

The Dark Triad and Workplace Behavior

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The Dark Triad and Workplace Behavior

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dark triad, Machiavellianism, narcissism, personality, psychopathy

Abstract

Over the last 15 years, there has been growing fascination among scholars in studying “dark behaviors” and “dark traits,” especially as they are expressed in organizational contexts. One taxonomy of dark traits that has garnered special interest is the dark triad (DT), which is comprised of three toxic and malevolent traits: psychopathy, narcissism, and Machiavellianism. This chapter offers a review of DT research, with a particular focus on research relevant to the organizational sciences. We begin with a definition of personality in general and the traits of the DT in particular, including a discussion of the clinical and subclinical variants of these traits. We then review literature linking the DT traits to an array of organizational outcomes, discuss how the DT traits may be assessed, and conclude with recommendations for future work.

INTRODUCTION

At some point, each of us will encounter someone in either our work or social lives that would be aptly described as a conniving cheat, an arrogant braggart, or a callous hedonist. These labels capture the cardinal characteristics that define the cluster of personality traits referred to as the dark triad (DT): Machiavellianism, narcissism, and psychopathy. Over the last 15 years, there has been growing fascination among scholars in studying “dark behaviors” and “dark traits,” especially as they are expressed in organizational contexts. The DT represents a taxonomy of dark personality traits that has been extensively studied, with researchers seeking to understand how these traits are related both to other models of personality [e.g., the Five Factor Model (FFM) or Big Five] and to an array of organizationally relevant processes and outcomes (e.g., counterproductive workplace behaviors and leadership). Given the rapid accumulation of research on the DT, we believe now is the time to pause and reflect on the state of the science, with a particular focus on studies that may be informative to scholars working within the organizational sciences.

Our review is structured as follows: (a) We offer a formal definition of personality and distinguish between the implicit and explicit aspects of personality; (b) we introduce and define the traits comprising the DT, including a discussion of clinical and subclinical variants of these traits; (c) we review literature linking the DT traits to an array of organizational outcomes; (d) we discuss how these traits have been measured in the organizational sciences; and (e) we conclude with recommendations for where researchers and practitioners may focus future work linking the DT traits to organizational outcomes.

PERSONALITY DEFINED

As noted above, the DT refers to a constellation of personality-related constructs. James & LeBreton (2012, p. 3) defined personality as the “dynamic mental structures (e.g., scripts, schemas, motives, needs) associated with mental processes (e.g., perceiving, framing, encoding, analyzing, inferring) that determine an individual’s cognitive, affective, and behavioral adjustments to his or her environments.” The authors further distinguished between the implicit and explicit components of personality, with the former referring to those aspects of personality that reside outside of conscious awareness (e.g., defense mechanisms) and the latter referring to those aspects of personality of which one is consciously aware (e.g., introspectively accessible thoughts, feelings, and patterns of behavior). To date, the majority of research (in general and in the organizational sciences) has focused on the explicit components of the DT, most notably in the form of explicit traits. Thus, our review focuses on those aspects of the DT that are accessible via introspection and (most commonly) measured via self-report surveys.

THE DARK TRIAD DEFINED

Machiavellianism

Some of the most important conceptual and empirical work on Machiavellianism was summarized in the classic book by Christie & Geis (1970), which included a chapter on the assessment of Machiavellianism using a 20-item survey denoted the MACH-IV. The construct of Machiavellianism has been defined as “a strategy of social conduct that involves manipulating others for personal gain” (Christie & Geis 1970, p. 285; Wilson et al. 1996). More recently, Dahling et al. (2009) suggested that Machiavellianism might be conceptualized as “a tendency to distrust others, a willingness to engage in amoral manipulation, a desire to accumulate status for oneself, and a desire to maintain interpersonal control” (p. 227). Kessler et al. (2010) offered a similar description by

noting that Machiavellianism described a “belief in the use of manipulation, as necessary, to achieve one’s desired ends in the context of the work environment” (p. 1871). Finally, Paulhus (2014) succinctly summarized the construct thus: “Machiavellians are master manipulators” (p. 421).

Although scholars have advanced different definitions of Machiavellianism, there is a general recognition that the core defining feature of Machiavellianism is a tendency toward manipulation, often accompanied by (a) lack of empathy, (b) lower levels of affect, (c) a focus on pursuing one’s own goals (often at the expense of others), and (d) an aberrant view of morality (i.e., one that offers a greater acceptance of behaviors that would normally be described as immoral or unethical, such as lying, manipulating, and exploiting others; see Christie & Geis 1970, Dahling et al. 2009, Kessler et al. 2010, Paulhus & Williams 2002, Rauthmann & Will 2011, Spain et al. 2014, Wu & LeBreton 2011). Although measures of Machiavellianism often posit distinct facets or dimensions, it is normative in the organizational sciences to compute scores on a single omnibus measure of overall Machiavellian tendencies.

Narcissism

Narcissism has been studied using an array of theoretical models spanning applied psychology, personality psychology, and clinical psychology. Although there are notable differences across models, there are also areas of overlap and similarity. For example, nearly all models recognize that individuals with higher levels of narcissism are likely to (a) harbor feelings of superiority driven by an inflated or grandiose sense of self, (b) have a dysfunctional need for excessive attention and admiration, (c) have a propensity for engaging in exploitive acts or behaviors, and (d) lack empathy, tending toward callousness (see Morf & Rhodewalt 2001, Paulhus & Williams 2002, Raskin & Hall 1979, Raskin & Terry 1988, Rhodewalt & Morf 1995, Wright et al. 2013, Wu & LeBreton 2011).

Although we agree that these traits form the core of narcissistic personalities, we also recognize that other dimensions have been offered, falling largely from the factor analysis of existing self-report measures [especially the most popular measure, the Narcissistic Personality Inventory (NPI); see Raskin & Hall 1979]. For example, while reviewing previous factor (component) analyses on the NPI, Boldero et al. (2015) observed that authors had settled on factor solutions that ranged from two to seven factors. These authors also reported the results of several new factor analyses and concluded that although the data were consistent with a multifactor model, unidimensional models explained more than half of the variance in the latent trait, and therefore it would be acceptable to estimate an overall composite measure of narcissism using NPI items.

In general, the factors extracted from the NPI tend to be consistent with the core features of narcissism noted above, which Pincus et al. (2009) referred to as “narcissistic grandiosity” (p. 367). The authors noted that this aspect of narcissism is often manifested as “interpersonally exploitive acts, lack of empathy, intense envy, aggression, and exhibitionism” (p. 367). In addition, Pincus et al. suggested that “narcissistic vulnerability,” which referred to “the conscious experience of helplessness, emptiness, low self-esteem, and shame” (p. 367) represents another important aspect of narcissism. However, most research in the organizational sciences has focused on narcissistic grandiosity and paid little attention to narcissistic vulnerability. This emphasis on grandiosity (and the use of a single global scale measuring narcissism) has stemmed largely from the dominance of the NPI in the organizational sciences.

Psychopathy

The third, and arguably most toxic, partition of the DT is psychopathy. Researchers have been studying the clinical aspects of psychopathy for over 100 years (Millon et al. 1998), but

contemporary models of psychopathy can be traced to two highly influential scholars. In 1941, Hervey Cleckley summarized his clinical experiences with psychopaths in his now classic text *The Mask of Sanity* (Cleckley 1976). In part three of his text, Cleckley offered a list of 16 defining characteristics that would provide the initial foundation for the measurement of psychopathy via the Psychopathy Checklist (developed by Robert Hare and colleagues). The 30-year research program of Hare and colleagues was summarized in Hare's (1993) book titled *Without Conscience: The Disturbing World of Psychopaths Among Us*, and the organizational implications of psychopaths were recently summarized by Babiak & Hare (2006) in their popular book titled *Snakes in Suits: When Psychopaths Go To Work*.

Hare (1993) succinctly described individuals falling on the high end of a psychopathy continuum as:

social predators who charm, manipulate and ruthlessly plow their way through life, leaving a broad trail of broken hearts, shattered expectations, and empty wallets. . . . [They are completely] lacking in conscious and in feelings for others, they selfishly take what they want and do as they please. . . without the slightest sense of guilt or remorse. (p. ix)

Over the last 30 years, a number of dimensional models of psychopathy have been offered that seek to provide an overall structure to the lengthy list of characteristics that describe psychopaths. Early dimensional models emphasized two core areas of dysfunction, namely emotional/interpersonal deviance (e.g., lack of remorse, interpersonal manipulation, grandiosity, lack of empathy) and behavioral deviance (e.g., impulsivity, sensation seeking, antisocial behavior; see Hare 1993). More recently, scholars have offered three- and four-dimensional models as more appropriate for summarizing psychopathic characteristics (see Cooke & Michie 2001, Mathieu et al. 2015, Williams et al. 2007).

For our purposes, we adopt the four-dimensional model offered by Williams et al. (2007), which summarizes psychopathy along four key dimensions: interpersonal manipulation (e.g., grandiosity, lying, superficial charm); callous affect (e.g., lack of empathy, lack of remorse); erratic lifestyle (e.g., impulsivity, irresponsibility, sensation seeking); and criminal tendencies (e.g., antisocial or counterproductive behavior). It is worth noting that there is debate concerning whether the fourth dimension reflects personality characteristics (e.g., generalized rule breaking) or it simply reflects the behavioral manifestation of the other psychopathy traits (see Cooke & Michie 2001; Neumann et al. 2005, 2007; Skeem & Cooke 2010).

Although the literature comprises more complex structural models of psychopathy, most of the traits/dimensions they include tend to easily map onto the more parsimonious models noted above. Notable exceptions include the work of Scott Lilienfeld, Chris Patrick, and colleagues, who have argued that contemporary models of psychopathy overlook at least one important dimension labeled boldness or fearless dominance, which reflects social and physical dominance, as well as the tendency for those with higher levels of psychopathy to have elevated thresholds for experiencing anxiety or fear (cf. Lilienfeld & Andrews 1996; Lilienfeld et al. 2015, 2016; Patrick & Drislane 2015). Although the majority of psychopathy-related work in the organizational sciences has adhered to the models offered by Paulhus, Hare, and their colleagues (Neumann et al. 2005, 2007; Williams et al. 2007), we think it is important to acknowledge these alternative models and revisit them in our recommendations for future work and practice.

Delimiting the Scope of the Dark Triad

As originally presented by Paulhus & Williams (2002), the omnibus traits of the DT were conceptualized as subclinical expressions of their well-known clinical counterparts. The authors aptly

described the DT as “offensive,” “aversive,” and consistent with a “malevolent social character” (pp. 556–57); however, these toxic traits were deemed less problematic and more prevalent than their pathological or clinical counterparts. In addition, long before the tripartite packaging of the DT traits, other psychologists had been studying subclinical variants of these exact traits (cf. Gustafson & Ritzer 1995, Hogan & Hogan 1997).

The organizational sciences rarely focus on the identification of pathologically impaired individuals. As Wu & LeBreton (2011) noted, “focusing on clinical levels of the Dark Triad would virtually nullify” the importance and relevance of these traits to the organizational sciences (p. 616). This nullification follows from the extremely low base rates associated with the clinical expressions of the DT traits, which are likely well below 1% in the general population. These authors also noted that “many individuals with clinical personality disorders are often housed in criminal or psychiatric settings (Hare 1999), further reducing the likelihood of encountering these individuals on a frequent basis in employment settings” (p. 615). In contrast, subclinical expressions of the DT occur with much greater frequency, with some researchers concluding that the base rates may be as high as 15% of the general population (Gustafson & Ritzer 1995, Pethman & Earlandsson 2002).

The importance of distinguishing between clinical and subclinical variants of the DT, in terms of both construct definition and psychological measurement, is even more important when considering the potential legal ramifications of screening for these traits in organizational settings. If practitioners embrace assessments designed to identify clinical or pathological manifestations of the DT traits, they may unwittingly be opening themselves up to litigation under the Americans with Disabilities Act (ADA) of 1990 (Pub. L. 101-336, 104 Stat. 327, 42 U.S.C. § 12101)—at least to the extent that the courts (*a*) continue to view personality disorders as constituting disabilities/impairments under the ADA and (*b*) continue to view the use of pre-employment tests (designed to identify such clinical impairments) as constituting pre-offer medical examinations.

LeBreton et al. (2006) distinguished between clinical and subclinical psychopathy; we simply apply their definition to all of the DT traits:

The difference [between clinical and subclinical traits] is not in the types or categories of behavior, affect, interpersonal relationships, or rationalizations but instead in the degree, magnitude, or frequency of those behaviors and cognitions. . . . [Clinical traits consist of] an all-encompassing pattern of aberrant and dysfunctional behavior, affect, and cognition that permeates multiple spheres or aspects of an individual’s life (e.g., work, family, social). The individual is a clinically-impaired, chronically-dysfunctional employee, spouse, parent, and friend. . . . In contrast, [subclinical traits consist of the] same patterns of dysfunctional behaviors, affects, and cognitions; however, the pervasiveness and levels of impaired functioning are not as extreme because the individual manifests the symptoms at a commensurately lower level and rate. (p. 389)

Thus, by focusing on the subclinical expressions of the DT, practitioners are less likely to find themselves under scrutiny by the Equal Employment Opportunity Commission for a potential civil rights violation, and both practitioners and researchers may be more likely to detect important relationships between the DT and organizationally relevant phenomena.

RELATIONSHIPS BETWEEN THE DARK TRIAD AND ORGANIZATIONAL OUTCOMES

Within the organizational sciences, researchers seek to better understand the impact that the maladaptive behaviors associated with DT personality traits may have on organizational, interpersonal,

and individual outcomes. This increased attention is evidenced by the number of recent theoretical and empirical publications linking the DT personality traits to an array of topics, including team processes (Baysinger et al. 2014), leadership (Kaiser et al. 2015, Krasikova et al. 2013), and counterproductive workplace behaviors (Scherer et al. 2013, Wu & LeBreton 2011). Additionally, several recent qualitative and quantitative review articles have focused on the dark side of personality, with a particular focus on the traits of the DT (see O'Boyle et al. 2012, Spain et al. 2014).

This research has established that the DT traits are related to many organizational criteria; however, the relationships between DT traits and organizational outcomes are extremely complex and varied. Indeed, the mixed empirical findings observed in primary studies as well as the heterogeneity in the effect sizes reported in meta-analytic reviews make it clear that even seemingly simple bivariate relationships are often qualified by moderator variables or may be better represented as being channeled through one or more mediating variables.

In this section, we review the findings concerning the relationships between each of the DT personality traits and a number of topics in the organizational sciences. Our article extends prior reviews by (a) providing readers with a brief recap of key findings from existing reviews before (b) delving into a review of the most recent literature (i.e., articles published after 2012). We refrain from including recommendations for future work in this section, preferring to save such recommendations for the concluding section of our article. Our review spans a range of topics including job performance (including task, contextual, and counterproductive behaviors), leadership, creativity and innovation, workgroups and teams, employee selection, and job attitudes. When possible, we review the empirical evidence for direct, mediated, and moderated effects linking DT traits to these topics.

Job (Task) Performance

In this section, we summarize prior reviews that examined the relationships between the DT traits and job performance. Here, we focus on the task-based aspects of performance that comprise the essential behaviors and activities that define the criterion space of each job/role within an organization. We then transition to a review of more recent literature examining how the DT traits are related to job performance.

Prior reviews. Historically, research on the link between DT traits and job performance has been inconclusive, with some empirical research suggesting that DT traits are positively related to job performance and other research suggesting the opposite. To clarify these mixed findings, O'Boyle et al. (2012) conducted a meta-analytic review examining the criterion-related validity of the DT traits for predicting job performance and counterproductive workplace behaviors (CWBs). The authors found that Machiavellianism (sample weighted mean $r = -0.06$) and psychopathy (sample weighted mean $r = -0.08$) both had small but significant relationships with job performance. In addition, they reported a small but nonsignificant relationship between narcissism and job performance (sample weighted mean $r = -0.02$). Even after correcting for measurement error, none of the corrected correlations between DT traits and job performance exceeded -0.10 .

Although this meta-analytic evidence may provide a more stable representation of the direct relationship between DT traits and job performance, the authors qualify their findings by reminding the reader that the effect sizes found were small and there was nontrivial variability in effect sizes across samples. Additionally, the authors investigated the moderating effect that holding positions of authority (e.g., as managers, leaders, police officers, corrections officers) and group culture (e.g., in-group collectivism) exerted on the relationship of the DT to job performance. Results indicated that the relationship between narcissism and performance was negative and

significant for individuals working in positions of authority; similarly, the relationship between narcissism and performance was negative and stronger for cultures with higher levels of in-group collectivism. Overall, these findings suggest that a simple bivariate relationship between DT traits and job performance may be an oversimplification and that researchers should consider possible moderators of the relationships between DT and job performance. In addition to moderators, researchers may wish to expand their theoretical perspectives to better accommodate curvilinear models (e.g., quadratic trends consistent with the Too-Much-of-a-Good-Thing effect; Pierce & Aguinis 2013).

Recent literature. Fortunately, researchers heeded the call for a more thorough investigation of the relationship between DT and job performance and responded by examining alternative moderating variables as well as various mediational links. For instance, Guedes (2017) concluded that the mixed findings for the bivariate relationship between narcissism and job performance may be partially attributable to the way in which job performance is measured. Specifically, narcissistic individuals tended to provide more positive self-evaluations, leading to a significant positive relationship when job performance was subjectively self-rated. On the other hand, this relationship was no longer significant when performance was objectively measured. Utilizing a moderated mediation model, Reina et al. (2014) examined the potential positive effect of CEO narcissism on firm performance and found that narcissism had an indirect impact on firm performance, because it was mediated via top management team behavioral integration. Moreover, these authors reported that organizational identification moderated the relationship between CEOs' narcissism and top management team behavioral integration, such that narcissistic CEOs who identified strongly with their organization were associated with higher rates of top management team behavioral integration, which in turn led to better firm performance. Conceptualizing narcissism as a boundary condition of the relationship between corporate social responsibility and organizational performance (i.e., return on assets), Petrenko et al. (2016) found a weaker relationship between corporate social responsibility and organization performance in organizations with highly narcissistic CEOs versus organizations with less narcissistic CEOs.

No recently published research examined potential moderators of the link between Machiavellianism and job performance; however, a recent study did examine moderators of the relationship between psychopathy and performance. Specifically, Blickle & Schütte (2017) examined how a two-factor conceptualization of psychopathy based on self-centered impulsivity and fearless dominance (Lykken 1995) was related to performance. These authors found that neither of the psychopathy factors had a significant bivariate relationship with job performance ($r = -0.12$ and $r = 0.08$ for self-centered impulsivity and fearless dominance, respectively). However, education level did moderate the relationship between fearless dominance and job performance, such that this relationship was positive for high levels of education but negative for low levels of education. This study is important for two reasons. First, the authors examined additional moderators of the relationship between psychopathy and performance; second, one of these moderator variables included the different facets of psychopathy. The authors found differential predictive validity for two of these facets, suggesting that information may be lost when aggregating over the facets of the DT traits.

Counterproductive Workplace Behaviors

In this section, we summarize prior reviews that examined the relationships between the DT traits and counterproductive workplace behaviors (CWBs). CWBs represent a form of toxic workplace behaviors that are typically conceptualized as occurring outside one's focal employment role/job.

We then transition to a review of more recent literature examining how the DT traits are related to CWBs.

Prior reviews. O'Boyle and colleagues' (2012) meta-analytic review found that all three DT traits were positively related to CWBs, with sample weighted average correlations of 0.20, 0.35, and 0.06 for Machiavellianism, narcissism, and psychopathy, respectively. Interestingly, the near-zero bivariate relationship between psychopathy and CWBs was moderated by the level of authority held by the respondents, such that the relationship was weaker for jobs conferring greater authority. Finally, a culture of in-group collectivism weakened the relationship between narcissism and CWBs but had no moderating effect for Machiavellianism or psychopathy. Again, these results illustrate that the simple bivariate relationship between DT traits and CWBs may be more nuanced and complex.

Recent literature: main effects. Much of the recent research has hypothesized and tested potential moderators and mediators of the relationships between DT traits and CWBs. However, researchers have also investigated the direct effects of DT traits on CWBs. For example, James et al. (2014) expanded the forms of CWB associated with the DT traits by demonstrating that all three DT traits were directly related to increased levels of *schadenfreude* (i.e., feeling pleasure from others' pain). Specifically, individuals with higher levels of DT traits expressed greater levels of enjoyment (i.e., amusement, satisfaction, pleasure, and happiness) when a coworker received a bad performance review. These findings provide insight into direct practical implications of DT traits in the workplace by illuminating the potential deleterious consequences that can arise from being a subordinate or coworker of individuals who find pleasure in the misfortune of others.

Additionally, Jonason & O'Connor (2017) found that psychopathy and Machiavellianism each uniquely accounted for variance in the propensity to take shortcuts at work, even after controlling for the Big Five traits. Also showing the incremental predictive validity of DT traits, Scherer et al. (2013) found that psychopathy predicted, above and beyond the Big Five traits, both the intention to commit CWBs in the future (Study 1) and self-reported interpersonal CWBs in a team context (Study 2). Furthermore, in a recent meta-analysis, Grijalva & Newman (2015) replicated prior meta-analytic results linking DT to CWBs and reported that two facets of narcissism were differentially related to CWBs: The entitlement/exploitativeness facet was positively related to CWBs, whereas the leadership/authority facet was negatively related to CWBs. This finding further supports O'Boyle and colleagues' (2012) contention that there is value in examining the underlying facets of the DT traits.

Recent literature: mediators and moderators. Recent research from Castille et al. (2017) found that organizational constraint (i.e., lack of resources) moderated the relationship between Machiavellianism and self-reported production deviance. In addition, this effect was mediated by social undermining. More precisely, when organizational constraints were high and led to social undermining (due to competition for resources), the positive relationship between Machiavellianism and production deviance was stronger. Also investigating moderators of relationship between DT and CWB, Blickle & Schütte (2017) found that higher levels on the fearless dominance facet of psychopathy, when coupled with either low educational level or low interpersonal influence, led to increased CWBs toward the organization (CWBO). Additionally, the authors found a direct positive correlation between the self-centered impulsivity facet from the same two-factor model of psychopathy and CWBOs.

Providing initial evidence of a potential mediating variable, Egan et al. (2015) found that both psychopathy and Machiavellianism (but not narcissism) were related to moral disengagement,

which prior research had linked to CWBs (Barsky 2011, Moore et al. 2012). In addition to the empirical contributions delineating the relationship between DT traits and CWBs, novel theoretical contributions on the topic are continuing to be developed. A recent article examining the link between DT traits and CWBs by Cohen (2016) introduced a model that integrated two mediators (i.e., perceptions of organizational politics and perceived accountability) and four potential moderators (political skill, organizational transparency, organizational policies, and organizational culture/climate) of the relationship between DT traits and CWBs.

Organizational Citizenship Behavior

In this section, we summarize prior reviews that examined the relationships between the DT traits and organizational citizenship behaviors (OCBs). OCBs represent a form of positive or prosocial workplace behaviors that are typically conceptualized as occurring outside one's focal employment role/job.

Prior reviews. Perhaps due to the malicious and malevolent nature of the DT traits, much of the research has focused on using DT traits to predict “dark” outcomes (e.g., CWBs). In contrast, little work has tested the intuitive proposition that the DT traits should have negative relationships with organizational citizenship behaviors (OCBs). What evidence is available seems to support the contention that DT traits are negatively associated with these prosocial behaviors. For example, research by Boddy et al. (2010) reported a negative relationship between corporate psychopaths (i.e., psychopaths working in leadership roles) and levels of corporate social responsibility. Becker & O’Hair (2007) presented evidence that DT traits, specifically Machiavellianism, may have differential relationships with OCBs depending on the target of the OCBs. They found that Machiavellianism had a weaker negative relationship to OCBs directed toward individuals (OCBIs) and a stronger relationship to OCBs directed more generally toward the organization (OCBOs).

Liu (2008) provided a rare cross-cultural test of the relationship between Machiavellianism and OCB using a Taiwanese sample. The author found the anticipated negative relationship between Machiavellianism and willingness to share knowledge (an indicator for OCBs). Unfortunately, no additional studies were found in our review of recent literature, suggesting that there is a lack of interest in the topic or researchers believe that the phenomenon is understood well enough. However, we advise researchers to continue to pursue a better understanding of the underlying motives and processes that lead to the relatively robust negative relationship between DT traits and OCBs.

Job and Work Attitudes

In this section, we summarize prior reviews that examined the relationships between the DT traits and job and work attitudes, specifically, job satisfaction. We then transition to a review of more recent literature that has examined how the DT traits are related to a broader set of job and work attitudes.

Prior reviews. Literature prior to 2013 describing the relationship between the DT and workplace attitudes is relatively limited. However, there is some evidence that DT traits are related to lower levels of job satisfaction. For example, Bruk-Lee et al. (2009) summarized meta-analytic evidence suggesting that narcissism and Machiavellianism were negatively related to job satisfaction, with sample weighted correlations of -0.14 and -0.26 , respectively. Psychopathy was

not included in this particular meta-analysis. It is important to note that the confidence interval for narcissism contained zero and that the results for both narcissism and Machiavellianism were based on a limited number of independent samples, four and seven, respectively.

Recent literature. Several more recent studies have been conducted examining the relationships between DT traits and job/work attitudes—including job satisfaction, stress, well-being, career success, and self-efficacy—for the individuals possessing the DT traits as well as the coworkers and subordinates of individuals with high DT traits. Jonason et al. (2015b) used an employee sample (MTurk) with a diverse array of jobs to test the direct and indirect relationships between DT traits and job satisfaction. They found that narcissism was positively related to job satisfaction, but there was evidence that this was an indirect effect carried through perceptions of job prestige and job autonomy. Machiavellianism and psychopathy were negatively related to job satisfaction, but these effects were also carried through perceived competitiveness. The authors suggested that these traits led to differential perceptions of the environment, due to the differences in motives/orientations that individuals with these traits possess, which, in turn, led to varying work attitudes. Causal inferences drawn from this study should be taken with caution due to the cross-sectional survey design; however, the study does provide a promising starting point for considering these relationships. Similarly, Spurk et al. (2016) found that narcissism and Machiavellianism were both unrelated to career satisfaction, whereas psychopathy showed a significant negative relationship. In an earlier study, Hirschi & Jaensch (2015) found significant indirect effects of narcissism on career satisfaction via self-efficacy and career engagement. These studies suggest that the perceptions and motives specific to individuals high in DT traits affect the attitudes of those individuals within the work environment.

DT traits are characterized by interpersonally maladaptive behavioral tendencies. Thus, it is reasonable to believe that individuals possessing these traits will have an impact on the affective states of their peers or subordinates. Two independent studies demonstrated that subordinates' reports of supervisors' psychopathy (assessed using the B-SCAN 360) were negatively related to job satisfaction (Mathieu & Babiak 2015, Mathieu et al. 2014). In a third study, the same measure using subordinates' ratings of supervisors' psychopathy was shown to be indirectly related to subordinates' ratings of turnover intention through their ratings of job satisfaction (Mathieu & Babiak 2016). In one of the few longitudinal studies delineating the roles that DT traits play in the workplace, Volmer et al. (2016) found that leaders' narcissism was unrelated to subordinates' work attitudes. On the other hand, Machiavellianism was negatively related to subordinates' career satisfaction and positively related to subordinates' emotional exhaustion, whereas leaders' psychopathy was negatively related to subordinates' job satisfaction.

Leadership

In this section, we summarize prior reviews that examined the relationships between the DT traits and various aspects of leadership. We then transition to an in-depth review of more recent literature examining how the DT traits are related to leadership-related outcomes including things such as subordinates' career success and firm performance.

Prior reviews. The FFM of personality still dominates the research conducted by proponents of the trait approach to leadership. However, in their review of the literature surrounding the relationship between “dark side” personalities and leadership, Spain et al. (2014) provided an overview of the research linking DT traits to leaders' effectiveness, managerial derailment, and abusive supervision. Additionally, Spain et al. (2016) provided an exhaustive review of DT with a

focus on leadership. The primary conclusions from these reviews suggest that (a) the relationships linking the DT traits to leadership (in)effectiveness are complex (and a number of important moderating variables may play a role in explaining these relationships), (b) leaders' DT traits may exert an impact across all organizational levels, and (c) the impact of leaders' DT traits reaches beyond job performance to include job attitudes and affect.

Recent literature. Due to the range of leadership levels within an organization, leaders high in DT traits have the ability to affect a range of outcomes spanning from the subordinate level to the organizational level. Recent research has begun to acknowledge this variety and has expanded from a narrow organizational-level focus to a broader focus that includes the effects that leaders characterized by DT traits have on subordinates' performance and attitudinal outcomes (e.g., job satisfaction). For instance, Volmer et al. (2016) showed that leaders' narcissism, Machiavellianism, and psychopathy differentially predicted objective and subjective outcomes for subordinates. Specifically, leaders' narcissism was positively related to objective and subjective indicators of career success and did not have a negative impact on their subordinates' well-being. Alternatively, leaders' Machiavellianism was related to lower career satisfaction and higher rates of emotional exhaustion. Similarly, leaders' psychopathy was also found to have a deleterious impact on subordinates' job satisfaction.

As mentioned, researchers typically explore the impact that leaders with high levels of DT traits have on the organization. However, taking a novel approach to understanding Machiavellianism in the workplace, Belschak et al. (2015) explore the role that charismatic leadership plays in effectively leading Machiavellian followers. In a similar vein, Grijalva & Harms (2013) proposed a model for understanding leaders' effectiveness that considered leaders' narcissism as well as followers' submissive/dominant characteristics. Also investigating subordinates' and leaders' DT traits, Wisse et al. (2015) found that subordinates' psychopathy and Machiavellianism were negatively related to evaluations of innovation by their leader. However, the dyadic composition of DT traits in leader/subordinate pairings seemed to play an important role because subordinates' narcissism was positively related to leaders' evaluations of innovation, but only when the subordinates were not paired with a narcissistic leader. These studies highlight the need to extend our investigation of leaders' DT traits to include the DT trait composition of leader/subordinate pairings.

Although research is typically concerned with how leaders' DT traits may negatively affect the evaluations of their followers, followers' evaluations of narcissistic leaders have been shown to be affected by the gender of both the follower and leader. Specifically, evidence suggests that male followers evaluate narcissistic female leaders more negatively than male narcissistic leaders (De Hoogh et al. 2015). Furthermore, in a recent meta-analysis, Grijalva et al. (2015) suggested that mixed findings for the relationship between leaders' narcissism and effectiveness might be attributed to who is providing the effectiveness ratings and that the relationship may be curvilinear (i.e., optimal levels of leaders' narcissism that follows a negative quadratic function) rather than the traditional linear relationship that is often assumed in the organizational sciences.

Although much of the recent DT research has emphasized the influence that middle and lower-level leaders have on individual- and group-level outcomes, researchers have also sought to investigate the impact that top-level leaders (i.e., CEOs) have on organizational outcomes. A recent study by Zhang et al. (2017) insightfully connected two seemingly contradictory traits by showing that CEOs' narcissism increased an organization's innovative performance but only when these CEOs were able to display humble behaviors in front of their subordinates (based on subordinates' ratings of CEOs' humility). Additionally, Reina et al. (2014) contributed to defining the boundary conditions for effective narcissistic CEOs by showing that these narcissistic CEOs

were positively correlated to firm performance, but only when they identified strongly with their organization.

A second strand of research has investigated how individuals with such seemingly toxic and maladaptive behavioral tendencies are able to acquire positions of leadership and authority. Past research has suggested that there is a positive relationship between narcissism and leaders' emergence (Brunell et al. 2008); however, Grijalva et al. (2015) found that narcissism no longer predicted leaders' emergence after controlling for extroversion. Interestingly, in a longitudinal study, Ong et al. (2016) found that narcissists initially emerged as leaders within unacquainted groups, but this initial favorability was followed by a decline in peer-rated leadership over time. Küfner et al. (2013) provided a theoretical frame for understanding how narcissistic individuals gain initial favor (due to peer perceptions of confidence and social dominance), but such positive valuations decline over time as the interactions with the leader become more antagonistic and hostile.

A third line of research has focused on the relationship between DT traits and toxic or abusive supervision. For example, Wisse & Sleebos (2016) reported that supervisors' Machiavellianism was positively related to abusive supervision, but only when the supervisors perceived their position to be a powerful one. Using a qualitative research design, Boddy et al. (2015) identified a group of "corporate psychopaths" and then obtained ratings of those leaders by both their superiors and their subordinates. The ratings furnished by the superiors were overwhelmingly positive; in contrast, the subordinates reported being poorly treated and subjected to abusive tactics. This study highlights how leaders with DT traits may be able to simultaneously express their toxic tendencies (e.g., abusing subordinates) while at the same time conveying a favorable impression to higher-level leaders.

Creativity and Innovation

In this section, we examine the connections between the DT traits and creativity and innovation. We briefly acknowledge the earlier (limited) research in this area before summarizing the more recent literature.

Prior reviews. Prior to the review by Spain et al. (2014), there was limited research linking the DT traits to creativity and/or innovation. One notable study was conducted by Goncalo et al. (2010), who found that individuals with elevated levels of narcissism tended to exaggerate their creative ability, but their actual creative performance was not different from that of non-narcissists. However, the authors found that when given the opportunity to personally present their ideas to the raters, the confidence and enthusiasm shown by narcissists tended to result in elevated ratings of creative performance. This highlights the efficacy of narcissistic individuals in manipulating the perceptions of others.

Recent literature. A number of recent studies have begun filling the void linking DT traits to creativity and innovation. For example, Dahmen-Wassenberg et al. (2016) found that narcissism was strongly correlated to self-reported creativity but no relationship was found for objective measures of creativity (i.e., divergent thinking performance). Conversely, they found that Machiavellianism and psychopathy both had weak negative relationships with objectively assessed creativity but were uncorrelated with self-reported creativity. Jonason et al. (2015a) conducted an exploratory investigation and found that narcissism mediated the relationship between sex differences in reported general creativity. Although exploratory attempts should be replicated, this provides insight into how the sex differences in narcissism may lead to differential outcomes. Additionally, we advise caution when using personality traits (e.g., DT) as mediating variables or when testing for indirect

effects because mediation implies that changes in the independent variable beget changes in the outcome variable by influencing (i.e., changing) the mediator variable (James et al. 1982). However, the DT traits (like all traits) are presumed to be relatively enduring and invariant over time, especially short periods of time. Thus, their utility as a potential mediating mechanism may be conceptually questionable.

Creativity and innovation are often conceptualized as individual differences or processes/outcomes stemming from individual differences (i.e., DT traits); however, creativity and innovation rarely unfold while working in isolation from others. This is especially true in organizational contexts, where individual employees are often working as part of a team. In such contexts, supervisors often evaluate employees' creativity and lend support to the most favorably evaluated ideas. While investigating the interpersonal nature of such supervisors' evaluations, Wisse et al. (2015) found that subordinates' psychopathy and Machiavellianism were negatively related to evaluations of innovation by the leader. By contrast, subordinates' narcissism was positively related to leaders' evaluations of innovation, but only when the leaders providing the evaluation were themselves low in narcissism. Due to their own grandiose self-concept, narcissistic supervisors may devalue innovative performance by their subordinates. However, Zhang et al. (2017) found that narcissistic CEOs who were able to effectively manage their impressions to appear humble to their subordinates tended to be more effective at fostering a culture of innovation and improving firm performance.

Other Organizationally Relevant Outcomes

In the final section of our review, we summarize several additional areas of research that are immediately relevant to organizational scholars. Specifically, we review research that discusses DT traits and (a) faking/impression management issues in personnel selection, (b) work groups and work teams, and (c) comparison of the traits across cultures.

Faking and personnel selection. In high-stakes testing situations (e.g., employment testing or interviews), individuals with elevated levels of DT traits may be (a) prone to engage in faking and socially desirable responding, (b) more skilled at faking compared to individuals with lower levels of the DT traits, and (c) may be more comfortable engaging in faking behavior (Levashina & Campion 2006, Spain et al. 2014). For instance, earlier research found that Machiavellianism is related to a greater willingness to be dishonest during interviews (Fletcher 1990), and theory suggests that individuals with Machiavellian traits may be quite skilled at faking during the selection process (Levashina & Campion 2006). Additionally, narcissists are quite adept at making positive first impressions, and their behavioral tendencies toward self-promotion and talkativeness work in their favor when they are rated for employability (Paulhus et al. 2013). Finally, given that psychopathy is conceptualized as including aspects of interpersonal manipulation, lying, and lack of guilt/remorsefulness (LeBreton et al. 2006, Paulhus & Williams 2002), individuals with elevated levels of psychopathy are masters at managing their impressions and manipulating others for personal gain.

Roulin & Bourdage (2017) recently confirmed that all three DT traits predicted the use of deceptive impression management tactics in interviews. Moreover, individuals exhibiting DT traits changed their impression management style to adapt to the different interview structures used by the hiring organizations. These findings should be a cause for concern if the goal of an organization is to remove individuals who possess elevated levels of DT traits from the applicant pool. All is not lost, however, as new theoretical perspectives describing the evolutionary advantage of DT traits in short interpersonal interactions (Holtzman & Strube 2011, Jonason et al. 2014)

and the development of indirect measurement techniques (Greenwald et al. 1998; James 1998; James & LeBreton, 2010, 2012; LeBreton et al. 2007) may provide valuable insight into stopping the enemy at the gate (Fischbacher-Smith 2015). Overall, there is evidence that DT traits are associated with faking and impression management, but additional work is needed to better the processes through which DT traits impact faking behavior, as well as identifying assessment tools that may be less prone to faking and impression management.

Work groups and teams. Due to the deleterious interpersonal nature of DT personality traits, one would expect research investigating the effect of these traits on work group/team outcomes and processes to be plentiful. However, to date there has been limited empirical research on the impact of DT traits within team contexts. Kufner et al. (2013) proposed a dual-pathway approach for understanding why narcissists are initially held in high regard but their positive evaluations decline with more interactions. They suggest that narcissistic individuals utilize agentic behaviors (e.g., dominance and assertiveness) initially and transition to more antagonistic behaviors (e.g., aggression and arrogance) as interpersonal relationships develop. This theoretical perspective was empirically supported by Leckelt et al. (2015) in a study that monitored agentic and antagonistic behaviors by unacquainted individuals in groups over a three-week period. Similarly, individuals with Machiavellian tendencies have been shown to participate in the undermining of peers to gain positive evaluations from supervisors; however, this tendency was conditional on situations containing limited resources (Castille et al. 2017). These findings suggest that boundary conditions as well as a multitude of social interaction processes may play a role in understanding the effectiveness or detriment of DT traits in a group/team setting.

The study of DT traits within team/group contexts has primarily used individual level characteristics to predict individual level outcomes within a team/group context, such as the research presented in the previous paragraph. Another approach typically used to study DT traits in teams/groups is the use of aggregated predictor variables where the researcher uses some form of central tendency to depict the unit (e.g., team) level construct. The literature reviewed for this section uses mean aggregation to quantify the unit level properties of DT traits; however, we ask the reader to consider alternative forms of aggregations that may be more appropriate (i.e., dispersion, minimum, maximum, etc.) when determining how one will quantify the unit level construct. Baysinger et al. (2014) presented evidence of how the composition of DT traits within a group may predict several team-level outcomes. For example, they showed that higher levels of team psychopathy and of implicit aggression predicted poorer team performance, lower commitment, and weaker cohesion. These relationships were mediated by negative socioemotional behaviors. Likewise, a curvilinear relationship has been found between group-level narcissism and group-level creative performance, suggesting that there may be optimal levels of group-level narcissism (Goncalo et al. 2010). This research highlights the need to further investigate these interpersonal processes as well as the particular composition of DT traits within a group.

Cross-cultural research. Although literature on the topic is limited, mounting evidence suggests that DT traits are not unique to Western cultures. Aspects of DT traits have been observed in remote cultures, such as the Yupic-speaking Eskimos (Murphy 1976). Additionally, research suggests that the region of the world one lives in may play a role in self-reported levels of narcissism (see Foster et al. 2003, Kwan, Kuang, & Hui 2009). Thus, researchers are encouraged to explore the cross-cultural implications of DT traits.

In addition to the usual difficulties associated with cross-cultural research (e.g., sampling, translations, etc.), researchers should be mindful of other potential hurdles to the study of DT traits. For example, Kaiser et al. (2015) noted that perceptions of DT behaviors may be influenced by the

strict obedience to authority seen in collectivist and hierarchical cultures, such that subordinates from these cultures may be more accepting of DT traits in their leaders. Stated alternatively, the threshold for detecting the impact of DT traits may differ across cultures (House et al. 1999). Taking these challenges into account, we believe that the cross-cultural study of DT traits will be a fruitful endeavor, especially with the increased globalization of organizations.

MEASURING THE TRAITS OF THE DARK TRIAD

A variety of assessments exist for measuring the explicit aspects of DT traits, including (a) single construct measures, (b) combined construct measures, (c) configural scoring of the traits and facets comprising the FFM, and (d) the HEXACO model of personality. **Table 1** contains a summary of the several commonly used measures of the DT traits, including a description of the factor structure/dimensionality that underlies each measure.

Single Construct Measures—Psychopathy

One of the most commonly used measures of psychopathy is the Self-Report Psychopathy scale (SRP) (Hare et al. 1989). The current version, the SRP-III, consists of 64 self-report items designed to measure 4 factors (i.e., interpersonal manipulation, callous affect, erratic lifestyle, criminal tendencies). Participants respond to each question using a Likert-type scale. Example items include “I can be fairly cunning if I have to be” and “I enjoy gambling for large stakes.”

Other validated self-report measures of psychopathy include the 26-item Levenson’s Self-Report Psychopathy Scale (LSRP) (Levenson et al. 1995, Lynam et al. 1999), which is designed to measure primary and secondary psychopathy, and the 180-item Psychopathic Personality Index (PPI) (Lilienfeld & Andrews 1996), which also has a shortened 56-item version. Both long and short forms of the PPI measure eight psychopathy-related factors: stress immunity, social potency, fearlessness, blame externalization, Machiavellian egocentricity, carefree nonplanfulness, impulsive nonconformity, and coldheartedness (see Lilienfeld & Hess 2001).

In general, researchers have tended to favor the SRP-III over the other measures, with the LSRP or PPI seeing very infrequent use (Paulhus & Jones 2015). Reliabilities for the SRP-III tend to be in the range of $\alpha = 0.80$ – 0.90 or higher, whereas reliabilities for the individual subfactors are generally somewhat lower ($\alpha = 0.69$ – 0.90 ; Gordts et al. 2017).

Another option for measuring psychopathy, specifically within the context of organizational research, is the Business-SCAN 360 (B-SCAN 360) (Mathieu et al. 2013). The B-SCAN 360 is designed to measure corporate psychopathy, whereas SRP, PPI, and LSRP data are collected from other sources (e.g., subordinates). Participants respond to 20 items using a 5-point Likert scale. The B-SCAN 360 measures four factors that roughly correspond to the four factors comprising the SRP (manipulative/unethical, callous/insensitive, unreliable/unfocused, and intimidating/aggressive).

Another tool is the B-SCAN Self (Mathieu & Babiak 2016), which is a self-assessment measure of psychopathy in the workplace. The B-SCAN Self comprises 126 items measuring 4 factors and 15 subfactors (here listed in parentheses): interpersonal (insincere, arrogant, untrustworthy, manipulative/unethical), affective (remorseless, shallow, insensitive, blaming), lifestyle (impatient, selfish, unfocused, erratic, unreliable), and antisocial (dramatic, bullying). Mathieu & Babiak (2016) reported a significant correlation between the B-SCAN Self and the SRP-III ($r = 0.69$), as well as between the B-SCAN and measures of Machiavellianism (MACH-IV; $r = 0.63$) and narcissism (NPI-16; $r = 0.45$). Finally, the B-SCAN Self scores were found to be negatively related to agreeableness ($r = -0.45$) and conscientiousness ($r = -0.33$) but not significantly related to other aspects of the Big Five traits.

Table 1 Dimensionality of common measures of the DT traits

Constructs and measures	Number of items	Factors/Dimensions	Reference
Machiavellianism			
Mach-IV	20	Unidimensional ^a	Christie & Geise 1970
MPS	16	Four factors: distrust of others, desire for status, desire for control, amoral manipulation	Dahling et al. 2009
OMS	18	Three factors: maintaining power, management practices, manipulateness	Kessler et al. 2010
Narcissism			
NPI	40	Seven factors: authority, self-sufficiency, superiority, vanity, exhibitionism, entitlement, exploitativeness	Raskin & Terry 1988
		Four factors: leadership/authority, self-absorption/self-admiration, superiority/arrogance, exploitativeness/entitlement	Emmons 1987
		Three factors: leadership/authority, grandiose exhibitionism, entitlement/exploitativeness	Ackerman et al. 2011
PNI	52	Seven factors: contingent self-esteem, hiding the self, devaluing, entitlement rage, exploitativeness, grandiose fantasy, self-sacrificing self-enhancement	Pincus et al. 2009
GNS	33	Seven factors: authority, self-sufficiency, superiority, vanity, exhibitionism, entitlement, exploitativeness	Foster et al. 2015
Psychopathy			
SRP ^b	64	Four factors: interpersonal manipulation, callous affect, erratic lifestyle, criminal tendencies	Paulhus et al. 2014
LSRP	26	Two factors: primary and secondary psychopathy	Levenson et al. 1995
PPI	180 ^c	Eight factors: stress immunity, social potency, fearlessness, blame externalization, Machiavellian egocentricity, carefree nonplanfulness, impulsive nonconformity, coldheartedness	Lilienfeld & Andrews 1996
B-SCAN 360	20	Four factors: manipulative/unethical, callous/insensitive, unreliable/unfocused, and intimidating/aggressive	Mathieu et al. 2013
B-SCAN Self	126	Four factors with 15 subfactors ^d	Mathieu & Babiak 2016
All dark triad traits			
SD3	27	Three factors: psychopathy, narcissism, Machiavellianism	Jones & Paulhus 2014
DD	12	Three factors: psychopathy, narcissism, Machiavellianism	Jonason & Webster 2010
HDS	168	Eleven factors with five often used to measure DT: boldness (narcissism), mischievous, colorful (psychopathy), skeptical, excitable (Machiavellianism)	Hogan & Hogan 1997

Abbreviations: B-SCAN 360, Business SCAN 360; DD, The Dirty Dozen; GNS, Grandiose Narcissism Scale; HDS, Hogan Development Survey; Mach-IV, Machiavellianism self-assessment; MPS, Machiavellian Personality Scale; NPI, Narcissistic Personality Inventory; OMS, Organizational Machiavellianism Scale; PNI, Pathological Narcissism Inventory; PPI, Psychopathic Personality Index; SD3, Short Dark Triad; SRP, Self-Report Psychopathy Scale.

^aThe Mach-IV has not shown a consistent empirical factor structure (see Panitz 1989, Jones & Paulhus 2009).

^bSRP-III is the version of the SRP described here.

^cA 56-item version of the PPI has also been developed (Lilienfeld & Andrews 1996).

^dSee Single Construct Measures—Psychopathy for description of factor structure of the B-SCAN Self.

Single Construct Measures—Narcissism

The most popular measurement tool for the self-assessment of narcissism is the Narcissistic Personality Inventory (NPI) (Ackerman et al. 2011, Emmons 1987, Raskin & Hall 1979). The traditional format for the NPI consists of a forced choice between two statements, where respondents select the one that is most consistent with their self-appraisals. In addition, the NPI has been modified to conform to a traditional Likert scale with sample items including “I am an extraordinary person” and “If I ruled the world it would be a much better place” (Boldero et al. 2015). At least one study has indicated that the Likert scale version provides more information regarding subfactors compared to the forced-choice or binary-rated version (Boldero et al. 2015). A shortened version of the NPI, the NPI-16, has also been used by researchers to assess narcissistic personality (Ames et al. 2006).

Although the NPI is quite popular, it has been criticized for failing to measure the vulnerable component of narcissistic personality (Pincus et al. 2009). Additionally, researchers have found inconsistent evidence regarding the factor structure of the NPI, with the number of factors ranging from two to seven (Paulhus & Jones 2015). However, there is evidence supporting the NPI's construct validity (Paulhus & Jones 2015, Raskin & Terry 1988) as well as internal reliability. For the full scale, α is typically at 0.80 or above, whereas individual subfactors have yielded internal consistency reliabilities in the 0.50s and 0.60s (see Raskin & Terry 1988).

Several alternative measures have been developed in the past decade to address the limitations of the NPI. For instance, the Grandiose Narcissism Scale (GNS) (Foster et al. 2015) was developed to specifically address the consistently low reliabilities found at the facet level of the NPI. Initial evidence for the 33-item GNS, which utilizes the original 7-facet structure proposed by Raskin & Terry (1988), indicates that the measure has better facet-level reliability.

Expanding the measurement of narcissism to capture both grandiose and vulnerable components of the trait, the 52-item Pathological Narcissism Inventory (PNI) developed by Pincus et al. (2009) displayed acceptable ranges of internal consistency for both the vulnerable facets (e.g., contingent self-esteem, hiding the self, and devaluing) and the grandiose facets (e.g., entitlement rage, exploitativeness, grandiose fantasy, and self-sacrificing self-enhancement) of explicit narcissism, with α values ranging from 0.78 to 0.93. The PNI total has been shown to significantly correlate with the NPI at $r = 0.13$, whereas only five of the seven facets correlate with the NPI, with the strongest correlation found for the relationship between the exploitativeness facet and the NPI ($r = 0.56$; Pincus et al. 2009). Other facets correlated with the NPI in the range of -0.15 to -0.24 .

In addition to these large multi-item scales, recent studies have examined the Single-Item Narcissism Scale (SINS) (van der Linden & Rosenthal 2016), which contains a single Likert item: “I am a narcissist.” Initial evidence suggests that although the SINS correlates well with the NPI and has discriminant validity from self-esteem measures, it does not tap into grandiose narcissism and correlates less consistently with behavioral measures compared to the NPI (van der Linden & Rosenthal 2016).

Single Construct Measures—Machiavellianism

The most commonly used measure of Machiavellianism is the Mach-IV inventory (Christie & Geis 1970). Like the NPI and SRP, this measure has been subjected to a number of validation studies (Panitz 1989). The Mach-IV is a 20-item self-assessment measure that participants respond to using a Likert scale. Items include “Never tell anyone the real reason you did something unless it is useful to do so” and “The best way to handle people is to tell them what they want to hear.” The

Mach-IV has been criticized over concerns related to its factor structure, which has not been found to align with the theoretically proposed unidimensional model (Hunter et al. 1982). Hunter et al. (1982) have suggested that these issues cast doubt on the Mach-IV's construct validity. Finally, the Mach-IV has not typically been criticized for reliability-related issues, although some researchers have noted that the scale reliability is not consistent across demographic groups (Dahling et al. 2009, Paulhus & Jones 2015).

In addition to the Mach-IV, researchers have developed alternative measures of the construct in recent years. For example, Dahling et al. (2009) developed the Machiavellian Personality Scale (MPS), which consists of 16 items designed to measure 4 factors (distrust of others, desire for status, desire for control, and amoral manipulation) and is answered using a Likert-type scale. Although a newer measure, the MPS has demonstrated acceptable reliability in a sample of adults ($\alpha = 0.82$) in addition to demonstrating construct validity and predicting organizationally relevant outcomes such as task performance (Dahling et al. 2009).

Similarly, Kessler et al. (2010) developed the Organizational Machiavellianism Scale (OMS), which is an 18-item Likert scale assessing 3 factors (maintaining power, management practices, and manipulateness). Internal consistency of the factors was relatively low, ranging from 0.67 to 0.76. Of the three factors, only the manipulateness factor correlated with the Mach-IV ($r = 0.45$; Kessler et al. 2010). Kessler et al. (2010) additionally found that the OMS manipulateness factor correlated positively with CWBs ($r = 0.21$), whereas maintaining power and management practices were negatively correlated with CWBs ($r = -0.27$ and -0.19 , respectively), indicating that certain facets of Machiavellianism may be positive in an organizational context and demonstrating that Machiavellian behaviors extend beyond mere manipulation.

Combined Construct Measures—Short Dark Triad

A relatively new measure, the Short Dark Triad (SD3) (Jones & Paulhus (2015)), takes aim at measuring all three aspects of the DT simultaneously in one brief measure. The final version of the scale has 27 items designed to measure the 3 traits of the DT. The SD3 has reasonable overall internal consistency, with α ranging from 0.70 to 0.80, in addition to solid test-retest reliability at two weeks, with coefficients ranging from 0.77 to 0.84 (Paulhus & Jones 2015). In addition, the SD3 has a three-factor structure where each factor matches a component of the DT (Paulhus & Jones 2015).

Combined Construct Measures—Dirty Dozen

Similarly, the Dirty Dozen (DD) (Jonason & Webster 2010) is a 12-item scale designed to measure each of the 3 DT traits. However, the DD has been criticized for its extreme brevity (four items per trait) and weaker convergent validity with other measures of the DT when compared to the SD3 (Jones & Paulhus 2014). Specifically, Jones & Paulhus (2014) found that the DD correlated with the Mach-IV at 0.53, the SRP-III at 0.56, and the NPI at 0.46, whereas the SD3 correlated with Mach-IV at 0.68, the SRP-III at 0.78, and the NPI at 0.70. Reliability evidence for the DD is mixed, with internal consistency estimates ranging from 0.85 to 0.87 for narcissism, 0.67 to 0.72 for Machiavellianism, and 0.62 to 0.66 for psychopathy; reported test-retest estimates are 0.87 for narcissism, 0.85 for Machiavellianism, and 0.77 for psychopathy (Jonason & Webster 2010). In addition, despite its brevity, the DD does have a three-factor structure that aligns with each component of the DT, although a single factor solution may also be used (Jonason et al. 2011).

Combined Construct Measures—Hogan Development Survey

Finally, predating the DT label was the pioneering work of Robert and Joyce Hogan and their Hogan Development Survey (HDS) (Hogan & Hogan 1997). The HDS was designed to measure subclinical variants of the personality disorders described in the DSM-IV. Specifically, the HDS consists of 168 items comprising 11 distinct scales: excitable, skeptical, cautious, reserved, leisurely, bold, mischievous, colorful, imaginative, diligent, and dutiful. The traits of the DT map directly onto two of these scales. The boldness scale measures a subclinical version of the narcissistic personality disorder, and the mischievousness scale measures a subclinical version of the antisocial personality disorder (which includes callous disregard for others, manipulateness, impulsivity, and inflated self-regard). In addition, Machiavellianism has been measured using items from the skeptical and excitable scales, and information about psychopathy is typically provided by the mischievous scale and the colorful scale (Hogan 2014). Each of the 11 scales is measured by 14 statements/items with which respondents are simply asked to agree or disagree. Hogan (2014) tested the HDS alongside two other measures of DT traits: the SD-3 (Jones & Paulhus 2014) and the DD (Jonason & Webster 2010). Findings indicated that the HDS measure of Machiavellianism ($\alpha = 0.87$) significantly related to the DD measure ($r = 0.35$) and the SD-3 measure ($r = 0.67$) of Machiavellianism; the HDS measure of narcissism significantly related to the DD measure ($r = 0.39$) and the SD-3 measure ($r = 0.69$) of narcissism; and the HDS measure of psychopathy significantly related to the DD measure ($r = 0.26$) and the SD-3 measure ($r = 0.61$) of psychopathy. In addition, Hogan (2014) reported that the HDS measure of Machiavellianism was related to the HDS measure of narcissism ($r = 0.25$) but not of psychopathy ($r = 0.12$), and that the HDS measures of psychopathy and narcissism were also related to one another ($r = 0.44$). One of the principal advantages of using the HDS is that it provides information about not only the DT traits, but also other maladaptive or problematic tendencies that may be particularly disruptive in organizational contexts.

Five Factor Model—Global Traits

The traits of the DT overlap with the global traits comprising the FFM of personality, indicating that commonly used measures of personality could be used to provide information about the DT traits. For example, O'Boyle et al. (2015) investigated the relationship between the DT traits and the global traits of the FFM. Their meta-analytic findings indicated that Machiavellianism was negatively associated with conscientiousness ($r_c = -0.27$) and agreeability ($r_c = -0.50$), positively associated with neuroticism ($r_c = 0.11$), and not significantly associated with extraversion ($r_c = -0.01$) or openness to experience ($r_c = -0.05$). In addition, narcissism was negatively associated with agreeability ($r_c = -0.36$) and neuroticism ($r_c = -0.20$) while being positively associated with extraversion ($r_c = 0.49$), openness ($r_c = 0.24$), and conscientiousness ($r_c = 0.11$). Finally, psychopathy was negatively associated with agreeability ($r_c = -0.53$) and conscientiousness ($r_c = -0.39$) and had very small positive associations with extraversion ($r_c = 0.05$), openness ($r_c = 0.05$), and neuroticism ($r_c = 0.06$).

Five Factor Model—Facet-Level Traits

O'Boyle et al. (2015) also examined the relationships between psychopathy and narcissism and specific facets or dimensions that comprise the global traits of the FFM. Relying on a model proposed by Glover et al. (2012) that identified 13 FFM facets that converge on narcissism (and that has demonstrated construct, discriminant, and incremental validity compared to alternative measures), O'Boyle et al.'s (2015) meta-analytic results indicated that 10 of the 13 FFM facets

were associated with narcissism when corrected for measurement error, specifically, altruism ($r_c = -0.26$), modesty ($r_c = -0.49$), straightforwardness ($r_c = -0.45$), tendermindedness ($r_c = -0.27$), trust ($r_c = -0.19$), assertiveness ($r_c = 0.31$), excitement seeking ($r_c = 0.23$), gregariousness ($r_c = 0.17$), anger/hostility ($r_c = 0.33$), and fantasy ($r_c = 0.11$).

O'Boyle et al. (2015) also tested a similar model of psychopathy put forth by Lynam et al. (2011) consisting of 18 FFM facets that were mapped onto psychopathy. Evidence supporting construct validity and incremental validity (compared to alternate measures) has been found for Lynam and colleagues' model (see Lynam et al. 2011, Miller et al. 2014). The results of O'Boyle and colleagues' meta-analytic review indicated that 15 of the proposed 18 facets were associated with psychopathy, specifically, altruism ($r_c = -0.40$), compliance ($r_c = -0.47$), modesty ($r_c = -0.25$), straightforwardness ($r_c = -0.56$), tendermindedness ($r_c = -0.36$), trust ($r_c = -0.35$), deliberation ($r_c = -0.46$), dutifulness ($r_c = -0.41$), self-discipline ($r_c = -0.31$), excitement seeking ($r_c = 0.28$), warmth ($r_c = -0.24$), anger/hostility ($r_c = 0.37$), depressive tendencies ($r_c = 0.10$), impulsiveness ($r_c = 0.39$), and vulnerability ($r_c = 0.08$). Both narcissism and psychopathy were well explained by FFM subfacets, although psychopathy ($R_c^2 = 0.88$) was better explained than narcissism ($R_c^2 = 0.42$; O'Boyle et al. 2015). Regarding Machiavellianism, more research is needed to explore the relationship between Machiavellianism and specific FFM subfacets. However, it is noteworthy that O'Boyle et al. (2015) found that the profiles of global FFM constructs for Machiavellianism and psychopathy were remarkably similar. Ultimately, O'Boyle et al. (2015) conclude that there is substantial overlap between the FFM and the DT. This does not necessarily indicate that the constructs are redundant, but rather that researchers working with archival data containing FFM facet-level information may be able to reconstruct information on DT traits for those participants if desired.

Five Factor Model—HEXACO

The HEXACO model of personality is a six-factor model that adds a honesty-humility factor to the five global traits of the FFM (Ashton et al. 2004). The honesty-humility factor consists of four facets: sincerity, fairness, greed avoidance, and modesty. The full HEXACO personality measure contains 60 items with 10 items for each factor and factor-level reliabilities generally at 0.70 or above (Lee & Ashton 2005). Research has found that the DT traits are negatively and strongly related to this added honesty-humility dimension, with correlations ranging from $r = -0.53$ (for narcissism) to $r = -0.57$ (for Machiavellianism), to $r = -0.72$ (for psychopathy; Lee & Ashton 2005). This indicates that using the HEXACO model to assess personality could offer the option of assessing DT-related constructs. However, the HEXACO measure does not permit researchers to assess specific DT traits or the facets comprising those DT traits.

Five Factor Model—Distinct from, or Redundant with, the DT Traits

As noted above, there is substantial evidence linking the traits and facets associated with the FFM with the DT traits. Although the constructs are correlated, our interpretation of this literature suggests that the different measures of the FFM traits provide different levels of precision when it comes to serving as indicators for the DT traits. The global traits of the FFM are too coarse to provide any reliable and direct proxy for the DT traits. The exception may be the honesty-humility trait that is included in the HEXACO model and assessments. This trait may be a reasonable proxy for psychopathy. The facet-level traits of the FFM appear to offer a reliable and effective way to assess psychopathy, but additional work is needed to better link the FFM facets to narcissism and Machiavellianism. Finally, we believe that the stand-alone measures of the DT traits (i.e., individual or combined measures of the DT traits) provide the most direct and reliable assessments of those traits; and, consequently, they are likely to yield the most valid inferences about how the DT traits are related to organizational outcomes.

CONCLUSION

Over the past 15 years there has been a notable increase in efforts to link the DT personalities to behavior in organizations. Interestingly, nearly all of this research has been focused on the explicit (i.e., consciously and introspectively accessible) aspects of the DT personalities (i.e., traits). Thus, in our review, we focused on the differing ways that the DT traits have been conceptualized, provided a summary of how the DT traits have been linked to organizational outcomes, and identified the most commonly used tools for measuring the DT traits. Looking ahead, we anticipate that the DT traits will continue to occupy a central role in research and practice linking personality constructs to organizational outcomes. However, looking ahead we also believe that the time is right to begin mapping and measuring the implicit (i.e., unconscious) aspects of the DT personalities (i.e., defense mechanisms, implicit biases, latent motives). It is now widely acknowledged that models that combine information about both the explicit aspects of personality and the implicit aspects of personality tend to provide greater insights into how personality is related to behavior (James & LeBreton 2012, McClelland et al. 1989, Winter et al. 1998). In addition to exploring the implicit components of the DT, the sidebar titled General Domains and Specific Suggestions for Future Research and Practice contains other suggestions for future research and practice. These suggestions are intended to be illustrative, not exhaustive, our goal being to catalyze the next chapter of work linking the DT to workplace behaviors.

GENERAL DOMAINS AND SPECIFIC SUGGESTIONS FOR FUTURE RESEARCH AND PRACTICE

Explicit aspects of the dark triad (DT) personalities

- Reconcile the different frameworks used to study psychopathy, with a particular focus on explicating the psychological features associated with each framework and how those features are organized/structured (e.g., two-factor versus four-factor models of psychopathy).
- Reconcile the different frameworks used to study narcissism and Machiavellianism, again, with a particular focus on explicating the psychological features associated with each framework and how those features are organized/structured.
- Examine whether conceptualizing and measuring the DT traits as singular, global constructs or adopting a facet-level approach to theory and measurement provides better prediction of organizational outcomes.
- Explore the differential relationships that each of the DT traits has with various organizational outcomes, using both global and facet-level models of the DT traits.

Implicit aspects of the DT personalities

- Map implicit aspects/components of the DT personalities by identifying the stable patterns of social information processing used by individuals with higher levels of DT constructs. Researchers should focus on the relatively enduring patterns of how individuals perceive social information, seek out additional information, weigh the importance of information, frame and interpret information, encode and store information, and draw inferences/reach conclusions (James & LeBreton 2012).
- Develop indirect measures that reliably assess the implicit aspects of DT personalities; potential measurement systems include response latency tests (e.g., implicit association tests), projective tests (e.g., thematic apperception tests), and problem-solving tests (e.g., conditional reasoning tests).

Integrating the implicit and explicit aspects of DT personalities

- Examine the extent to which the implicit and explicit aspects of DT personalities overlap with one another.
- Examine the incremental value of integrating or combining measures of the implicit and explicit aspects of the DT personalities to predict various organizational outcomes.

Faking and impression management

- Examine how the tendencies toward interpersonal deception and interpersonal manipulation associated with psychopathy and Machiavellianism may be related to test faking (e.g., deflating one's self-reports of being self-serving, antagonistic, callous, etc.).
- Examine how the tendencies toward entitlement and self-aggrandizement (associated with psychopathy and narcissism) may be related to upwardly biased self-appraisals in nonsurvey assessments (e.g., misleading resume content, overstating one's work-related experiences during an interview, etc.).
- Examine the extent to which surveys using a forced-choice response format to measure DT traits may be less susceptible to faking and impression management.
- Examine how susceptible different measures of the DT are to faking and impression management, including comparisons between measures of the implicit and explicit aspects of the DT personalities.

Impact of context on the relationships between DT personalities and organizational outcomes

- Systematically map the situational/contextual variables that serve to trigger/exacerbate or constrain/dampen the impact of the DT on organizational outcomes.
- Identify weak situations (i.e., situations lacking strong behavioral norms/expectations; Dalal et al. 2015, Meyer et al. 2010, Mischel 1968) where DT traits may be more likely to be manifested and exert influence over organizational outcomes.
- Identify the situations that are judged to be psychologically salient or evocative to DT traits (e.g., situations involving social comparisons, distribution of limited resources, interpersonal conflict; Tett & Burnett 2003, Tett & Guterman 2000), and thus more likely to activate DT traits.

Moderators and mediators

- Identify and evaluate potential mediators and moderators of the relationships between DT traits and organizational outcomes; this includes potential curvilinear relationships between the DT and organizational outcomes.

Cross-cultural implications of the DT

- Test measurement equivalence of the DT traits across groups (e.g., race, gender, nationality, culture).
- Test the structural invariance of models linking DT traits to organizational outcomes across groups (e.g., race, gender, nationality, culture).

Careers in the context of the DT

- Examine the extent to which aspects of the DT are potentially amenable to change via coaching and/or developmental interventions.
- Examine the efficacy of coaching and/or other developmental interventions that target both the implicit and explicit aspects of the DT.
- Examine whether the DT is associated with vocational interests including career choice and the desire to assume positions of leadership/responsibility.

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Errata

An online log of corrections to *Annual Review of Organizational Psychology and Organizational Behavior* articles may be found at <http://www.annualreviews.org/errata/orgpsych>