ABSTRACT

TRAVIS, JUSTIN ANDREW. Examination of Employee Deviance Patterns: A Person-centered Approach to Counterproductive Work Behavior. (Under the direction of Dr. S. Bartholomew Craig.)

The study of counterproductive work behaviors (CWBs), intentional actions by employees that are deleterious to the organization and/or its stakeholders, has increasingly produced research on the structure and dimensionality of CWBs, as well as studies identifying situational and dispositional antecedents. Alternatively, there is a dearth of published empirical research that investigates whether there are profiles, or types, of counterproductive employees – a so-called person-centered approach. This study addressed that gap by conducting latent profile analysis on a sample of employees \( N = 522 \) from various organizations to examine a number of research questions involving the existence, distribution, and shape of CWB profiles, and the relationships between profiles and dark triad traits and previous work (disciplined or fired) and nonwork (arrested) experiences. Collectively, results supported a four-profile solution with statistically significant differences between profiles on most study variables. Further, the findings of this person-centered approach fit with extant variable-centered CWB research and complement that research by identifying subgroups of counterproductive employees. Implications for scientists’ conceptual understanding of counterproductivity and applied interventions aimed at reducing CWBs are discussed, alongside recommendations for future person-centered research on CWB.
Examination of Employee Deviance Patterns: A Person-centered Approach to Counterproductive Work Behavior

by
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BIOGRAPHY

Justin Travis was born in Greenville, South Carolina in 1986. He attended Woodruff High School and subsequently graduated from the University of South Carolina – Upstate in 2008 with a Bachelor of Science degree in experimental psychology. After graduating with a Master of Arts degree in industrial/organizational psychology from the University of Missouri – St. Louis in 2011, he returned to Spartanburg, SC where he served as an adjunct instructor of psychology at USC Upstate, Presbyterian College, Greenville Technical College, and Limestone College, in addition to developing a consulting practice. Following enrollment in the PhD I/O program at North Carolina State University, Justin continued to conduct peer-reviewed research, consult on HR and psychometrics projects, and teach psychology or business at NC State University, Meredith College, and Presbyterian College. Justin currently resides with his preschooler, Andrew Travis, in upstate South Carolina and works as a statistical and research analyst and psychology instructor at the University of South Carolina – Upstate.
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Examination of Employee Deviance Patterns: A Person-centered Approach to Counterproductive Work Behavior

Counterproductive work behavior (CWB) refers to discretionary acts by employees that harm or intend to harm their employer, coworkers, or other stakeholders (Spector et al., 2006). Productive streams of research have documented, classified, and predicted CWBs, prompted in large part by the repercussions of counterproductivity in the workplace. Most, if not all, of these research streams have adopted a variable-centered approach that reports taxonomies and correlates of CWB. While such research has extended scientific understanding of CWBs, it has not addressed the possibility that there are configurations of counterproductive tendencies that manifest themselves within-person. Currently, there is little published research investigating whether there are different patterns of counterproductive behavior among employees.

Organizational deviance and employee counterproductivity have been topics of research for many decades. In reaction to applied problems, early CWB research frequently concentrated on discrete but uniformly negative behaviors, such as sabotage (Crino, 1994), employee theft (Lipman & McGraw, 1988), substance abuse (Lehman & Simpson, 1992), and absenteeism (Muchinsky, 1977). More recently, scholars have developed taxonomies in order to classify and organize these behaviors into categories or dimensions based on the foci of the behavior (e.g., organizationally directed or interpersonally; Robinson & Bennett, 1995) and/or the content of the behavior (e.g., theft or production deviance; Spector et al., 2006). Collectively, these efforts have produced several disparate taxonomies that have been referenced throughout the literature (Bennett & Robinson, 2000; Gruys & Sackett, 2003; Spector et al., 2006). Further, these models differ in terms of measurement, scope, and theoretical assumptions.
Scientists have produced extensive empirical work linking CWB with dispositional and situational antecedents. Commonly studied predictors of CWB have included personality (Salgado, 2002; Spector, 2011; Wu & LeBreton, 2011) organizational justice (Cohen-Charash & Spector, 2001; Skarlicki & Folger, 1997), attitudes (Bolin & Heatherly, 2001), affect (Lee & Allen, 2002), and job stressors (Fox, Spector, & Miles, 2001; Penney & Spector, 2005). One of the primary distinctions among these predictor-CWB studies is their focus on either person/dispositional variables or situation/environmental variables. Another distinction, although rarely explicitly stated, is whether CWB is conceptualized as an underlying latent construct (reflective model) or a label for a collection of behaviors (formative model).

In the only empirical paper identified as addressing this issue explicitly, Marcus, Taylor, Hastings, Sturm, and Weigelt (2016) argued that current evidence supports CWB as a reflective hierarchical factor represented by bimodal facets (target and content) at lower levels. This support for a reflective model bears importance on the current study as it aligns with theoretical links between individual differences (e.g., personality) and CWB (Marcus et al., 2016). That is, models proposing dispositional causes of counterproductivity are conceptually appropriate if CWB is indeed a reflective latent construct. For example, predictions of CWBs from internal causes may be problematic, and likely lacking in empirical support, if CWBs were collections of disparate behaviors with exclusively unique causes.

To the author’s knowledge, the totality of research to date has taken a variable-centered approach to understanding CWB. This voluminous and growing body of literature has enhanced scientific understanding of the structure, antecedents, and consequences of CWB by focusing on the structural relationships between the variables themselves. Nevertheless, there is an increasingly vocal call to supplement typical variable-centered research with a person-centered
approach (Asendorpf, 2006; Magnusson, 2003; Wang & Hanges, 2011). Taking a person-centered approach provides an opportunity to identify possible types of counterproductive employees. Doing so offers a nuanced perspective on how various counterproductive behaviors combine into unique configurations, much like person-centered approaches to personality profiles (Asendorpf, 2006; Shoss & Witt, 2013). If there exist subpopulations of counterproductive employees, then describing and linking these with dispositional antecedents can have implications for selection, assessment, and interventions aimed at reducing counterproductivity.

The present study provided a person-centered analysis of counterproductive work behaviors that complements the growing body of extant variable-centered research by examining whether individuals display different patterns of CWB and linking those patterns to commonly studied dispositional antecedents.

Counterproductive Work Behavior

**Dimensionality of CWB.** Early research on employee counterproductivity tended to focus on particular manifestations of CWB that were of interest to management scholars. For example, the topics of employee theft (Greenberg, 1990; Greenberg, 2002; Holligner & Clark, 1983), sabotage (Ambrose, Seabright, Schminke, 2002; Crino, 1994; Skarlicki, van Jaarsveld, & Walker, 2008), and violence and aggression (LeBlanc & Kelloway, 2002; Neuman & Baron, 1998) have generated substantial interest in their own right. These research streams were sometimes marked by their focus on issues of definition, prevalence, and relationships with situational and dispositional antecedents that could aid in the development of interventions to reduce their deleterious effects.
More recently, researchers have begun attempts to organize these relatively discrete manifestations of counterproductivity into a broader, more inclusive conceptualization. Specifically, scientists have argued that these work behaviors are indicators of a higher order CWB construct (c.f., Spector et al., 2006), whether termed workplace deviance (Bennett & Robinson, 2000; Robinson & Bennett, 1995) or counterproductive work behavior (Gruys & Sackett, 2003).

An implicit assumption of a molar CWB construct is that the latent construct is producing shared variance between the otherwise distinct counterproductive acts. This assumption characterizes the perspective of reflective measurement, whereby observations are caused by the underlying latent construct (see Edwards, 2011 for a discussion). Although CWB has been measured without any distinctions among subdimensions (e.g., Ashton, 1998), scientists have more commonly considered CWB as either a reflective construct with multiple dimensions (Bennett & Robinson, 2000; Gruys & Sackett, 2003) or a formative construct with multiple behavioral domains (Spector et al., 2006).

For the purposes of this review, I will discuss the two most commonly used considerations when identifying CWB dimensions -- the target (e.g., coworkers or organization) of the behavior and the type (e.g., theft or sabotage) of behavior. While not necessarily exhaustive, these dimensions have underpinned the majority of nascent CWB research (Marcus et al., 2016).

**Target dimensions.** Robinson and Bennett (1995) investigated similarity ratings of various CWBs and then developed a multidimensional scale of workplace deviance that captured two dimensions of deviance, organizational-interpersonal and minor-serious. Of these, the organizational-interpersonal dimension has received the most widespread adoption by
organizational theorists studying CWB, with the minor-serious dimension abandoned in later scale development attempts (Bennett & Robinson, 2000). Organizational deviance refers to intentional deviant behaviors that harm the organization while interpersonal deviance are intentional behaviors that harm others. Analogously, organizationally-targeted CWB and interpersonally-targeted CWB are commonly referred to by the terms CWB-O and CWB-I, respectively.

Organizational and interpersonal targets have appeared as the most common distinction, defined in terms of the “whom” or “what” toward which the harmful behavior is directed. Nevertheless, recent research from Marcus et al. (2016) has suggested that this target dimension be expanded from the dichotomous organization/interpersonal to also include self-directed CWBs. Indeed, many scales measure behaviors such as alcohol and drug use that do not seem to map clearly onto an interpersonal or organizational target. Perhaps more importantly, some theoretical explanations of CWB as retaliatory behavior in response to a perceived injustice would conflict with the inclusion of self-directed behaviors as part of a larger CWB construct.

As with distinctions in the content of CWBs discussed below, distinctions in the target of the CWB bears importance for the conceptualization and measurement of CWB. If CWBs are measured in aggregate where the target is not delineated, then any important theoretical implications for understanding or preventing undesirable behavior will be attenuated. For example, leveraging organizational justice perceptions to reduce CWB may have no effect if the cause of the CWB is untethered from the target of the CWB. Self-directed CWBs, such as drug use, have been aggregated with CWB-O items in some measures (e.g., Bennett & Robinson, 2000) or aggregated with similar behaviors in measures that ignore the target (e.g., Gruys & Sackett, 2003). Interventions aimed at reducing organizationally-targeted deviance, such as
sabotage and theft of the employer’s property, may have little influence on employee drug use. Thus, the confounding of targets may severely limit the utility of interventions.

Despite its prevalence in the CWB literature, the interpersonal-organizational distinction has been criticized as too broad for research investigating the antecedents and consequences of CWB. Specifically, two more recent papers argued that the structure of CWB is best modeled with a focus on the content, or type, of behaviors being committed (Gruys & Sackett, 2003; Spector et al., 2006).

**Content dimensions.** As previously mentioned, CWB has been conceptualized and measured in fashions that span a large array of counterproductive behaviors. Using common definitions such as the one used in this paper, CWBs can range from heinous and rare acts of violence or homicide to things as mundane as faking sick to get out of work. Consequently, various content-focused typologies of CWB have been proposed.

Along with Bennett and Robinson’s (2000) measure of workplace deviance, the Counterproductive Work Behavior Checklist (CWB-C; Spector et al., 2006; Spector, Bauer, & Fox, 2010) is also widely used in academic research. There are several versions available, however, the short CWB-C scale specifies five dimensions of CWB: sabotage, withdrawal, production deviance, theft, and abuse (Spector et al., 2006).

Gruys and Sackett (2003) offer what is perhaps the most fine-grained classification of CWB content dimensions from the results of two studies. In study one, participants rated the likelihood they would engage in various counterproductive behaviors, resulting in an 11-factor solution. In study two, the same participants provided ratings of their perceived co-occurrence of the 11 factors and results suggested that participants generally viewed these 11 categories as distinct.
The nuances and similarities of each scale are beyond the scope of the current paper, however, their relative overlap is shown in Table 1. This table was made by reviewing the construct definitions and scale items in each manuscript and noting congruence of scale items across measures. As shown in Table 1, there is substantial overlap between the scales, with Gruys and Sackett (2003) containing the most diverse range of behaviors (c.f., Table 1 in Marcus et al., 2016).

**Personality and CWB**

Provided that diverse CWBs may share common variance from a general, reflective CWB construct, there have been a number of studies that explore individual differences in prediction of counterproductive work behaviors. Over the last two decades, a wealth of scholarly research has documented the relationships between various personality traits and CWBs, with scientists typically using large bandwidth traits (e.g., the Five Factor Model; FFM), narrow facets (e.g., dependability), or so-called “dark” personality traits (e.g., narcissism) to predict specific behaviors like theft or composite/aggregated CWB.

At the broadest level, several FFM traits have been linked to CWB. In particular, research has found negative relationships between conscientiousness, agreeableness, emotional stability, and CWB (Berry, Ones, & Sackett, 2007). Indeed, integrity tests are frequently used for the prediction of counterproductive work behavior, and these tests are considered to be saturated with variance from test-takers’ personality traits, particularly conscientiousness and agreeableness (Cullen & Sackett, 2003; Marcus, Lee, & Ashton, 2007; Woolley & Hakstian, 1992). Additionally, several facet-level traits (e.g., dutifulness or dependability) have been found to correlate with theoretically-related CWBs (Cullen & Sackett, 2003).
Although broad and narrow personality traits have been used to predict counterproductive work behavior, scientists have recently turned to personality traits that are conceptually related to deviance and counterproductivity. Specifically, researchers have begun studying the predictive validity of the so-called “dark triad” traits: narcissism, Machiavellianism, and psychopathy (Paulhus & Williams, 2002). These traits are probably less marked by the broad-narrow bandwidth consideration as they are more appropriately considered constellations of narrow traits that likely pull from multiple global FFM traits (Lee & Ashton, 2005). As these traits have seen the most attention in extant literature and given their theoretical proximity to deviant behavior, discussion of their relation to CWB is most pertinent to the current study.

**The Dark Triad.** Despite the various definitions found in the literature, counterproductive work behavior is typically noted by its deviance from organizational interests and/or social norms that guide interpersonal interactions and work behavior more broadly. Additionally, the co-occurrence of CWBs and support for a reflective general CWB construct all reinforce theoretical assertions that individual differences are antecedents of CWB (Marcus et al., 2016). When taken together, it is possible that individual differences that are closely related to deviance and unethical behavior would predict counterproductive behavior at work. “Dark” personality traits in general have recently sparked interest from personnel and organizational psychologists (e.g., Wu & LeBreton, 2011); however, it is the dark triad that has received the most attention from CWB scholars.

The dark triad refers to subclinical ranges of three personality traits -- narcissism, Machiavellianism, and psychopathy (Paulhus & Williams, 2002). Narcissism captures individual differences in self-aggrandizing and self-affirming behaviors, and a tendency to overreact to perceived threats to an individual’s self-concept (Morf & Rhodewalt, 2001). Machiavellianism is
a construct inspired by the literature of Italian philosopher Niccolo Machiavelli, and refers to differences in attitudes toward and behaviors of manipulation and deception for personal advancement, as well as suspicion of others’ intentions (Jones & Paulhus, 2009). Like narcissism, subclinical psychopathy is essentially a lower magnitude manifestation of clinical psychopathy symptoms -- callous, impulsive, destructive behavior coupled with a lack of remorse and empathy (LeBreton, Binning, & Adorno, 2006).

The dark triad dimensions, like the traits of the FFM, are only partially independent of each other. That each of these three dark traits is a composite of narrow facets from diverse, larger traits makes their overlap with each other both expected and cumbersome. For example, researchers have found narcissism, Machiavellianism, and psychopathy to be negatively correlated with agreeableness (Paulhus & Williams, 2002), while others have found only psychopathy and Machiavellianism to be negatively correlated with agreeableness (Lee & Ashton, 2005). The interrelatedness of the three traits has also been supported by at least two recent meta-analyses that report a range of intercorrelations between .23 and .58, with both reporting the Machiavellianism-psychopathy relationship to be the strongest (Muris, Merckelbach, Otgaar, & Meijer, 2017; O’Boyle, Forsyth, Banks, & McDaniel, 2012). Collectively, the small-to-medium relationships within the dark triad and their relationships with external criteria prompt the following discussion to address each trait separately while acknowledging their overlap.

**Narcissism.** While narcissism at the clinical level refers to, “a pervasive pattern of grandiosity (in fantasy or behavior), need for admiration, and lack of empathy, beginning by early adulthood and present in a variety of contexts” (American Psychiatric Association, 2013), research investigating narcissism-CWB relationships most frequently focuses on assumed
subclinical levels of narcissism as measured in typical dark triad or narcissism instruments. Some of the critical features underlying narcissism are grandiosity and a simultaneous insensitivity to others’ concern and hypersensitivity to perceived criticism of their exaggerated self. Morf and Rhodewalt (2001) proposed a self-regulatory process model of narcissism that positions narcissism as a maladaptive coalescence of affective and information-processing motives that serve the goal of creating and maintaining an overinflated self-concept that is sensitive to criticism.

Individuals with feelings of entitlement and superiority coupled with an inflated sense of control and success are likely to leave coworkers and other social contacts at work (e.g., customers) disgruntled. Most importantly, this feeling of superiority can result in a dismissive attitude toward workplace rules and norms, leading to increased rule-breaking behavior (Penney & Spector, 2002). Indeed, narcissism has been found to be the strongest predictor of CWB beyond the FFM and other dark triad traits (Grijalva & Newman, 2015; O’Boyle, Forsyth, Banks, & McDaniel, 2012).

**Machiavellianism.** Whereas narcissism entails a self-enhanced and entitled view of oneself, Machiavellianism captures a self-interested and manipulative approach to social interaction. Individuals high in Machiavellianism behave callously toward others, are suspicious of others' motives, and their actions frequently conflict with the well-being of others (Christie & Geis, 1970; Wilson, Near, & Miller, 1996). The cynical and manipulative nature of Machiavellianism is thought to lend itself to increased levels of broadly unethical behavior, such as lying and stealing (Jones & Paulhus, 2009).

Research in economics (e.g., game theory) has supported the propensity of individuals high in Machiavellianism to be opportunists that disregard reciprocity in favor of self-interest
(Gunnthorsdottir, McCabe, & Smith, 2002; Sakalaki, Richardson, Thépaut, 2007). That such opportunists engage in a variety of CWBs has also been demonstrated by psychological research (Dahling, Whitaker, & Levy, 2009; O’Boyle, Forsyth, Banks, & McDaniel, 2012).

Psychopathy. Individuals high in psychopathy are impulsive and deceptive, as well as resistant to the anxiety, shame, and guilt that are typically produced by deviant behavior. Although there remains debate regarding the factor structure of psychopathy, Cooke and Michie (2001) proposed three primary dimensions of psychopathy: arrogant and deceitful interpersonal style, deficient affective experience, and impulsive and irresponsible behavioral style. In particular, the markedly differential effects of emotion, or lack of emotion, on interpersonal behavior has been supported by research spanning clinical (e.g., Hare, 1999) and neurological (Blair, 2007) domains.

Theoretically, the characteristics of psychopathy lend themselves to impulsive, callous behaviors that harm others. Indeed, a recent meta-analysis reported relationships between psychopathy and a diverse pool of undesirable factors, such as aggression and delinquency ($r = .39$) and antisocial tactics (e.g., lying or cheating, $r = .32$; Muris et al., 2017).

In summary, the dark triad represent three related but distinct personality factors that a) are amalgamations of narrow personality traits that capture variance from several FFM factors (Lee & Ashton, 2005; Wu & LeBreton, 2011), b) are conceptually proximal to varieties of deviant outcomes (Paulhus & Williams, 2002), and c) predict counterproductive work behavior (O’Boyle, et al., 2012). Given the aforementioned research on the dark triad and CWB, the current study includes the dark triad for the purpose of tying in possible CWB profiles with the emergent literature on dark personality at work.
A Person-centered Approach to CWB

The most typical approach to studying organizational phenomena, and psychological phenomena more broadly, has been the variable-centered approach (Wang & Hanges, 2011). The variable-centered approach presents a model where an individual’s location on some latent variable (e.g., narcissism) is considered in comparison with others’ location, typically rank-order, and is then related to that individual’s location on some other latent variable (e.g., CWB) also considered in comparison with others’ location (Magnusson, 2003). The focus of the variable-centered approach is the variables and their relationships with each other at the group level. Importantly, relationships between variables that emerge at the group level may not be necessarily descriptive of relationships between variables at the individual level within the sample or population (ecological fallacy; Robinson, 1950). Additionally, although variable-oriented approaches can inform hypotheses regarding outcomes for individuals with specific within-person combinations of variables, they provide no explicit tests of those hypotheses, or even identify which configurations actually exist in nature.

A notable limitation of a variable-centered approach is the neglect of the integration of an individual’s standing on multiple factors. For example, CWBs are most frequently measured using instruments that usually tap into multiple dimensions, and scores are either reported at the dimension level (e.g., interpersonal deviance or theft) or aggregated and reported at the superordinate level (e.g., total CWB). Additionally, research testing the dispositional basis of CWB links particular traits to those dimensions or total CWB. However, such linkages inherently assume a homogenous population whereby the linkages with other criteria function in a similar fashion across the sample/population as a whole. Without evidence of homogeneity in the employee population of interest, these assumptions may not hold and subsequent inferences
may be problematic. If there are unobserved subpopulations, or distinct profiles, of counterproductivity, then there may be different outcomes for profiles of CWB that are obscured without explicit person-centered analyses.

In brief, a variable-centered approach typically theorizes individual differences and their antecedents and consequences, whereas a person-centered approach seeks to understand intraindividual content and processes as they occur at the organismic or individual level (Cervone, 2005). While variable-centered approaches have irrefutably advanced psychological understanding -- evidenced by the variable-centered literature that underpins the current literature review -- these approaches may overlook important configurations of behaviors within individuals. Thus, exploring possible configurations of counterproductive tendencies within-individual can complement the existing CWB literature.

Person-centered approaches, sometimes called profile, pattern-based, or configural, are not new (i.e., Cronbach & Gleser, 1953), however, they have recently garnered increasing attention from scholars in the personality (Asendorpf, 2006; Shoss & Witt, 2013), school (Davison & Kuang, 2000), developmental (Magnusson, 2003), and industrial/organizational psychology literatures (Morin, Morizot, Boudrias, & Madore, 2011). For the purposes of this paper, person-centered and profile approach will be used interchangeably as the language that follows will align closely with that used in empirical research (e.g., elevation/level, shape, and scatter; Cronbach & Gleser, 1953).

The Present Study

The purpose of this study was to investigate the within-person co-occurrence of CWB using a person-centered approach. Examining both the frequencies of CWB alongside the types of CWB individuals engage in provides a novel contribution regarding the possibility of different
types of counterproductive employees. Building on extant research and answering the call for person-centered approaches to CWB (Marcus et al., 2016), the present study aimed to test the existence of distinct profiles of CWB using an inclusive set of behaviors from common CWB measures. Such an approach may extend research on motivational or dispositional antecedents, as well as situational factors and boundary conditions. Specifically, this study tested the assumption that counterproductive behaviors are manifest in a uniform fashion across individuals by investigating the possibility of subgroups where these behaviors combine in unique ways. Identification of latent subpopulations within a diverse sample of working adults may also indicate a need to recalibrate scientific thinking on the nature of CWB away from a variable orientation and toward a more Gestaltist perspective.

To the author’s knowledge, no previous study has investigated whether subgroups of counterproductive employees exist in regards to the frequencies (levels) and types (shapes) of counterproductive behaviors they exhibit.

*Research Question 1:* How many distinct profiles of counterproductive work behavior exist among working adults?

*Research Question 2:* What are the characteristics (level and shape) of each profile and what proportion of the sample is classified in each of these profiles?

Considering the recent support for a reflective model of CWB and a general CWB construct (Marcus et al., 2016), a pattern-based approach may provide further clarity on how dispositional antecedents, such as personality traits, relate to the configuration of CWB within-person. That is, theories that propose internal or dispositional causes of counterproductivity may benefit from empirical evidence linking those dispositions to profiles of CWB. Thus, the current study also tested whether common trait correlates of CWB are predictive of profile membership.
Research Question 3: How do individual differences in dark triad traits (narcissism, Machiavellianism, and psychopathy) relate to profile membership?

Research Question 4: Does profile membership predict previous organizational sanctioning or disciplinary action?

Research Question 5: Does profile membership predict non-work deviance (e.g., arrest history)?

By investigating the possibility of CWB profiles, researchers may better understand the dispositional basis of CWB. For instance, separating the level, or amount, of CWB an individual engages in from the shape, or types, of CWB an individual engages in may allow scientists to advance extant process models of CWB (e.g., the stressor-emotion model; Fox & Spector, 2005). Furthermore, exploring profiles will demonstrate the various ways that the amount and type of CWB may combine, which could indicate important differences between counterproductive employees. Extant literature on employee counterproductivity assumes monotonic relationships among dispositional factors and CWB and, while the current study does not offer an explicit test of this, it does offer evidence as to whether the manifestation of CWB within-person is predicted by some of the most commonly studied dark personality traits. That is, the current study provides a nuanced contribution to the CWB literature by asking: a) are there profiles of CWB, b) are common correlates predictive of profile membership, and c) does profile membership relate to undesirable work and non-work outcomes?

The importance of CWB to organizations is highlighted by the high costs of deviance (Murphy, 1993), but also by the frequent use of selection instruments aimed at screening applicants in high shrinkage industries, such as integrity tests for retail positions. Results from the current study may aid practitioners in selecting applicants that are less likely to commit
CWBs, whether specific or in general, as well as support the engineering of settings that limit the opportunity for, and perceived desirability of, CWB in the workplace. The identification of CWB profiles may shed light on the manifestation of counterproductive behaviors within employees and future research could illuminate how common selection instruments could be used to identify and screen certain profiles deemed undesirable by employers.

**Method**

**Participants and Procedure**

Participants were recruited from Amazon’s Mechanical Turk (mTurk) platform. In order to participate, participants must have been a) 18 years or older, b) based in the United States and fluent in English, and c) currently employed full-time at 30 or more hours per week. Studies comparing data collected from mTurk samples to traditional student and employee samples have largely supported its use in psychological research (Behrend, Sharek, Meade, & Wiebe, 2011; Buhrmester, Kwag, & Gosling, 2011; Casler, Bickel, & Hackett, 2013).

Although power analysis is a tool encouraged by organizational scientists (Murphy, Moyrs, & Wolach, 2014), the novelty of the current study rendered difficulty in estimating population effect sizes which are needed to compute desired sample size via power analysis. Further, recent research has found that statistical power in latent profile analysis is more heavily influenced by population effects (distance between profiles) than sample size (Tein, Coxe, & Cham, 2013). Therefore, previous CWB research was evaluated to provide a baseline for sample size. Two recent meta-analyses both report an average sample size of approximately 350 participants in the studies included in their analyses (Dalal, 2005; Marcus et al., 2016). On the basis of previous research, the current study sought a sample size of approximately 400 participants.
After providing informed consent, participants received a battery of questionnaires including measures of the dark triad, counterproductive work behavior, previous work discipline and arrest history, and demographic information such as their sex, age, and the industry in which they currently work. Subsequently, participants were thanked and compensated $.40 for their participation, an approximately $2.40/hour pay rate.

Prior to testing research questions, data were first screened for careless responding (see Meade & Craig, 2012). Specifically, careless participants were identified by three different indicators: a) an instructed response item (“Please select ‘disagree’”), b) maximum LongString (identical responses across 15 or more sequential items), and c) inspection of open-ended, forced-response text.

There were 640 participants that provided partial data. Of this total, 36 participants failed the instructed response and 11 were identified as careless responders via maximum Longstring. The remaining 593 cases were further screened for careless responding by inspecting the open-ended text responses provided at the end of the survey in response to, “Take a moment to think back on the negative work behaviors that were described above. Please explain why you did, or did not, choose to do those behaviors.” A conservative screen was performed whereby nonsensical, blank, or uninterpretable responses were identified (n = 71) and removed from the data set, leaving 522 partial cases for data analysis.

The sample was 56% female, and the average age and tenure in current job were 37.3 years old (SD = 10.8) and 80.5 months (SD = 73.5), respectively. The most commonly reported employment industries were health care or social assistance (12%), finance or insurance (11%), and educational services (11%). An administrative error left racial demographic data uncollected.
Measures

Dark triad. The 27-item Short Dark Triad scale (SD3; Jones & Paulhus, 2014; see Appendix A) was used to measure Machiavellianism (9 items), psychopathy (9 items), and narcissism (9 items). The SD3 is a brief instrument that affords researchers an efficient means to capture each of the dark triad traits, and studies comparing it to alternative brief measures (e.g., the dirty dozen; Jonason & Webster, 2010) have largely supported its use (Egan, Chan, & Shorter, 2014; Maples, Lamkin, & Miller, 2014; Muris et al., 2017). Participants are asked to consider each item and respond using a 5-point Likert scale anchored from 1 (disagree strongly) to 5 (agree strongly), and internal consistency (coefficient alpha) estimates were acceptable for Machiavellianism (.85), psychopathy (.81), and narcissism (.75).

Counterproductive work behavior. Sixty-five items from the Gruys and Sackett (2003) scale were used to measure 11 dimensions of CWB: theft and related behavior (TRB, 10 items; $\alpha = .96$), destruction of property (DP, 4 items; $\alpha = .94$), misuse of information (MI, 5 items; $\alpha = .90$), misuse of time and resources (MTR, 13 items; $\alpha = .89$), unsafe behavior (UB, 4 items; $\alpha = .93$), poor attendance (PA, 5 items; $\alpha = .92$), poor quality work (PQW, 3 items; $\alpha = .89$), alcohol use (AU, 3 items; $\alpha = .92$), drug use (DU, 4 items; $\alpha = .93$), inappropriate verbal actions (IVA, 8 items; $\alpha = .94$), and inappropriate physical actions (IPA, 6 items; $\alpha = .94$; see Appendix B). While the original IPA scale had seven items, an error in survey entry left the final item, “Make unwanted sexual advances toward a customer” off the survey participants completed.

Although this measure has not experienced as widespread use as its counterparts (e.g., Bennett & Robinson 2000; Spector et al., 2006), it has been considered one of the most inclusive measures of CWB by some organizational scholars (Marcus, et al., 2016; Wu & LeBreton, 2011). In order to capture all possible subpopulations of counterproductive employees, it was
deemed most prudent to capture the widest array of counterproductive behaviors in the current study. Additionally, sampling as widely as possible from the CWB domain enhanced the applicability of this CWB measure to participants that were sampled from diverse industries and occupations.

In their scale development paper, Gruys and Sackett (2003) asked participants to rate whether they would engage in each of the behaviors using a 7-point scale. For the purposes of the current study, and similar to other research (e.g., Bragg & Bowling, 2018), participants were instructed to report the frequency in which they engage in the behaviors using an 8-point scale anchored from 1 (never) to 7 (daily), with an 8th option for items deemed “Not Relevant.”

**Previous disciplinary action.** In order to assess previous disciplinary action, participants were asked two questions developed for the current study: “How many times have you been disciplined or punished for breaking rules at any job?” and “How many times have you been fired or terminated from any job?” Response options included “zero” “one” “two” “three” and “four times or more” (see Appendix C). Although these items represent relatively discrete phenomena, they are not necessarily independent and were positively correlated ($r = .55, p < .01$).

**Previous arrest history.** Participants were asked to respond to the question, “How many times have you been arrested for any reason other than traffic offenses?” Response options included “zero” “one” “two” “three” and “four times or more” (see Appendix C).

**Results**

**Measurement Model**

Intercorrelations between variables at the scale level are shown in Table 2. To evaluate the functioning of the study’s measures, a confirmatory factor analysis (CFA) was conducted.
using the “lavaan” package in R (Rosseel, 2019). Due to the high ratio of items to construct, items were parceled within scales using the random method (see Little, Rhemtulla, Gibson, & Schoemann, 2013 for a discussion). Random numbers were generated and used to group items within construct, a method endorsed by scholars when there is little theoretical justification for other methods of parceling (Little, Cunningham, Shahar, & Widaman, 2002). This random method was followed for all scales with more than five items and scales with five or fewer items were estimated as typical in CFA whereby the item-level indicators were modeled on their respective latent variables.

Using the maximum likelihood estimation procedure and allowing the latent variables to covary, results suggested the data demonstrated marginal fit ($\chi^2(1036) = 4250.04, p < .001, \text{CFI} = .881, \text{RMSEA} = .083 (.08 - .086), \text{SRMR} = .046$) with the hypothesized 14-factor model (three dark triad factors and eleven CWB factors). All factor loadings were above .40 and statistically significant ($p < .001$). Inspection of modification indices did not reveal any theoretically justifiable alterations to the measurement model and therefore, no modifications were performed to the scales.

Profile Analyses

Research question 1 asked: How many distinct profiles of counterproductive work behavior exist among working adults? Research question 2 asked: What are the characteristics (level and shape) of each profile and what proportion of the sample is classified in each of these profiles? To investigate both research questions, latent profile analysis (LPA) was conducted using R via the “mclust” package (Scrucca, Fop, Murphy, & Raftery, 2016). LPA is a model-based analytic tool, from a larger class of mixture models, that can be used to identify and describe unobserved subpopulations (Wang & Hanges, 2011). Using maximum likelihood
estimation, LPA produces probabilities of latent class membership (unobserved subpopulations) with continuous data, and each model is estimated with additional latent profiles added iteratively. Model fit indices (Bayesian Information Criterion [BIC], Integrated Complete-data Likelihood criterion [ICL], and the Bootstrapped Likelihood Ratio Test [BLRT]) were compared between fourteen models that varied in parameterization constraints (e.g., varying vs. equal volume, varying vs. equal shape; see Scrucca, Fop, Murphy, & Raftery, 2016). Considering the novelty and lack of previous empirical and theoretical work concerning the current study’s research questions, identifying the optimal solution, or number of profiles, was largely guided by the preponderance of evidence from model fit indices.

The results of the latent profile analysis indicated a four-profile solution was superior to alternative models. Specifically, a four-profile solution with spherical, equal shapes and varying volume (“VII” model in mclust; Scrucca, Fop, Murphy, & Raftery, 2016) was identified as the optimal model by the two descriptive fit criteria (BIC = 1563.35, ICL = 1551.17), as well as the BLRT comparison of a four-profile solution to a three-profile solution (BLRT = 2647.19, \( p < .001 \)). As these three criteria converged on the four-profile solution as providing optimal fit with the data, the four profiles were used as the basis of subsequent analyses involving profile membership. Research has found the BIC to be a robust indicator of the number of profiles at varying sample sizes (Nylund, Asparouhov, & Muthén, 2007), and a plot of each model’s four-profile BIC values is shown in Figure 1.

Research question 2 addressed the distribution of the sample into profiles as well as the shape and level of these profiles. This research question was addressed by calculating the means and standard deviations for each profile across all CWB dimensions, as well as the proportion of the sample classified into each profile. Table 3 and Figure 2 display this information for the four
profiles. As Table 3 reports, there were some patterns of counterproductivity similar across profiles, with peaks (e.g., misuse of time and resources, poor attendance) and valleys (destruction of property, unsafe behavior, inappropriate physical actions) shared among the three profiles that reported counterproductive behaviors.

The third profile had the fewest members at 14% of the sample \((n = 67)\) and was marked by near uniform (non)reporting of CWBs (i.e., “never” endorsed across CWB scales). Accordingly, this profile was labeled “angels” and most interpretation of the results that follow focused on comparing the other three profiles that did report some levels of CWBs.

The first profile was marked by comparatively high levels of CWB across measures and accounted for 14% \((n = 69)\) of the sample that was classified. These individuals engaged in much higher amounts of CWB than individuals with other profiles, however, some of the shape of their CWBs was similar with the other two profiles showing CWBs. Whereas profiles 2 and 4 reported almost no drug use, destruction of property, or inappropriate physical actions, drug use was one of the highest reported CWBs for profile 1. In fact, drug use and misuse of information were both magnitudes higher than the sample’s total mean \((z = 2.08\) and \(z = 2.08\), respectively). Given the high levels of CWBs across this profile, its relative departure in shape from other profiles, and its separation from the other three profiles, this profile was labeled “aberrant deviants.”

The second profile constituted the largest portion of participants at 39% \((n = 191)\) of the sample. Although the three profiles reporting CWBs shared a common pattern in general, the second profile more closely resembled the shape of mean levels found in the aberrant deviants’ profile than the fourth profile with the exception of drug use (see Figure 3). The second profile also differed from the angels and fourth profile in that it was the only profile other than the
aberrant deviants that reported a level of any CWB above its mean (misuse of time and resources \( z = .14 \); Figure 2). Accordingly, the second profile was labeled, “bold opportunists.”

Lastly, the fourth profile constituted the remaining 33\% (\( n = 162 \)) of the sample. This profile shared its two highest levels of CWBs with the bold opportunists (misuse of time and resources and poor attendance), however, it demonstrated minimal divergence with the angels’ profile. Indeed, the only meaningful deviation from the angels was higher levels of misuse of time and resources and poor attendance, and slightly higher inappropriate verbal actions. This pattern produced a shape that was ultimately distinct from the other three profiles but broadly marked by mild counterproductivity in the most commonly reported dimensions. Considering the relatively low levels of CWBs, the large proportion of participants classified in this profile, and the CWBs reported being both common and somewhat mundane compared to other forms of CWB, this profile was labeled, “reserved opportunists.” In sum, results from the LPA were generally consistent with the proposition that individuals can be classified into groups based on their “signature” patterns across different CWBs.

**Analyses of Variance**

Research question 3 asked if the dark triad traits were related to profile membership. To test this, a multivariate analysis of variance (MANOVA) was conducted to test for mean differences on dark triad traits between different profiles, and subsequent between-subjects effects were calculated for each of the dark triad with post-hoc comparisons between profiles. Prior to conducting the MANOVA, the Levene statistic was calculated for each dark triad trait in order to test for violations of the assumption of homogeneity of variance. Findings revealed that this assumption was violated only for narcissism (\( F(3, 485) = 3.31, p = .02 \)). Nevertheless, all post-hoc comparisons were tested using the Games-Howell statistic for the sake of consistency, as this
statistic has shown to be robust in conditions similar to this sample: a) when there is heterogeneity of variance, and b) when sample sizes are unequal but each group is greater than 50 (Wilcox, 1987).

Results from the omnibus MANOVA test showed that there were differences between profiles in the mean levels of dark triad traits as a whole \(F(3, 483) = 24.08, p < .001\). More specifically, there were statistically significant differences between profiles for Machiavellianism \(F(3, 485) = 27.90, p < .001 \eta^2 = .15\), narcissism \(F(3, 485) = 12.96, p < .001 \eta^2 = .07\), and psychopathy \(F(3, 485) = 72.01, p < .001 \eta^2 = .31\). As shown in Table 4, all comparisons between profiles on Machiavellianism were statistically significant \(M_{\text{aberrant deviants}} = 3.32, M_{\text{bold opportunists}} = 2.94, M_{\text{reserved opportunists}} = 2.72, \text{and } M_{\text{angels}} = 2.23\), and all comparisons on psychopathy were statistically significant \(M_{\text{aberrant deviants}} = 3.08, M_{\text{bold opportunists}} = 2.16, M_{\text{reserved opportunists}} = 1.89, \text{and } M_{\text{angels}} = 1.74\), with the exception of angels-reserved opportunists \(p = .36\). For narcissism, the aberrant deviants’ profile \(M_{\text{aberrant deviants}} = 3.10\) was statistically different from all other profiles \(M_{\text{bold opportunists}} = 2.60, M_{\text{reserved opportunists}} = 2.57, \text{and } M_{\text{angels}} = 2.59\), however, all remaining comparisons revealed nonsignificant differences. Figure 4 shows the profiles’ mean z-scores for each dark triad trait.

Research question 4 asked if there were differences between profiles in regards to previous organizational disciplinary action. As previously mentioned, the two items measuring previous disciplinary actions were different but not necessarily independent and thus, an analysis of variance (ANOVA) was conducted with each item as the dependent variable. Again, the Games-Howell statistic was used for all pairwise comparisons as there were unequal variances and sample sizes between profiles. The results of the ANOVA for the first item, referring to previously being disciplined by an employer, was statistically significant \(F(3, 485) = 46.27, p < .001\).
.001 $\eta^2 = .22$) and all pairwise comparisons were statistically significant. Aberrant deviants ($M = 1.41$) reported the most instances of discipline while the angels ($M = .04$) reported the fewest. Results from the ANOVA for the second item, referring to previously being fired/terminated by an employer, revealed statistically significant differences across profiles ($F(3, 485) = 29.06, p < .001 \eta^2 = .15$). While the aberrant deviants ($M = 1.19$) were significantly different from all other profiles and the bold opportunists ($M = .46$) and angels ($M = .13$) were significantly different, all other comparisons were nonsignificant (see Table 4).

Research question 5 asked where profiles differed in regards to previous arrest history. ANOVA results showed that there were statistically significant differences across profiles ($F(3, 485) = 39.83, p < .001 \eta^2 = .20$). Post-hoc comparisons revealed results identical to the pattern observed in the previously fired/terminated item, whereby the aberrant deviants ($M = 1.07$) were significantly different from all other profiles and the bold opportunists ($M = .24$) and angels ($M = .01$) were significantly different, all other comparisons were nonsignificant (see Table 4). Figure 5 displays each profile’s mean level of previous experiences of discipline, firing, and arrests in standardized units.

**Discussion**

The aim of this research was to investigate whether there are subpopulations of counterproductive employees using a person-centered approach. As CWB research continues to be increasingly studied by psychology and management scholars, this study offered a supplement to the vast array of variable-centered research. Collectively, analyses revealed a number of findings that contribute to the dearth of person-centered CWB research and may stimulate future investigations of employee counterproductivity.
First, results indicated that the co-occurrence of CWBs varies among individuals, and these individuals can be grouped into distinct profiles of counterproductive behavior. Specifically, criteria from the LPA converged on a four-profile solution, and subsequent analyses revealed that these profiles differed on a number of personality variables and both work and non-work experiences. This finding suggests that employees who engage in CWBs at work may not just differ in amount of counterproductive behavior, but also in kind. That is, employees aren’t just more or less counterproductive than other employees, but may be counterproductive in different ways. Further, these different kinds of counterproductive employees are not distributed in equal proportions among the broader population of employees.

The first profile, labeled “aberrant deviants” and constituting 14% of the sample, was characterized by the highest mean levels of CWBs, as well as the highest mean scores for all dark triad traits. Perhaps unsurprisingly, this profile also reported more experiences of being disciplined at work, being fired by previous employers, and being arrested. In fact, this group had means for each of the previous outcomes that more than doubled the means of any other profile (see Table 4). The elevated means of the aberrant deviants’ profile may initially appear to reflect individuals that are just more counterproductive than individuals in the other profiles. For example, the bold and reserved opportunists’ both engaged in MTR the most frequently and PA the second most frequently, which was also true of the aberrant deviants’ profile. But closer inspection reveals that the shape of these means deviates from those of the other profiles in some interesting ways.

First, the aberrant deviants’ third most frequent counterproductive behavior, drug use, was one of the least common for all other profiles. On average, the angels and reserved opportunists reported almost never engaging in drug use while the bold opportunists reported
drug use as the third least common CWB. Second, while the within-profile variance for each CWB dimension was greater for the aberrant deviants than the other profiles (indicating greater heterogeneity within profile), the aberrant deviants’ means across CWBs deviated less than the bold opportunists but more than the angels and reserved opportunists. Thus, the aberrant deviants and bold opportunists were slightly more selective in the types of CWB they engaged in compared to the other two profiles. Third, while the bold opportunists also reported some frequency of theft and inappropriate verbal actions, the average frequencies reported for participants in the aberrant deviants’ profile were at concerning levels for many serious CWBs. Counterproductive work behaviors are, by definition, inherently detrimental to the well-being of the organization and its stakeholders, yet some scholars point to conceptual distinctions in their seriousness (Robinson & Bennett, 1995). Of note, the aberrant deviants’ profile was characterized by a high frequency of common CWBs (e.g., poor attendance) as well as less common and more serious CWBs (e.g., inappropriate physical actions and drug use). Members of this subgroup appear to not only be more counterproductive in a general sense, but also more extreme in their types of counterproductivity.

Aberrant deviants had higher mean scores on each dark triad trait than the other three profiles, and as they engaged in more CWBs of each dimension, this finding was consistent with previous research that examined these phenomena from a variable-oriented perspective (e.g., O’Boyle, et al., 2012). Additionally, aberrant deviants reported significantly more experiences of being disciplined and fired at work, as well as more arrests. The linkages between work and non-work deviancy are not common topics of organizational research, yet scholars have proposed the potential causal role of dark triad traits in CWB via the more voluminous literature linking the dark triad to social deviancy more broadly (Wu & LeBreton, 2011). If one considers personality
traits as dispositional tendencies that, while interacting with situational and environmental determinants, play a role in producing counterproductive behaviors, it is likely that such dispositions would predict deviance or counterproductivity in multiple settings in which the individual operates. For example, individuals high in Machiavellianism are often characterized as manipulative, cynical, and concerned with their reputation, and those high in psychopathy are characterized by a lack of empathy and a callous orientation towards others. As such conceptualizations and their accompanying measurements are stated in general terms and not necessarily contextualized, it is probable that those scoring high in Machiavellianism are manipulative and cynical, and those high in psychopathy are callous and exploitative, at work, at social events, at school, and most other settings.

The associations between Machiavellianism, psychopathy, and to a lesser extent narcissism, and undesirable social behavior are well-documented. A recent meta-analysis by Muris et al. (2017) reported positive correlations between the dark triad and a variety of negative psychosocial outcomes, such as Machiavellianism, psychopathy, and narcissism with aggression/delinquency (.32, .39, .20, respectively), and with antisocial tactics (.30, .32, .20, respectively). The findings of the current study are congruent with the aforementioned research on the dark triad’s relationship with workplace deviancy and counterproductivity.

The bold opportunists’ profile contained the most participants (37% of sample) and was marked by a pattern of mean CWB frequencies that appear to be less serious than the aberrant deviants (i.e., $M_{DP} = 1.01$, $M_{DU} = 1.07$) but still higher than the other two profiles in terms of common but less serious CWBs. Nevertheless, bold opportunists can be differentiated from angels and reserved opportunists in more than just frequency of common CWBs, as more than 50% of bold opportunists reported engaging in inappropriate verbal actions, theft and related
behaviors, and misuse of information in the last 12 months. Thus, members of this group deviated from the otherwise more closely matched pattern of the reserved opportunists in their proclivity to engage in more serious acts of misconduct. This distinction between the bold opportunists and reserved opportunists is reinforced by the finding of statistically significant differences in their mean Machiavellianism and psychopathy scores, where bold opportunists had higher scores than either the reserved opportunists or the angels. Finally, bold opportunists reported more experiences of being disciplined than the angels or reserved opportunists, as well as more experiences of being fired or arrested than the angels.

The reserved opportunists were the second largest profile at 33% of the sample, and were characterized by mean CWBs below the total average (see Figure 2). As the label implies, members of this profile reported few CWBs and those that were reported were of the most common and mundane types – misuse of time and resources and poor attendance (Gruys & Sackett, 2003). Further, these two CWBs were reported at levels below the total mean. Reserved opportunists had significantly higher scores on Machiavellianism and reported more experiencing of previous organizational discipline compared to angels, but shared similar mean levels of all other non-CWB variables with the angels. Ultimately, reserved opportunists appear to be individuals that were rather typical in personality and non-work experiences, and when they engaged in CWBs, did so selectively and less than average.

The final profile, the angels, was the smallest group at 14% of the sample, and characterized by near-zero means across self-reported CWBs. Additionally, this profile had the lowest means for non-work experiences and was significantly lower in Machiavellianism than all other profiles, and significantly lower than the bold opportunists and aberrant deviants in psychopathy. The most straightforward interpretation of the angels’ profile is that its members
are relatively typical in terms of dark triad traits, are exceptionally rule abiding in terms of CWB, and have comparatively few negative experiences in terms being previously disciplined, fired, or arrested. Alternatively, it is possible that angels engaged in impression management or social desirability, or at least more so than members of other profiles, thereby failing to honestly report their counterproductive behavior. There are some findings that suggest that the former explanation is more likely. For instance, scientists using the counterproductive behavior checklist (CWB-C) found that many CWBs are very rarely endorsed, and that the most commonly endorsed CWB in their measure, taking a longer break than permitted, was only reported by 61.6% of their sample (Spector et al., 2006). In a study using the same measure as the current study, researchers found composite subscale means very similar to the ones reported in the current study (Gruys & Sackett, 2003). Coupled with the careless responding screen performed prior to data analysis, it is suggested here that the angels profile largely reflects rule-bound employees.

Interestingly, mean scores for each dark triad trait were linearly associated with profiles’ mean levels of CWBs and previous disciplinary and arrest experiences – with the lone exception of narcissism for reserved opportunists and angels. This finding fits rather neatly with the considerable variable-centered research evidencing positive correlations between dark triad traits and both CWBs (O’Boyle, et al., 2012) as well as a litany of more broad negative behaviors and outcomes (see Furnham, Richards, & Paulhus, 2013 for a review).

**Conclusion**

Most research on employee counterproductivity has taken a variable-centered approach, providing fruitful advancements to both theory and practice. The present state of this literature is marked by contributions from investigations into the structure of CWB (e.g., Marcus et al.,
2016), situational antecedents of CWB (e.g., Fox, Spector, & Miles, 2001), and dispositional antecedents of CWB (e.g., Spector, 2011). Most recently, dark triad traits have formed a foundation for many scientists studying the dispositional basis of CWB (O’Boyle et al., 2012; Wu & LeBreton, 2011). The current study complements this growing body of research by providing the first test of possible subgroups of counterproductive employees and linking those subgroups, or profiles, to dark triad traits and previous disciplinary and arrest histories. As results collectively indicated the existence of four distinct profiles of counterproductivity, there are several implications for the study of CWB, as well as practical considerations for managers and consultants in terms of selection and organizational interventions.

Limitations and Future Research

There is a long and storied history of studying individual differences in psychology. This tradition, in both the conceptualization of the individual and the linking of individual differences to external criteria, is most heavily represented by the variable-centered approach. Nevertheless, one of the earliest pioneers of individual differences’ research in personality psychology, Gordon Allport (1930, p. 124), noted the distinction between within-person and between-persons’ differences:

“Now if we visualize several distribution curves for several traits, and plot on the base line of each the position attained by Alice, we find that the significant thing for our understanding of Alice is not her position in each curve or the average of her positions in all the curves, but rather the profile which would result from connecting her positions in the different curves. This qualitative pattern is more significant than measurements on anyone or on all of the isolated traits. In short,
the natural point of reference in understanding Alice is Alice herself, and not the population at large."

Considering the variables as the centerpiece of psychological investigations has proven undeniably productive in the study of human phenomena, as it forms the background to almost all current research into personality – behavior relationships. There are, however, increasingly vocal calls to supplement this variable-centered research with person-centered research that can offer different, complementary perspectives (Wang & Hanges, 2011).

The present study found four profiles of counterproductive employees in terms of their patterns of CWB, and further substantiated by patterns of theoretically-supported relationships with dark triad traits and previous work and nonwork experiences. That is, these profiles were empirically derived from latent profile analysis of self-reported CWBs, and then further supported by relationships with other criteria – all of which fit with extant variable-centered research. The findings of this study do not appear to conflict with the current understanding of personality-CWB relationships, however, there are contributions and possible future avenues of research that bear mention.

Counterproductive work behaviors differ in amount and kind. This study is among the first to demonstrate that counterproductive employees also differ in kind and not just their frequency in engaging in CWBs. Specifically, this study found that subgroups of employees can be separated on the basis of their frequency, or level, of CWBs, and the kinds, or shape, of CWBs they report. This finding is important because it suggests that not all counterproductive employees are the same, whether in terms of their personality or previous history, or in terms of the way in which they are counterproductive. Most importantly, the profiles identified in this
study were not reflective of varying amounts of CWB (i.e., “low,” “medium,” “high”), but reflective of differing patterns and amounts of CWB.

Aside from replication of these profiles in other samples, future research should expand the range of criteria to further substantiate the nomological space around these profiles. For instance, only three narrow, overlapping, subclinical personality traits were included in this study. Meta-analytic research has reported significant negative correlations between conscientiousness and agreeableness with CWB (Berry, Ones, & Sackett, 2007). Future research can advance the current study’s findings by investigating whether these relationships operate in a similar fashion for each profile.

Another important area for future research would be the investigation of profiles using alternative CWB measures. As previously discussed, there are at least three commonly used instruments to measure CWBs, each with its own uniqueness but with overlap across measures. The Gruys and Sackett (2003) measure used in this study was chosen on the basis of its inclusivity, but the 11-factor structure proposed by its authors demonstrated only marginal fit to the current data. Findings from its use should be compared to those from measures from Bennett and Robinson (2000) and Spector et al. (2007), as shown in Marcus et al. (2016). Finding evidence of generalizability across measures would contribute to the validity of the four profiles identified in the current study.

Linking profiles to previous work experiences and arrest history is another contribution of this study. It is not typical that studies of CWB consider previous work experiences, even though ones like those included in the current study are conceptually related to workplace deviance and CWB. Collecting arrest history alongside CWB data is also rare, although changing legal frameworks and applicant attitudes may be of increasing importance to practitioners and
recruitment/selection scholars. If scientists assert that relatively stable individual difference variables (e.g., the dark triad) are causally linked to CWBs, then it would be valuable to substantiate such linkages with other deviance or counterproductive-related outcomes – such as being fired at another job or being arrested.

The current study was constrained by a number of limitations that bear mention. First, the use of a heterogeneous sample that pulled from many different occupations and industries could have introduced substantial sampling error into the study’s design. Person-centered approaches to CWB would benefit from future research that investigates the possibility of subgroups in workplaces that provide some level of commonality. For instance, similar occupations, particularly within the same organization, may have fewer discrepancies in the number and types of situational constraints that facilitate or limit counterproductive behaviors. Although the current study emphasized generalizability over control, future investigations may tease apart whether these subgroups differ according to the type of work or employing organization. Second, the failure to capture data on employee race eliminated the study’s opportunity to investigate whether there were differences in the racial makeup of profiles. Another limitation in the current study was the focus on Gruys and Sackett’s (2003) 11-dimension model of CWB. While the justification for its use has already been made, the author proposes that the use of alternative measures in future research offers perhaps the most immediate and beneficial extension to the current study.

**Practical Considerations**

Research into deviance, criminality, and antisocial behavior informs many fields (e.g., counseling, education, and criminal justice) with very real consequences (e.g., employment, public policy, and institutional reform). Although more narrow in scope, employee
counterproductivity can be embarrassing for organizations and their members, and has monetary costs that can include shrinkage, production loss, turnover, and a range of other implications for an organization’s recruitment, selection, and retention. The results of CWB research therefore have applied consequences for all organizational stakeholders.

The most pertinent implication of the current study’s findings for practitioners is that not all counterproductive employees are the same. Specifically, subgroups of employees perform different amounts and types of CWBs. When implementing a selection test for the purpose of reducing CWBs in the workplace (e.g., an integrity test), the goal is to identify and screen out individuals that engage in CWBs. In the current study’s data, this may be the individuals categorized into the aberrant deviants’ profile, which reported high frequencies of CWBs on average across all types of CWBs. Many of these instruments contain items regarding petty behaviors from past jobs, or contain items that target specific types of CWB like theft or absenteeism (see Van Iddekinge, Roth, Raymark, & Odle-Dusseau, 2012). One implication from the current study is that individuals that may report CWBs of the most common types (e.g., bold and reserved opportunists) could be screened out although they fall below the mean on these dimensions of CWB, and report very little frequency in regards to engaging in more serious CWBs (e.g., inappropriate physical actions or drug use). For example, the reserved opportunists reported engaging in misuse of time and resources and poor attendance, however, their means on these two dimensions were more than half a standard deviation below the total mean. The consequences of such screening procedures in this scenario could include a failure to hire individuals that are rarely counterproductive and very rarely commit serious CWBs, and potentially penalizing individuals for reporting common work behaviors honestly.
Another implication from the current study’s findings pertains to the development and implementation of CWB interventions. Although the systematic study of such interventions on incumbents is less frequently reported than interventions during the selection phase with applicants, organizations sometimes incorporate deterrents to CWB whether during the onboarding process or within company policies and procedures. For example, organizations may use random drug testing or auditing a cash register at the end of the shift in order to evaluate whether CWB has occurred. When particular issues are considered problematic or in need of immediate redress, managers may incorporate interventions for targeting the behavior.

Organizations have turned to a number of surveillance or monitoring programs that aim to deter CWBs as mundane as making an unauthorized stop at Starbucks while on a delivery route or checking a personal e-mail account while at work – CWBs that the current study and previous ones (e.g., Gruys & Sackett, 2003; Spector et al., 2006) have found to be the most common. These electronic performance monitoring (EPM) programs have shown promise at enhancing employee performance and reducing CWB, however, accumulating evidence has found they can detract from individual and group-level outcomes, such as commitment, satisfaction, fairness perceptions, and may even increase the likelihood of employees engaging in CWBs (Tomczak, Lanzo, & Aguinis, 2018). There is likely little debate as to whether serious CWBs, such as enacting violence or stealing, should require interventions and consequences, and it is reasonable that engaging in performance detracting, off-task behaviors is virtually always deleterious to task performance. The current research has shown, however, that while some groups of employees (e.g., aberrant deviants) engage in extreme CWBs as well as more frivolous CWBs, other groups (e.g., bold and reserved opportunists) perform the most frequent and less serious CWBs almost exclusively. Thus, interventions targeting those frequent and less serious CWBs via monitoring
technologies will inevitably capture individuals from all groups. If the goal in instituting an internet monitoring system is to reduce cyberloafing, then flagging and disciplining individuals may accomplish that goal. Alternatively, if managers aim to reduce counterproductivity more broadly and assume that the target of their monitoring is just a sample of such counterproductivity, the current research suggests that such an assumption may be misguided, or at least inefficient. In conclusion, organizations should develop interventions that account for the distinction among types of counterproductive employees so that employees that most expose the organization to legal, life-threatening, and/or serious financial problems (aberrant deviants in the current study) are targeted without expense to the less counterproductive employees.
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doi:10.1006/obhd.2001.2958


Table 1

Counterproductive Work Behavior Scales and their Content Overlap

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*Note.* Values along the diagonal are coefficient alphas for multi-item scales. Mach = Machiavellianism, Narc = narcissism, Psych = psychopathy, TRB = theft and related behaviors, DP = destruction of property, MI = misuse of information, MTR = misuse of time and resources, UB = unsafe behavior, PA = poor attendance, PQW = poor quality work, AU = alcohol use, DU = drug use, IVA = inappropriate verbal behaviors, IPA = inappropriate physical actions, Disc = previous disciplinary experiences, Fired = previous number of terminations, and Arrest = previous arrest history.
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*Intercorrelations Among Study Variables*

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Table 3

Profile Distributions, Means, and Standard Deviations

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*Note.* TRB = theft and related behaviors, DP = destruction of property, MI = misuse of information, MTR = misuse of time and resources, UB = unsafe behavior, PA = poor attendance, PQW = poor quality work, AU = alcohol use, DU = drug use, IVA = inappropriate verbal behaviors, IPA = inappropriate physical actions.
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*Note.* Values in parentheses are standard deviations. Values with the same superscript refer to values that were not significantly different from each other. All other values were significantly different \((p < .05)\). Mach = Machiavellianism, Narc = narcissism, Psych = psychopathy, Disc = previous disciplinary experiences, Fired = previous number of terminations, and Arrest = previous arrest history.
Figure 1. Bayesian Information Criterion (BIC) values for models with 1-9 profiles. “VII” refers to spherical, equal shapes with varying volume (Scrucca, Fop, Murphy, & Raftery, 2016).
Figure 2. Profile z-scores for each dimension of counterproductive work behavior. TRB = theft and related behaviors, DP = destruction of property, MI = misuse of information, MTR = misuse of time and resources, UB = unsafe behavior, PA = poor attendance, PQW = poor quality work, AU = alcohol use, DU = drug use, IVA = inappropriate verbal behaviors, IPA = inappropriate physical actions.
Figure 3. Means plot for each latent profile. TRB = theft and related behaviors, DP = destruction of property, MI = misuse of information, MTR = misuse of time and resources, UB = unsafe behavior, PA = poor attendance, PQW = poor quality work, AU = alcohol use, DU = drug use, IVA = inappropriate verbal behaviors, IPA = inappropriate physical actions.
Figure 4. Mean profile z-scores for each dark triad trait.
Figure 5. Mean profile z-scores for previous disciplinary and arrest histories.
APPENDICES
APPENDIX A

The Short Dark Triad (SD3; Jones & Paulhus, 2014)

Please consider each item and respond using a 5-point Likert scale from 1 (disagree strongly) to 5 (agree strongly).

Machiavellianism

1. It’s not wise to tell your secrets.
2. I like to use clever manipulation to get my way.
3. Whatever it takes, you must get the important people on your side.
4. Avoid direct conflict with others because they may be useful in the future.
5. It’s wise to keep track of information that you can use against people later.
6. You should wait for the right time to get back at people.
7. There are things you should hide from other people to preserve your reputation.
8. Make sure your plans benefit yourself, not others.
9. Most people can be manipulated.

Narcissism

1. People see me as a natural leader.
2. I hate being the center of attention. (R)
3. Many group activities tend to be dull without me.
4. I know that I am special because everyone keeps telling me so.
5. I like to get acquainted with important people.
6. I feel embarrassed if someone compliments me. (R)
7. I have been compared to famous people.
8. I am an average person. (R)
9. I insist on getting the respect I deserve.

Psychopathy

1. I like to get revenge on authorities.

2. I avoid dangerous situations. (R)

3. Payback needs to be quick and nasty.

4. People often say I’m out of control.

5. It’s true that I can be mean to others.

6. People who mess with me always regret it.

7. I have never gotten into trouble with the law. (R)

8. I enjoy having sex with people I hardly know.

9. I'll say anything to get what I want.
APPENDIX B

Gruys and Sackett’s (2003) 66-item CWB Measure

Please report the frequency in which you engage in the behaviors using a 7-point scale (1 = never, 2 = once or twice a year, 3 = once a month, 4 = two or three times a month, 5 = weekly, 6 = two or three times a week, 7 = daily). If the behavior described is not applicable to your job, please select “Not Relevant.”

Theft and Related Behavior

1. Help another person or advise them how to take company property or merchandise.
2. Take cash or property belonging to the company.
4. Take cash or property belonging to a co-worker.
5. Take office supplies from the company.
6. Take petty cash from the company.
7. Take cash or property belonging to a customer.
8. Give away goods or services for free.
9. Provide goods or services at less than the price established by the company.
10. Misuse employee discount privileges.

Destruction of Property

1. Deface, damage, or destroy property, belonging to a co-worker.
2. Deface, damage, or destroy property, belonging to a customer.
3. Deface, damage, or destroy property, equipment, or product belonging to the company.
4. Deliberately sabotage the production of product in the company.

Misuse of Information
1. Destroy or falsify company records or documents.

2. Discuss confidential matters with unauthorized personnel within or outside the organization.

3. Intentionally fail to give a supervisor or co-worker necessary information.

4. Provide the organization with false information to obtain a job (i.e., regarding education or experience).

5. Lie to employer or supervisor to cover up a mistake.

Misuse of Time and Resources

1. Conduct personal business during work time.

2. Spend time on the internet for reasons not related to work.

3. Take a long lunch or coffee break without approval.


5. Waste company resources.

6. Use company resources you aren't authorized to use.

7. Make personal long distance calls at work.

8. Mail personal packages at work.

9. Make personal photocopies at work.

10. Use email for personal purposes.

11. Play computer games during work time.

12. Alter time card to get paid for more hours than you worked.

13. Work unnecessary overtime.

Unsafe Behavior

1. Endanger yourself by not following safety procedures.

2. Endanger coworkers by not following safety procedures.
3. Endanger customers by not following safety procedures.
4. Fail to read the manual outlining safety procedures.

Poor Attendance
1. Be absent from work without a legitimate excuse.
2. Intentionally come to work late.
3. Use sick leave when not really sick.
4. Leave work early without permission.
5. Miss work without calling in.

Poor Quality Work
1. Intentionally perform your job below acceptable standards.
2. Intentionally do work badly or incorrectly.
3. Intentionally do slow or sloppy work.

Alcohol Use
1. Come to work under the influence of alcohol.
2. Have your performance affected due to a hangover from alcohol.
3. Engage in alcohol consumption on the job.

Drug Use
1. Engage in drug use on the job.
2. Come to work under the influence of drugs.
3. Possess or sell drugs on company property.
4. Have your performance affected due to a hangover from drugs.

Inappropriate Verbal Actions
1. Argue or fight with a co-worker.
2. Yell or shout on the job.
3. Verbally abuse a customer.
4. Verbally abuse a co-worker.
5. Verbally abuse a supervisor.
6. Use sexually explicit language in the workplace
7. Argue or fight with a supervisor.
8. Argue or fight with a customer.

Inappropriate Physical Actions
1. Physically attack (e.g., pushing, shoving, hitting) a co-worker.
2. Physically attack (e.g., pushing, shoving, hitting) a customer.
3. Physically attack (e.g., pushing, shoving, hitting) a supervisor.
4. Make unwanted sexual advances toward a subordinate.
5. Make unwanted sexual advances toward a supervisor.
6. Make unwanted sexual advances toward a co-worker.
7. Make unwanted sexual advances toward a co-worker.*

* Item #65 was repeated for item #66 and therefore removed from analyses.
APPENDIX C

Previous Disciplinary Action

Please respond to each of the following items by indicating zero, one, two, three, or four or more.

1. How many times have you been disciplined or punished for breaking rules at any job?

2. How many times have you been fired or terminated from any job?

3. Have you ever been arrested for any reason other than traffic offenses?