized using years of education, income, and health as indicators (e.g., Oakes & Rossi, 2003). In addition, SES is associated with what food and art people consume, participation in social institutions and social networks (e.g., schools and social clubs), and which types of activities people undertake (Kraus & Keltner, 2009). Higher SES is also related to perceived trustworthiness and thus extends to reputation, perhaps because trust violations carry greater costs (e.g., social punishments) for high status individuals (Keijzer & Corten, 2017, June 16). Thus, the benefits of using SES to operationalize success are two-fold. First, SES is defined by broad concepts that are highly indicative of success (e.g., high education, high income, and good health), and second, SES has excellent nomothetic span (Whitely, 1983), meaning that it bears an extensive network of relations with other theoretically relevant variables. For instance, literature documents robust relations between SES and academic achievement (Sirin, 2005), decreased risk for depression (Lorant et al., 2003), self-esteem (Twenge & Campbell, 2002), physical health (Agardh, Allebeck, Hallqvist, Moradi, & Sidorchuk, 2011; Winkleby, Jatulis, Frank, & Fortmann, 1992), low levels of adverse life events (McLeod & Kessler, 1990), and intelligence (Lubinski, 2009).

This definition is not without its problems, however. The problem of status change across time remains, as individuals with high social status sometimes descend the socioeconomic ladder. Finding a definition that is always clear-cut or infallible is probably impossible, which favors a conceptualization of success as a complex construct with multiple fallible indicators. In other words, successful psychopathy can be conceptualized much like psychological constructs are customarily conceptualized, that is, in terms of a nomological network (i.e. in a system of predictions linking constructs to external correlates, constructs to other constructs, and external correlates to other external correlates; see Cronbach & Meehl, 1955).

2.2. A two-dimensional view of success

To summarize, we argue that high social status (i.e., socioeconomic success) has been largely overlooked in the literature and that this neglect is problematic, as socioeconomic success is perhaps the most common and intuitive measure of an individual's success. Conceptualizing success using only one of the definitions may be overly strict, so we argue that success is an outcome that can and probably should be operationalized in multiple ways. Accordingly, we suggest that successful psychopathy can be clarified if conceptualized as a dimensional variable constituted by high levels of psychopathic traits and at least one of two conditions: (a) high social status, (b) absence of, or limited, aggressive antisocial behavior. We further posit that (c), high levels of intelligence or other compensatory cognitive or personality functions (e.g., high levels of executive functioning, low levels of disinhibition) are potential moderators of success worthy of further study, although we do not examine these moderators in the present study.

For the purposes of the present study, we propose that an individual fitting condition (a) outlined earlier has either managed to maintain (if born into a high SES family) high SES or advance into high SES in adulthood. We posit that this state of affairs is facilitated by possessing high levels of traits predisposing one to be bold (i.e., social dominance, fearlessness, emotional resilience, and stress immunity), higher than average meanness, and relatively low levels of disinhibition. This conceptualization dovetails with a view of successful psychopathy as essentially adaptive, in the sense that such an individual tends to rise toward the top of social hierarchies, despite (or in limited cases,

perhaps because of) behaving immorally.

3. The present study

The aforementioned conceptualization dovetails well with the triarchic model of psychopathy (Patrick et al., 2009). This model encompasses the domains of boldness, meanness, and disinhibition, which are considered singly necessary and jointly sufficient conditions for the full condition of psychopathy. Boldness, in particular, is potentially relevant to successful psychopathy given its conceptual and empirical linkages to adaptive and high-functioning personality characteristics. Nevertheless, the relevance of boldness to psychopathy has been challenged by some scholars (Gatner, Douglas, & Hart, 2016; Miller, Lamkin, Maples-Keller, & Lynam, 2016; Miller & Lynam, 2012). In contrast, others have defended the importance of boldness to psychopathy, especially to successful psychopathy (Berg, Lilienfeld, & Sellbom, 2017; Lilienfeld et al., 2012; Lilienfeld et al., 2016). In notable respects, this conceptual disagreement traces back to historical accounts of psychopathy (see Miller & Lynam, 2015). For instance, Cleckley (1941/ 1988) emphasized superficial charm, apparent intelligence, positive first impressions, and relative immunity to neurotic symptoms and suicidal behavior as important psychopathic features, while deemphasizing violence and aggression. In contrast, in Hare's seminal contributions, including the Psychopathy Checklist-Revised (PCL-R; Hare, 1991-2003) - which was influenced by Cleckley's work - greater attention was paid to antisocial and, to a lesser extent, criminal behavior (Hare & Neumann, 2010).

Previous studies using a well-validated self-report measure of the triarchic model, the Triarchic Psychopathy Measure (TriPM; Drislane, Brislin, Jones, & Patrick, 2018; Patrick et al., 2009), have shown that boldness is highly positively correlated with emotional stability (r = 0.73; Lilienfeld et al., 2016), negatively with all facets of neuroticism with the exception of impulsivity, positively correlated with surgent extraversion and openness, negatively correlated with straightforwardness and modesty (both facets of agreeableness), as well as moderately positively correlated with competence (Poy, Segarra, Esteller, López, & Moltó, 2014). Meanness is highly negatively correlated with agreeableness, positively correlated with angry hostility and excitement-seeking, and negatively related to conscientiousness (Poy et al., 2014). Finally, disinhibition is positively correlated with neuroticism, and negatively correlated with agreeableness and conscientiousness (Poy et al., 2014). Taken together, boldness generally manifests clearer relations with traditionally "adaptive traits," such as emotional stability (cf. Lykken, 1957), extraversion, and openness, whereas meanness and disinhibition manifest clearer relations with traditionally "maladaptive traits," such as neuroticism, disagreeableness, and low conscientiousness.

In the present study, we adopt the view that boldness is highly relevant for successful psychopathy as individuals with the maladaptive traits of meanness and disinhibition are much less likely to attain success, as conceptualized here, than is someone with high levels of boldness. Indeed, psychopathy without boldness largely resembles antisocial personality disorder (cf. Murphy, Lilienfeld, Skeem, & Edens, 2016; Venables, Hall, & Patrick, 2014; Wall, Wygant, & Sellbom, 2015). However, boldness by itself cannot be a sole indicator of psychopathy, as trait boldness largely reflects high-functioning personality characteristics. Thus, all three domains are necessary for the full clinical picture of psychopathy, although the relative balance of each domain almost surely varies across different variants of psychopathy. Additionally, we posit that personality dysfunction constrains individuals' likelihood of success. Better functioning individuals will be more likely to rise to the top of the social ladder compared with more poorly functioning individuals (cf. Lahey, 2009).

On the basis of the arguments and research presented, we posit three hypotheses aimed at testing whether the triarchic model can differentiate successful from unsuccessful psychopathy, as conceptualized in the present study:

Hypothesis 1. Boldness is positively related to SES and negatively related to personality dysfunction.

Hypothesis 2. Meanness is unrelated to SES and positively related to personality dysfunction.

Hypothesis 3. Disinhibition is negatively related to SES and positively related to personality dysfunction, to a greater degree than meanness.

4. Method

4.1. Participants

Participant data (N = 591, $n_{\text{men}} = 241$, $n_{\text{women}} = 350$) were collected through Amazon's Mechanical Turk (MTurk; for a review of this data collection technique, see Thomas & Clifford, 2017), which has been used successfully in the study of personality disorder traits (Miller, Crowe, Weiss, Maples-Keller, & Lynam, 2017). The MTurk workers, who were limited to U.S. residents, received \$3.50 as compensation for participating. The median completion time was $44.35 \, \text{min} \, (M = 58.39,$ SD = 58.63). Four control questions (e.g., "I have used a computer in the past 2 years", "I am president of the United States") were added to the survey as inattention checks. A total of 26 participants were excluded from the final analyses on the basis of these checks.³ Participants' mean age was 39.57 years (SD = 12.28). Although there are limitations to MTurk research - perhaps most notably the participants' physical isolation leading to a lack of researcher control - the use of a community sample is preferable to a student sample for our present study, as social success in the former sample is generally attained later in life.

4.2. Measures

4.2.1. SES

Four items were collected to assess SES. These items were level of education, household income, general health, and finally one item regarding perceived SES. Education was assessed on a scale with 12 steps, ranging from 1 = No schooling completed to 12 = Doctorate degree. The median was 9 (M = 8.01, SD = 1.66), which corresponded to the category Bachelor's degree. Household income was also measured in 12 steps, starting with 1 = Less than \$10,000 and increasing in \$10,000 increments to 12 = \$150,000 or more. General health was rated on a 5point scale, where 1 = Excellent and 5 = Poor. Participants' scores on this scale were reverse-coded (such that higher scores indicate better health) prior to analysis. The mean value for the health item was 3.51 (SD = 0.96). Finally, the item assessing perceived subjective status was collected using the MacArthur Scale of Subjective Social Status (e.g., Adler, Epel, Castellazzo, & Ickovics, 2000), which is a visual presentation of a ladder with 10 rungs onto which participants are asked to place themselves. Regarding dimensionality of the items, a parallel analysis (Horn, 1965; Hoyle & Duvall, 2004), which uses random data simulation to estimate the number of components or factors in a dataset, suggested the extraction of 1 component. Nevertheless, when calculating Cronbach's alpha, it was evident that the health item lowered the internal consistency (from 0.66 to 0.64). Thus, we omitted the health item and created a composite score by computing the sum of the other three items. 4 Descriptive statistics and reliability coefficients for

³ Missing values were very sparse and thus handled by using complete observations in all analyses. The number of observations is 584 or more in all analyses.

⁴When conducting an exploratory factor analysis, the item assessing health loaded on a second factor. Dropping indicators on a post-hoc basis can be questionable. However, given that the SES questions were not part of a

Table 2
Descriptive statistics for TriPM domains, LPFS-SR, and SES.

	M	SD	Median	α	ω	Skewness	Kurtosis
Boldness	1.48	0.52	1.53	0.88	0.89	-0.21	0.01
Meanness	0.54	0.47	0.42	0.92	0.92	1.31	1.96
Disinhibition	0.60	0.45	0.50	0.89	0.89	1.20	1.90
TriPM total	0.87	0.31	0.81			1.01	2.34
LPFS identity	86.10	24.35	85.50	0.88	0.89	0.19	-0.52
LPFS self-direction	58.60	18.33	58.50	0.84	0.86	0.40	-0.54
LPFS empathy	43.56	13.54	43.00	0.79	0.83	0.37	-0.30
LPFS intimacy	69.97	22.19	69.00	0.87	0.89	0.51	0.02
LPFS total	258.39	71.30	255.00	0.95	0.96	0.25	-0.50
Education	8.01	1.66	9.00			-0.35	-0.54
Income	5.99	3.11	6.00			0.26	-1.01
Ladder	4.85	1.64	5.00			-0.05	-0.46
SES total	18.85	5.21	19.00	0.66	0.76	0.10	-0.81

Note α = Cronbach's alpha, ω = Coefficient omega (Kelley, 2018; McNeish, 2018). Reliability coefficients for TriPM Total is not reported because all subscales are not positively correlated.

all measures are presented in Table 2. Cronbach's alpha has been the subject of considerable criticism (e.g., McNeish, 2018). Thus, coefficient omega (ω), which rests on more realistic assumptions, was calculated using the R library MBESS (Kelley, 2018). All scale intercorrelations are presented in Table 3.

4.2.2. Triarchic Psychopathy Measure

The Triarchic Psychopathy Measure (TriPM; Blagov, Patrick, Oost, Goodman, & Pugh, 2016; Patrick, 2010) is a 58-item inventory measuring three central features of psychopathy: boldness, meanness, and disinhibition. Each item is scored on a 4-point Likert scale ranging from 0 = false to 3 = true. Mean scores were calculated for each domain. The mean scores were similar to those collected from student samples (Donnellan & Burt, 2016).

4.2.3. Levels of Personality Functioning Scale-Self Report (LPFS-SR; Hopwood, Good, & Morey, 2018; Morey, 2017)

The LPFS-SR is a recently developed self-report questionnaire used to assess severity of personality dysfunction. The 80 items are answered on a 4-point scale ranging from *totally false, not at all true* to *very true*. Each item is weighted based on a severity framework, with five levels of increasing severity (Level 0 indicates healthy personality and is thus negatively weighted). The items are weighted accordingly: Level 0 items are weighted -0.5, Level 1 items ("some impairment") are weighted +0.5, Level 2 items ("moderate impairment") are weighted +1.5, Level 3 items ("severe impairment") are weighted +2.5, and Level 4 items ("extreme impairment") are weighted +3.5. The LPFS-SR allows for calculation of a total score and four facet scores, tapping the domains identity, self-direction, empathy, and intimacy. One item (item 76, which belongs to the facet of identity) yielded a negative item-total correlation but were nevertheless retained in further analyses. Removing it did not alter the results significantly.

4.3. Analyses

We proceeded in testing our three hypotheses in two major steps: First by presenting descriptive statistics and correlations among measures (see Tables 2 and 3), and second, by presenting a structural equation model (SEM), whereby the relations among SES, LPFS-SR, and TriPM are analyzed. The rationale behind the model is such that the triarchic model domains are used as predictors of SES and personality

(footnote continued)

standardized questionnaire, an exploratory approach can be justified. To address these concerns, we tested models with both three and four SES items in the subsequent SEMs.

dysfunction, respectively.

The model was estimated using maximum likelihood estimation with robust (Huber-White) standard errors and a scaled test statistic, which is appropriate when multivariate normality is not met. This approach assumes normally distributed continuous latent variables. All analyses were conducted in the R library *lavaan* version 0.6–3 (Rosseel, 2012) using the MLR estimator. Because the χ^2 statistic is sensitive to sample size, we did not use it as a sole indicator of model fit. Instead, we used the robust versions of the Tucker-Lewis index (TLI; Tucker & Lewis, 1973), comparative fit index (CFI; Bentler, 1990), root mean square error of approximation (RMSEA; Steiger, 1990), and standardized root mean square residual (SRMR; Bentler, 1995). Even perfect model fit does not guarantee correct model specification, however, as there also exist other equivalent models, and also nonequivalent but potentially well-fitting alternative models (Tomarken & Waller, 2003).

5. Results

First, we examined the bivariate relations among the measures of the three triarchic constructs (see Table 3). Gignac and Szodorai (2016) established effect size guidelines, where r = 0.10, r = 0.20, and r = 0.30 were recommended as relatively small, medium, and relatively large, respectively. Using these guidelines, the relations among the psychopathy domains, personality dysfunction, and SES were in line with predictions. Boldness was consistently negatively related to the facets of personality dysfunction (rs ranging -0.29 to -0.47) and positively related to SES ($r_{\text{SES Total}} = 0.20$). Meanness was strongly positively correlated with personality dysfunction facets (rs ranging 0.37 to 0.59) and not significantly related to SES. Finally, disinhibition yielded even stronger relations with personality dysfunction facets (rs ranging 0.60 to 0.68) and was negatively related to SES ($r_{\rm SES~compo}$ site = -0.18). Additionally, the correlations between SES variables and personality dysfunction were negative and small to medium in size. For instance, the SES composite correlated most strongly with the intimacy facet (r = -0.21), perhaps reflecting the relation of both constructs to the interpersonal domain.

We next conducted a SEM in which SES and LPFS-SR were regressed using the three psychopathy domains (see Fig. 1). The model fit was good: $\chi^2=23.685(8)$, $\chi^2_{\rm scaled}=24.368$, p=.002, CFI = 0.984, TLI = 0.963, RMSEA = 0.059 [95% CI: 0.033, 0.087], SRMR = 0.024. The parameter estimates were similar to the results obtained in the bivariate analysis, but also elucidate more clearly how the psychopathy domains diverged in their relations with SES and personality dysfunction. Although the effects were relatively modest, they showed the expected inverse patterns.

We also tested a second model where we included the SES item measuring health. As expected, the second model showed worse fit: $\chi^2 = 64.221(14)$, $\chi^2_{\rm scaled} = 62.081$, p < .001, CFI = 0.951, TLI = 0.912, RMSEA = 0.077 [95% CI: 0.058, 0.096], SRMR = 0.048. Including the health item resulted in relatively small changes in parameter estimates, the largest one being the relation between boldness and SES, which changed from 0.22 to 0.25. In both models, SES and personality dysfunction correlated a mere 0.01, indicating that the two constructs are essentially independent, despite generating similar patterns of results with respect to psychopathy.

6. Discussion

After analyzing six definitions of successful psychopathy, we concluded that success is best conceptualized as a continuous variable, with two conditions in mind: (a) high social status, and (b) lack of serious antisocial behavior. Additionally, we posit that condition (c), high levels of intelligence or other compensatory cognitive and personality functions (e.g., high levels of executive functioning, low levels of disinhibition), is a likely candidate in the moderation of success, although we did not examine this condition in our investigation. We argue that

Table 3

Zero-order correlations between TriPM Domains, LPFS-SR, and SES.

	Boldness	Meanness	Disinhibition	TriPM total	LPFS identity	LPFS self- direction	LPFS empathy	LPFS intimacy	LPFS total	Education	Income	Ladder
Meanness	0.04											
Disinhibition	-0.20	0.58										
TriPM total	0.47	0.81	0.68									
LPFS identity	-0.47	0.37	0.60	0.23								
LPFS self-	-0.39	0.48	0.66	0.36	0.81							
direction												
LPFS empathy	-0.29	0.59	0.62	0.45	0.73	0.78						
LPFS intimacy	-0.30	0.56	0.61	0.42	0.75	0.76	0.79					
LPFS total	-0.41	0.54	0.68	0.39	0.92	0.92	0.88	0.91				
Education	0.11	0.04	-0.11	0.02	-0.01	-0.06	-0.02	-0.08	-0.05			
Income	0.14	-0.05	-0.14	-0.01	-0.07	-0.13	-0.10	-0.20	-0.14	0.38		
Ladder	0.26	-0.08	-0.20	0.00	-0.15	-0.18	-0.13	-0.20	-0.18	0.35	0.61	
SES total	0.20	-0.04	-0.18	0.00	-0.09	-0.15	-0.11	-0.21	-0.16	0.65	0.91	0.79

Note. rs > |0.11| are significant at 0.01 level.

there are many benefits to using SES as one key indicator of social success with respect to psychopathy: This variable allows for longitudinal analyses of changes in an individual's level of success across the life span. In addition, SES can be studied from multiple perspectives (e.g., subjective and objective SES), which optimally affords greater insight into how individuals rate or view their standing in society relative to others, and consequently to what extent such insight relates to various relevant outcomes. SES also allows for analysis across multiple levels of abstraction (e.g., individual or neighborhood analyses), thereby allowing for separation of sources of variance to better understand which individuals succeed, and under what conditions.

The three hypotheses were broadly corroborated by our findings. Disinhibition, as expected, was negatively related to SES and positively related to personality dysfunction, which is interpretable in light of the well-established relations between disinhibition and various kinds of externalizing psychopathology (Bogg & Roberts, 2004; Patrick et al., 2009). Such psychopathology in turn is unlikely to generate success as we conceptualize it here. Meanness was not significantly related to SES but positively related to domains of personality dysfunction. A particularly large statistical effect was seen in relation to the LPFS-SR domain of empathy, which is intuitive given that empathy dysfunction, at least in the emotional realm, appears to be central to psychopathy in network analyses (e.g., Verschuere et al., 2018).

6.1. Is boldness indicative of psychopathy?

As previously discussed, one of the main controversies within the psychopathy literature is whether presumably adaptive features (e.g., low anxiety) of psychopathy should be included in the psychopathy construct, or whether psychopathy should be viewed as largely or entirely maladaptive (cf. Lilienfeld et al., 2012; Miller & Lynam, 2012). From the perspective of the triarchic model, these competing perspectives bear on the question of whether boldness should be considered relevant to psychopathy given that boldness correlates positively with traits that tend to be psychologically adaptive (e.g., emotional stability, surgent extraversion).

Our position is that psychopathy (and indeed some traditional personality disorders more broadly, such as narcissistic and histrionic personality disorders) can and does include adaptive features, but that the individual's behavior is influenced by the relative balance of traits, whether organized according to the triarchic model or otherwise. For example, we posit that boldness is much more pronounced in successful psychopathy, relative to meanness and disinhibition, which are more pronounced in unsuccessful psychopathy. Lilienfeld et al. (2012) observed that differences in opinion in the psychopathy literature may be due largely to competing and equally legitimate formulations of the nomological network (Cronbach & Meehl, 1955) constituting psychopathy.

We offer three suggestions for paving a way forward in this debate.

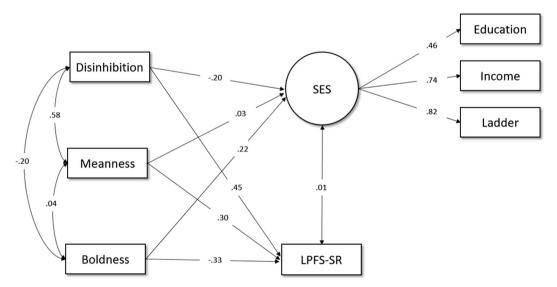


Fig. 1. SEM depicting relations between psychopathy domains (i.e., boldness, meanness, and disinhibition), SES and personality dysfunction (LPFS-SR).

First, by testing hypotheses with regards to the FFM, a clearer picture of the similarities and differences among different psychopathy measures and general personality will hopefully emerge (e.g., Crego & Widiger, 2014; Poy et al., 2014). Specifically, researchers should juxtapose different accounts of both successful and unsuccessful psychopathy in relation to the FFM, or more broadly, connecting the psychopathy literature with the general personality literature (see Lilienfeld, 2018, for an extended discussion). Second, successful psychopathy in particular warrants additional attention in special populations, for instance in corporate, military, politics, and first responders (cf. Patton, Smith, & Lilienfeld, 2017), which are ostensibly populations in which adaptive features of psychopathy, such as fearlessness, may be especially pronounced. Third, a number of interesting questions emerge as a consequence of this study. Our two-dimensional proposal of successful psychopathy can be empirically tested. For instance, it is possible that the two dimensions we propose are related via a shared mechanism that facilitates behavioral alternatives to aggression (e.g., manipulation), which in turn, contributes to increases in SES. If these two dimensions are positively related, a more cogent picture of successful psychopathy will hopefully emerge.

6.2. Limitations

On the conceptual level, we have provided arguments for why successful psychopathy should be conceptualized and operationalized in part in terms of socioeconomic success, in particular as operationalized through SES. Nevertheless, it plausible that the construct of "non-criminal" or "non-violent" psychopathy is also worth pursuing (cf. Lilienfeld, Watts, & Smith, 2015; Smith, Watts & Lilienfeld, 2014). Further, we suspect that high intelligence (cf. Definition 6, Table 1) is more likely a moderator of success, but is not, in itself, central to causing success.

Methodologically, one may be concerned that individuals with high psychopathic traits do not accurately report on their SES. The accuracy of reports of SES, specifically, is unknown, but distorted responding has been studied more generally in both student and forensic settings (Kelsey, Rogers, & Robinson, 2015; Ray et al., 2013; Watts et al., 2016), This research suggests that higher levels of psychopathic traits are not necessarily related to distorted responding so long as no external incentives to lie are present (Kelsey et al., 2015). A related issue is the use of an MTurk sample. Although MTurk has its methodological limitations, it is preferable over a student sample for testing our hypotheses, especially considering that success is accrued over time, and that the potential for success in a 20-year-old is much more limited than in a 40-year-old.

One may also question our use of composite scores in the SEM, as we did not explicitly test the dimensionality of each composite in measurement models. Our reasons for doing so are two-fold. First, factor models (especially confirmatory) of personality trait inventories often show significant model misfit, especially when the number of items is large (Hopwood & Donnellan, 2010). Second, performing rigorous tests on each inventory goes beyond the scope of the present study, but has been conducted elsewhere (Sleep, Lynam, Widiger, Crowe, & Miller, 2018, May 3; Somma, Borroni, Drislane, Patrick, & Fossati, 2018). Additionally, SES is often regarded as a variable than lends itself to formative measurement (Howell, Breivik, & Wilcox, 2007), which is to say that the indicators themselves comprise the latent variable rather than vice-versa, as in reflective measurement. Nevertheless, subjective measures of SES can be modeled reflectively, as the items are saturated by measurement error just as are ordinary personality items (Edwards, 2011) and SES may be a marker of underlying economic and social hardiness.

In addition, we measured SES using questions that are subjective in nature. More extensive SES batteries and complementary objective data should help to increase the psychometric rigor of future research. Another psychometric issue is posed by the problem of equivalent

SEMs. Alternative conceptualizations of the presented data are possible, for instance by using personality dysfunction as a moderator of success. Such models are beyond the scope of the present paper but may provide fruitful avenues for future research. Furthermore, the administration of questionnaires was not counter-balanced across participants which could potentially confound results. Finally, the cross-sectional nature of our design precludes inferences regarding temporal precedence.

7. Conclusion

In sum, we have argued that successful psychopathy is best conceptualized in terms of two dimensions and that one viable but largely overlooked operationalization focuses on socioeconomic success, which allows for a dimensional view of success. In support, we presented data demonstrating that adaptive features of psychopathy (i.e., boldness) are positively related to socioeconomic status and personality functioning, and that more maladaptive features (i.e., meanness and disinhibition) are negatively related to SES and personality functioning. Our hope is that the present study articulates some of the challenges and debates confronting the evolving field of successful psychopathy and ultimately leads to improved theories and measurement of both successful and unsuccessful psychopathy.

References

- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, white women. *Health Psychology*, 19, 586–592.
- Agardh, E., Allebeck, P., Hallqvist, J., Moradi, T., & Sidorchuk, A. (2011). Type 2 diabetes incidence and socio-economic position: A systematic review and meta-analysis. *International Journal of Epidemiology*, 40, 804–818.
- American Psychiatric Association (2013). Diagnostic and statistical manual of mental disorders, fifth edition (DSM-5). Washington, D.C.: Author.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. Psychological Bulletin, 107, 238–246.
- Bentler, P. M. (1995). EQS structural equations program manual. Encino, CA: Multivariate
- Berg, J. M., Lilienfeld, S. O., & Sellbom, M. (2017). The role of boldness in psychopathy: A study of academic and clinical perceptions. *Personality Disorders: Theory, Research,* and Treatment, 8, 319–328.
- Blagov, P. S., Patrick, C. J., Oost, K. M., Goodman, J. A., & Pugh, A. T. (2016). Triarchic psychopathy measure: Validity in relation to normal-range traits, personality pathology, and psychological adjustment. *Journal of Personality Disorders*, 30, 71–81.
- Boccio, C. M., Beaver, K. M., & Schwartz, J. A. (2018). The role of verbal intelligence in becoming a successful criminal: Results from a longitudinal sample. *Intelligence*, 66, 24–31
- Bogg, T., & Roberts, B. W. (2004). Conscientiousness and health-related behaviors: A meta-analysis of the leading behavioral contributors to mortality. *Psychological Bulletin*, 130, 887–919.
- Brinkley, C. A., Newman, J. P., Widiger, T. A., & Lynam, D. R. (2004). Two approaches to parsing the heterogeneity of psychopathy. *Clinical Psychology: Science and Practice*, 11, 69–94.
- Burt, S. A. (2009). Are there meaningful etiological differences within antisocial behavior? Results of a meta-analysis. *Clinical Psychology Review*, 29, 163–178.
- Cleckley, H. M. (1988). The mask of sanity. Oxford, England: Mosby (Original work published 1941).
- Crego, C., & Widiger, T. A. (2014). Psychopathy, DSM-5, and a caution. Personality Disorders: Theory, Research, and Treatment, 5, 335–347.
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. Psychological Bulletin, 52, 281–302.
- De Fruyt, F., De Clercq, B., De Bolle, M., Wille, B., Markon, K., & Krueger, R. F. (2013). General and maladaptive traits in a five-factor framework for *DSM-5* in a university student sample. *Assessment*, 20, 295–307.
- DeYoung, C. G., & Krueger, R. F. (2019). A cybernetic theory of psychopathology. *Psychological Inquiry* (in press).
- Donnellan, M. B., & Burt, S. A. (2016). A further evaluation of the triarchic conceptualization of psychopathy in college students. *Journal of Psychopathology and Behavioral Assessment*, 38, 172–182.
- Drislane, L. E., Brislin, S. J., Jones, S., & Patrick, C. J. (2018). Interfacing five-factor model and Triarchic conceptualizations of psychopathy. *Psychological Assessment*, 30, 834–840.
- Edwards, J. R. (2011). The fallacy of formative measurement. *Organizational Research Methods*, 14, 370–388.
- Elliott, D. S. (1995). *Lies, damn lies, and arrest statistics*. Boulder, CO: Center for the Study and Prevention of Violence.
- Federal Bureau of Investigation (2005). Serial murder: Multi-disciplinary perspectives for investigators. Washington DC: Behavioral Science Unit, National Center for the Analysis of Violent Crime, U.S. Department of Justice, U.S.A.

- Gao, Y., & Raine, A. (2010). Successful and unsuccessful psychopaths: A neurobiological model. Behavioral Sciences & the Law, 28, 194–210.
- Gatner, D. T., Douglas, K. S., & Hart, S. D. (2016). Examining the incremental and interactive effects of boldness with meanness and disinhibition within the triarchic model of psychopathy. Personality Disorders: Theory, Research, and Treatment, 7, 250, 269
- Gignac, G. E., & Szodorai, E. T. (2016). Effect size guidelines for individual differences researchers. Personality and Individual Differences, 102, 74–78.
- Glenn, A. L., & Raine, A. (2014). Psychopathy: An introduction to biological findings and their implications. New York, NY: New York University Press.
- Goldberg, L. R. (1990). An alternative "description of personality": The big-five factor structure. Journal of Personality and Social Psychology, 59, 1216–1229.
- Hall, J. R., & Benning, S. D. (2006). The "successful" psychopath: Adaptive and subclinical manifestations of psychopathy in the general population. In C. J. Patrick (Ed.). The handbook of psychopathy (pp. 459–478). New York, NY: Guilford Press.
- Hare, R. D. (1991–2003). Manual for the Revised Psychopathy Checklist (2nd ed.). Toronto, Ontario, Canada: Multi-Health Systems.
- Hare, R. D., & Neumann, C. S. (2010). The role of antisociality in the psychopathy construct: Comment on Skeem and Cooke (2010). *Psychological Assessment*, 22, 446–454.
- Hopwood, C. J., & Donnellan, M. B. (2010). How should the internal structure of personality inventories be evaluated? Personality and Social Psychology Review, 14, 332–346.
- Hopwood, C. J., Good, E. W., & Morey, L. C. (2018). Validity of the DSM-5 levels of personality functioning scale-self report. *Journal of Personality Assessment*. https://doi.org/10.1080/00223891.2017.1420660.
- Hopwood, C. J., Kotov, R., Krueger, R. F., Watson, D., Widiger, T. A., Althoff, R. R., ... Zimmermann, J. (2018). The time has come for dimensional personality disorder diagnosis. *Personality and Mental Health*, 12, 82–86.
- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. Psychometrika, 30, 179–185.
- Howell, R. D., Breivik, E., & Wilcox, J. B. (2007). Reconsidering formative measurement. Psychological Methods, 12, 205–218.
- Hoyle, R. H., & Duvall, J. L. (2004). Determining the number of factors in exploratory and confirmatory factor analysis. In D. Kaplan (Ed.). The SAGE handbook of quantitative methodology for the social sciences (pp. 301–315). Thousand Oaks, CA: Sage.
- Jaffee, S. R., Moffitt, T. E., Caspi, A., & Taylor, A. (2003). Life with (or without) father: The benefits of living with two biological parents depend on the father's antisocial behavior. *Child Development*, 74, 109–126.
- Keijzer, M., & Corten, R. (2017, June 16). In Status We Trust: A vignette experiment on socioeconomic status and reputation explaining interpersonal trust in peer-to-peer markets. SocArXiv. 10.17605/OSF.IO/PC7NW.
- Kelley, K. (2018). MBESS. R package version 4.4.3. https://CRAN.R-project.org/package=MBESS.
- Kelsey, K. R., Rogers, R., & Robinson, E. V. (2015). Self-report measures of psychopathy: What is their role in forensic assessments? *Journal of Psychopathology and Behavioral Assessment*, 37, 380–391.
- Kiehl, K. A., & Hoffman, M. B. (2011). The criminal psychopath: History, neuroscience, treatment, and economics. *Jurimetrics*, 51, 355–397.
- Kraus, M. W., & Keltner, D. (2009). Signs of socioeconomic status: A thin-slicing approach. Psychological Science, 20, 99–106.
- Lahey, B. B. (2009). Public health significance of neuroticism. American Psychologist, 64, 241–256.
- Lilienfeld, S. O. (1994). Conceptual problems in the assessment of psychopathy. Clinical Psychology Review, 14, 17–38.
- Lilienfeld, S. O. (2018). The multidimensional nature of psychopathy: Five recommendations for research. *Journal of Psychopathology and Behavioral Assessment*, 40, 79–85.
- Lilienfeld, S. O., Patrick, C. J., Benning, S. D., Berg, J., Sellbom, M., & Edens, J. F. (2012). The role of fearless dominance in psychopathy: Confusions, controversies, and clarifications. Personality Disorders: Theory, Research, and Treatment, 3, 327–340.
- Lilienfeld, S. O., Smith, S. F., Sauvigné, K. C., Patrick, C. J., Drislane, L. E., Latzman, R. D., & Krueger, R. F. (2016). Is boldness relevant to psychopathic personality? Metaanalytic relations with non-psychopathy checklist-based measures of psychopathy. *Psychological Assessment*, 28, 1172–1185.
- Lilienfeld, S. O., Watts, A. L., & Smith, S. F. (2015). Successful psychopathy: A scientific status report. Current Directions in Psychological Science, 24, 298–303.
- Lorant, V., Deliège, D., Eaton, W., Robert, A., Philippot, P., & Ansseau, M. (2003). Socioeconomic inequalities in depression: A meta-analysis. *American Journal of Epidemiology*, 157, 98–112.
- Lubinski, D. (2009). Cognitive epidemiology: With emphasis on untangling cognitive ability and socioeconomic status. *Intelligence*, 37, 625–633.
- Lykken, D. T. (1957). A study of anxiety in the sociopathic personality. The Journal of Abnormal and Social Psychology, 55, 6–10.
- Lynam, D. R., & Miller, J. D. (2015). Psychopathy from a basic trait perspective: The utility of a five-factor model approach. *Journal of Personality*, 83, 611–626.
- Markon, K. E., Chmielewski, M., & Miller, C. J. (2011). The reliability and validity of discrete and continuous measures of psychopathology: A quantitative review. *Psychological Bulletin*, 137, 856–879.
- Markon, K. E., Krueger, R. F., & Watson, D. (2005). Delineating the structure of normal and abnormal personality: An integrative hierarchical approach. *Journal of Personality and Social Psychology*, 88, 139–157.
- McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, 60, 175–215.
- McLeod, J. D., & Kessler, R. C. (1990). Socioeconomic status differences in vulnerability to undesirable life events. *Journal of Health and Social Behavior*, 162–172.
- McNeish, D. (2018). Thanks coefficient alpha, we'll take it from here. Psychological

- Methods, 23, 412-433.
- Miller, J. D., Crowe, M., Weiss, B., Maples-Keller, J. L., & Lynam, D. R. (2017). Using online, crowdsourcing platforms for data collection in personality disorder research: The example of Amazon's Mechanical Turk. Personality Disorders: Theory, Research, and Treatment. 8. 26–34.
- Miller, J. D., Lamkin, J., Maples-Keller, J. L., & Lynam, D. R. (2016). Viewing the triarchic model of psychopathy through general personality and expert-based lenses. Personality Disorders: Theory, Research, and Treatment, 7, 247–258.
- Miller, J. D., & Lynam, D. R. (2012). An examination of the psychopathic personality Inventory's nomological network: A meta-analytic review. *Personality Disorders: Theory, Research, and Practice*, 3, 305–326.
- Miller, J. D., & Lynam, D. R. (2015). Understanding psychopathy using the basic elements of personality. *Social and Personality Psychology Compass*, 9, 223–237.
- Morey, L. C. (2017). Development and initial evaluation of a self-report form of the DSM-5 Level of Personality Functioning Scale. Psychological Assessment, 29, 1302–1308.
- Murphy, B., Lilienfeld, S., Skeem, J., & Edens, J. F. (2016). Are fearless dominance traits superfluous in operationalizing psychopathy? Incremental validity and sex differences. *Psychological Assessment*, 28, 1597–1607.
- Oakes, J. M., & Rossi, P. H. (2003). The measurement of SES in health research: Current practice and steps toward a new approach. Social Science & Medicine, 56, 769–784.
- Olderbak, S. G., Mokros, A., Nitschke, J., Habermeyer, E., & Wilhelm, O. (2018).
 Psychopathic men: Deficits in general mental ability, not emotion perception. *Journal of Abnormal Psychology*, 127, 294–304.
- Oleson, J. C. (2016). Criminal genius: A portrait of high-IQ offenders. Oakland, California: University of California Press.
- Patrick, C. J. (2010). Operationalizing the triarchic conceptualization of psychopathy:

 Preliminary description of brief scales for assessment of boldness, meanness, and disinhibition. Tallahassee, FL: Florida State University. Retrieved from https://pdfs.semanticscholar.org/fb4c/c0fdae0840553500ee091579ae76a6477e8e.pdf.
- Patrick, C. J., Fowles, D. C., & Krueger, R. F. (2009). Triarchic conceptualization of psychopathy: Developmental origins of disinhibition, boldness, and meanness. *Development and Psychopathology*, 21, 913–938.
- Patton, C. L., Smith, S. F., & Lilienfeld, S. O. (2017). Psychopathy and heroism in first responders: Traits cut from the same cloth? Personality Disorders: Theory, Research, and Treatment. https://doi.org/10.1037/per0000261 Advance online publication.
- Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36, 556–563.
- Poy, R., Segarra, P., Esteller, A., López, R., & Moltó, J. (2014). FFM description of the triarchic conceptualization of psychopathy in men and women. *Psychological Assessment*, 26, 69–76.
- Ray, J. V., Hall, J., Rivera-Hudson, N., Poythress, N. G., Lilienfeld, S. O., & Morano, M. (2013). The relation between self-reported psychopathic traits and distorted response styles: A meta-analytic review. *Personality Disorders: Theory, Research, and Treatment*, 4, 1–14.
- Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48, 1–36.
- Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. Review of Educational Research, 75, 417–453.
- Skeem, J. L., & Cooke, D. J. (2010). Is criminal behavior a central component of psychopathy? Conceptual directions for resolving the debate. *Psychological Assessment*, 22, 433–445.
- Skeem, J. L., Polaschek, D. L., Patrick, C. J., & Lilienfeld, S. O. (2011). Psychopathic personality: Bridging the gap between scientific evidence and public policy. *Psychological Science in the Public Interest*, 12, 95–162.
- Sleep, C., Lynam, D., Widiger, T. A., Crowe, M., & Miller, J. (2018, May 3). An evaluation of DSM-5 section III personality disorder criterion A (Impairment) in accounting for psychopathology. 10.17605/OSF.IO/Z48TV.
- Smith, S. F., Watts, A. L., & Lilienfeld, S. O. (2014). On the trail of the elusive successful psychopath. *The Psychologist*, 27, 506–511.
- Somma, A., Borroni, S., Drislane, L. E., Patrick, C. J., & Fossati, A. (2018). Modeling the structure of the Triarchic Psychopathy Measure: Conceptual, empirical, and analytic considerations. *Journal of Personality Disorders* (Advance online publication).
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, 25, 173–180.
- Thomas, K. A., & Clifford, S. (2017). Validity and mechanical turk: An assessment of exclusion methods and interactive experiments. *Computers in Human Behavior*, 77, 184–197.
- Tomarken, A. J., & Waller, N. G. (2003). Potential problems with" well fitting" models. *Journal of Abnormal Psychology, 112*, 578–598.
- Trentacosta, C. J., & Shaw, D. S. (2009). Emotional self-regulation, peer rejection, and antisocial behavior: Developmental associations from early childhood to early adolescence. *Journal of Applied Developmental Psychology*, 30, 356–365.
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. Psychometrika, 38, 1–10.
- Twenge, J. M., & Campbell, W. K. (2002). Self-esteem and socioeconomic status: A metaanalytic review. *Personality and Social Psychology Review*, 6, 59–71.
- Venables, N. C., Hall, J. R., & Patrick, C. J. (2014). Differentiating psychopathy from antisocial personality disorder: A triarchic model perspective. *Psychological Medicine*, 44, 1005–1013.
- Verschuere, B., van Ghesel Grothe, S., Waldorp, L., Watts, A. L., Lilienfeld, S. O., Edens, J. F., ... Noordhof, A. (2018). What features of psychopathy might be central? A network analysis of the psychopathy checklist-revised (PCL-R) in three large samples. *Journal of Abnormal Psychology*, 127, 51–65.
- Wall, T. D., Wygant, D. B., & Sellbom, M. (2015). Boldness explains a key difference between psychopathy and antisocial personality disorder. *Psychiatry, Psychology and*

- Law, 22, 94-105.
- Walsh, Z., Swogger, M. T., & Kosson, D. S. (2004). Psychopathy, IQ, and violence in European American and African American county jail inmates. *Journal of Consulting and Clinical Psychology*, 72, 1165–1169.
- Watts, A. L., Lilienfeld, S. O., Edens, J. F., Douglas, K. S., Skeem, J. L., Verschuere, B., & LoPilato, A. C. (2016). Does response distortion statistically affect the relations between self-report psychopathy measures and external criteria? *Psychological Assessment*, 28, 294–306.
- Watts, A. L., Salekin, R. T., Harrison, N., Clark, A., Waldman, I. D., Vitacco, M. J., &
- Lilienfeld, S. O. (2016). Psychopathy: Relations with three conceptions of intelligence. *Personality Disorders: Theory, Research, and Treatment, 7,* 269–279. Whitely, S. E. (1983). Construct validity: Construct representation versus nomothetic span. *Psychological Bulletin, 93,* 179.
- Widom, C. S. (1977). A methodology for studying noninstitutionalized psychopaths. Journal of Consulting and Clinical Psychology, 45, 674–683.
- Winkleby, M. A., Jatulis, D. E., Frank, E., & Fortmann, S. P. (1992). Socioeconomic status and health: How education, income, and occupation contribute to risk factors for cardiovascular disease. *American Journal of Public Health*, 82, 816–820.