Wright State University

CORE Scholar

2015

Not all Forms of Misbehavior are Created Equal: Perpetrator Personality and Differential Relationships with CWBs

Caleb Braxton Bragg
Wright State University

Follow this and additional works at: https://corescholar.libraries.wright.edu/etd_all

Part of the Industrial and Organizational Psychology Commons

Repository Citation

NOT ALL FORMS OF MISBEHAVIOR ARE CREATED EQUAL: PERPETRATOR

PERSONALITY AND DIFFERENTIAL RELATIONSHIPS WITH CWBS.

A dissertation submitted in partial fulfillment of the

requirements for the degree of

Doctor of Philosophy

by

Caleb Braxton Bragg
M.S., Brigham Young University, 2011

2015
Wright State University

WRIGHT STATE UNIVERSITY

GRADUATE SCHOOL

JULY 31, 2015

I HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER MY SUPERVISION BY   Caleb Bragg   ENTITLED Not all forms of misbehavior are created equal: Perpetrator personality and differential relationships with CWBs. BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF Doctor of Philosophy.

_____
Nathan Bowling, Ph.D.
Dissertation Director

_____
Debra Steele-Johnson, Ph.D. Chair,
Department of Psychology

_____
Robert E.W. Fyffe, Ph.D.
Vice President for Research and
Dean of the Graduate School

Committee on Final Examination

_____
Nathan Bowling, Ph.D

_____
Gary Burns, Ph.D.

_____
Melissa Gruys, Ph.D.

_____
David LaHuis, Ph.D.

ABSTRACT

Bragg, Caleb Braxton. Ph.D. Department of Psychology, Wright State University, 2015. Not All Forms Of Misbehavior Are Created Equal: Perpetrator Personality And Differential Relationships With CWBs.

Most research has lumped counterproductive work behaviors into a single or a few categories. The present study, however, used dominance analysis to examine whether aggression, industriousness, dishonesty and self-control had differential predictive relationships with the Gruys and Sacket (2003) 11-Factor CWB model. I hypothesized that various CWBs would be differentially predicted by various personality traits, and that those predictive relationships would be moderated by self-control. The results indicated all CWBs are not created equal and should not be lumped into a single all-inclusive category. Counterproductive work behaviors are multidimensional, with unique predictors and covariates, and are best understood and predicted when split into categorical types. Self-Control and Aggression best predicted nine of 11 CWB categories. I also found limited support for the moderating effects of self-control.

Keywords: Counterproductive work behavior, workplace deviance, dominance analysis, MTurk, personality

TABLE OF CONTENTS

LIST OF FIGURES

Figure

LIST OF TABLES

I.   INTRODUCTION

Over the years, organizational theorist and practitioners alike have become increasingly concerned about the negative impact certain employee behaviors can have on an organization's legitimate business interests and viability. Employee behaviors that negatively impact employers have been termed "counterproductive work behaviors," which are defined as "any intentional behavior on the part of an organization member viewed by the organization as contrary to its legitimate interests" (Sackett & DeVore, 2001, p. 145). (Note that some researchers have used the term "workplace deviance" to refer to CWBs; cf. Robinson & Bennett [1995].) Examples of CWB include employee theft, arriving late or leaving early from work, being rude to coworkers or customers, wasting time while on the clock, and speaking ill of the organization and management (Bennett & Robinson, 2000; Berry, Ones & Sackett, 2007; Gruys & Sackett, 2003).

Counterproductive work behaviors have significant costs to organizations and their employees. Internal fraud including employee theft, for example, costs US companies up to $400 billion dollars a year by some estimates (Greenberg, 2002; Wells, 1999), which represents only a fraction of the losses caused by CWBs. When taken together, the combined financial costs of CWBs to organizations are tremendous (Vardi & Weitz, 2004). In addition to the financial costs, CWBs may also harm victims' physical and emotional well-being (Aquino & Thau, 2009; Bowling & Beehr, 2006;

1

Tepper, 2007). Due in part to enormity of this negative organizational impact, it is easy to see why researchers are interested in understanding the nature of CWBs as well as their potential causes. Indeed, research into the area of CWB has in the past 20 years moved from being a peripheral topic of interest to a topic that is well represented in most top organizational research journals in the field (Raver, 2013).

The proposed study will make contributions to two overlooked areas in the CWB literature. First, I will link the specific personality traits of aggression, dishonesty, laziness, and self-control to *specific categories* of CWB, which could lead to a better understanding of different predictors of distinct types of CWBs. To date, the CWB literature has generally lumped together distinct behaviors into broad CWB scales (Bennett & Robinson, 2000). These "lumped" scales have been used in most of the studies examining the predictors of CWBs (cf. Cameron, Dutton, & Quinn, 2003; Dalal, 2005; Lee & Allen, 2002)

Second, I will contribute to the CWB literature by examining the possibility that personality traits interact with each other to predict CWBs. Although previous research has demonstrated that personality traits can interact to predict in-role job performance (see Witt, Burke, Barrick, & Mount, 2002), the CWB literature has given little attention to this possibility. In this study, I will examine the moderating effects of self-control on the relationship between specific personality traits and CWB categories. First, however, I will discuss the nature of CWBs.

The Nature of Counterproductive Work Behavior

In order for one to understand how the body of literature has taken its current shape, it is important to consider the history of CWB research. Prior to the current

practice of combining distinct behaviors into overall CWB scales, each type of behavior that would now be included under the umbrella term CWB was studied separately (see Chen & Spector, 1992). There are extensive literatures on constructs that are now described as CWBs: theft (Greenberg, 2002), sexual harassment (Ilies, Hauserman, Schwochau, & Stibal, 2003), absenteeism (Farrell & Stamm, 1988), and turnover (Griffeth, Hom, & Gaertner, 2000) to name a few. Robinson and Bennett (1995) noted that these behaviors share a common theme—they all involve intentionally harming one's organization or people within the organization—and hence there is reason to combine distinct behaviors into overall CWB scales.

Two Approaches to Conceptualizing CWB

A scientist in any field may be described as either a *lumper* or a *splitter*. These terms were originally used within biology (Mayr, 1982), but have also been used to describe theorists in other fields, including personality and clinical psychologists (Frizer et al., 2012; Levanthal, 2012; Mandy, Charman, & Skuse, 2012). Lumpers are theorists who "tend to be as parsimonious as possible by condensing similar constructs under as a few categories as possible; splitters on the other hand, "tend to use fine distinctions … to classify unique conditions separately" (Levanthal, 2012, p 6). Most theorists can be assigned to one of two camps in general (Weinberg, 1989) or on a particular issue (Levanthal, 2012). Within the CWB literature, the lumper approach has clearly dominated.

The Lumper approach to CWBs. An impressive body of research on CWBs has accumulated in the past two decades. Most of that research has been done using a lumper approach, which focuses on combining conceptually distinct CWBs into a single

3

overarching construct (Bennett & Robinson, 2000; Gruys & Sackett, 2003; Sackett & Devore, 2001; Spector et al., 2006). Conceptually distinct CWBs are combined into a single construct, and other variables are examined as predictors, correlates, or outcomes of the broadly assessed CWBs (see Bowling et al., 2011; Dalal, 2005; Vardi & Weitz, 2004). The Bennett and Robinson (2000) scale, for example, combines the items "Taken property from work without permission," "Intentionally worked slower than you could have worked," and "Littered your work environment" into an overall CWB scale. Note, however, that these three behaviors are conceptually distinct from each other, and each would likely have different predictors, correlates, and consequences (see Herschovis & Reich, 2013).

Bennett and Robinson (2000) provide a good justification for using the lumper approach. Prior to their popular typology (Robinson & Bennett, 1997) and measure of CWB (Bennett & Robinson, 2000), most of the research had focused on only one or two specific CWBs in isolation, largely ignoring the commonalities that could be used to describe and predict a more inclusive range of behaviors. Another benefit of lumping, as explained by Spector et al., (2006) is that it minimizes the potential negative impact of range-restriction. Many CWB have a low base-rate of occurrence (e.g., workplace assault), thus lumping the low base-rate behaviors into an overall measure allows for more variance than would occur in a narrower measure. Indeed, the lumper approach used by Bennett and Robinson (2000) is very useful when trying to define the boundaries of a relatively new construct like CWB, as it pools knowledge and related constructs together in an attempt to be as comprehensive as possible while avoiding redundancy in an attempt to be as parsimonious as possible.

To date, the majority of research on CWBs has used the Bennett and Robinson (2000) measure (Marcus, Taylor, Hastings, Sturm, & Weigelt, 2013), which was developed based off the Robinson and Bennett (1995) typology. As noted above, this typology represents a lumper perspective. Unfortunately, this is one major limitation of lumper perspectives: They prevent researchers from examining the potentially unique characteristics of specific types of CWBs.

Two factor Bennett and Robinson (2000) Model. The Bennett and Robinson (2000) conceptualization of CWBs dominates the CWB literature (Marcus et al., 2013). It has been the subject of many empirical studies, and at least four meta-analyses (Berry, Ones, & Sackett, 2007; Dalal, 2005; Hershcovis et al., 2007; Marcus et al, 2013) that directly tested the model. Counterproductive work behaviors are presented as being in one of two categories: counterproductive work behaviors directed towards individuals (CWB-I) and behaviors that are directed towards the organization (CWB-O). Originally, a severity dimension was also included in the model, with behaviors being rated on their target and severity. Gossiping about a coworker, for example, would be considered a low-severity CWB-I; physically assaulting another employee would be considered a high-severity CWB-I. The severity dimension was dropped from the final model due to a lack of support from subsequent factor analyses (Bennett & Robinson, 2000; Marcus et al., 2013).

The two factor model and accompanying measure have been criticized. Marcus et al., (2013) cautions use and interpretation of CWB-I and CWB-O factors as applied to the wide range of behaviors that are forced into the two-factor solution. During model development, Bennett and Robinson (2000) dropped items from their original list that had

a low base-rate of occurrence and low variance "which likely eliminated more severe forms of deviance because serious acts tend to be rare. Moreover, the authors imposed the theoretically expected two-factor solution on the data, which may have led to the exclusion of different or narrower facets of CWB" (p 4). It is possible that the lumper approach taken by Bennett and Robinson (2000) excluded or ignored meaningful distinctions between types of CWBs which may have been better captured using the splitter approach.

Lumping has the drawback, however, of obscuring the distinct effects of any single type of CWB. The lumper approach is useful when looking for common factors that predict all types of CWBs, but it is not as effective at predicting what personality traits predispose employees toward a specific type or category of CWB, which is the focus of the present study. Because much of the CWB literature has taken a lumper perspective, there has been a call from some researchers to examine CWBs from the splitter perspective (Sackett & DeVore, 2001; Spector et al., 2006).

The Splitter approach to CWBs. Perhaps the most compelling reason to use the splitter approach is that CWBs are conceptually diverse and distinct from each other. The use of CWB measures that combine distinct behaviors into an overall scale, therefore, could obscure the unique nature of individual types of CWB. Two CWB models—each of which has gained much less research attention than the Robinson and Bennett (1995) model—have adopted a splitter perspective. These two models are the Spector et al. (2006) model and the Gruys and Sackett (2003) model.

Five factor Spector et al (2006) Model. Spector et al. (2006) distinguish between five types of CWBs: 1) abuse (a sample item is "Started an argument with someone at

work"), 2) production deviance (a sample item is "Purposely failed to follow instructions."), 3) sabotage (a sample item is "Purposely damaged a piece of equipment or property."), 4) theft (a sample item is "Took money from your employer without permission."), and 5) withdrawal (a sample item is "Came to work late without permission"). This model of CWBs is slightly more encompassing of the CWB domain than is the Robinson and Bennett (1995) typology or subsequent model, but it falls short of presenting the comprehensive model of CWB behavioral categories.

Eleven factor Gruys and Sackett (2003) Model. The Gruys and Sackett (2003) model provides an extensive list of 11 categories in an attempt to fully map the domain and dimensionality of CWB. The 11 categories are: 1) theft and related behavior, 2) destruction of property, 3) misuse of information, 4) misuse of time and resources, 5) unsafe behavior, 6) poor attendance,7) poor-quality work, 8) alcohol use, 9) drug use, 10) inappropriate verbal actions, and 11) inappropriate physical actions. Unlike Bennett and Robinson (2000), the Gruys and Sackett model included several low frequency behaviors (e.g., "Physically attack (e.g., pushing, shoving, hitting) a customer."). The Gruys and Sackett (2003) model includes the CWB categories identified by Spector et al. (2006), plus several additional categories. An extensive structural meta-analysis by Marcus et al. (2013) compared the internal structure of the three above referenced broad-domain models of CWB. As evidence of its superior structure, the Gruys and Sackett (2003) model was shown to have the best model fit. The eleven factor Gruys and Sackett (2003) model was chosen for use in this study as it is both "more fine-grained and more comprehensive than the other two [the Bennett & Robinson, 2000 and the Spector et al., 2006] models [of CWB]" (Marcus et al., 2013, p. 4).

In an effort to address the deficiencies of the lumper approach, the present study uses the Gruys and Sackett (2003) 11-factor CWB model. The proposed study model (see Figure 1) outlines four personality traits (trait aggression, industriousness, dishonesty, and self-control) that predict the different types or categories of CWBs, with self-control also moderating the other trait-CWB category relationships.

Perpetrator Predictors of CWB

As already discussed, much of the previous research has combined distinct behaviors into overall measures of CWB (e.g., Fox, Spector, & Mills, 2001; Martinko, Gundlach, & Douglas, 2002; O'Brien & Allen, 2008). That research has focused on three categories of CWB predictors: 1) personality traits, 2) job attitudes, and 3) situational factors.

Personality Traits. Several perpetrator personality traits that have been linked to CWBs. These include the Big Five personality traits of conscientiousness, agreeableness, emotional stability; trait anger and aggression, locus of control, and positive and negative affect (Berry et al., 2007; Dalal, 2005; O'Brien & Allen, 2008). These studies were done using the CWB-I and CWB-O conceptualization of CWBs (Bennett & Robinson, 2000; Robinson & Bennett, 1995), and showed differential relationships between some of the individual differences and CWB-Os when compared to individual differences/CWB-I relationships (Berry et al., 2007; Dalal, 2005; O'Brien & Allen, 2008). Berry et al. (2007), for example, demonstrated that conscientiousness had a significantly stronger relationships with CBW-O, ($\rho = -.43$) than with CWB-I ($\rho = -.23$). The differential strength of this correlation indicates that there may be greater predictive utility in

matching individual differences and categories of CWBs as suggested by Sackett and DeVore (2001) than in lumping all CWBs together as a single construct.

In his meta-analysis, Salgado (2002) provides further evidence of the differential relationships that individual differences have with distinct CWBs. He used meta-analyses on the specific CWBs of absenteeism, accidents, deviant behaviors, and turnover to demonstrate differential relationships of the Big Five personality traits with each specific CWB. As an example, the trait of emotional stability showed a corrected correlation of .35 with a lack of turnover, but only a corrected correlation of .08 with a lack of accidents. Thus, individual differences in personality can have differential relationships with different types of CWBs.

The present study builds off of Salgado's meta-analysis by focusing in on specific personality traits and their differential relationships with the comprehensive Gruys and Sackett (2003) CWB model. I intentionally selected particular individual differences (i.e., trait aggression, industriousness, dishonesty, and self-control) that I expected to produce differential relationships with different categories of CWBs. In the sub-section below on personality traits predicting CWB categories. I provide a detailed description of the conceptual links between each of these personality traits and various categories of CWB.

Job attitudes. Job attitudes held by the perpetrator have also been shown to predict CWB. Some job attitudes that have been empirically linked include job satisfactions, distributive injustice, procedural injustice (Berry et al., 2007; Dalal, 2005; Hershcovis et al., 2007; O'Brien & Allen, 2008), low organizational commitment (Dalal, 2005), and low organizational support (O'Brien & Allen, 2008). These studies have tied

the various job attitudes to overall levels of CWB. Unlike perpetrator personality traits, job attitudes haven't empirically demonstrated differential prediction of CWB-I and CWB-O. Thus, there is no rationale for testing differential relationships between job attitudes and types or categories of CWBs.

Situational factors. A number of situational factors have been found to be related to CWBs, particular work stressors such as organizational constraints and interpersonal conflict. (Berry et al., 2007; Hershcovis et al., 2007; O'Brien & Allen, 2008). Unlike the comparison of the relationship between the individual differences and CWBs, there wasn't a significant difference between the Organizational/Situational factors and CWB-I or CWB-O relationships (Berry et al., 2007; Hershcovis et al., 2007; O'Brien & Allen, 2008).

Interpersonal conflict and organizational constraints (Spector & Jex, 1998) have long been assumed to have an impact on the occurrence of CWBs. Two possible theoretical mechanisms that link stressors to increased CWB occurrence are theories of frustration (Chen & Spector, 1992) and resource depletion (Vardi & Weitz, 2004). Workplace stressors lead to frustration and negative affect in the workplace, and the increased frustration and negative affect increase the likelihood of engaging in a CWB as a potential form of retaliation (Chen & Spector, 1992). Workplace stressors also use mental and physical resources, which are then unavailable to be used on the job, and may result in an increase of CWB as "shortcuts" to reduce resource depletion. A recent longitudinal study attempted to verify these assumptions (Meier & Spector, 2013). They found that organizational constraints and interpersonal conflict were significantly correlated with both CWB-I and CWB-Os in future time points. This is further evidence

that while situational factors do have an impact on the occurrence of CWBs, they, like job attitudes, don't seem to differentially predict CWB categories. For this reason, the present study will focus on the differential relationships observed by studying which perpetrator personality traits will predict which types or categories of CWB behavior, as suggested in Sackett and Devore (2001) instead of examining perpetrator job attitudes or situational factors. This approach is useful in that it allows for theorizing at a general level as to what types of individual differences and organizational factors combine and lead to the commission of some type of CWB. Treating all CWBs as a manifestation of a single latent construct, however, is not very effective at predicting specific categories of CWB. As discussed above, there are at least 11 distinct categories of CWB (Gruys & Sackett, 2003; Marcus et al., 2013), and treating all these categories as a single construct obscures different effects involving different types of CWBs.

The present study addresses this issue by presenting an expanded version of the Gruys and Sackett (2003) categorical model of CWB (see Figure 1) that includes four personality traits that are expected to yield particularly strong relationships with each of the 11 categories in the model better than they predict overall levels of CWB measured as a single latent construct. The individual differences that will be examined in the present study are trait aggression, dishonesty, industriousness, and self-control. I discuss the overall theory behind using personality traits to predict specific categories of CWBs and each of these personality traits in detail in the following sub-sections.

Perpetrator Personality Traits Predicting CWB categories

The 11 Gruys and Sackett (2003) CWB categories I will examine vary from each other in psychologically important ways. Some involve aggressiveness, some involve

low industriousness, some involve dishonesty, and some involve low self-control. Given these fundamental differences, different categories of CWBs might have different predictors. In the following subsections, I argue how trait aggression, industriousness, dishonesty, and self-control differ in their conceptual links with various types of CWBs (i.e., some have stronger links than others).

Trait aggression. Aggression is generally defined as "behavior intended to harm other people who want to avoid harm" (Webster et al., 2014, p. 121). More specifically, trait aggression describes an *enduring* pattern of individual differences in behaviors, thoughts, and emotions (Webster et al., 2014; see also Bartlett & Anderson, 2012; Buss & Perry, 1992). Thus, people who are high in trait aggression are those who habitually demonstrate an elevated level of emotions, thoughts, and behaviors that facilitate intentional harm (Dillon, 2012). For example, trait aggression has been linked to risky driving behaviors (e.g. tailgating and aggressive driving, etc.; Fernandez, Job, & Hatfield, 2007) as well as domestic violence (Shorey, Brasfield, Ferbes, & Stuart, 2011), which are behaviors that facilitate intentional harm.

Trait aggression, as it represents individual differences in aggressive thoughts, emotions and behaviors, would be logically tied to categories of CWB that are by their nature aggressive. Previous research has found that trait aggression was the single best predictor of interpersonally targeted CWBs (O'Brien & Allen, 2008). In the Gruys and Sackett (2003) model of CWB, there are several CWB categories that are conceptually aligned with trait aggression. Specifically, trait aggression should best predict the occurrence of property destruction, inappropriate physical actions, and inappropriate verbal actions. All of these behaviors are overt, active behaviors that seek to harm others,

and as such are conceptually related to each other. Aggression also usually involves

action, and will probably predict behaviors requiring action better than those that

represent a failure to act. Engaging in property destruction, for example, is a very

aggressive action as it requires effortful action to destroy something that belongs to

another person. This action is not very ambiguous, the intent is clear to the perpetrator

and the victim, and conveys aggression to the target.

The literature makes a clear distinction between trait aggression and being in an

aggressive state (Webster et al., 2014). For the purpose of this research, we are focusing

on the general trait of aggression in order to predict behavior over time and across

situations (Costa & McCrae, 1988).

Hypothesis 1. Trait aggression will be dominant over industriousness,

dishonesty, and self-control in predicting CWB frequency in the categories of

property destruction, inappropriate verbal actions, and inappropriate physical

actions.

Industriousness. There has been ample research done on industriousness, a sub-

facet of conscientiousness. Industriousness has been identified as one of the major facets

of conscientiousness (MacCann, Duckworth, & Roberts, 2009). A person with high

levels of trait industriousness is one who works hard, pushes him or herself to succeed,

and accomplish a lot of work (MacCann et al., 2009). Thus, a person who is low on trait

industriousness would do little work, put in little time or effort into their work, and do

just enough to get by.

Low trait industriousness, as it reflects the enduring tendency to do as little as

possible would likely be related to CWBs that have withholding effort as a common

13

theme. In the Gruys and Sackett (2003) model of CWB, there are a number of categories that seem like they would be related to the perpetrator's level of trait industriousness. These include poor attendance, poor work quality, and unsafe behavior. A commonality shared by all of these behaviors is that they involve the absence of effort, and those who are low in trait industriousness usually don't expend effort. Unsafe behavior, for example, can come in the form of not following the appropriate safety equipment when using chemical cleaners. It takes more effort to go get and wear the required protective goggles, mask, and gloves than to not do so, so a person low in industriousness is more likely to participate in the unsafe behavior and simply not wear the equipment.

Hypothesis 2. Industriousness will be dominant over trait aggression, dishonesty, and self-control in predicting CWB frequency in the categories of poor attendance, poor work quality, and unsafe behavior.

Dishonesty. Dishonest behavior is characterized by words like "conceited, greedy, manipulative, and malicious," and those who are described as dishonest are usually likely to use manipulation or flattery to break moral or social conventions in the pursuit of personal gain, position, or power (Weller & Tiker, 2010; see also Ashton, Lee, & Son, 2000; Ashton et al., 2004).

Trait dishonesty, which involves a willingness to violate moral, societal, and organizational norms in pursuit of selfish interests, is conceptually linked to CWB categories relating to a lack of honest, moral behavior. Within the Gruys and Sackett (2003) model, there are several CWB of categories that conceptually align with trait dishonesty. These include theft and related behaviors, misuse of information, and misuse of time and resources. These behaviors share the commonality of being secretive, covert,

14

and deceitful in order to benefit the perpetrator and defraud the victim. For example, theft involves taking something that does not belong to the perpetrator, and is usually done in such a way so as to reduce the chance of being caught.

Hypothesis 3. Dishonesty will be dominant over aggression, industriousness, and self-control in predicting CWB frequency in the categories of theft and related behavior, misuse of information, and misuse of time and resources.

Self-control. Hirschi and Gottfredson and (1994) define trait self-control as "the tendency to avoid acts whose long-term costs exceed their momentary benefits" (p. 4). Self-control is conceptually linked to CWBs. Engaging in any form of CWB can have negative long-term consequences for perpetrators. These long-term consequences could take the form of disciplinary action administered from the perpetrator's employer (Vardi & Weitz. 2004) or retaliation from the human targets of CWBs (Fox et al., 2001; Spector & Fox, 2005). As a result, workers who are high in self-control are likely to avoid engaging in CWBs because they carefully consider the negative personal consequences of their behavior prior to acting.

While most of the other categories have other more proximal personality traits that would predict their occurrence better than trait self-control, the two categories of alcohol use and drug use do not. The decision to drink alcohol or use drugs, either at work or in such a way that a person's capacity to do their job is impacted the next day, gives short-term pleasure and has the potential for long-term costs (e.g. termination, criminal prosecution). People that are high in self-control are likely to avoid abusing drugs or alcohol (Duckworth, 2011; Tangney et al., 2004) as they set aside the short-term pleasure in favor of the long-term benefits.

15

Hypothesis 4. Self-control will be dominant over trait aggression, industriousness, and dishonesty in predicting CWB frequency in the categories of drug use and alcohol use.

Moderating effects of self-control. In their comprehensive review, Sackett and DeVore (2001) hypothesized about a theoretical hierarchical factor structure for CWB with a high-level trait underlying the entire structure. Marcus and Schuler (2004) argued that low self-control, using the Hirschi and Gottfredson (1994) definition, might be that underlying single factor. With decade-long longitudinal studies finding that a lack of self-control has been implicated in a wide variety of important life outcomes, such as poor health, teenage pregnancy, financial problems, drug abuse, and delinquency, even when controlling for intelligence and socio-economic background (Moffitt et al., 2011), the authors argument of self-control being the single best predictor of general counterproductive behavior makes sense. Essentially, the underlying mechanism is that people that do not weigh the long-term costs against the short-term benefits are more likely to participate in counterproductive behavior across a variety of contexts and situations (Marcus, 2013).

While trait self-control has been found to be related to many types of delinquent behavior, including CWB (Lian et al., 2014) it would likely not predict one CWB category better than another, as self-control is usually not the proximal personality trait or antecedent. It may work better when employed as a moderator, as it limits the relationship between the trait based CWB inclination and the actual commission of the CWB. Trait aggression, trait dishonesty and low trait industriousness each influences whether one finds a particular CWB to be immediately appealing or not. Due to their

16

nature, CWBs usually have negative long-term consequences for the perpetrator. Self-control would function as a moderator because being high in self-control decreases the likelihood that a person will act in ways that seek short-term benefits at the cost of long term consequences

For example, a person with low trait self-control and a person with high trait self-control see a $20 dollar bill sticking out of the bottom of the register that they are covering briefly while their co-worker goes on break. Both are workers are high in trait dishonesty. The person with low trait self-control will probably slip the bill from the register into his/her pocket when nobody is looking due to their high levels of dishonesty. The person with high self-control sees the bill stick out as well, but immediately thinks that if they take the bill and are caught, they will most likely lose their job and may even face criminal prosecution. The immediate gain of $20 is not worth the risk or punishment, He/she will most likely not take the bill. In this example, the trait self-control acts as a brake on the usual personality trait-CWB relationship, decreasing the likelihood of the CWB even though the associated trait of dishonesty was high.

Therefore, I hypothesize that trait self-control will moderate the relationship between personality traits and CWB frequency in each trait-category pair.

Hypothesis 5a. Self-control will moderate the relationship between trait aggression and CWB frequency in the categories of property destruction, inappropriate verbal actions, and appropriate physical actions. Specifically, the relationship between trait aggression and these CWB categories will be stronger when self-control is low than when self-control is high.

Hypothesis 5b. Self-control will moderate the relationship between industriousness and CWB frequency in the categories of poor attendance, poor work quality, and unsafe behavior. Specifically, the relationship between industriousness and these CWB categories will be stronger when self-control is low than when self-control is high.

Hypothesis 5c. Self-control will moderate the relationship between dishonesty and the CWB frequency in the categories of theft & related behavior, misuse of information, and misuse of time and resources. Specifically, the relationship between dishonesty and these CWB categories will be stronger when self-control is low than when self-control is high.

II.   METHOD

Pilot Studies

Prior to their use in the study, several scales had to be altered. Three pilot studies were conducted in order to establish the psychometric soundness of the altered measures.

Pilot Study 1. The items in the industriousness scale risked being confounded with CWB items. In order to remove the items that were confounded with CWB items (e.g., "I put little time or effort into my work") in the Gruys and Sackett (2003) scale, I altered five items with confounding content (e.g., "I accomplish a lot in a typical day." instead of "I accomplish a lot of work."; "I put little time and effort into my daily responsibilities." instead of "I put little time and effort into my work."). I then used MTurk to collect a pilot sample ($N = 83$) to test the internal-consistency reliability of the scale using the altered items (see Appendix I). The altered scale items and the unaltered scale items together showed good internal consistency ($\alpha = .82$) and were used to measure industriousness in the main study.

Pilot Study 2. I conducted a pilot study to validate a theoretically derived measure of trait dishonesty. Medeovic (2012) recently mapped out the topography of dishonesty, comparing various constructs to the developed model. The honesty component from the HEXACO six factor model of personality (DeViers, 2013; Lee & Ashton, 2004) showed large negative factor loadings on dishonesty, and the interpersonal

manipulation component of the self-report psychopathy measure (Williams et al., 2007) had the strongest positive loading on the dishonesty factor. These two subscales, along with the reverse-scored IPIP trait honesty items taken from the Values in Action Scale (VIA; Peterson & Seligman, 2004) were submitted to SME ratings of face validity. All 20 items were given to three SMEs, and were rated on a scale of 1 to 7 for how face valid the item was for assessing the construct of dishonesty as suggested by Medeovic (2012). Of the 20 items, the seven with the most agreement and highest ratings of face validity were selected (see Appendix II) to be further pilot tested using a sample collected through MTurk ($N = 51$). These seven items showed good internal reliability ($\alpha = .82$) and had item-total correlations above .30 (see Everitt, 2002) and were thus selected to constitute the dishonesty scale.

Pilot Study 3. Existing measures of self-control were inadequate for a number of reasons. The most popular self-report measure, the Self Control Scale (SCS; Tangney, Baumeister, & Boone, 2004) and its short version the Brief Self Control Scale (BSCS; Maloney, Grawitch, & Barber, 2012; Tangney et al., 2004) do not well match the Hirschi and Gottfredsen (1994) definition of trait self-control: "the tendency to avoid acts whose long-term costs exceed their momentary benefits" (p. 4). For example the item "I change my mind fairly often" from the SCS does not well match the Hirschi and Gottfredsen definition of self-control.

Conversely, the Grasmick Low Self Control Scale (GLSCS) focuses more on the multidimensional theory of crime than it does on self-control (Grasmick, Tittle, Bursik, and Arneklev, 1993). Some of the items are designed to measure self-control, as it is part of the multidimensional theory of crime, but the many irrelevant items would not

measure self-control as well as an alternative scale. Example irrelevant items from the

GLSCS include "If I had a choice, I would almost always rather do something physical

than something mental" and "If things I do upset people, it's their problem, not mine."

The Retrospective Behavioral Self-Control Scale (RBS; Marcus, 2003), in

contrast to the GLSCS and SCS, consists of 67 behavioral items that respondents answer

by reflecting on the specific time periods in their lives of Childhood (8 to 13 years),

Youth (14 to 18 years old), and Adult (19 to 25 years old). Respondents indicate on a 7-

point Likert scale how frequently they had done the behavior asked about in the question.

The scale has been used in previous research on the relationship between self-control and

counterproductive work behavior (Marcus & Schuler, 2004) in which self-control as

measured by the RBS was shown to be the single best predictor of general

counterproductive behavior (GCB; Marcus, Schuler, Quell, & Humpfner, 2002).

Despite the empirical support of the RBS in the study, there are a few areas of

concern with the scale. The first is that a number of the items in the 67 item scale have a

low item-total correlation (ITC). An ITC less than .30 indicate that the item doesn't

correlate well with the overall scale, and may be dropped (Everitt, 2002). Of the 67 items

in the scale, 21 had an ITC of less than .30, which indicates that those items may not well

reflect the construct of self-control, and may be dropped.

The second area of concern is that many of the RBS items overlap with many

items that are in CWB scales (see Bennett & Robinson, 2000; Gruys & Sackett, 2003;

Marcus et al., 2002). Having CWB-like items in a scale that is intended to predict CWB

can artificially inflate the relationship between the two variables, and confound any

results derived from using those scales.

21

The third area of concern was the length of the scale, and the inclusion of items that did not always reflect the definition of self-control given by Gottfredsen and Hirschi (1994). Examples of such items include "When I was a child, my friends and I pestered younger or weaker children" and "When I was a teenager, I tired of hobbies quickly". Consistent with the scientific principle of parsimony, shorter, less complicated measures are preferable to longer, more complicated measures if they provided as good predictive validity and utility.

To address the above concerns, I created the aforementioned SRSCQ to be consistent with the Gottfredsen and Hirschi definition of self-control. To create the scale, I took the RBS items and their ITCs as reported by Marcus (2003), and dropped all items with ITCs less than .30 cutoff as suggested by Everitt (2002). I then eliminated all items that directly overlapped with items in CWB measures (e.g., "I have been late for school or at work because I stayed out too late the night before"; "I have been late for important appointments."). The remaining 32 items were combined with the SCS and GLSCS items, and randomly sorted to produce a pool of 92 self-control items. The self-control item pool was given to seven subject matter experts (SME) with instructions to rate each item on how well it represented the Gottfredsen and Hirschi construct of self-control using a 7 point-Likert scale with responses ranging from 1 (*Not very well*) to 7 (*Very well*).

Of the 92 items in the pool, 20 had an average SME rating greater than 5.0 on the 7-point Likert scale, and met the cutoff score for inter rater agreement of 1.17 on the Absolute Deviance of Means (ADm; Cohen, 2009). The ADm statistic represents the extent that individual ratings of a single item deviate from the overall mean rating of that

item. A low ADm on an individual item means that raters have a high level of agreement about their ratings of that particular item. Those 20 items were pilot tested ($n = 94$) and four items with poor ($< .30$) ITC were dropped from the scale, leaving a final scale with 16 items (see Appendix III), with excellent ($\alpha = .91$) reliability.

Participants

Working adults who were employed at least 20 hours a week for the past year were recruited as participants through the website Mechanical Turk (MTurk). Mechanical Turk (MTurk) is a work sharing website powered by Amazon that has been successfully used for participant recruitment in published psychological studies (see Casler, Bickel, & Hackett, 2013; Goncalves & Campbell, 2014; Wee, 2014). In fact, Casler et al., (2013) found no significant difference in the pattern of results from a learning and decision making task from data provided by social media, MTurk, and a traditional college sample.

A total of 525 participants accepted the HIT, 121 of which then returned the HIT without completing the study because they did not meet the selection criteria. The remaining respondents ($N = 404$) were 44.1% female, had a mean age of 34.2 years, and were 83.4% White, 5.7% Black, 5.9% Hispanic or Latino, 1.5% Middle Eastern, 7.4% Asian, and 2.2% Native American. All respondents worked at least 20 hours a week, with 14.9% working between 20 and 30 hours, 53.7% between 30 and 40 hours, and 31.4% working 40 hours or more on average each week. Respondents also had a variety of job titles (e.g. Surgeon, Editor, Custodian, Professor, etc.)

Measures

The scales and measures used in this study are described in this section. The scales are divided into sections by type: personality and counterproductive work behavior.

Personality Scales. Below is a list of the measure used to assess the personality traits that will be measured in this study.

Trait aggression. The Brief Aggression Questionnaire (BAQ; Webster et al., 2014) was used to measure trait aggression. This measure was selected because it showed good validity and breadth of the construct without needless repetition, and its 12 item length is considerably shorter than the most widely used 29-item measure, the Buss-Perry Aggression Questionnaire (BPAQ; Buss & Perry, 1992). The scale can be used either as a measure of four subscales that are theoretically thought to make up aggression (i.e., verbal aggression, physical aggression, anger, and hostility), or as an overall measure of trait aggression. It will be used in that later capacity for the current study. The item "If I have to resort to violence to protect my rights, I will" is typical of the measure. The measure showed good internal reliability ($\alpha = .85$). High scores on the BAQ reflect high levels of trait aggression.

Industriousness. I measured trait industriousness using items from MacCann et al. (2009). The revised scale consists of 10 items, seven of which are reverse scored. The item "I work hard at everything I do" is typical of a positively scored item, while the item "I do just enough to get by" is typical of a reverse-scored item. The measure showed excellent internal reliability ($\alpha = .90$) High scores on the industriousness measure will be interpreted as high levels of industriousness.

Dishonesty. A seven-item measure created for this study will be used to measure trait dishonesty. Existing dishonesty scales have shown internal consistency in the low .70s (Goldberg, 2005), and do not fully capture the construct of dishonesty as outlined in Medeovic (2012). Of the seven items, three are reverse scored. The item "I would never accept a bribe, even if it were very large" is typical of the reverse-scored items, and the item "I lie to get myself out of trouble" is typical of a positively scored item. The measure showed good internal reliability ($\alpha = .84$). Participants with high scores on this measure will be interpreted as having high levels of trait dishonesty.

Self-control. Trait self-control will be measured by the Self-report Self-control Questionnaire (SRSCQ), a 16-item self-control measure created for use in this study, which had excellent ($\alpha = .92$) reliability. Of the 16 items, 14 are reverse scored. Sample reverse scored item "I'm more concerned with what happens to me in the short run than in the long run," and positively scored item "I refuse things that are bad for me" are typical of the subscale. High scores on this subscale were interpreted as high self-control.

Counterproductive work behavior. The Gruys and Sackett (2003) measure of counterproductive work behavior is the most comprehensive of the measures currently in use. It uses factor analysis to categorize a wide range behaviors into one of 11 categories described below. The original scale asked "How likely would you be to engage in the behavior?" which participants rated using a 7-point Likert scale ranging from 1 (*No matter what the circumstances, I would not engage in the behavior*) to 7 (*In a wide variety of circumstances, I would engage in this behavior*).

One of the complaints about counterproductive work behavior scales in general is that in an effort to be comprehensive, there are items in the scales that are not relevant to

the job the participant holds (Bowling & Gruys, 2010). This can lead to a systematic

underrepresentation of actual levels of counterproductive work behavior, as the

participant will mark the irrelevant item as engaged in with low frequency, lowering the

average reported by the scale. For example, if a scale item asks, "How often in the past

year have you misused your expense account?," a participant without an expense account

would endorse that item as "never" because of a lack of opportunity to engage in that

specific counterproductive behavior, not because that participant is lower on

counterproductive work behavior than another. To address this criticism the scale will be

answered using a 7-point Likert scale to rate behavioral frequency from 0 (Never) to 6

(Daily), and include a "Not Relevant" answer option in addition to the one to seven

Likert options with the following scale instructions:

> *Please read the statements below and indicate how frequently you might have*
>
> *done each item in the past year. If the item cannot occur at your workplace due*
>
> *to the nature of your work, mark that item as **NOT** Relevant. For example, the*
>
> *item "Make personal photocopies at work." would not be relevant if your job does*
>
> *not have a photocopier.*

Theft and related behavior. This CWB category contains 10 items. A typical

item for the Theft and Related Behavior category is, "Take cash or property belonging to

a co-worker." The items in this category have previously shown acceptable ($\alpha = .77$)

reliability (Gruys & Sackett, 2003).

Destruction of property. This CWB category contains four items. A typical item

for the Destruction of Property category is, "Deface, damage, or destroy property

belonging to a co-worker." The items in this category have previously shown acceptable ($\alpha = .66$) reliability (Gruys & Sackett, 2003).

Misuse of information. This CWB category contains five items. A typical item for the Misuse of Information category is, "Destroy or falsify company records or documents." The items in this category have previously shown acceptable ($\alpha = .71$) reliability (Gruys & Sackett, 2003).

Misuse of time and resources. This CWB category contains 13 items. A typical item for the Misuse of Time and Resources category is, "Spend time on the internet for reasons not related to work." The items in this category have previously shown very good ($\alpha = .90$) reliability (Gruys & Sackett, 2003).

Unsafe behavior. This CWB category contains four items. A typical item for the Unsafe Behavior category is, "Endanger coworkers by not following safety procedures." The items in this category have previously shown acceptable ($\alpha = .71$) reliability (Gruys & Sackett, 2003).

Poor attendance. This CWB category contains five items. A typical item for the Poor Attendance category is, "Leave work early without permission." The items in this category have previously shown acceptable ($\alpha = .77$) reliability (Gruys & Sackett, 2003).

Poor quality work. This CWB category contains three items. A typical item for the Poor Quality Work category is, "Intentionally do slow or sloppy work." The items in this category have previously shown good ($\alpha = .86$) reliability (Gruys & Sackett, 2003).

Alcohol use. This CWB category contains three items. A typical item for the Alcohol Use category is, "Come to work under the influence of alcohol." The items in

this category have previously shown acceptable ($\alpha = .59$) reliability (Gruys & Sackett, 2003).

Drug use. This CWB category contains four items. A typical item for the Drug Use category is, "Come to work under the influence of drugs." The items in this category have previously shown acceptable ($\alpha = .71$) reliability (Gruys & Sackett, 2003).

Inappropriate verbal actions. This CWB category contains eight items. A typical item for the Inappropriate Verbal Actions category is, "Yell or shout on the job." The items in this category have previously shown good ($\alpha = .82$) reliability (Gruys & Sackett, 2003).

Inappropriate physical actions. This CWB category contains seven items. A typical item for the Inappropriate Physical Actions category is, "Physically attack (e.g., pushing, shoving, hitting) a coworker." The items in this category have previously shown good ($\alpha = .82$) reliability (Gruys & Sackett, 2003).

Demographic Variables. Demographic variables asking for the age, sex, race, job title, average hours worked per week, and job tenure were included at the beginning of the survey as a screening tool for study selection criteria. Potential respondents that indicated that they had not been employed at least 20 hours a week for the past year were asked to return the HIT so an eligible respondent could complete it.

Procedure

An electronic version of the study survey was created and administered through Qualtrics. Study participants will access the study through a URL dispensed through the Mechanical Turk website. Respondents completed the online questionnaire, and were

then re-directed to another webpage with a passcode that will need to be entered to receive credit for participation.

A study description will be posted on the MTurk website, and all potential respondents that meet the study requirements were allowed to sign up through the MTurk website. In order to maintain high quality data, participants must also have completed at least 50 previous Human Intelligence Tasks (HIT) with a 98% HIT Approval Rating. A HIT is what projects that are posted on MTurk are called. After a participant completes the HIT, their submission is either approved or rejected by the person that posted the HIT. So, a person with 50 previous HITs and a 98% Approval rating is one that has completed at least 50 HITS on MTurk, and had their submitted HIT approved 98% of the time. On completion and approval of the completed survey, MTurk respondents will be paid $1 USD for their participation. To further motivate effortful responding, participants were told that their completed surveys will be analyzed for insufficient effort responding (IER; see Huang et al, 2012 for a discussion of IER) using psychometric synonyms and antonyms and individual reliability algorithm to detect IER. Respondents that complete surveys free of IER will be entered into a drawing for a $50 USD bonus, paid to their MTurk account. Due to the high quality, internally consistent data collected, it seems that the bonus helped motivate participants to complete good quality, effortful surveys.

III.   RESULTS

Summary of Statistical Analyses

Descriptive Statistics. I computed variable means, standard deviations, and internal consistency scores for each study variable (see Table 2). As shown in the table, all of the measures yielded acceptable levels of internal-consistency reliability (Cronbach's alphas > .75).

Intercorrelations of Study Variables. Intercorrelations of all study variables are reported in Table 3. All predictor/criterion correlations were consistent (i.e., in the same hypothesized direction) with the hypothesized regression predictor/criterion relationships. Specifically, Aggression was positively correlated with Property Destruction, Inappropriate Verbal Actions, and Inappropriate Physical Actions. Dishonesty was positively correlated with Theft and Related Behavior, Misuse of Information, and Misuse of Time and Resources. Industriousness was negatively correlated with Unsafe Behavior, Poor Attendance, and Poor Quality Work. Self-Control was negatively correlated with Alcohol Use and Drug Use.

Dominance Analysis. Dominance analysis (see Azen & Budescu, 2003; Budescu, 1993; LeBreton, Hargis, Griepentrog, Oswald, & Ployhart, 2007) was used to compare unique contributions of each personality trait in predicting the CWB categories as outlined in Hypotheses 1 through 4. Dominance Analysis compares the unique and

shared predictive contributions of each variable in the proposed model in predicting the criterion variable of interest. For example, in a four-variable multiple regression model, the unique change in variance accounted for is computed for the full model with four predictors as a well as all sub-model combinations of one, two, and three predictors. These proportions of unique variance accounted for are reported as dominance scores. These scores are then divided by the total model R^2 to compute rescaled dominance scores (*RS*), reported as a percentage.

The results of a dominance analysis indicate whether a variable shows complete dominance, conditional dominance, general dominance, or relative dominance. Complete, general, and conditional dominance are typically used as evidence that the variable of interest is the best predictor of the criterion variable, while relative dominance is mostly reported to show that one predictor is more dominant than another in the overall model, but does not have complete, general, or conditional dominance (see LeBreton et al, 2007; Tondadinel & LeBreton, 2011). If a predictor accounts for the largest proportion of unique variance in all the sub-models and the full model, it shows complete dominance (Budescu, 1993; LeBreton et al., 2007; Nimon & Oswald, 2012). If a predictor accounts for the largest proportion of variance in only one sub-model, it is conditionally dominant. If a predictor accounts for the largest amount of variance averaged across the sub models and the general model, but does not account for the largest proportion of variance in every sub model or the general model, it shows general dominance. Because the predictive power of each variable is directly compared to all other predictors, dominance relative to the other predictors can be established at any sub-model level or at the general level (Azen & Budescu, 2003; LeBreton, et al, 2007). Thus, if a predictor X_1 shows

conditional or general dominance over predictors X_2 and X_3 but not X_4 in predicting

outcome variable Y, then X_1 shows relative dominance over X_2 and X_3 in predicting Y. If

the hypothesized personality trait shows complete, general, or conditional dominance in

predicting the corresponding CWB category, then Hypotheses 1 through 4 are supported

Dominance analysis acts as a useful supplement to regression analysis when

comparing the relative contributions of a variable in predicting an outcome variable of

interest. Prior to the advent of dominance analysis, comparisons of variable importance

were usually done by visual inspection of standardized regression weights, visual

comparison of bivariate correlations, or visual inspection of change in R^2 (see LeBreton

et al., 2007; Tonidandel & LeBreton, 2011). These approaches are insufficient to make

claims of relative importance between variables, as they fail to correctly partition

variance between correlated predictors (standardized regression weights); don't take into

account relationships between variables and only address contribution of a variable by

itself (bivariate correlation), or attributes shared variance to the variable that was entered

first in the regression equation (change in R^2). Dominance analysis addresses these

shortfalls in previous attempts to answer questions of variable importance. It examines

the change in R^2 from adding a predictor to all possible subset regression models,

averages the contribution across all possible regression models, and identifies a variable's

contribution by itself and in combination with the other predictors in the models. In short,

the unique benefit of dominance analysis over regression or comparing correlations is

that, because dominance analysis accounts for both unique and shared variance between

predictors, meaningful direct comparisons between predictors can be made.

Hypotheses tested with Dominance Analysis. In order to test Hypotheses 1

through 4, a series of multiple linear regression analyses were conducted, using each of

the hypothesized personality traits as predictors (i.e., aggression, industriousness,

dishonesty, and self-control) to predict each of the CWB categories (see Table 4) as

criterion variables. Various regression models were then tested using each combination

of predictor and criterion variables (i.e., aggression predicting property destruction,

aggression and industriousness predicting property destruction, etc.) as a precursor to

running a dominance analysis.

Hypothesis 1. Hypothesis 1 predicted that trait aggression would be dominant in

predicting CWBs in the categories of property destruction, inappropriate verbal

behaviors, and inappropriate physical behaviors. In order to test Hypothesis 1, a

dominance analysis was run to test the predictive strength of aggression on the criterion

variables of property destruction, inappropriate verbal actions, and inappropriate physical

actions (see Table 5). When predicting property destruction, aggression ($RS = 44.52\%$)

showed complete dominance over dishonesty, industriousness, and self-control.

Aggression ($RS = 45.30\%$) showed complete dominance over dishonesty,

industriousness, and self-control in predicting inappropriate verbal behaviors.

Additionally, aggression ($RS = 46.73\%$) showed complete dominance over dishonesty,

industriousness, and self-control in predicting inappropriate physical behaviors. The

results of the dominance analysis showed support for Hypothesis 1.

Hypothesis 2. Hypothesis 2 predicted that industriousness would be dominant in

predicting CWBs in the categories of poor attendance, poor quality work, and unsafe

behavior. In order to test Hypothesis 2, a dominance analysis was run to test the

predictive strength of industriousness on the criterion variables of poor attendance, poor quality work, and unsafe behavior (see Table 5). Industriousness showed complete dominance ($RS = 43.06\%$) over dishonesty, aggression, and self-control in predicting poor quality work. In predicting poor attendance, however, industriousness ($RS = 20.25\%$) did not show dominance over dishonesty, aggression, or self-control in predicting poor attendance. Likewise, Industriousness ($RS = 20.77\%$) did not show dominance over dishonesty, aggression, or self-control in predicting unsafe behavior. The results of the dominance analysis thus showed partial support for Hypothesis 2.

Hypothesis 3. Hypothesis 3 predicted that dishonesty would be dominant in predicting CWBs in the categories of theft and related behavior, misuse of information, and the misuse of time and resources. In order to test Hypothesis 3, a dominance analysis was run to test the predictive strength of dishonesty on the criterion variables of theft and related behavior, misuse of information, and misuse of time and resources (see Table 5). When used to predict theft and related behavior, dishonesty ($RS = 9.18\%$) did not show dominance over aggression, industriousness, or self-control. Dishonesty ($RS = 23.15\%$) showed relative dominance over industriousness, but did not show dominance over aggression or self-control in predicting misuse of information. Additionally, dishonesty ($RS = 29.92\%$) showed relative dominance over aggression and industriousness, but it did not show dominance over self-control in predicting misuse of time and resources. Thus, the results of the dominance analysis did not support Hypothesis 3.

Hypothesis 4. Hypothesis 4 predicted that self-control would be dominant in predicting CWBs in the categories of alcohol use and drug use. In order to test Hypothesis 4, a dominance analysis was run to test the predictive strength of self-control

on the criterion variables of alcohol use and drug use (see Table 5). Self-control ($RS =$ 54.85%) showed complete dominance over aggression, dishonesty, and industriousness in predicting alcohol use. Likewise, self-control ($RS = 47.43$%) also showed complete dominance over aggression, dishonesty, and industriousness in predicting drug use. The results of the dominance analysis showed support for Hypothesis 4.

Moderated Regression Analysis. Moderated regression analysis was used to test for the hypothesized moderating effects of trait self-control on the personality trait-CWB category links predicted in Hypothesis 5. Before conducting the regression analysis, I mean-centered the predictor and moderating variables as suggested by Aiken and West (1991). The first step in the analysis was to run a regression on the main and moderator effects in Hypotheses 1 through 4. The second step was to run the interaction effects of both the main and moderating variables. If the addition of the interaction term predicts incremental variance in the criterion variable, then a significant interaction effect is present. Significant interactions were plotted using simple slopes at one standard deviation above and one standard deviation below the mean of the moderator (see also Dawson, 2014; Jaccard & Turrisi, 2003).

Hypotheses tested with Moderated Regression Analysis. Hypothesis 5 included three parts: 5a, which predicted that self-control would moderate the relationships between aggression and property destruction, inappropriate verbal actions, and inappropriate physical actions; 5b, which predicted that self-control would moderate the relationships between industriousness and poor attendance, poor quality work, and unsafe behavior; and 5c, which predicted that self-control would moderate the relationships

between dishonesty and theft and related behavior, misuse of time and resources, and misuse of information.

In order to test Hypothesis 5a, 5b, and 5c, a moderated regression analysis was conducted (see Table 6). The relationship between aggression and the CWB category of inappropriate verbal actions was moderated by self-control as indicated by a significant change in explained variance (ΔR^2 = .02, p < .01) when the aggression/self-control interaction term was added as a second step to the regression model. Figure 1, which plots this interaction, shows that the relationship between aggression and inappropriate verbal actions is significantly stronger when self-control is low than when self-control is high.

The relationship between industriousness and the CWB category of poor quality work was moderated by self-control, as indicated by a significant change in explained variance (ΔR^2 = .043, p < .001) when the industriousness/self-control interaction term was added as a second step to the regression model. The relationship between industriousness and poor quality work is significantly stronger when self-control is low than when self-control is high (see Figure 1). As shown in Table 6, however, no other interaction terms between the study's personality traits and self-control were statistically significant (see Table 6). In sum, the results of the moderated regression analysis showed partial support for Hypotheses 5a and 5b, but did not support 5c.

Confirmatory Factor Analysis. To test model fit, a CFA comparing a one factor, a two factor, and an 11 factor model was conducted. The results of the CFA (see Table 7) indicated that the 11 factor model had significantly better fit than the one or two factor models.

IV.   DISCUSSION

Counterproductive work behaviors impose many hardships on organizations, organizational members, and organizational stakeholders in the form of financial costs (Grenberg, 2002; Vardi & Weiz, 2004) and emotional and physical illness (Aquino & Thau, 2009; Bowling & Beehr, 2006; Tepper, 2007). It is thus not surprising that research on CWBs in the past 20 years has moved from being a peripheral topic of interest to a topic that is well represented in most top organizational research journals (Raver, 2013).

While much research has focused on personality and other variables as predictors of broadly measured CWBs, little research has focused on predicting narrowly measured CWBs. The current study was designed to address this gap in the scientific literature, and the results summarized below show initial evidence of the utility of the "splitter" approach to understanding and predicting CWBs.

Differential prediction of CWBs

The current study predicted that aggression, industriousness, dishonesty, and self-control would be differentially related to the CWB categories identified by Gruys and Sackett (2003). Previous research has not focused on the relationship between personality and specific types of CWBs as fully as between personality and broadly defined CWBs. The results of this study indicate that there are indeed differential relationships between individual differences and CWB categories, and that if researchers match the right personality trait with the right CWB, they are likely to find stronger

37

relationships than are typically reported in the CWB literature (see Ones & Viswesvaren, 1996; Hogan & Roberts, 1996). Of the differential relationships examined in the study, aggression and self-control had the strongest relationships with the largest number of CWBs. I discuss these differential relationships below.

Aggression. Trait aggression has been found to be one of the most consistent personality trait predictors of CWB (Hershcovis et al., 2007). A common element of previous studies, however, was the practice of lumping all CWBs together into just a few or even only one category despite the qualitative differences in various types of CWBs (e.g., arriving late to work is very different from screaming at a coworker). I used a less common approach in this study, however, as I did not treat CWB as a homogeneous construct using the "lumper" approach, and was thereby able to examine which CWB categories aggression best predicted.

As hypothesized, trait aggression was the best predictor of the CWB categories of property destruction, inappropriate verbal actions, and inappropriate physical actions. This finding is consistent with the literature on aggression and its relationships to personally directed CWBs (O'Brien & Allen, 2008) when using the CWB "lumper" categorization method as outlined in the Bennett and Robinson (2000) scale. It is possible that the dominance of aggression in predicting the aggressive CWB categories was driving the relationship between aggression and broadly assessed CWB-Is. In other words, the relationship between aggression and broadly assessed CWB-Is may have been inflated due to the dominance aggression has in predicting the CWB categories of property destruction, inappropriate verbal actions, and inappropriate physical actions. Categories of CWBs that should in theory be relatively modestly related to aggression

(e.g., theft and related behavior, misuse of information) can now be linked to theoretically grounded predictors instead of being lumped into a larger aggregate of behaviors.

Contrary to the hypothesis, aggression was also the best predictor of unsafe behavior, which I had hypothesized would be best predicted by industriousness. This finding is conceptually plausible, however, as aggressive people usually take more risks than non-aggressive people (see Bartlett & Anderson, 2012), and risk-taking can manifest itself as unsafe behavior. For example, an aggressive parcel delivery driver may drive more quickly or more dangerously than an un-aggressive parcel delivery driver. Behaviors such as speeding, tailgating, weaving through traffic, changing lanes without indicating, and ignoring traffic signs are all unsafe behaviors (Fernandez et al., 2007). An aggressive parcel delivery driver may be more likely to engage in these unsafe behaviors than would an unaggressive driver.

Industriousness. Unsafe behavior, poor attendance, and poor quality work were all hypothesized to be best predicted by industriousness. Of the three, industriousness was only found to be the best predictor of poor quality work. Consistent with the hypothesis, industriousness was significantly related to unsafe behavior, poor attendance, and poor quality work. Industriousness did predict both unsafe behavior and poor attendance, but aggression and self-control were more dominant in predicting unsafe behavior and poor attendance, respectively (see Table 5).

As explained above, unsafe behavior was best predicted by aggression. Industriousness was originally hypothesized as the best predictor of unsafe behavior because a component of unsafe behavior is disregard of safety rules and procedures, and

an unwillingness to read safety manuals or operator instructions due to laziness on the part of the employee. The results of the current study, however, showed that the aggressive components of unsafe behavior were more dominant, so aggression best predicted unsafe behavior.

Poor attendance was not best predicted by industriousness; instead, it was best predicted by self-control. This may be because there are many non-work factors that can contribute to poor attendance. A good parallel comes from the turnover literature. An interesting finding from that literature is that turnover intention does not necessarily translate into actual turnover (Griffeth et al., 2000; Trevor 2001). Many variables predict turnover intention, but do not predict actual turnover. This discrepancy in predictive ability between predictors of turnover intention and actual turnover has been attributed to a number of environmental factors such as an inability to find a viable employment alternative or spousal relocation (Trevor 2001). In a similar vein, an industrious person may or may not have poor attendance due to environmental factors such as family to work conflict (see Amistad, Meier, Fasel, Elfering, & Semmer. 2011; Byron, 2005; Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011), unreliable transportation, or illness. Those and other similar factors may directly impact attendance while being unrelated to industriousness. The results of the present study indicate that industriousness is the best predictor of poor quality work, but it did not best predict poor attendance or unsafe behavior, which were best predicted by aggression.

Dishonesty. Dishonesty was not the dominant predictor of any of the hypothesized CWB categories of theft and related behavior, misuse of information, or misuse of time and resources. In each instance, surprisingly, self-control showed

complete dominance over the other predictors, with dishonesty ranking 4th, 3rd, and 2nd respectively in terms of dominance.

The results of the dominance analysis (see Table 5) indicated that dishonesty is related to both misuse of information and misuse of time and resources, but not theft and related behavior. Self-control and aggression each superseded the predictive power of dishonesty with self-control showing complete dominance in all three categories.

Aggression showed relative dominance over dishonesty and industriousness in predicting both theft and related behavior and misuse of information. Both of these behaviors can be targeted directly at other people with an intention of causing harm, which are aggressive by definition when conceptualized this way (see Buss & Perry, 1992; Webster, 2014). Although not hypothesized, the relative dominance of aggression over dishonesty for CWBs that can cause harm to others is consistent with the literature. Evidently, the ability to cause harm to another as a component of aggression is more dominant than the level of dishonesty encased in that same person.

Dishonesty did show relative dominance over aggression and industriousness in predicting misuse of time and resources. While this is not evidence supporting Hypothesis 3 that dishonesty is the best predictor of misuse of time and resources (self-control was the best predictor), it does suggest that dishonesty plays a role in predicting CWBs that do not directly harm another person. Falsifying an expense reimbursement form or time card is not an aggressive act that directly harms another person, and as such aggression is less dominant than dishonesty in predicting that kind of behavior. Thus, dishonesty may still have predictive utility and should be useful in predicting CWBs that

fall in the category of misuse of time and resources, especially since this category is the most prevalent of the CWBs (see Table 1) in the present study.

Self-Control. Of the four hypothesized personality traits, self-control was the best predictor of the most CWB categories. Self-control best predicted alcohol use and drug use, as hypothesized, but it was also the best predictor of theft and related behavior, misuse of information, misuse of time and resources, and poor attendance. This suggests that the inability to control one's impulses is at the heart of many distinct types of CWBs (see Marcus & Schuler, 2004).

In support of Hypothesis 4, self-control showed complete dominance in predicting alcohol use and drug use in a way that negatively impacts the workplace. Consistent with previous research (see Duckworth, 2011; Tangney et al., 2004), the present study found evidence that people who are low in self-control are more likely to abuse alcohol and drugs, both in general, and in the workplace. Organizations that have problems with alcohol and drug use in their workforce may find it useful to include a self-control measure in future selection or intervention efforts.

Setting aside alcohol use and drug use, there are nine additional CWB categories identified in the Gruys and Sackett (2003) model, four of which self-control showed complete dominance in predicting. Self-control was more dominant in the current study than was previously hypothesized, but was not dominant over every type of CWB as has been suggested by other CWB researchers. Sackett and DeVore (2001) suggested that there may be a single underlying construct that serves as a hierarchical base, underlying all types of CWBs. Marcus and Schuler (2004) claim that this single underlying construct

is self-control, and that self-control is the single best predictor of counterproductive behaviors.

The results of the present study provide partial support to the hypothesizing of Sackett and Devore (2001) and Marcus and Schuler (2004), in that self-control was shown to be the dominant predictor of four categorically distinct types of CWB. At the same time, the results of the present study do not support their hypothesizing because self-control was not the dominant predictor of every type of CWB. If self-control were the single best predictor of CWB, then it would have been dominant in predicting every category of CWB. The differential dominance levels shown by self-control in predicting the various CWB categories is further evidence of the dimensionality of CWB, and that lumping all behaviors together into one or two categories is not very effective for predictive purposes.

Moderating Influence of Self-Control

I hypothesized that self-control would moderate the relationships between aggression, dishonesty, and industriousness and their respective linked CWB categories. Specifically, I expected that these personality traits would be more strongly related to CWBs when self-control was low rather than high. The results of the present study partially supported this hypothesis. Self-control acted as a moderator between aggression and inappropriate verbal actions and between industriousness and poor quality work, but did not act as a moderator in the seven other tested interactions.

A person with high levels of self-control would not commit many inappropraite verbal actions, regardless of his or her level of aggression. The impulse to lash out or verbally abuse others, especially for those high in aggression, is suppressed by the

tendency of the person to avoid acts whose long-term costs outweigh their short-term benefits. The impulse to yell, scream, or harass another has the potential for many serious negative consequences at work, such as litigation or disciplinary actions. People high in self-control will rarely engage in such low-reward, high risk activity.

Similarly, a person with high levels of self-control would not produce much poor quality work, regardless of their level of industriousness. The momentary pleasure derived from "taking it easy" is not worth the potential reprimand, loss of pay, or loss of advancement opportunity that can accompany poor quality work.

The aforementioned findings on both the differential relationships that individual differences have with CWBs and the moderating influence of self-control have several implications for both theory and practice. In the section below, I discuss the theoretical and practical implications of the current research.

Theoretical Contribution

In the present study, aggression best predicted four of the 11 CWB categories outlined by Gruys and Sackett (2003), industriousness best predicted one of the 11, dishonesty was not the best predictor of any of the 11 categories, and self-control best predicted six of the 11 categories. Although these results did not perfectly support Hypotheses 1, 2, 3, and 4, they do show evidence of the differential relationships between predictors and categorically distinct CWBs. All CWBs, therefore, are not created equal and should not be lumped into a single all-inclusive category. Counterproductive work behaviors are multidimensional, with unique predictors and covariates, and are best understood and predicted when split into categorical types.

The empirical evidence presented in the current study has a number of important contributions to the CWB literature. First, it provides further evidence for the multi-dimensionality of CWB (see Gruys & Sackett, 2003; Marcus, 2013; see also Spector et al., 2006). Lumping CWBs into a single category and examining common predictors and outcomes may be useful in some regard, but it loses meaning and predictive power when compared with examining CWBs by category.

A second contribution comes from identifying specific stable personality traits that best predict categories of CWBs. Whereas aggression was previously tied to all CWBs, even ones that were not typically aggressive, it has now shown to be the best predictor of aggressive CWBs. This finding is conceptually plausible, and now has empirical support as well.

A third contribution is to the self-control predicting CWB area of research. Some research (Marcus & Schuler, 2004) had indicated that self-control was the best single predictor of general counterproductivity. The current study findings show that self-control is the best predictor for six of 11 CWB categories, but not for the other five categories. This clarification of what self-control best predicts allows for self-control to be properly used in the prediction of the corresponding CWB.

Applied Implications

The empirical findings from the current study that not all CWBs are created equal, and have unique predictors and outcomes have a number of applications to organizational practice. A major implication for organizational practice is that 10 of the 11 CWB categories are best predicted by either aggression or self-control, and thus measures of these two personality traits might be useful for screening job applicants. Hiring those

with high levels of self-control and low levels of aggression may reduce the occurrence most types of CWBs.

Additionally, methods for predicting and reducing the occurrence of CWBs can be tailored to the specific needs of a particular team, organization, or even industry. If an organization is having problems with employees producing poor quality work, for example, that organization can begin selecting new employees that are high in industriousness and self-control, as employees that have high levels of these two traits engage in fewer CWBs categorized as poor quality work. Selecting for employees with high levels of industriousness and self-control may help reduce future levels of poor quality work.

Limitations and Future Research

There are a few limitations in the current study that should be addressed. First, the research design is cross-sectional, making it impossible to test causation. Cross-sectional designs capture snapshots in time and establish that two variables are present together, but they cannot establish temporal position of the phenomenon's occurrence. Future research should focus on using longitudinal study designs to address the issue of temporal position.

Another potential limitation of the current study is the manner in which the data were collected. All data were collected through online self-report questionnaires, which means that the data could be influenced by common method variance(CMV). Some researchers have argued that the problems associated with CMV— that variable relationships may be artificially inflated due to the method type that was used in data collection— may not be as problematic as some researchers suggest (see Spector, 2006).

In the present study, CMV likely did not necessarily result in infalted correlations because I observed several weak relationships (see Table 3).

A third potential concern was that the study was conducted entirely online through MTurk. One concern with using a sample like MTurk is that participants are paid for their participation, and may be unmotivated to provide high-quality data. This is likely not a problem in the current study for two reasons. First, I included a warning to participants that there were "psychometric algorithms" in place to tell me if the participant was providing good data. If the algorithms indicated that the data were good, then the participant would be entered into a random drawing for a $50 study bonus. Participants were only compensated $1 for their participation, so a $50 bonus should have been sufficient motivation for participants to provide good data. Second, the pattern of correlations for the study (see Table 3) generally match those of past research in CWB using more traditional sample. Correlations between the various types of CWBs are similar to those reported in other published data using employed participants (see Gruys & Sackett, 2003). In addition, other researchers have suggested that using an online data collection platform like MTurk may be ideal for collecting CWB data (Bowling & Lyons, 2015). Due to the sensitive nature of CWBs, any means of collecting data that allows for anonymity on the part of the participant helps to minimize incentive to fake in the responses. Furthermore, MTurk and similar data collection platforms free from organizational ties allow for anonymity of participation for the participant. The data collection through MTurk is not associated with the organization that the employee works for, therefore there is no potential for reprisal for reporting CWBs. Future research should

replicate the present study using a sample recruited anonymously from a variety of organizations, and compare those findings with the results of the current study.

Future researchers should be mindful of the differences between the different types of CWBs, and focus on potential differential relationships of other predictors and outcomes of CWBs. One area researchers could focus on, for example, is whether certain job attitudes or stressors would have differential relationships with CWBs. Interactional injustice might have a stronger relationship with property destruction than with misuse of information, for example, because if a person felt like they were being treated unfairly this could lead to feelings of anger, which feelings could then manifest themselves as aggression. Aggression was the dominant predictor for property destruction, but not for misuse of information. Therefore, interactional injustice may have a stronger relationship with property destruction than with misuse of information. Future research should focus on these types of differential relationships with the different CWBs.

Finally, future research should focus on developing and validating selection and intervention techniques that can be tailored to predict specific CWBs with which an organization may be having difficulty. If an organization has difficulty with its employees engaging in inappropriate verbal actions, having a way to hire employees who are less likely to engage in inapprotiate verbal actions would be one strategy to employ to reduce this particular problematic CWB. Establishing the criterion validity of using an aggression measure as a selection technique may be a worthwhile area for future research to focus on.

Summary

The major finding of the present study is that all CWBs are not created equal and should thus not be lumped into a single all-inclusive category. Counterproductive work

behaviors are multidimensional, with each CWB type having unique predictors and

covariates. Self-control and aggression, however, were consistently the strongest

predictors of various CWB categories.

REFERENCES

Allport, G. W. (1961). *Pattern and growth in personality*. Oxford.

Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work–family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal Of Occupational Health Psychology*, *16(2)*, 151-169. doi: 10.1037/a0022170

Ashton, M. C., Lee, K., Perugini, M., Szarota, P., de Vries, R.E., Di Blas, L., Boies, K., & De Raad, B. (2004). A six-factor structure of personality-descriptive adjectives: solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology, 86*, 356–366.

Ashton, M. C., Lee, K., & Son, C. (2000). Honesty as the sixth factor of personality: Correlations with Machiavellianism, primary psychopathy, and social adroitness. *European Journal of Personality, 14*, 359–368.

Azen, R., & Budescu, D. V. (2003). The dominance analysis approach for comparing predictors in multiple regression. *Psychological Methods, 8*, 129-148. doi: 10.1037/1082-989X.8.2.129

Barling, J., Dupre, K. E., & Kelloway, E. K. (2009). Predicting workplace aggression and violence. *Annual Review of Psychology, 60*, 671–692 doi: 10.1146/annurev.psych.60.110707.163629

Baumeister, R. F., & Exline, J. (1999). Virtue, personality, and social relations: Self-

    control as the moral muscle. *Journal of Personality, 67*, 1165–1194.

    doi:10.1111/1467-6494.00086

Baumeister, R. F., Zell, A. L., & Tice, D. M. (2007). How emotions facilitate and impair

    self-regulation. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 408–

    426). New York, NY: Guilford Press

Beehr, T. A., Bowling, N. A., & Bennett, M. M. (2010). Occupational stress and failures

    of social support: When helping hurts. Journal Of Occupational Health

    Psychology, 15(1), 45-59. doi:10.1037/a0018234

Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace

    deviance. *Journal of Applied Psychology, 85*, 349–360. doi: 10.1037//0021-

    9010.85.3.349

Berry, C. M., Ones, D. S., & Sackett, P. R. (2007). Interpersonal deviance,

    organizational deviance, and their common correlates: A review and meta-

    analysis. *Journal of Applied Psychology, 92*, 410-424. doi: 10.1037/0021-

    9010.92.2.410

Bowling, N. A. (2010). The interactive effects of job satisfaction and conscientiousness

    on extra-role behaviors. *Journal of Business and Psychology, 25*, 119–130. doi:

    10.1007/s10869-009-9134-0

Bowling, N. A., & Beehr, T. A. (2006). Workplace harassment from the victim's

    perspective: A theoretical model and metaanalysis. *Journal of Applied*

    Psychology, 91, 998–1012.

Bowling, N. A., Burns, G. N., Stewart, S. M., & Gruys, M. L. (2011). Conscientiousness and agreeableness as moderators of the relationship between neuroticism and counterproductive work behaviors: A constructive replication. *International Journal of Selection and Assessment*, *19*(3), 320-330. doi: 10.1111/j.1468-2389.2011.00561.x

Bowling, N. A., & Eschleman, K. J. (2010). Employee personality as a moderator of the relationships between work stressors and counterproductive work behavior. *Journal of Occupational Health Psychology, 15*(1), 91-103. doi: 10.1037/a0017326

Bowling, N. A., & Gruys, M. L., (2010). Overlooked issues in the conceptualization and measurement of counterproductive work behavior. *Human Resource Management Review, 20*, 54-61. doi: 10.1016/j.hrmr.2009.03.008

Bowling, N. A., & Hammond, G. D. (2008). A meta-analytic examination of the construct validity of the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale. *Journal of Vocational Behavior*, *73*(1), 63-77. doi: 10.1016/j.jvb.2008.01.004

Bowling, N. A., & Lyons, B. D. (2015). Not on my watch: Facilitating peer reporting through employee job attitudes and personality traits. *International Journal of Selection and Assessment, 23(1)*, 80-91. doi:10.1111/ijsa.12097

Budescu, D. V. (1993). Dominance analysis: A new approach to the problem of relative importance of predictors in multiple regression. *Psychological Bulletin, 114*, 542-551. doi: 10.1037/0033-2909.114.3.542

Byron, K. (2005). A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behavior, 67,* 169-198 doi: doi:10.1016/j.jvb.2004.08.009

Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in Human Behavior*, *29*(6), 2156-2160. doi: 10.1016/j.chb.2013.05.009

Cameron, K., Dutton, J., & Quinn, R. E. (Eds.). (2003). *Positive organizational scholarship: Foundations of a new discipline*. Berrett-Koehler Publishers.

Costa, P. T., & McCrae, R. R. (1988). Personality in adulthood: a six-year longitudinal study of self-reports and spouse ratings on the NEO personality inventory. *Journal of Personality and Social Psychology, 54*, 853−863.

Cortina, L. M., Magley, V. J., Williams, J. H., & Langhout, R. D. (2001). Incivility in the workplace: Incidence and impact. *Journal of Occupational Health Psychology, 6*(1), 64-80. doi: 10.1037/1076-8998.6.1.64

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, *24*(4), 349. doi: 10.1037/h0047358

Dawson, J. F. (2014). Moderation in management research: What, why, when, and how. *Journal of Business and Psychology, 29*, 1-19. doi: 10.1007/s10869-013-9308-7

Dillon, B. L. (2012). Workplace violence: Impact, causes, and prevention. *Work, 42*, 15-20. doi: 10.3233/WOR-2012-1322

Duckworth, A. L. (2011). The significance of self-control. Proceedings of the National Academy of Sciences, 108(7), 2639-2640. doi: 10.1073/pnas.1019725108

Ferguson, M., , & Barry, B. (2011). I know what you did: The effects of interpersonal deviance on bystanders. *Journal of Occupational Health Psychology, 16*(1), 80-94. doi:10.1037/a0021708

Fernandes, R., Job, R. S., & Hatfield, J. (2007). A challenge to the assumed generalizability of prediction and countermeasure for risky driving: Different factors predict different risky driving behaviors. Journal Of Safety Research, 38(1), 59-70. doi: 10.1016/j.jsr.2006.09.003

Fine, S., Horowitz, I., Weigler, H., & Basis, L. (2010). Is good character good enough? The effects of situational variables on the relationship between integrity and counterproductive work behaviors. *Human Resource Management Review, 20*(1), 73-84. doi: 10.1016/j.hrmr.2009.03.010

Fischer, D. G., & Fick, C. (1993). Measuring social desirability: Short forms of the Marlowe-Crowne social desirability scale. *Educational and Psychological Measurement*, *53*(2), 417-424. doi: 10.1177/0013164493053002011

Fox, S., Spector, P. E., & Miles, D. (2001). Counterproductive work behavior (cwb) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and emotions. *Journal of Vocational Behavior*, *59*, 291-309. doi: 10.1006/jvbe.2001.1803

Farrell, D., & Stamm, C. L. (1988). Meta-analysis of the correlates of employee absence. *Human Relations, 41*(3), 211-227. doi: 10.1177/001872678804100302

Frazier, T. W., Youngstrom, E. A., Speer, L., Embacher, R., Law, P., Constantino, J & Eng, C. (2012). Validation of proposed DSM-5 criteria for Autism Spectrum

Disorder. *Journal of the American Academy of Child & Adolescent Psychiatry, 51(1)*, 28-40. doi: 10.1016/j.jaac.2011.09.021

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality*, *40*(1), 84-96. doi: 10.1016/j.jrp.2005.08.007

Goncalves, M. K., & Campbell, L. (2014). The Dark Triad and the derogation of mating competitors. *Personality and Individual Differences*, (*67)* 42-46. doi:10.1016/j.paid.2014.02.003

Grasmick, H. G., Tittle, C. R., Bursik, R. J., & Arneklev, B. J. (1993). Testing the core empirical implications of Gottfredson and Hirschi's general theory of crime. *Journal of Research on Crime and Delinquency, 30*, 5–29.

Greenberg, J. (2002). Who stole the money, and when? Individual and situational determinants of employee theft. *Organizational Behavior and Human Decision Processes*, *89*(1), 985-1003. doi: 10.1016/S0749-5978(02)00039-0

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management, 26*(3), 463-488. doi: 10.1177/014920630002600305

Gruys, M. L., & Sackett, P. R. (2003). Investigating the dimensionality of counterproductive work behavior. *International Journal of Selection and Assessment, 11*, 30-42. doi: 10.1111/1468-2389.00224

Hammer, L. B., Kossek, E. E., Anger, W. K., Bodner, T., & Zimmerman, K. L. (2011).

    Clarifying work–family intervention processes: The roles of work–family conflict

    and family-supportive supervisor behaviors. *Journal of Applied Psychology,*

    96(1), 134-150. doi: 10.1037/a0020927

Harrison, P. L., Pope, J. E., Coberley, C. R., & Rula, E. Y. (2012). Evaluation of the

    relationship between individual well-being and future health care utilization and

    cost. *Population Health Management*, *15*(6), 325-330. doi:

    10.1089/pop.2011.0089

Hershcovis, M. S., & Reich, T. C. (2013). Integrating workplace aggression research:

    Relational, contextual, and method considerations. *Journal of Organizational*

    Behavior, *34*, 26-42. doi: 10.1002/job.1886

Hershcovis, M. S., Turner, N., Barling, J., Arnold, K. A., Dupre, K. E., Inness, M.,

    Sivanathan, N. (2007). Predicting workplace aggression: A meta-analysis. *Journal*

    of Applied Psychology, 92, 228–238. doi: 10.1037/0021-9010.92.1.228

Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, *52*(12), 1280-

    1300. doi: 10.1037/0003-066X.52.12.1280

Hirschi, T. and Gottfredson, M.R. (1994). The generality of deviance. In T. Hirschi and

    M.R. Gottfredson (eds) *The Generality of Deviance*. New Brunswick, NJ:

    Transaction Publishers.

Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., & DeShon, R. P. (2012).

    Detecting and deterring insufficient effort respond to surveys. *Journal of Business*

    and Psychology, *27*, 99-114. doi: 10.1007/s10869-011-9231-8

Huang, J.L., Bowling, N.A., Liu, M., & Li, Y. (In Press). Detecting insufficient effort

    responding with an infrequency scale: Evaluating validity and participant

    reactions. Journal of Business and Psychology.

Ilies, R., Hauserman, N., Schwochau, S., & Stibal, J. (2003). Reported incidence rates of

    work‐related sexual harassment in the United States: Using meta-analysis to

    explain reported rate disparities. *Personnel Psychology, 56*(3), 607-631. doi:

    10.1111/j.1744-6570.2003.tb00752.x

Jaccard, J., & Turrisi, R. (2003). *Interaction Effects in Multiple Regression* (2nd ed.).

    Sage University Paper series on Quantitative Applications in the Social Sciences,

    series no. 07-072. Sage, Thousand Oaks, CA.

Kelloway, E. K. (1998). Using MPLUS for structural equation modeling: A researcher's

    guide. Sage.

Koslowsky, M., Sagie, A., Krausz, M., & Singer, A. D. (1997). Correlates of employee

    lateness: Some theoretical considerations. *Journal of Applied Psychology, 82,* 79-

    88. doi: 10.1037/0021-9010.82.1.79

LeBreton, J. M., Hargis, M. B., Griepentrog, B., Oswald, F. L., & Ployhart, R. E. (2007).

    A multidimensional approach for evaluating variables in organizational research

    and practice. *Personnel Psychology*, *60*(2), 475-498. doi: 10.1111/j.1744-

    6570.2007.00080.x

Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace

    deviance: the role of affect and cognitions. *Journal of Applied Psychology*, *87*,

    131-142. doi: 10.1037/0021-9010.87.1.131

Leventhal, B. L. (2012). "Lumpers" and splitters: who knows? Who cares? *Journal of the American Academy of Child & Adolescent Psychiatry, 51*(1), 6-7. doi: 10.1016/j.jaac.2011.10.009

Lian, H., Brown, D., Ferris, D. L., Liang, L., Keeping, L., & Morrison, R. (2012). Abusive supervision and retaliation: A self-control framework. *Academy of Management Journal, 57*(1), 116-139. doi: 10.5465/amj.2011.0977

MacCann, C., Duckworth, A. L., & Roberts, R. D. (2009). Empirical identification of the major facets of conscientiousness. *Learning and Individual Differences, 19*(4), 451-458. doi: 10.1016/j.lindif.2009.03.007

Mandy, W. P., Charman, T., & Skuse, D. H. (2012). Testing the construct validity of proposed criteria for DSM-5 Autism Spectrum Disorder. *Journal of the American Academy of Child & Adolescent Psychiatry, 51(1)*, 41-50. doi: 10.1016/j.jaac.2011.10.013

Marcus, B., & Schuler, H. (2004). Antecedents of counterproductive behavior at work: A general perspective. *Journal of Applied Psychology, 89*, 647-660. doi: 10.1037/0021-9010.89.4.647

Marcus, B., Schuler, H., Quell, P., Humpfner,G. (2002). Measuring counterproductivity: Development and initial validation of a German self-report questionnaire. *International Journal of Selection and Assessment. 10,* 18-35. doi: 10.1111/1468-2389.00191

Marcus, B., Taylor, O. A., Hastings, S. E., Sturm, A., & Weigelt, O. (2013). The structure of counterproductive work behavior: A review, a structural meta-analysis, and a primary study. *Journal of Management, X*, 1-31. doi: 10.1177/0149206313503019

Martinko, M. J., Gundlach, M. J., & Douglas, S. C. (2002). Toward an integrative theory

    of counterproductive workplace behavior: A causal reasoning perspective.

    International Journal of Selection and Assessment, 10, 46-50. Retrieved from:

    http://journals.ohiolink.edu/ejc/pdf.cgi/Martinko_Mark_J.pdf?issn=0965075x&iss

    ue=v10i1-2&article=36_taitocwbacrp

Mayer, J. D. (2007). *Personality: A systems approach*. Pearson Education.

Mayr, E. (1982). *The growth of biological thought*. Cambridge, MA: Belknap Press.

Meade, A.W., & Craig, S. B. (2012). Identifying careless responses in survey data.

    Psychological Methods, 17, 437-455. doi: 10.1037/a0028085

Međedović, J. (2012). Topography of dishonesty: Mapping the opposite pole of honesty-

    humility personality domain. *Primenjena Psihologija, 5*(2), 115-135. Retreived

    from:

    http://primenjena.psihologija.edu.rs/index.php?je=en&godina=2012&broj=2&str

    =115-135.

Meier, L. L., & Spector, P. E. (2013). Reciprocal effects of work stressors and

    counterproductive work behavior: A five-wave longitudinal study. *Journal of*

    Applied Psychology, 98(3), 529-539. doi: 10.1037/a0031732

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., ...

    & Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth,

    and public safety. *Proceedings of the National Academy of Sciences, 108*(7),

    2693-2698. doi: 10.1073/pnas.1010076108

Muraven, M., & Baumeister, R. F. (2000). Self-regulation and depletion of limited

    resources: Does self-control resemble a muscle? *Psychological Bulletin, 126*,

    247–259. doi:10.1037/0033-2909.126.2.247

Muraven, M., Tice, D. M., & Baumeister, R. F. (1998). Self-control as limited resource:

    Regulatory depletion patterns. *Journal of Personality and Social Psychology, 74*,

    774–789. doi:10.1037/0022-3514.74.3.774

Ones, D.S., Viswesvaran, C. and Schmidt, F.L. (1993) Comprehensive meta-analysis of

    integrity test validities: Findings and implications for personnel selection and

    theories of job performance. *Journal of Applied Psychology, 78*, 679-703. doi:

    10.1037/0021-9010.78.4.679

Parks, K. M., & Steelman, L. A. (2008). Organizational wellness programs: a meta-

    analysis. Journal of Occupational Health Psychology, *13(1)*, 58-68. doi:

    10.1037/1076-8998.13.1.58

Raver, J., L. (2013). Counterproductive work behavior and conflict: Merging

    complementary domains. *Negotiation and Conflict Management Research, 6*(3) p

    151-159. doi: 10.1111/ncmr.12013

Rothbaum, F., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the

    self: A two-process model of perceived control. Journal of Personality and Social

    Psychology, 42, 5–37. doi: 10.1037/0022-3514.42.1.5

Rychlak, J. F. (1973). *Introduction to personality and psychotherapy: A theory-

    construction approach*. Houghton Mifflin.

Sackett, P. S., & DeVore, C. J. (2001). Counterproductive behavior at work. In N.

    Anderson, D. S. Ones, H. K., Sinangil, & C. Viswesvaran (Eds.), *Handbook of*

Industrial and Organizational Psychology, Vol. 1, 2001 (pp. 145-164). London, UK: Sage.

Salgado, J. F. (2002). The Big Five personality dimensions and counterproductive behaviors. *International Journal of Selection and Assessment*, *10*, 117-125. doi: 10.1111/1468-2389.00198

Sears, L. E., Shi, Y., Coberley, C. R., & Pope, J. E. (2013). Overall well-being as a predictor of health care, productivity, and retention outcomes in a large employer. *Population Health Management, 16*(6), 397-405. doi: 10.1089/pop.2012.0114

Shorey, R. C., Brasfield, H., Febres, J., & Stuart, G. L. (2011). The association between impulsivity, trait anger, and the perpetration of intimate partner and general violence among women arrested for domestic violence. Journal Of Interpersonal Violence, 26(13), 2681-2697. doi:10.1177/0886260510388289

Skogstad, A., Torsheim, T., Einarsen, S., Hauge, L. J. (2011) Testing the Work Environment Hypothesis of Bullying on a Group Level of Analysis: Psychosocial Factors as Precursors of Observed Workplace Bullying. *Applied Psychology*, 60(3), 475–495. doi: 10.1111/j.1464-0597.2011.00444.x

Spector, P. E. (2006). Method variance in organizational research: Truth or urban legend?. *Organizational Research Methods, 9,* 221-232. doi: 10.1177/1094428105284955

Spector, P. E., Fox, S., Penney, L. M., Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviors created equal?, *Journal of Vocational Behavior, 68*, 446−460. doi: 10.1016/j.jvb.2005.10.005

Spector, P. E., & Jex, S. M. (1998). Development of Four Self-Report Measures of Job

    Stressors and Strain: Interpersonal Conflict at Work Scale, Organizational

    Constraints Scale, Quantitative Workload Inventory, and Physical Symptoms

    Inventory. *Journal of Occupational Health Psychology*, *3*, 356-367. doi:

    10.1037/1076-8998.3.4.356

Stein, J. A., Newcomb, M. D., & Bentler, P. M. (1987). Personality and drug use:

    Reciprocal effects across four years. *Personality and Individual Differences*, *8*(3),

    419-430. doi: 10.1016/0191-8869(87)90043-2

Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self‑control predicts

    good adjustment, less pathology, better grades, and interpersonal success. *Journal*

    of Personality, 72(2), 271-324. doi: 10.1111/j.0022-3506.2004.00263.x

Terracciano, A., Costa, P. T., & McCrae, R. R. (2006). Personality plasticity after age 30.

    Personality and Social Psychology Bulletin, 32(8), 999−1009.

Trevor, C. O. (2001). Interactions among actual ease-of-movement determinants and job

    satisfaction in the prediction of voluntary turnover. *Academy of Management*

    Journal, 44(4), 621-638.

Ɣardi, Y., & Weitz, E. (2004). *Misbehavior in Organizations : Theory, Research, and*

    Management. Lawrence Erlbaum Associates, Inc.

Witt, L. A., Burke, L. A., Barrick, M. A., & Mount, M. K. (2002). The interactive effects

    of conscientiousness and agreeableness on job performance. *Journal of Applied*

    Psychology, *87*(1), 164-169. doi: 10.1037/0021-9010.87.1.164

Webster, G. D., DeWall, C. N., Pond, R. S., Deckman, T., Jonason, P. K., Le, B. M., ... &

    Bator, R. J. (2014). The brief aggression questionnaire: Psychometric and

behavioral evidence for an efficient measure of trait aggression. Aggressive

behavior, 40(2), 120-139. doi: 10.1002/ab.21507

Wee, S. (2014). Compromises in career-related decisions: Examining the role of

compromise severity. *Journal Of Counseling Psychology*, *61*(4), 593-604.

doi:10.1037/cou0000037

Weinberg, R. A. (1989). Intelligence and IQ: Landmark issues and great debates.

American Psychologist, 44(2), 98. doi: 10.1037/0003-066X.44.2.98

Weller, J. A., & Tikir, A. (2010). Predicting domain-specific risk taking with the

HEXACO personality structure. *Journal of Behavioral Decision Making, 24*, 180-

201.

Wells, J. T. (1999). A fistful of dollars. *Security Management, 43*(8), 70–75.

Wheelis, A. (1973). *How people change*. Harper & Row.

Williams, K. M., Paulhus, D. L., & Hare, R. D. (2007). Capturing the four-factor

structure of psychopathy in college students via self-report. *Journal of Personality

Assessment, 88*, 205–19.

Table 1

Sample Items from CWB Categories and Matched Trait (from Gruys & Sackett, 2003*)*

Item	CWB Category	Trait
Deface, damage, or destroy property, equipment, or product belonging to the company.	Destruction of Property	Aggression
Physically attack (e.g., pushing, shoving, hitting) a customer	Inappropriate Physical Actions	Aggression
Yell or shout unnecessarily on the job.	Inappropriate Verbal Actions	Aggression
Take cash or property belonging to the company.	Theft etc.	Dishonesty
Lie to employer or supervisor to cover up a mistake.	Misuse of Information	Dishonesty
Alter time card to get paid for more hours than you worked.	Misuse of Time	Dishonesty
Be absent from work without a legitimate excuse	Poor Attendance	Industriousness
Intentionally do slow or sloppy work.	Poor Quality Work	Industriousness
Fail to read the manual outlining safety procedures	Unsafe Behavior	Industriousness
Engage in alcohol consumption on the job.	Alcohol Use	Self-Control
Come to work under the influence of drugs.	Drug Use	Self-Control

Note. All items and CWB categories come from the Gruys and Sackett 11-factor CWB measure (Gruys & Sackett, 2003). Trait = personality trait.

Table 2

Descriptive Statistics for All Study Variables.

Study Variable	*M*	*SD*	*α*
Age	34.26	9.89	-
Aggression	3.19	1.03	.85
Dishonesty	2.89	1.25	.84
Industriousness	5.44	0.98	.90
Self-Control	4.83	1.22	.92
Property Destruction	1.10	0.50	.86
Inappropriate Verbal Actions	1.32	0.59	.86
Inappropriate Physical Actions	1.08	0.46	.98
Theft and Related Behavior	1.24	0.54	.93
Misuse of Information	1.24	0.49	.78
Misuse of Time and Resources	2.14	0.91	.86
Unsafe Behavior	1.28	0.58	.78
Poor Attendance	1.49	0.68	.80
Poor Quality Work	1.67	0.79	.84
Alcohol Use	1.20	0.59	.84
Drug Use	1.11	0.53	.92

Note. N = 404. Variable names of CWBs taken from Gruys and Sackett (2003).

Table 3

Intercorrelations of all study variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Aggression	-													
2. Dishonesty	.55**													
3. Industriousness	-.33**	-.42**												
4. Self-Control	-.52**	-.58**	.45**											
5. Property Destruction	.17**	.11†	-.10†	-.16**										
6. Inappropriate Verbal Actions	.35**	.27**	-.14**	-.32**	.78**									
7. Inappropriate Physical Actions	.14**	.12*	-.09	-.13**	.93**	.76**								
8. Theft and Related Behavior	.22**	.14**	-.14**	-.22**	.85**	.72**	.81**							
9. Misuse of Information	.30**	.29**	-.25**	-.31**	.76**	.75**	.73**	.76**						
10. Misuse of Time and Resources	.28**	.40**	-.30**	-.45**	.29**	.41**	.27**	.43**	.47**					
11. Unsafe Behavior	.29**	.28**	-.24**	-.28**	.59**	.58**	.60**	.59**	.66**	.38**				
12. Poor Attendance	.30**	.31**	-.28**	-.36**	.58**	.59**	.55**	.65**	.69**	.62**	.57**			
13. Poor Quality Work	.29**	.28**	-.35**	-.30**	.57**	.58**	.55**	.48**	.63**	.42**	.52**	.57**		
14. Alcohol Use	.27**	.26**	-.13**	-.36**	.75**	.73**	.77**	.63**	.66**	.32**	.50**	.51**	.50**	
15. Drug Use	.20**	.16**	-.12*	-.23**	.85**	.77**	.86**	.73**	.71**	.28**	.53**	.55**	.55**	.80**

Note. Variable names for 5-15 from Gruys and Sackett (2003).
* p<.05; **p<.01

66

Table 4

Summary of Regression Analysis Results

Criterion	Predictor	β^*	t	p	Total R^2
Property Destruction	Aggression	**.123**	1.970	.049	
	Dishonesty	-.017	-.263	.793	
	Industriousness	-.033	-.582	.561	
	Self-Control	-.092	-1.388	.166	
	Model				.038
Inappropriate Verbal Actions	Aggression	**.246**	4.215	.000	
	Dishonesty	.038	.605	.546	
	Industriousness	.040	.745	.457	
	Self-Control	**-.196**	-3.184	.002	
	Model				.156
Inappropriate Physical Actions	Aggression	.091	1.455	.147	
	Dishonesty	.019	.278	.781	
	Industriousness	-.026	-.455	.649	
	Self-Control	-.068	-1.026	.306	
	Model				.028
Poor Attendance	Aggression	.112	1.940	.053	
	Dishonesty	.084	1.372	.171	
	Industriousness	**-.123**	-2.337	.020	
	Self-Control	**-.206**	-3.389	.001	
	Model				.172
Poor Quality Work	Aggression	**.132**	2.296	.022	
	Dishonesty	.046	.750	.454	
	Industriousness	**-.246**	-4.679	.000	
	Self-Control	-.096	-1.585	.114	
	Model				.168
Unsafe Behavior	Aggression	**.165**	2.680	.008	
	Dishonesty	.082	1.253	.211	
	Industriousness	**-.116**	-2.068	.039	
	Self-Control	-.096	-1.498	.135	
	Model				.128

Table 4 (cont.)

Criterion	Predictor	$\beta*$	t	p	Total R^2
Theft and Related Behavior	Aggression	**.153**	2.503	.013	
	Dishonesty	-.058	-.891	.373	
	Industriousness	-.044	-.794	.428	
	Self-Control	**-.163**	-2.521	.012	
	Model				.069
Misuse of Information	Aggression	**.142**	2.408	.017	
	Dishonesty	.090	1.428	.154	
	Industriousness	-.100	-1.852	.065	
	Self-Control	**-.144**	-2.306	.022	
	Model				.140
Misuse of Time and Resources	Aggression	-.009	-.172	.864	
	Dishonesty	**.196**	3.352	.001	
	Industriousness	-.091	-1.812	.071	
	Self-Control	**-.306**	-5.274	.000	
	Model				.244
Alcohol Use	Aggression	.109	1.870	.062	
	Dishonesty	.066	1.066	.287	
	Industriousness	.058	1.055	.283	
	Self-Control	**-.294**	-4.754	.000	
	Model				.146
Drug Use	Aggression	.118	1.909	.057	
	Dishonesty	-.011	-.169	.866	
	Industriousness	-.015	-.272	.786	
	Self-Control	**-.173**	-2.646	.008	
	Model				.065

Note. $N = 404$. Bolded standardized beta weights are significant at the p < .05 level. Model = ANOVA Summary Model; Dependent variable names from Gruys & Sackett, (2003).

Table 5

Summary of Dominance Analysis Results

Dependent Variable	K	Self-Control	Aggression	Dishonesty	Industriousness
Property	0	.026	.030	.014	.012
Destruction	1	.012	.016	.002	.003
	2	.006	.011	.000	.001
	3	.005	.01	.001	.001
	GD	.012	.017	.004	.004
	RS	32.68%	44.52%	11.62%	11.18%
Inappropriate	0	.108	.126	.073	.022
Verbal	1	.052	.070	.023	.001
Actions	2	.030	.048	.006	.000
	3	.022	.038	.001	.001
	GD	.053	.070	.025	.006
	RS	34.19%	45.30%	16.56%	3.95%
Inappropriate	0	.019	.021	.012	.009
Physical	1	.009	.011	.004	.003
Actions	2	.001	.006	.000	.000
	3	.003	.013	.001	.001
	GD	.008	.013	.003	.002
	RS	28.87%	46.73%	13.99%	10.42%
Poor	0	.135	.094	.101	.083
Attendance	1	.060	.031	.031	.029
	2	.035	.013	.010	.016
	3	.024	.008	.004	.011
	GD	.063	.036	.036	.034
	RS	37.01%	21.31%	21.41%	20.25%
Poor	0	.092	.085	.079	.125
Quality	1	.028	.027	.019	.066
Work	2	.012	.015	.005	.052
	3	.006	.011	.002	.046
	GD	.034	.034	.026	.072
	RS	20.63%	20.63%	15.67%	43.06%
Unsafe	0	.080	.090	.078	.062
Behavior	1	.026	.038	.024	.021
	2	.011	.023	.009	.013
	3	.005	.017	.003	.010
	GD	.030	.042	.028	.026
	RS	23.89%	32.88%	22.46%	20.77%

Table 5 (cont.)

Dependent Variable	K	Self-Control	Aggression	Dishonesty	Industriousness
Theft and Related Behavior	0	.052	.049	.020	.021
	1	.027	.025	.002	.005
	2	.019	.018	.000	.002
	3	.015	.015	.002	.001
	GD	.028	.026	.006	.007
	RS	41.06%	38.89%	9.18%	10.87%
Misuse of Information	0	.100	.091	.087	.064
	1	.038	.035	.028	.019
	2	.019	.019	.010	.011
	3	.012	.013	.004	.007
	GD	.042	.039	.032	.025
	RS	30.42%	28.27%	23.15%	18.15%
Misuse of Time and Resources	0	.207	.084	.165	.095
	1	.108	.016	.070	.029
	2	.070	.001	.035	.012
	3	.053	.000	.021	.006
	GD	.109	.025	.073	.035
	RS	45.01%	10.45%	29.92%	14.62%
Alcohol Use	0	.130	.076	.070	.019
	1	.081	.032	.026	.002
	2	.059	.014	.008	.001
	3	.050	.008	.003	.003
	GD	.080	.032	.027	.006
	RS	54.85%	22.31%	18.55%	4.28%
Drug Use	0	.055	.043	.026	.017
	1	.030	.020	.005	.003
	2	.021	.012	.000	.000
	3	.017	.009	.000	.000
	GD	.031	.021	.008	.005
	RS	47.43%	32.30%	12.30%	7.94%

Note. $N = 404$. GD = General dominance; RS = rescaled general dominance; Dependent variable names from Gruys & Sackett, (2003).

Table 6

Summary of Moderated Regression Analysis Results.

Criterion	Predictor		$\beta*$	T	p	ΔR^2	Total R^2
Property Destruction	1.	Aggression	**.118**	2.035	.043		
		Self-Control	-.087	-1.489	.166	.037	.037
	2.	Self-Control x Aggression	-.072	-1.427	.154	.005	.042
Inappropriate Verbal Actions	1.	Aggression	**.246**	4.586	.000		
		Self-Control	**-.174**	-3.232	.001	.154	.154
	2.	Self-Control x Aggression	**-.152**	-3.289	.001	.023	.177
Inappropriate Physical Actions	1.	Aggression	.099	1.698	.090		
		Self-Control	-.081	-1.367	.173	.027	.027
	2.	Self-Control x Aggression	-.035	-.695	.488	.001	.028
Poor Attendance	1.	Industriousness	**-.143**	1.698	.009		
		Self-Control	**-.301**	-1.367	.000	.154	.154
	2.	Self-Control x Industriousness	.030	-.695	.539	.001	.155
Poor Quality Work	1.	Industriousness	**-.192**	-3.614	.000		
		Self-Control	**-.201**	-3.976	.000	.151	.151
	2.	Self-Control x Industriousness	**.221**	4.639	.000	.043	.194
Unsafe Behavior	1.	Industriousness	**-.135**	-2.303	.022		
		Self-Control	**-.218**	-3.933	.000	.098	.098
	2.	Self-Control x Industriousness	.044	.841	.401	.002	.100
Theft and Related Behavior	1.	Dishonesty	.010	.174	.862		
		Self-Control	**-.228**	-3.763	.000	.052	.052
	2.	Self-Control x Dishonesty	.033	.665	.507	.001	.053
Misuse of Information	1.	Dishonesty	**.168**	2.877	.004		
		Self-Control	**-.212**	-3.600	.000	.118	.118
	2.	Self-Control x Dishonesty	-.035	-.737	.461	.001	.120
Misuse of Time and Resources	1.	Dishonesty	**.215**	3.994	.000		
		Self-Control	**-.333**	-6.121	.000	.238	.238
	2.	Self-Control x Dishonesty	.009	.204	.838	.000	.238

Note. $N = 404$. Bolded standardized beta weights are significant at the $p < .05$ level. Dependent variable names from Gruys & Sackett, (2003).

*1* = the first step in a step-wise regression; *2* = the second step in a step-wise regression.

Table 7

Chi-square Difference Test Results.

Statistic	1 Factor vs. 11 Factor	2 Factor vs. 11 Factor
Baseline model Chi-square	8294.35	8294.35
Baseline model *df*	2024	2024
Nested model Chi-square	10777.23	10402.10
Nested model *df*	2079	2078
Chi-square difference	2482.88	2107.75
df difference	55	54
p value	0.00	0.00

Note. $N = 404$. Calculations performed using MPlus version 6.0. Baseline model: model with more defined factors.
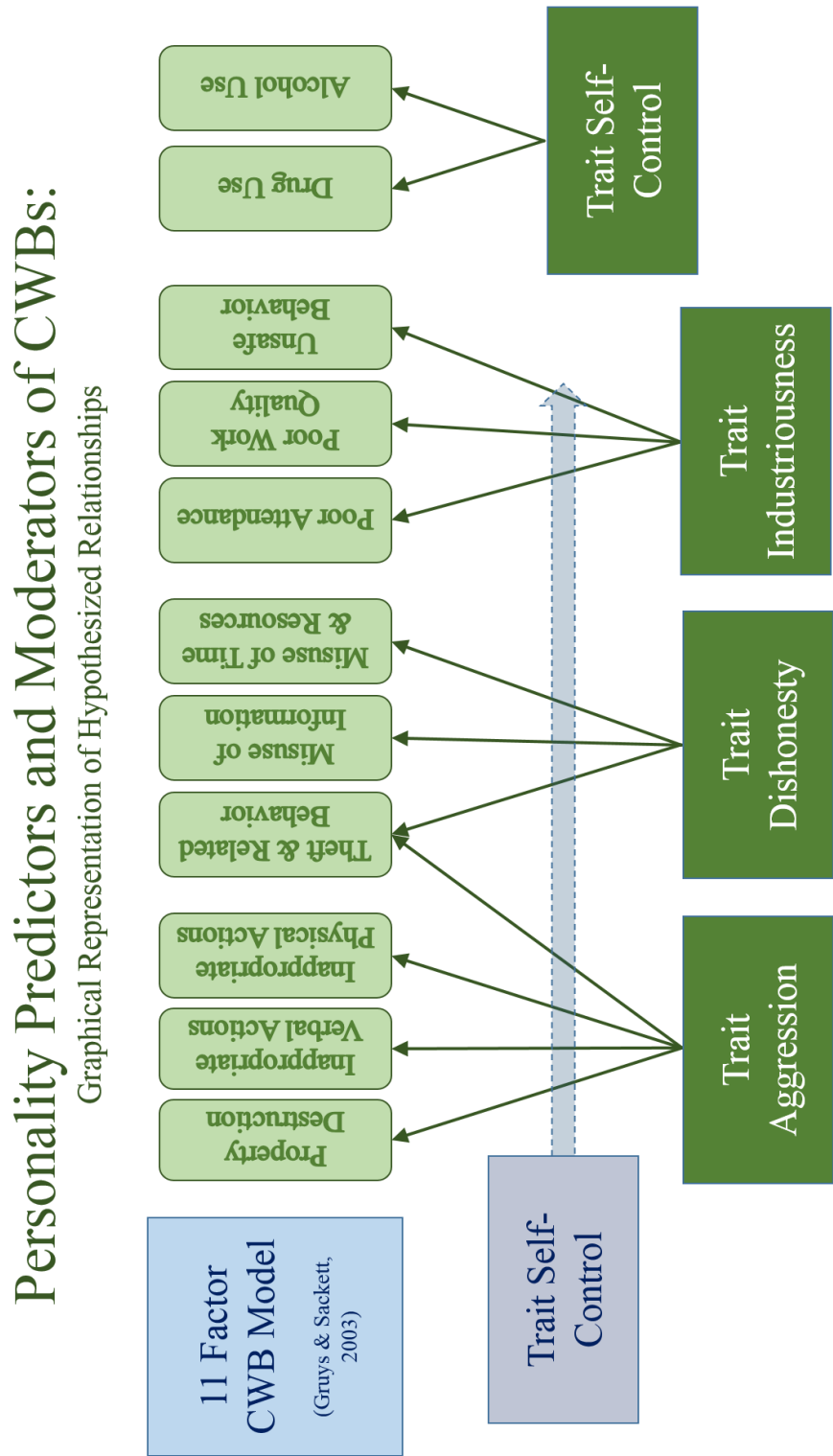
Figure 1

Graphical Representation of Significant Moderation Effects.
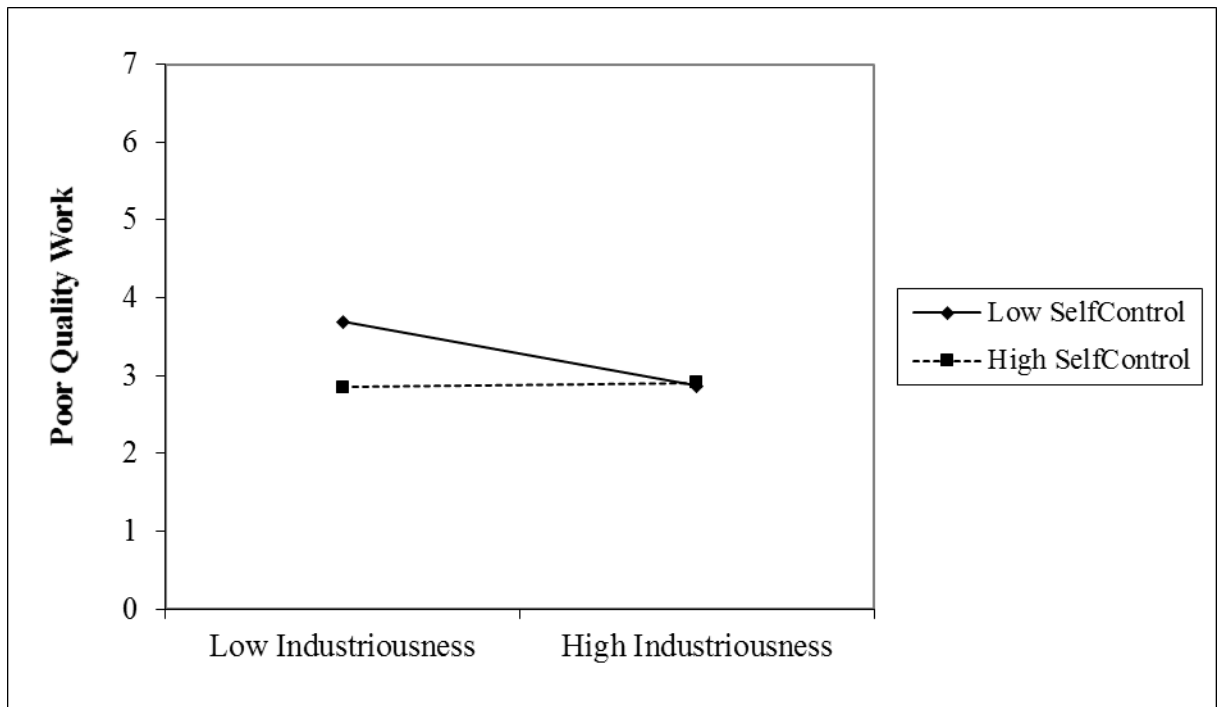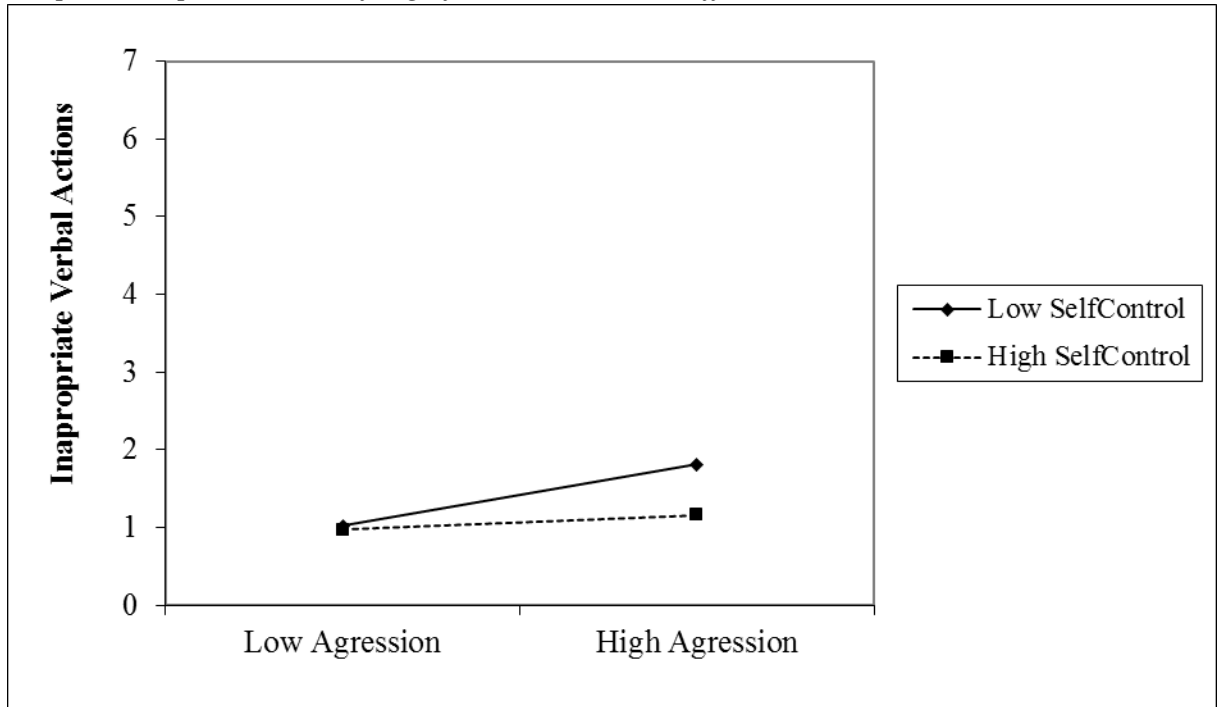
Note. Dependent variable names on the Y axis from Gruys & Sackett (2003). Both moderation effects were statistically significant at the *p* < .001 level.
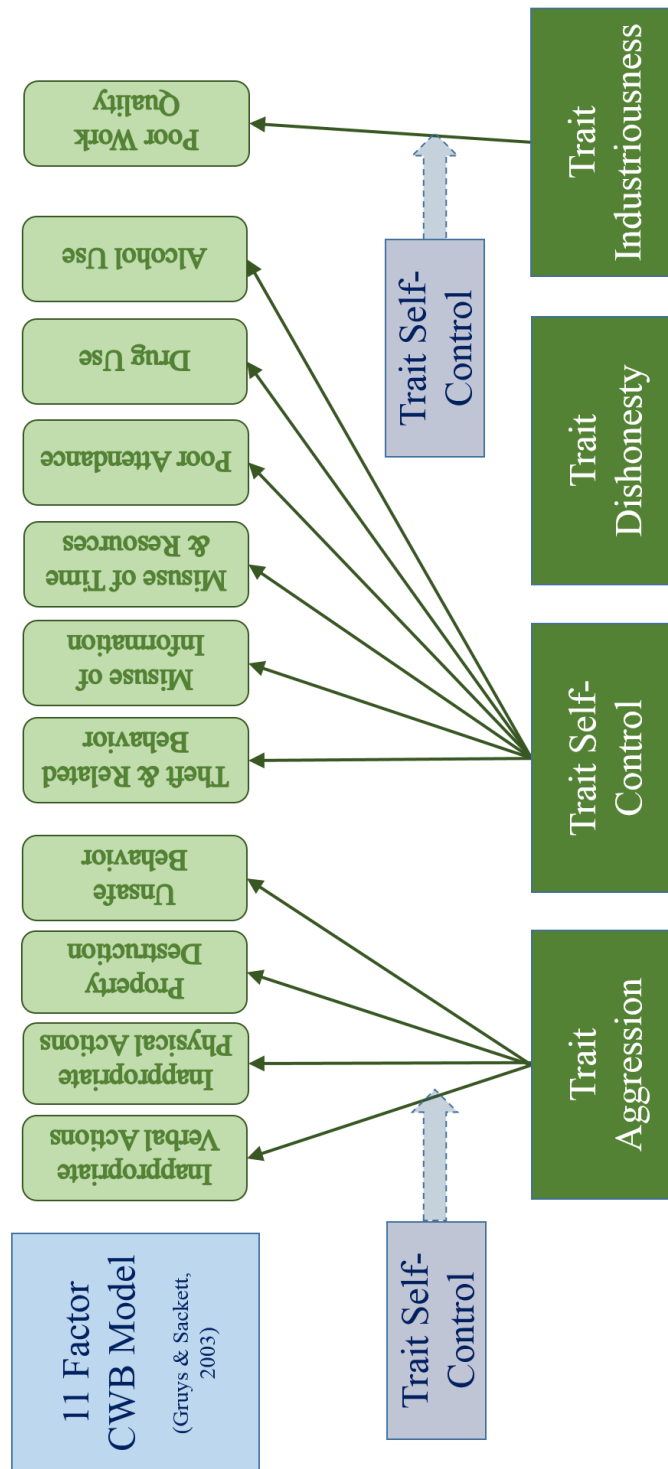
Figure 2

Personality Predictors and Moderators of CWBs:
Graphical Representation of Hypothesized Relationships

Note. Solid lines indicate direct effects, broken lines indicate moderation effects.

Figure 3

Personality Predictors and Moderators of CWBs:

Graphical Representation of Actual Relationships

Note. Solid lines indicate direct effects, broken lines indicate moderation effects.

Appendix I

Item Total Correlations (ITC) of Industriousness Items

Item	ITC
I accomplish a lot in a typical day.	0.49
I am always prepared.	0.54
I do just enough to get by.	0.17
I do more than what's expected of me.	0.63
I do too little on most days.	0.55
I make an effort.	0.60
I push myself very hard to succeed.	0.61
I put little time and effort into my daily responsibilities..	0.34
I work hard to complete my personal chores	0.65
I work hard at everything I do..	0.66

Note. ITC = item total correlations.

Appendix II

Item Total Correlations (ITC) of Dishonesty Items

Item	ITC
If I knew that I would never get caught, I would be willing to steal a million dollars.	0.61
I would never accept a bribe, even if it were very large.	0.74
I'd be tempted to use counterfeit money, if I were sure I could get away with it.	0.64
I don't think of myself as tricky or sly.	0.46
I get a "kick" out of conning someone.	0.56
I lie to get myself out of trouble.	0.53
I can be trusted to keep my promises.	0.47

Note. ITC = item total correlations.

Appendix III

SME Ratings, Item Total Correlations, and ADm of SRSCQ Items

Item	SME	ITC	ADm
I often do whatever brings me pleasure here and now, even at the cost of some distant goal.	6.86	0.64	0.24
Sometimes I can't stop myself from doing something, even if I know it is wrong.	6.29	0.63	0.61
I'm more concerned with what happens to me in the short run than in the long run.	6.29	0.67	0.82
I do certain things that are bad for me, if they are fun.	6.14	0.35	0.73
I refuse things that are bad for me.	6.14	0.55	0.49
I am good at resisting temptation.	6.14	0.40	0.73
When I was a teenager, when the weather was good, I would take off and skip school or work.	5.86	0.44	0.73
I often act on the spur of the moment without stopping to think.	5.86	0.75	0.82
I sometimes drink or use drugs to excess.	5.57	0.38	0.78
I often act without thinking through all the alternatives.	5.57	0.77	0.90
Pleasure and fun sometimes keep me from getting work done.	5.57	0.72	0.49
I have driven a car or motorcycle after drinking alcohol.	5.43	0.78	0.78
I have been late for school or at work because I stayed out too late the night before.	5.43	0.77	0.94
I spend too much money.	5.29	0.65	0.90
In the mood, I have drunk more than I could handle.	5.14	0.49	0.49
I have drunk so much that I had a black out the next day.	5.14	0.65	0.78

Note. SME = the average rating of 7 SMEs on a 7-point Likert scale, anchors of *1 (Not very well)* to 7 *(Very well)*. ADm = Absolute deviance of means, for a 7-point Likert Scale the cutoff for acceptable inter-rater agreement is 1.17 (Cohen, 2009). ITC = item total correlations.