

Fall 11-11-2015

# Behavioral Characteristics of White-Collar Crime and the Pre-Employment Hiring Process

Connie O'Brien

*Kutztown University of Pennsylvania*

Follow this and additional works at: [http://scholarworks.gsu.edu/bus\\_admin\\_diss](http://scholarworks.gsu.edu/bus_admin_diss)

---

## Recommended Citation

O'Brien, Connie, "Behavioral Characteristics of White-Collar Crime and the Pre-Employment Hiring Process." Dissertation, Georgia State University, 2015.

[http://scholarworks.gsu.edu/bus\\_admin\\_diss/58](http://scholarworks.gsu.edu/bus_admin_diss/58)

This Dissertation is brought to you for free and open access by the Programs in Business Administration at ScholarWorks @ Georgia State University. It has been accepted for inclusion in Business Administration Dissertations by an authorized administrator of ScholarWorks @ Georgia State University. For more information, please contact [scholarworks@gsu.edu](mailto:scholarworks@gsu.edu).

## **PERMISSION TO BORROW**

In presenting this dissertation as a partial fulfillment of the requirements for an advanced degree from Georgia State University, I agree that the Library of the University shall make it available for inspection and circulation in accordance with its regulations governing materials of this type. I agree that permission to quote from, copy from, or publish this dissertation may be granted by the author or, in her absence, the professor under whose direction it was written or, in his absence, by the Dean of the Robinson College of Business. Such quoting, copying, or publishing must be solely for scholarly purposes and must not involve potential financial gain. It is understood that any copying from or publication of this dissertation that involves potential gain will not be allowed without written permission of the author.

*Connie O'Brien*

## **NOTICE TO BORROWERS**

All dissertations deposited in the Georgia State University Library must be used only in accordance with the stipulations prescribed by the author in the preceding statement.

The author of this dissertation is:

Connie O'Brien  
Po Box 3323  
Allentown, Pa

The director of this dissertation is:

Karen D. Loch

J. Mack Robinson College of Business  
Georgia State University  
P.O. Box 4015  
Atlanta, GA 30302-4015

Behavioral Characteristics of White-Collar Crime and the Pre-Employment Hiring Process

By

Connie O'Brien

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

Executive Doctorate in Business

In the Robinson College of Business

Of

Georgia State University

GEORGIA STATE UNIVERSITY

ROBINSON COLLEGE OF BUSINESS

2015

Copyright by  
Connie L. O'Brien  
2015

## ACCEPTANCE

This dissertation was prepared under the direction of the Connie O'Brien Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Executive Doctorate in Business in the J. Mack Robinson College of Business of Georgia State University.

Richard A Phillips, Dean

## DISSERTATION COMMITTEE

Dr. Karen D. Loch (Chair)

Dr. Pam Scholder Ellen

Dr. Richard G. Brody

Frank Perri, JD

## ACKNOWLEDGMENTS

As this marathon journey comes to a close, I am reminded of how blessed I am to have so many wonderful people to share this accomplishment with, to merely say thank you does not seem satisfactory.

To my children Breanna, Brennin, Brittany and Bridgit, thank for being the inspiration and encouragement you have always been. For all the ways you have helped me and made this possible, thank you. I love and adore each of you. I could not have done this without each of you. To my family and friends, especially, my Mom, Bob, Tim, Bill, Lisa, Jimmy, Rebekah, Anastasia and Patrick, I am so grateful for each of you and all the wonderful things you have done and continue to do. You have made this journey, with all its challenges, possible and fun. Thank you! I am so glad all of you are part of my family. I love you.

Finally, to Karen, my dissertation chair, thank you for all the hours spent reading, meeting, revising, and the conversations. Without you, this would never have been accomplished. Your devotion to this project is greatly appreciated. Thank you for all your support.

## TABLE OF CONTENTS

ACKNOWLEDGMENTS .....	VI
LIST OF TABLES .....	X
LIST OF FIGURES .....	XI
LIST OF ABBREVIATIONS .....	XII
DEFINITION OF SPECIFIC TERMS.....	XIII
ORGANIZATION OF THE STUDY.....	XVI
<b>I CHAPTER I: INTRODUCTION.....</b>	<b>1</b>
<b>I.1 Research Goal .....</b>	<b>3</b>
<b>II CHAPTER II: LITERATURE REVIEW .....</b>	<b>4</b>
<b>II.1 Personality .....</b>	<b>5</b>
<i>II.1.1 Five Factor Model .....</i>	<i>7</i>
<i>II.1.2 Extraversion.....</i>	<i>9</i>
<i>II.1.3 Emotional Stability/Neuroticism.....</i>	<i>10</i>
<i>II.1.4 Agreeableness .....</i>	<i>10</i>
<i>II.1.5 Conscientiousness.....</i>	<i>11</i>
<i>II.1.6 Openness to Experience .....</i>	<i>12</i>
<i>II.1.7 Summary of FFM.....</i>	<i>12</i>
<b>II.2 The Theoretical Development of Deviant Behavior Constructs .....</b>	<b>12</b>
<b>II.3 Deviant behavior .....</b>	<b>13</b>
<i>II.3.1 Summary of Deviant Behavior Constructs .....</i>	<i>17</i>
<b>II.4 Deviant Behavior and Personality .....</b>	<b>17</b>
<b>II.5 Integrity.....</b>	<b>21</b>
<i>II.5.1 Development of Integrity Test and Relationship to Polygraph Tests .....</i>	<i>21</i>
<i>II.5.2 Types of Integrity Tests.....</i>	<i>22</i>



II.5.3	<i>Integrity Tests and Theft Admission</i> .....	25
II.5.4	<i>Validity and Reliability of Integrity Tests</i> .....	32
II.5.5	<i>Contrast Groups and Integrity Tests</i> .....	36
II.5.6	<i>Faking Honesty</i> .....	37
II.5.7	<i>Legality of Integrity Tests</i> .....	39
II.6	<b>White-collar Criminals</b> .....	40
II.6.1	<i>Criminal Thinking</i> .....	40
II.6.2	<i>Personality and White-collar Criminals</i> .....	40
II.6.3	<i>Psychopathy and White-collar Criminals</i> .....	42
II.6.4	<i>Narcissism in White-collar Criminals</i> .....	46
II.7	<b>Summary</b> .....	47
III	<b>CHAPTER III: STUDY DESIGN</b> .....	50
III.1	<b>Research Model and Setting</b> .....	50
III.2	<b>Instruments and Questionnaire</b> .....	50
III.3	<b>Study Participants</b> .....	51
III.3.1	<i>Sample Selection</i> .....	51
III.3.2	<i>Recruitment</i> .....	51
III.3.3	<i>Tests</i> .....	52
III.4	<b>Study Procedures</b> .....	57
IV	<b>CHAPTER IV: RESULTS</b> .....	58
IV.1	<b>Data Analysis</b> .....	58
IV.2	<b>Demographics</b> .....	58
IV.3	<b>Research Question Analysis</b> .....	59
IV.3.1	<i>Preliminary Comparison of WC to the General Population</i> .....	60
IV.3.2	<i>Propositions</i> .....	61

<b>V</b>	<b>CHAPTER V: DISCUSSION .....</b>	<b>71</b>
<b>V.1</b>	<b>Personality Traits/FFM .....</b>	<b>71</b>
<b>V.2</b>	<b>False Honesty .....</b>	<b>73</b>
<b>V.3</b>	<b>Failure Rates .....</b>	<b>73</b>
<b>V.4</b>	<b>Total Integrity Scores.....</b>	<b>74</b>
<b>VI</b>	<b>CHAPTER VI: EXPECTED CONTRIBUTIONS AND LIMITATIONS.....</b>	<b>76</b>
<b>VI.1</b>	<b>Contribution to Theory .....</b>	<b>76</b>
<b>VI.2</b>	<b>Contribution to Practice.....</b>	<b>76</b>
<b>VI.3</b>	<b>Limitations.....</b>	<b>78</b>
<b>VI.4</b>	<b>Conclusion .....</b>	<b>79</b>
	<b>REFERENCES.....</b>	<b>81</b>
	<b>APPENDIX.....</b>	<b>95</b>
	<b>Appendix A .....</b>	<b>95</b>
	<b>Appendix B .....</b>	<b>97</b>

## LIST OF TABLES

Table 1. <i>Traits Associated with FFM</i> .....	8
Table 2. <i>Comparison of Integrity Predictors and Criterion Used</i> .....	27
Table 3. <i>Summary of Validity of Integrity Tests</i> .....	33
Table 4. <i>Updated Integrity Test Validities for Prediction</i> .....	34
Table 5. <i>Summaries of Validity of Integrity Tests</i> .....	36
Table 6. <i>Common Personality Traits of Psychopathy</i> .....	43
Table 7. <i>Completion Rate of Instruments</i> .....	52
Table 8. <i>Demographic Questionnaire Summary</i> .....	59
Table 9. <i>WC Inmates vs. General Population Statistics</i> .....	61
Table 10. <i>Summary Findings of Pre-employment Tests</i> .....	62
Table 11. <i>Summary Theft Admissions</i> .....	67
Table 12. <i>Recommendations for Hire Summary</i> .....	68

## LIST OF FIGURES

<i>Figure 1.</i> Typology of deviant behaviors. From Bennett & Robinson, 2000. ....	14
---	----

## **LIST OF ABBREVIATIONS**

ACFE - Association of Certified Fraud Examiners

AICPA - American Institute of Certified Public Accountants

FFM - The Five-Factor Model

NEO -FFI-3 - Personality Inventory

NPI - Narcissistic Personality Inventory

WINT – Work Integrity Test

WC - White-collar

WCC - White-collar crime

## DEFINITION OF SPECIFIC TERMS

### List of Specific Terms (in Alphabetical Order)

**Counterproductive behaviors.** Defined as any intentional behavior by an organizational member viewed by the organization, as contrary to its legitimate interests (Sackett, 2002).

**Criminal thinking.** Refers to the pattern of thinking observed when a person justifies and rationalizes his or her norm-violating behavior by focusing on a social injustice to minimize the seriousness of specific antisocial acts or project blame onto the victims of his or her crimes (Walters, 1995).

**Deviant behaviors.** Defined as the intent to harm the organization or its members (Henle & Gross, 2013, p. 51). Can include: counterproductive behaviors, antisocial behaviors, retaliator behaviors, workplace aggression, property deviance including theft and property damage, disciplinary problems such as poor attendance and not following directions, organizational rule breaking, and alcohol and substance abuse (Henle & Gross, 2013; Niehoff & Paul, 2000; Salgado, 2002).

**Dimensions.** Refer to a broad category of personality characteristics (Tupes & Christal, 2006).

**False positives** Defined as incorrectly labeling individuals as dishonest (Camara & Schneider, 1994).

**Five Factor Model (FFM).** Defined as a hierarchical organization of personality dimensions, which defines an individual's character. The five defining personality dimensions are Extraversion, Emotional Stability, Agreeableness, Conscientiousness, and Openness to Experience (Barrick & Mount, 1991; Digman, 1990; Judge, Heller, & Mount, 2002; McCrae & John, 1992; Tupes & Christal, 2006).

**Fraud.** Is defined as any intentional act committed to secure an unfair or unlawful gain (Forensic, K. P. M. G., 2006).

**Fraud triangle.** In order for fraud to occur, three criteria must be present: perceived pressure, perceived opportunity, and rationalization (Cressey, 1950; Dorminey, Fleming, Kranacher, & Riley, 2012; Ramamoorti, 2008).

**Honesty.** Defined as the extent to which individuals and groups in organizations abide by a consistent and rational ethical set of principles related to obligations which respect the truth (Murphy, 1993).

**Internal threats.** The use of one's occupation for personal enrichment through the deliberate misuse or misapplication of the organization's resources or assets (Association of Certified Fraud Examiners, 2012).

**Integrity.** Defined as the consistency of acting entities, words and actions (Palanski & Yammarino, 2007).

**Interpersonal deviance.** Defined as deviance aimed at members of the organization (Bennett & Robinson, 2000).

**Narcissism.** Defined as "self-admiration that is characterized by tendencies toward grandiose ideas, fantasized talents, exhibitionism, and defensiveness in response to criticism; interpersonal relationships are characterized by feelings of entitlement, exploitativeness, and a lack of empathy" (as quoted by Raskin & Terry, 1988, p. 896).

**Narcissistic Personality Inventory (NPI).** Defined as a 40-item, forced-choice measure designed to measure individual differences in Narcissism as a personality trait. This scale combines the seven component scores for: authority, exhibitionism, superiority, entitlement,

exploitativeness, self-sufficiency, and vanity into a total Narcissism score (Raskin & Terry, 1988).

**Organizational deviance.** Defined as deviant behavior aimed at an organization (Bennett & Robinson, 2000).

**Political deviance.** Includes behaviors such as blaming co-workers, showing favoritism, gossiping about co-workers, and starting negative rumors about the organization (Robinson & Bennett, 1995).

**Personal aggression.** Is defined as behaving aggressively or in a hostile manner toward others, for example, sexual harassment and verbal abuse (Robinson & Bennett, 1995).

**Personality trait.** The individual characteristics that defines an individual or personality dimension (Tupes & Christal, 2006).

**Trait narcissism.** A stable personality characteristic that serves as a self-regulatory mechanism in adults (Johnson, Kuhn Jr., Apostolou, & Hassell, 2012).

**White-collar crime (WCC).** Defined as an illegal act or series of illegal acts committed by non-physical means and concealment or guile, to obtain money or property, to avoid payment or loss of money or property, or to obtain personal advantage or business (Edelhertz, 1970).

**Work place deviance.** Defined as voluntary act or a willingness to violate organizational norms (Henle & Gross, 2013).



## **ORGANIZATION OF THE STUDY**

**Section 1** Provides the definitions of specific terms, and foreshadows the introduction, motivation for the study, and significance of the study.

**Section 2** Presents a review of the current literature. Included in the review is a discussion of the basic assumptions, theoretical framework, and research question.

**Section 3** Considers the research model and setting, propositions, method of data collection and analysis, instruments and participants.

**Section 4** Analysis of the data.

**Section 5.** Summarizes the study; discusses findings, and makes recommendations for future research.

**Section 6** Presents conclusions and limitations of the research.

## **ABSTRACT**

Behavioral Characteristics of White-Collar Crime and the Pre-Employment Hiring Process

By

Connie L. O'Brien

December 2015

Committee Chair: Karen D. Loch

Major Academic Unit: Executive Doctorate in Business

Organizations use pre-employment tests to identify individuals characterized as having a propensity (likelihood) to commit theft with the intent to limit at-risk hires, thereby reducing the risk of fraud. Pre-employment tests were originally designed to identify a broad range of deviant behaviors such as previous violations of laws, and violations of social norms and organizational policies (O'Bannon et al., 1989), not as predictive indicators of deviant behavior and theft. In addition, the test most commonly used to identify high fraud risk applicants, the integrity test, has limited support as a valid predictor of theft (MacLane & Walmsley, 2010; Ones et al., 2003; Sackett et al., 1989; Van Iddekinge et al., 2012) within the literature. This study empirically examined the efficacy of pre-employment tests to elicit a predictive profile of white-collar crime by testing the relationship between deviant behaviors, personality traits, and integrity.

The data for this study was obtained through questionnaires and pre-employment tests administered within the Federal prison system. The total sample consisted of twenty (N=20)

convicted white-collar inmates. Results of this sample were compared to the general population statistics as provided by the pre-employment test providers.

In line with the literature, positive relationships were found between low integrity and deviant behaviors. Contrary to past literature, no significant relationships were found between Agreeableness and Integrity or Emotional Stability/Neuroticism and Integrity. A positive relationship was found between high Conscientiousness and Integrity. Of particular note, this study found that the failure rate of the overt-integrity test was 45% and 100% for personality tests in identifying individuals with traits consistent with deviant behaviors.

This study contributes to the existing literature on personality, integrity and deviant behaviors by providing insights into the nature of the relationships as they relate to white-collar crime. This study also expands the theory of deviant behaviors with a thorough definition within the literature results, which helps to define the dimension and constructs of deviant behaviors within the workplace as it relates to white-collar crime. Finally, this study specifies practical implications to be considered by management and pre-employment test providers for the purpose of enhancing fraud prevention and reducing deviant behaviors within the organization.

## I CHAPTER I: INTRODUCTION

When an account manager convicted of embezzling nine million dollars was asked about his crime, he was quick to shift blame to his previous employer. Better internal controls and enforcement, he believed, would have prevented his deviant behavior (O'Brien, 2011). A hedge fund manager convicted of embezzling twenty-three million from a corporate margin account insisted his losses were a matter of timing. Given five additional months of trading, he would have replaced the "borrowed funds" with a profit. He did not consider his actions criminal and alleged the benefit outweighed the risk (O'Brien, 2011). The act of displacing blame to the employer is common among convicted white-collar criminals and can be indicative of a pattern of deviant behavior. Organizations struggle with effectively limiting the risk of white-collar crime. Personality tests and integrity tests are often used to screen new applicants for behaviors indicative of white-collar crime (Engleman & Kleiner, 1998; Sackett, Burris, & Callahan, 1989).

Globally, annual white-collar crime losses were an estimated \$3.7 trillion of the Gross World Product in 2013 (Association of Certified Fraud Examiners [ACFE], 2014a). US organizations lose approximately five percent of their annual revenues to white-collar crime (ACFE, 2014a). White-collar crime (WCC) is defined as an illegal act or series of illegal acts committed by non-physical means and concealment or guile, to obtain money or property, to avoid payment or loss of money or property, or to obtain personal advantage or business (Edelhertz, 1970). While WCC is the broadly defined term, fraud has come to be the popular term encompassing a number of illegal acts (ACFE, 2012). Fraud is defined as any intentional act committed to secure an unfair or unlawful gain (Forensic, K. P. M. G., 2006).

Despite the magnitude of this problem, it is estimated that only 20% of fraud is detected (Oliphant & Oliphant, 2001). Of that 20%, approximately only two-thirds are prosecuted

(ACFE, 2014a). Due to the lack of detection and prosecution by organizations as a whole, employers have utilized a number of traditional techniques to pre-screen applicants and limit at-risk individuals from entering the organization (Brody, 2010; Henle & Gross, 2013). Brody (2010) reported that approximately 96% of all organizations use some technique to pre-screen dishonest job applicants, yet he also found traditional techniques (background investigations, reference checks, and resumes verifications) have had limited success. Another technique that is widely used by organizations is pre-employment tests.

Currently, US organizations administer approximately three million pre-employment tests to applicants per year (Brody, 2010). Pre-employment tests are used to predict the likelihood of future deviant behaviors based on a number of criteria, such as personality traits, theft admissions, and integrity (Sackett et al., 1989; Sackett & Wanek, 1996). There are two main types of pre-employment tests: personality tests and integrity tests, although Camara and Schneider (1994) and Sackett and Wanek, (1996) found that most publishers and researchers refer to all types of pre-employment instruments as “integrity tests” which has led to confusion in the literature and in practice. Despite their popularity, efficacy concerns have been raised regarding the ability of these tests to predict deviant behaviors, specifically fraud (Camara & Schneider, 1994; Coyne & Bartram, 2002; Jones & Hare, 2015; Lee et al., 2005; Martin, 1989; Murphy, 1993; Sackett, Burris, & Callahan, 1989; Sackett & Wanek, 1996; Van Iddekinge, Roth, Raymark, & Odle-Dusseau, 2012). The concerns that have been raised include the lack a clear definition of behavior constructs (Baruch, 2005), variation in instrument application, and uncertain reliability (Barrick, Mount, & Judge, 2001; Camara & Schneider, 1994; Cunningham & Ash, 1988; Murphy, 1993; Sackett et al., 1989). These concerns may limit the reliability and effectiveness of pre-employment tests.

## **I.1 Research Goal**

Pre-employment tests are used to limit risk, but the efficacy of these instruments has been questioned throughout literature (Camara & Schneider, 1994; Coyne & Bartram, 2002; Cunningham & Ash, 1988; Gruys & Sackett, 2003; Martin, 1989; Sackett et al., 1989). Without additional research into the reliability and applicability of pre-employment tests to accurately identify at-risk hires, the benefits of these tests' are unlikely to be fully realized (Camara & Schneider, 1994; Coyne & Bartram, 2002; Rieke & Guastello, 1995). Taking these concerns into consideration, the goal of this study was to examine the following research question:

*How effective are pre-employment tests in identifying individuals with profiles indicative of a propensity for fraud?*

## II CHAPTER II: LITERATURE REVIEW

The literature on deviant behaviors has followed two separate streams of research: one stream focused on the relationship with personality (Barrick & Mount, 1991; Digman, 1990; Judge, Heller, & Mount, 2002; McCrae & Costa, 2010; Tupes & Christal, 2006) and the second on pre-employment tests (Coyne & Bartram, 2002; Ones, Viswesvaran, & Schmidt, 2003; Sackett et al., 1989). A significant volume of the personality literature stems from the field of personnel psychology (Barrick & Mount, 1991; Digman, 1990), while a significant volume of the pre-employment tests literature draws from the fields of management and organizational psychology (Baruch, 2005; Gruys & Sackett, 2003).

Personality literature has been divided into two main themes: normal-range behaviors and clinical disorders (Sackett & Wanek, 1996). The majority of behaviors are considered normal-range behaviors. Assessment constructs within pre-employment tests are more closely linked to normal-range behaviors than clinical disorders (Sackett & Wanek, 1996; Jones & Hare, 2015). Clinical disorders include maladaptive behaviors (psychopathy, clinical narcissism) which require a clinical psychologist to diagnostic and form opinions (Sackett & Wanek, 1996).

A variety of pre-employment tests are referred to as *integrity tests* in practice and in the literature (Sackett et al., 1989; Sackett & Wanek, 1996), which can be misleading. Pre-employment tests are designed to pre-screen candidates for hire for things such as personality and deviant behavior (Engleman & Kleiner, 1998; Sackett et al., 1989). In the literature prior to 1990, integrity tests and personality test were often broadly grouped together in one category (Sackett et al., 1989). After 1990, research began to distinguish personality tests from integrity tests. Integrity tests were further sub-divided into two primary categories “overt” and “personality-based” integrity tests (Sackett et al., 1989). Overt integrity tests include direct theft

omission questions, whereas personality-based integrity tests do not. Personality tests can include personality-based integrity tests and personality measures (Sackett et al., 1989; Sackett & Wanek, 1996). Loosely grouping pre-employment tests into one category can result in incorrect usage and misleading data.

As the previous research arguments have demonstrated, there is a large amount of literature on deviant behavior, pre-employment tests, and personality (Barrick & Mount, 1991; Digman, 1990; Judge et al., 2002; McCrae & Costa, 2010; Sackett et al., 1989; Sackett & Wanek, 1996; Tupes & Christal, 2006; Jones & Hare, 2015). A number of studies have examined the base rates of various types of deviant behaviors for the purposes of attempting to predict deviant behaviors, but few studies have explored the efficacy of these tests with respect to fraud (Camara & Schneider, 1994; Rieke & Guastello, 1995). The following provides a distillation of the personality, deviant behaviors, pre-employment tests, and WCC literature pertinent to this study.

## **II.1 Personality**

The concept of personality encompasses such a broad domain that a simple definition cannot completely do justice to its diverse aspects (Staub, 1980). According to Staub (1980), previous definitions such as "the culmination of all relatively enduring dimensions of individual differences on which he (an individual) can be measured," "the distinctive patterns of behavior (including thoughts and emotions) that characterize each individual's adaptation to the situations of his or her life," and "a relatively enduring pattern of interpersonal situations that characterize a human life," were incomplete (Staub, 1980, p. 4). Other personality definitions have emphasized individual differences based on a consistent set of individual characteristics (Staub, 1980).



William McDougall (1932) broadly identified personality into five distinguishable but separate categories: intellect, character, temperament, disposition, and temper. Researchers such as Barrick and Mount (1991), Cattell (1946), Digman (1990), Eysenck (1953), Fiske (1949), McCrae and John (1992), and Norman (1963) used these original categories to identify and define the five recurrent personality categories as *Extraversion*, *Emotional Stability*, *Agreeableness*, *Conscientiousness*, and *Culture*. The categories were subsequently renamed *dimensions*. Digman (1990) found the term *Openness to Experience* to be more appropriate for the dimension of culture. It has slowly replaced *Culture* as the accepted terminology.

Tupes and Christal (1961) also examined the recurrent personality dimensions. The purpose of their study was to clarify the personality domains. They based their study on 35 individual characteristics ratings of Air Force officer candidates and senior Air Force officers. Tupes and Christal (1961) confirmed the theory of five distinct dimensions and provided validation ratings for the defining factors associated with each dimension. These individual defining characteristics were later referred to as *traits*. Tupes and Christal (2006) found the “personality traits to be predictive of later performance” (p. 226). Tupes and Christal (1961) also found that the ratings of personality traits are useful predictors of future behavior and that the ratings yield sufficiently reliable individual differences, which are useful for the study of individual differences in personality or as criteria which personality can be measured (see the discussion on the Five Factor Model below). Traits are also used to determine patterns of behavior.

Costa and McCrae (1988) concluded after conducting a six-year longitudinal study of trait-stability that personality traits remain stable over time. McCrae and John (1992) argue that individuals inherit a set of general predispositions associated with the five dimensions, and that

environmental conditions determine the specific traits in which the dimensions are expressed. They found correlations for *Extraversion*, *Emotional Stability/Neuroticism*, and *Openness to Experience* to be .82, .83, and .83, respectively (Digman, 1990). Based on the foundational works of researchers such as Cattell (1946), Eysenck (1953), Fiske (1951), McCrae and John (1992), Norman (1963) Tupes and Christal (1961), and William McDougall (1932), scales such as the Five Factor Model were developed to effectively measure and analyze these traits.

### ***II.1.1 Five Factor Model***

The Five Factor Model (FFM) is a hierarchical organization of personality dimensions. The five defining personality dimensions are *Extraversion*, *Emotional Stability/Neuroticism*, *Agreeableness*, *Conscientiousness*, and *Openness to Experience* (McCrae & Costa, 1987). The dimensions and their defining traits are listed in Table 1. The level and balance of each of these determines an individual's personality. FFM has illustrated that these five personality dimensions consistently provide a "meaningful taxonomy for studying individual differences" in personality (Barrick & Mount, 1991). FFM demonstrates the variance in personality dimensions which, when evaluated, provides a valid predictor of counterproductive behavior (Blickle, Schlegel, Fassbender, & Klein, 2006; Collin & Schmidt, 1993; Greitzer, Kangas, Noonan, & Dalton, 2010; Ones, Viswesvaran, & Schmidt, 2003; Salgado, 2002) and compulsive behavior (Mowen, 2000), although research in the area of predicting counterproductive behavior is limited. Counterproductive behaviors are defined as "any intentional behavior on the part of an organizational member viewed by the organizations as contrary to its legitimate interests" (Sackett, 2002). It is proposed that a combination of these traits may indicate a propensity for deviant behavior (Berry, Ones, & Sackett, 2007; Ones et al., 2003; Salgado 2002).

Table 1. *Traits Associated with FFM*

Extroversion	Talkativeness, Frankness, Adventurousness, Assertiveness, Sociability, Energetic, Composed, Interest in Opposite Sex, and Cheerfulness.
Emotional Stability	Being Anxious, Depressed, Angry, Embarrassed, Emotional, Worried, and Insecurity.
Agreeableness	Good, Natured, Not Jealous, Emotionally Mature, Mildness, Cooperativeness, Trustfulness, Adaptability, Kindliness, Attentiveness to People, and Self Sufficiency.
Conscientiousness	Responsibility, Organization, Thorough, Planful, Hardworking, Conscientiousness, Perseverance, and Conventionality.
Openness to Experience	Imaginative, Cultured, Curious, Original, Intelligent, Artistically Sensitive, Esthetically Fastidious, Socially Polished, and Independently Minded.

---

(Barrick & Mount, 1991; McCrae & John, 1992; Tupes & Christal, 2006)

FFM has proven to be the most stable model for personality research. The five dimensions of FFM correspond with the various conceptualizations of personality. Despite these findings, some researchers have found FFM does not adequately address behavioral traits (Lee, Ashton, & de Vries, 2005). Lee, et al. (2005) reported FFM was less able to accommodate negative behaviors due to a lack of depth needed to explicate the core deviant behaviors. Dilchert, Ones, and Krueger (2014) suggest that although the personality traits of normal and deviant individuals are variants of the same Five Factor constructs, most of the FFM constructs

are not sensitive enough or lack the depth required to assess the entire range of each personality construct. FFM measures individuals within the normal ranges of personality. FFM personality constructs range between maladaptive and normal (Dilchert et al., 2014). As a result, the FFM instrument does not adequately diagnose specific maladaptive or compound personality disorders (e.g., psychopathy, Schizotypal Personality Disorder, clinical Narcissism, etc.) therefore limiting the predictive validity for those with personalities on the extreme poles of the construct (Dilchert et al., 2014). Dilchert, et al. (2014) did find that most job applicants score within the normal range of personality. The five defining personality dimensions are described in the following sections.

### ***II.1.2 Extraversion***

Extraversion deals with the positive emotions and how “positive emotionality is likely generalized” (Judge et al., 2002). Individuals who score low in Extraversion can be described as quiet, reserved, shy, silent, and withdrawn (McCrae & John, 1992). Evidence also indicates that individuals who score higher in extraversion have more friends and spend more time in social situations than do introverts (Judge et al., 2002). Because of their social facility, extraverts are more likely to find interpersonal interactions (such as those that occur at work) more rewarding (Judge et al., 2002). Individuals who score greater than 30 (as measured on the NEO-FFI 3 personality index) in Extraversion are considered outgoing and active (McCrae & Costa, 2010). Lower scorers, measured at less than 24, are considered introverted and reserved (McCrae & Costa, 2010).

### ***II.1.3 Emotional Stability/Neuroticism***

Emotional Stability is also referred to as Neuroticism (Judge et al., 2002). Emotional stability represents differences in an individual's experience with distress and the cognitive and behavioral styles that follow from the distress (McCrae & John, 1992). A high score in Emotional Stability indicates individuals who may experience chronic negative effects and development of a variety of psychiatric disorders such as recurrent nervous tension, depression, frustration, guilt, self-consciousness, irrational thinking, low self-esteem, or poor control of impulses as a result of distress (McCrae & John, 1992). Because of their essentially negative nature, high scoring Emotional Stability individuals tend to experience more negative life events than other individuals, in part because they select themselves into situations that foster negative affect (Judge et al., 2002). Individuals who score low in Emotional Stability are not necessarily in a state of positive mental health; however, they may be defined as calm, relaxed, and even-tempered (McCrae & John, 1992). Individuals who score greater than 23 in Emotional Stability are considered sensitive and irrational (McCrae & Costa, 2010). High scorers have been found to be less able to control impulses and cope with stress (McCrae & Costa, 2010, p. 19). Lower scorers, with indicators totaling less than 16, are secure and emotionally more stable, and are able to face stressful situations (McCrae & Costa, 2010).

### ***II.1.4 Agreeableness***

Agreeableness gauges the individual character dimensions described by McCrae and John (1992) and Digman (1990) as "Agreeableness versus Antagonism" or "compliance" versus "hostile non-compliance." Some have argued that Agreeableness should be referred to as likability or friendliness (Barrick & Mount, 1991), whereas others have suggested happiness (Digman, 1990; Judge et al., 2002; McCrae & John, 1992). Agreeableness can be measured as a

reflection of an individual's willingness to fight for her own interests and eagerness to help others. Those individuals who score greater than 33 in Agreeableness are found to be more flexible, trusting, good-natured, cooperative, forgiving, and tolerant (Barrick & Mount, 1991) and are described as compassionate and sympathetic (McCrae & Costa, 2010). Lower scorers, with results totaling less than 27, are considered antagonistic, competitive, and proud (McCrae & Costa, 2010). Low Agreeableness has been associated with narcissism, antisocial and paranoid personality disorders (McCrae & Costa, 2010, p. 20).

### *II.1.5 Conscientiousness*

Conscientiousness is often referred to as "good" versus "evil," "strong-willed" versus "weak-willed," even "non-conformity" versus "dependability." It captures an individual's desire or will (Digman, 1990). High scores in Conscientiousness reflect an individual's dependability. It also reflects an individual's tendency to be hard working, achievement-oriented and persevering (Barrick & Mount, 1991). Individuals need conscientiousness to hold impulsive behavior in check. In addition, they need the will to achieve in order to direct and organize behavior. Conscientiousness and the development of it create the ability to resist temptations, manage desires, control impulses, and organize and carry out tasks (McCrae & Costa, 2010; McCrae & John, 1992). This has been considered a sign of high Emotional Stability (McCrae & Costa, 2010, p. 20). Individuals who score high in Conscientiousness, greater than 35, are considered reliable and well organized (McCrae & Costa, 2010). Lower scorers, less than 29, are considered disorganized and easy-going (McCrae & Costa, 2010). Low levels of Conscientiousness have also been linked to low levels of integrity and unethical behavior (McCrae & Costa, 2010). Studies have shown the most significant personality trait in predicting work performance to be Conscientiousness (e.g. Mount & Barrick, 1995; Salgado, 2002).

### ***II.1.6 Openness to Experience***

Items such as intelligence, imagination, and perception (McCrae & John, 1992) often define this dimension. Openness to Experience is often related to scientific and artistic creativity, divergent thinking, political liberalism (Judge et al., 2002) and cultured behavior (Barrick & Mount, 1991). Individuals who scored high in openness were considered cultured, broad-minded, imaginative, intelligent, and curious (Barrick & Mount, 1991). Individuals who scored low in openness were described by these behaviors: "judges in conventional terms," "favors conservative values," and "represses anxiety" (McCrae & John, 1992). Individuals who score greater than 30 in Openness to Experience are considered unconventional (McCrae & Costa, 2010). Those with score less than 24 are down-to-earth and traditional (McCrae & Costa, 2010).

### ***II.1.7 Summary of FFM***

In summary, research has shown that personality traits remain stable over time and are reliable predictors of behavior, including deviant behaviors (Costa & McCrae, 1985; McCrae & Costa, 2010; Mount, Ilies, & Johnson, 2006; Tupes & Christal, 2006). FFM has provided a meaningful taxonomy for studying individual differences in personality. Personality traits have been associated with a wide variety of deviant behaviors, although inconsistently (Cullen & Sackett, 2003; Ones et al., 2003; Salgado, 2002). Personality constructs within personality-based tests can be used to predict future patterns of behavior as supported by the findings of Berry, et al. (2007), Dalal (2005), Mount et al. (2006), and Salgado (2002).

## **II.2 The Theoretical Development of Deviant Behavior Constructs**

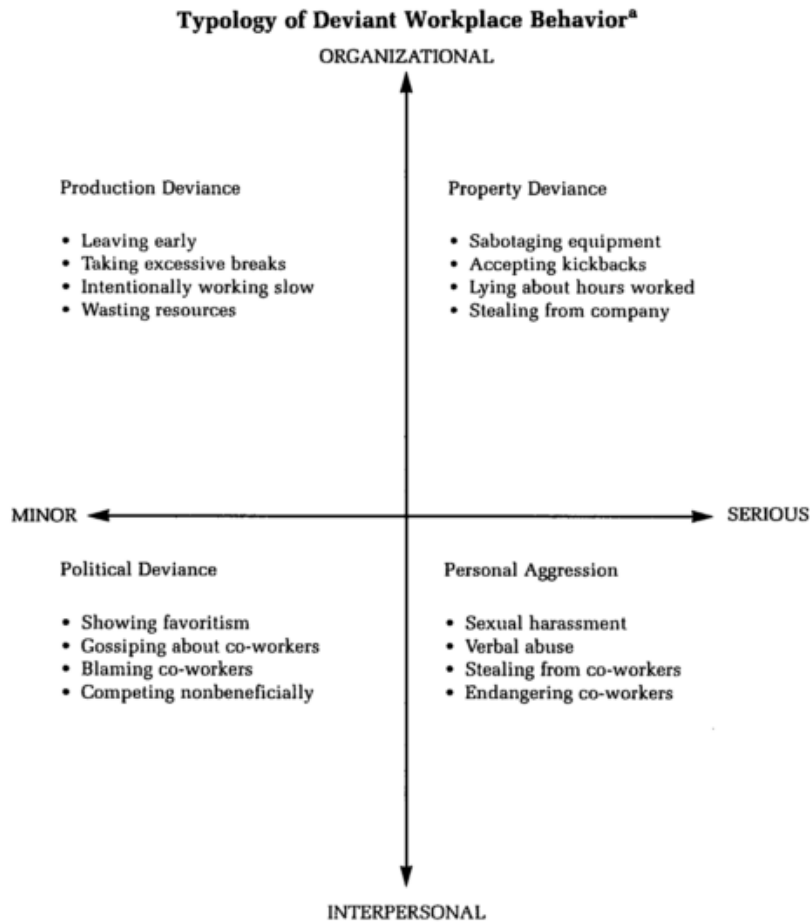
Concerns have been raised regarding reliability and appropriateness of the pre-employment tests constructs (Camara & Schneider, 1994; Cunningham & Ash, 1988; Murphy,

1993; Sackett et al., 1989). Research has found that not all deviant behaviors can be predicted utilizing pre-employment tests (MacLane & Walmsley, 2010; Ones et al., 2003). Within the dimension of deviant behavior literature, there has been a plethora of terms depicting negative behaviors such as “deviant behavior,” “misbehavior in organizations,” “anti-social behavior,” “dysfunctional behavior,” “mistreatment in organizations,” “incivility,” and “counterproductive work behavior” (Baruch, 2005; Henle & Gross, 2013; Niehoff & Paul, 2000; Salgado, 2002). Due to a lack of consistent definitions and classification in the literature, the use of these terms in research has been inconsistent (Baruch, 2005). Moreover, pre-employment tests are grounded in deviant behavior literature. As a result, deviant behavior research has been perceived as behavior specific rather than dimension specific, adding to the inconsistencies (Gruys & Sackett, 2003).

### **II.3 Deviant behavior**

Robinson and Bennett (1995) recognized that deviant behavior research was “scattered” due to the lack of consistency within the deviant behavior dimension (p. 556). Robinson and Bennett (1995) and Bennett and Robinson (2000) studied deviant behaviors for the purpose of identifying consistent classifications of behaviors. They proposed a typology for deviant behaviors that differentiated deviance aimed at the organization, which they called “organizational deviance,” from deviance aimed at members of the organization, which they referred to as “interpersonal deviance.” They argued that the target of the deviant behavior is a critical perspective. This perspective indicates significant qualitative differences between the deviant acts. Individuals who have a propensity to commit acts of organizational deviance are more likely to differ from individuals who commit deviant acts aimed at other individuals. A two-factor matrix representing Bennett and Robinson’s (2000) analysis of deviant behavior appears in Figure 1.





*Figure 1.* Typology of deviant behaviors. From Bennett & Robinson, 2000.

The primary focus of Robinson and Bennett (1995) was on classifying behaviors. The primary focus of Bennett and Robinson (2000) was on testing a new instrument designed to measure deviant behaviors. The instrument was designed based on the typology proposed by Robinson and Bennett (1995) and seriousness of behavior (Figure 1). Bennett and Robinson (2000) differentiated behaviors based on the targets of the deviant acts and found support for the categories of interpersonal and organizational deviance. Some research has found different forces such as situational strength drive affect individual and organizational manifestations of deviant behaviors (Bies, Tripp, & Kramer, 1997; Rosenfeld, Giacalone, & Riordan, 1995).

Gruys (2000) proposed an alternate typology based on intent. He posited that intent is what differentiates errors from fraud (Gruys, 2000). To determine this typology, Gruys (2000) examined literature focused on “workplace deviance.” The literature examined the “similarities” of deviant behaviors (Gruys, 2000, p. 88). Gruys (2000) argues covariance among behaviors, not similarity, is the key to understanding deviant behaviors. Based on Gruys’s (2000) findings, Gruys and Sackett (2003) challenged the findings of Robinson and Bennett (1995).

The findings of Robinson and Bennett (1995) are based on a survey of workers' unconstrained opinions regarding the similarity of behaviors. These opinions were very broad and did not help to understand the behaviors themselves. Gruys (2000) found the rate of co-occurrence of behaviors was more important than similarities in understanding deviant behaviors. Specifically, occurrence demonstrated patterns of behavior and that could be used to develop the structure of deviant behaviors, specifically theft as detected by pre-employment tests. Due to the inconsistencies of constructs and definitions, Gruys and Sackett (2003) could not replicate previous studies. Therefore, they compiled a list of over two hundred and fifty deviant constructs in which they attempted to capture the deviant constructs of previous studies. Gruys and Sackett (2003) surveyed alumni and found the rate of co-occurrence is indicative of replicable patterns of behavior. Patterns of behaviors are the basis for predicting future deviant behaviors. In addition, they also found support for the general categories of interpersonal and organizational deviance.

Research on the strength of the relationships between interpersonal and organizational deviant behaviors is also inconsistent (Dalal, 2005). Dalal (2005) argued that individuals can be engaged in organizational citizenship behavior (organizationally beneficial) and occupational deviant behaviors simultaneously. Sackett and DeVore (2001) found strong relationships

between deviant behaviors and organizational behaviors, whereas others (e.g., Kelloway, Loughlin, Barling, & Nault, 2002) found weaker relationships. Due to these inconsistencies, Dalal (2005) defined counterproductive work behaviors as any intentional employee behavior that is harmful to the legitimate interests of the organization. This study attempted to capture a number of deviant behaviors previously studied, but due to the inconsistencies of constructs and limited information, the studies could not be replicated. Dalal (2005) conducted a meta-analysis of the strength of the deviant relationships through a literature review. He found counterproductive work behaviors to be voluntary, adaptive, and correlated to organizational behaviors. Dalal (2005) concluded that individual behaviors varied based on the strength of the employees' relationships and perception of the situation. In addition, deviant behaviors may be adaptive responses to perceived events.

More recently, Henle and Gross (2013) examined the deviant and criminal behavior literature for the purpose of improving understanding of deviance at work. They defined work place deviance as a voluntary act or a willingness to violate organizational norms that is "intended to harm the organization and/or its members" (p. 51). Henle and Gross (2013) examined a variety of deviant behaviors, but although they defined deviance, they did not define and categorize the behaviors examined in their study. Often the terms "deviant behavior," "counterproductive behavior," and other terms were used interchangeably or together for the same behavior, resulting in confusion as to the applicability of the results.

Henle and Gross (2013) found deviance in the work place was driven by personality traits such as high levels of Emotional Stability/ Neuroticism, low levels of Agreeableness, and low levels of Conscientiousness. Henle and Gross (2013) found an individual's personality could be moderated by the strength of a situation and the organizational context (Henle & Gross, 2013,

p. 60). The organizational context provides an effective facade to hide and promote white collar (WC) criminal activities, because organizational rules are often non-comprehensive or too vague. They also found individuals were inclined to demonstrate reciprocity toward those they perceived directly harmed or benefited them. These deviant behaviors may be aimed at the individual or the organization (Henle & Gross, 2013). Screening individuals for traits indicative of work place deviance during the hiring process may enable organizations to reduce the risk of fraud (Henle & Gross, 2013). Henle and Gross (2013) also propose that organizations take into account the organizational context when evaluating personality and integrity as it may encourage or suppress displays of personality.

### ***II.3.1 Summary of Deviant Behavior Constructs***

In summary, the lack of consistent definitions for deviant behavior constructs has led to inconsistent application of diverse terms for similar constructs. Unfortunately, key studies that may have advanced deviant behavior research are not comparable due to these inconsistencies (Dalal (2005); Gruys & Sackett, 2003; Henle & Gross, 2013). The common themes within the deviant behavior literature are that deviant behaviors violate organizational norms, are harmful to both the organization and its employees, are intentional, are voluntary, are moderated by the strength of the situation, and vary with personality. Therefore, it is expected that the co-occurrence and pattern of behaviors can be used to predict future behavioral patterns such as WCC.

## **II.4 Deviant Behavior and Personality**

To understand link between the propensity for deviant behavior and personality, we need to look to the field of psychology. The majority of personality and behavior research generates from the field of psychology (Barrick & Mount, 1991, Barrick et al., 2001; Digman, 1990; Judge

et al., 2002; McCrae & John, 1992; Tupes & Christal, 2006) and has been used in the field of behavioral science (Brody et al., 2012). It is important to note that within the deviant behavior literature, the terms *personality* and *behavior* are often referred to interchangeably along with the descriptors *dimensions* and *traits* (see the discussion on FFM above). These terms originally stem from published psychological literature.

Barrick, Mount, and Judge (2001) found there was little development in the area of deviant behavior research. They explored the low validity rates of previous deviant behavior and personality research to identify the lack of development within this area. The focus of their study was on the relationship between FFM and job performance. Although their criterion was narrow, Barrick et al. (2001) quantitatively analyzed fifteen prior studies of deviant behavior and personality. They found Emotional Stability/Neuroticism and Conscientiousness were valid predictors of performance. In addition, they found:

1. That the lack of a standard classification system for measuring personality traits inhibited research;
2. Personality traits had not been clearly defined and used throughout literature;
3. Researchers did not differentiate between the measurement of personality at the inventory scale level and at the construct level;
4. A significant portion of the research correlated the scales of personality inventories with all criteria within the study;
5. Literature reviews were mostly narrative not quantitative studies. Also, they did not adjust for artifactual study differences, which may result in lower validity estimates.

According to Barrick et al. (2001), these issues made it difficult to identify consistent correlations between personality traits and the criteria used. This made comparability among

studies and criteria difficult, which resulted in little advancement in the understanding of the relationship between personality and performance. FFM, which was proposed by McCrae and Costa (1987), was the first instrument to effectively measure individual differences in personality (Barrick et al., 2001). According to Salgado (2002) and Mount, Ilies, and Johnson (2006), prior literature had not systematically investigated the ability of FFM to predict specific deviant behaviors. Therefore, a number of studies examined the relationship between personality and deviant behaviors.

Ones et al. (1993) conducted a comprehensive meta-analysis focused on the relationship between the traits of FFM and job performance. They found that personality-based integrity tests have a common personality core (Emotional Stability/ Neuroticism, Agreeableness, and Conscientiousness) and more specifically, Conscientiousness had a direct relationship with deviant behaviors. However, this study focused primarily on Conscientiousness and did not attempt to validate all five FFM traits to demonstrate which traits had the strongest relationship. Ones et al. (2003) found employees who engage in interpersonal deviance tend to engage in organizational deviance. They argued that employees whose personality is characterized by the trait of irresponsibility and lack of integrity will make overall poorer employees and will engage in comparably more deviant behaviors. Employees who are dependable and achievement striving generally refrain from deviant behaviors (Ones et al., 2003).

Sackett and Devore (2001) measured personality as a predictor of deviant behavior across a variety of jobs. Sackett and Devore (2001) found behaviors fit into three categories: deviant (theft, drug, alcohol), absenteeism (absence and tardiness), and unsafe (accidents and injuries). Although Sackett and Devore found that these three categories did not distinguish between

interpersonal and organizational deviance, they found they categories were strongly correlated with the FFM personality dimensions of Agreeableness and Conscientiousness.

Salgado (2002) specifically examined prior research for a direct relationship between FFM and a defined set of counterproductive work behaviors: absenteeism, accident rate, deviant behavior, and turnover. He found interpersonal behaviors were best predicted with the trait of Agreeableness and organizational behaviors were best predicted with the trait of Conscientiousness. Furthermore, he found deviant behaviors were best predicted with a composite measure that includes theft, admissions of theft, organizational rule breaking, and other irresponsible behaviors; none of the FFM traits individually predicted absenteeism.

Mount, et al. (2006) surveyed 141 employees regarding deviant behaviors. The study focused on the relationship between job satisfaction and interpersonal and organizational deviance and the mediating relationship of five personality traits of FFM. They found the personality dimensions of Emotional Stability/Neuroticism, Agreeableness, and Conscientiousness had a direct relationship on employee perceptions such as job satisfaction, and on mediating deviant behaviors. Job satisfaction was argued to be a key facet of irresponsible behavior in both the dimensions of interpersonal and organizational deviance dimensions. This study illustrated the role personality and emotional strength of the situation play in forming a pattern of future deviant behavior.

In summary, research has demonstrated that there is a direct relationship between personality and deviant behaviors. Three of the five personality dimensions, Emotional Stability/Neuroticism, Agreeableness, and Conscientiousness have consistently demonstrated a direct relationship to deviant work behaviors (Barrick et al., 2001; Berry et al., 2007; Mount et al, 2006; Ones, 1993; Ones et al., 2003; Sackett & Devore, 2001; Salgado, 2002). Of these three,

Conscientiousness has demonstrated the strongest relationship. (Barrick et al., 2001; Berry et al., 2007; Ones, 1993; Ones et al., 2003). These findings support the work of Bies et al. (1997), Dalal (2005), and Robinson and Bennett (1995), who found an individual's deviant behavior is voluntary, adaptive, and affected by the emotional strength of the situation.

## **II.5 Integrity**

Integrity implies honesty, fairness and the belief that one is acting correctly. Palanski and Yammarino (2007, p. 178) define integrity as "the consistency of an acting entities words and actions." Murphy (1993, p. 9) defines honesty in the workplace as "... the extent to which individuals and groups in organizations abide by consistent and rational ethical principles related to obligations to respect the truth." These definitions imply that employees cannot adapt different principles to individual situations. Employees with high integrity are expected to behave in accordance with the ethical norms of the organization, while lower integrity employees are more likely to display deviant behaviors that warrant disciplinary actions. Guion (1998) refers to individuals with integrity as someone whose word can be trusted, whose work is reliable, or who can work dependably without oversight.

### ***II.5.1 Development of Integrity Test and Relationship to Polygraph Tests***

Polygraph tests were initially used in criminal and security investigations to discern honesty. Later, they were used in the workplace for criminal investigations and pre-employment screening (Murphy, 1993). The polygraph was expensive and it could not easily reveal individuals with a propensity for theft if the individual did not have a criminal past (Cunningham & Ash, 1988). As issues with the use of the polygraph escalated, the Polygraph Protection Act 1988 was passed. This prohibited the use of the polygraph in pre-employment screening (Brody, 2010; Cunningham & Ash, 1988; Murphy, 1993) in almost every situation. In response to



concerns with the polygraphs, integrity tests were used in pre-employment screening. O'Bannon, Goldinger, and Appleby (1989) examined the how integrity tests were created.

O'Bannon, Goldinger, and Appleby (1989) found polygraph operators and psychologists helped create the original integrity tests. Within the supporting literature, there was little agreement as to the precise definition of integrity or the constructs that defined it (Barrick & Mount, 1991; Becker, 1998; Camara & Schneider, 1994). Integrity test creators originally drew from psychological research that indicated particular backgrounds and personality characteristics that correlated with personal integrity as opposed to determining patterns of behavior that would indicate a propensity to commit future deviant behavior (O'Bannon et al., 1989). Psychologists then used these characteristics to develop questions aimed at identifying individuals with the potential for violating laws, social norms, and organizational policies. These original polygraph sources can be recognized in the criteria of many extant integrity tests (O'Bannon et al., 1989).

Today, integrity tests are most commonly used in organizations where employees have direct access to cash and merchandise, such as banks and retail stores. Losses in these industries are attributed to high amounts of employee fraud; therefore, there is a high interest in limiting at-risk hires (O'Bannon et al., 1989).

### ***II.5.2 Types of Integrity Tests***

There are two main types of integrity tests: “overt” and “personality-based” (Sackett, Burris, & Callahan, 1989). Overt-integrity tests are designed to assess admissions of historical theft and attitudes regarding theft or other deviant behaviors or illegal activities (Ones et al., 1993; Sackett, Burris, & Callahan, 1989). Overt integrity tests include questions that measure personality, but the primary constructs for analysis are behavior scenarios and overt omissions of theft (Cullen & Sackett, 2004; Greitzer et al., 2010; Marcus et al., 2006; McCrae & John, 1992;

Ones et al., 2003). Overt-integrity tests contain transparent (direct) questions directly related to deviant behaviors measured such as, *Have you ever stolen time from your employer?* (Marcus, Höft, & Riediger, 2006).

While overt integrity tests are designed to measure theft, Cunningham (1989) and Bernardin and Cooke (1993) found that not all overt integrity test items measure actual theft. The typical integrity test measures:

- Ruminations about theft;
- Punitive versus tolerant attitudes toward thieves and non-thieves;
- General belief that people steal regularly;
- General belief regarding inter-thief loyalty;
- General agreement with the rationalizations for theft.

Gruys and Sackett (2003) examined the covariance of deviant behavior to understand the underlying structure of the dimension. They argued that the ability of integrity tests to predict theft, in general, was hindered by a lack of a clear underlying structure of deviant behaviors. Although integrity tests were originally designed to predict theft, they were now being used to predict a broad variety of other deviant behaviors in addition to theft. These predictions were based on a poorly structured and defined dimension. As a result, they compiled a list of more than 250 deviant behaviors from literature which prior researchers claimed to measure. Gruys and Sackett (2003) categorized these behaviors into eleven general categories:

1. Theft and theft related behaviors;
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;
11. Inappropriate physical actions.

From these results, Gruys and Sackett (2003) concluded that the 11 categories represent the basic dimensions of deviant behaviors. In addition, they found as the probability of participating in a particular deviant behavior increases, the likelihood of that individual simultaneously participating in a much broader variety of deviant behaviors also increases. As for the ability to predict which deviant behavior an individual will participate in, Gruys and Sackett (2003) found some variables to be predictors of other deviant behaviors, but these variables were not easily isolated.

Compared to overt integrity tests, personality-based integrity tests are designed to measure a much broader set of characteristics (Sackett, 1994). They measure personality traits and dimensions such as Emotional Stability/Neuroticism and Conscientiousness (Sackett, 1994). Personality-based integrity test questions are similar in style to personality tests such as the FFM, although the question items have been adapted to predict specific work-related criteria (Marcus et al., 2006). The questions are significantly wider in focus and do not exclusively target theft. They incorporate other items such as handling of hostility, trouble with authority, thrill-seeking, social conformity and dependability (Sackett & Wanek, 1996). Coyne and Bartram (2002) found personality-based integrity tests do not employ any obvious reference or questions related to theft or deviant behavior. Personality-based integrity tests' primary construct for analysis is personality traits (Greitzer et al., 2010; Marcus et al., 2006; McCrae & John, 1992; Ones et al.,

2003). Ones et al. (1993) found overt integrity tests have a stronger correlation to deviant behaviors than personality-based tests ( $r = .55$  vs.  $r = .32$  respectively).

### ***II.5.3 Integrity Tests and Theft Admission***

A number studies attempted to analyze how integrity tests predict and explain theft. Sackett and Harris (1984) compared integrity tests of job applicants and current employees with polygraph results. Sackett and Harris (1984) found it difficult to compare polygraph and integrity studies due to differences in the types of reliability estimates and test criteria used. One test did not include questions about theft attitudes or past thefts. In addition, there was incomplete information regarding study design and methods. Moreover, they found the validity rates of polygraph studies to be inflated due to numerous overlap between test items and criteria. Despite this, they concluded that admissions of theft correlated with polygraph judgments. They also found admissions of past wrongdoing correlated with Integrity scores for both job applicants and current employees.

Miners and Capps (1996) examined the correlation between theft admissions in overt integrity tests and polygraphs. They recognized that the range of deviant behaviors criteria was too broad and had too much variability to make direct comparisons. Therefore, they proposed a general listing of deviant behaviors for their study. Using this listing, they found the correlation between theft admission and integrity tests to be approximately 0.40, and the correlation between theft admission and polygraphs to be approximately 0.69. The validity coefficients ran lower for integrity tests than for polygraphs. Miners and Capps (1996) concluded this was due to the presumption, by applicants, that polygraph examiners had a means of validating their responses whether or not this was a valid assumption. These results would have a more meaningful impact

if Miners and Capps (1996) had composed a taxonomy of deviant behaviors based on their analysis, as opposed to a general listing.

In 1989, Sackett, Burris, and Callahan conducted an updated review of the integrity test literature since their prior work in 1984 (Sackett & Harris, 1984). They reviewed over 40 papers on the 10 commercially available integrity tests at the time, although most of the papers reviewed were unpublished. In the literature, pre-employment tests were referred to as pre-employments, pencil-and-paper predictors, polygraphs, personality-based measured and integrity tests. They found that the design of integrity tests had changed to include an expansion into both overt and personality-based integrity tests, that a broad set of validation criteria were being used, and that the use of external criteria such as turnover rates were included. Consequently, they found the research:

- Detected little theft;
- To compensate for the low theft detection rate, larger samples were used;
- Significant correlations with deviant behaviors other than theft have been utilized.
- Despite the type of test used, the reported validity coefficients were significantly smaller than validation studies where independence of predictor and criterion posed a potential problem (self-reports of theft). It can be argued that both types of validation strategies presented distorted views of test validity.

Miners and Capps (1996) came to the same conclusion as Sackett, Burris, and Callahan (1989), finding there was a lack of consistent criteria used across studies, thereby preventing legitimate head-to-head comparisons and limiting the ability of researchers to compare validity findings (Table 2).

As depicted in Table 2, the range of deviant behavior criteria and scales used to measure dishonesty were broad or poorly defined. This made it difficult to directly compare studies and types of reliability estimates. In addition, although there were 25 studies examined, only three, London House PSI (Brown & Joy, 1985), London House PSI (Moretti, 1984), and London House PSI (Moretti & Terris, 1983), actually detected theft.

Table 2. *Comparison of Integrity Predictors and Criterion Used*

Test	Sample	Predictor	Criterion	Validation Strategy	Results
London House PSI (Jones & Terris, 1983b)	86 home improvement center employees	Dishonesty scale Sup. Rating - mishandle cash-merchandise - damage property - overall productivity - absence - tardiness		Predictive (8-month intervals)	$r = 0.23$ $r = 0.35$ $r = -0.16$ $r = 0.62$ $r = 0.24$
London House PSI (Brown & Joy, 1985)	482 grocery store applicants	Dishonesty scale	Theft apprehension	Predictive (8 months)	Signif. difference ( $p < .05$ ) in failure rate; 94% of detected thieves (16 of 17) failed test; 48.4% of rest of sample failed test
			Tenure	Mean days employed	Signif... higher among those passing test (95.4 vs. 87.5 days)

London House PSI (Brown & Joy, 1985)	3,790 grocery store applicants	Dishonesty scale	Termination for dishonesty  Termination for absenteeism Termination for other policy violations	Predictive (one year)	Signif. difference ( $p < .05$ ) in failure rate: 83% of thieves (75 of 91) failed test; 58% of rest of sample failed test 72% (43 of 60) failed test 83% (42 of 51) failed test
London House PSI (Joy & Frost, 1987)	157 bus drivers  72 conductors and ticket agents	Dishonesty scale	Composite of 14 objective measures (e.g. absence, accidents)	Predictive (3 months)	$r = 0.19$  $r = 0.21$
London House PSI (Terris & Jones, 1982b)	238 fast food chain applicants	Dishonesty scale	Sup. rating of deviant behavior	Predictive (one year)	$r$ not reported: claimed $r$ was signif. at 0.05 level
London House PSI (Moretti, 1984)	498 department store applicants	Dishonesty scale	Sup. rating of frequency of register shortages	Predictive (3 months)	$r = 0.16$
London House PSI (Moretti & Terris, 1983)	876 department store applicants	Dishonesty scale	Termination for theft	Predictive (time interval unspecified)	48% of detected thieves (10 of 21) failed the test; 41% of the rest of the sample

failed the test

Reid Report (Kamp, 1988)	145 convenience store manager applicants	Dishonesty scale	Average monthly inventory imbalance	Predictive	$r = 0.48$
Employment Inventory (PDI, 1985)	98 college students	Performance scale	Received \$3.00 in advance after offering to retake test; measured whether test was completed	Predictive	Those who defaulted ( $N = 19$ ) scored 0.63 SD lower
		Tenure scale			Those who defaulted ( $N = 19$ ) scored 0.50 SD lower
PDI Employment Inventory (PDI, 1985)	2,988 retail applicants	Performance scale	9 perf. categories, from fully satisfactory to terminated for gross misconduct	Predictive (9-12 months)	$r = 0.26$ to $0.34$ depending on performance categories compared; 71% (47 of 66) of those fired for gross misconduct failed the test; 29% (216 of 744) of fully satisfactory employees failed the test



PDI Employment Inventory (PDI, 1985)	1,188 retail applicants	Tenure scale	Employed vs. voluntary turnover	Predictive (3 months)	$r = 0.26$
PDI Employment Inventory (PDI, 1985)	72 retail applicants	Performance scale	Sup. rating of performance	Predictive (3 months)	$r = 0.24$
PDI Employment Inventory (PDI, 1987)	90 current retail employees	Performance scale	Sup. rating - overall performance - sales behavior - objective sales indexes: sales/payroll sales/hour	Concurrent	$r = 0.38$ $r = 0.21$ $r = -0.10$ $r = 0.02$
PDI Employment Inventory (Sevy, 1987)	173 bus drivers	Performance scale Workers' compensation claims		Concurrent	$r = 0.32$
Personnel Reaction Blank (Gough, 1972)	342 department store employees 46 lumber mill employees 58 male office workers 321 female office workers 300 supermarket employees	Dependability/Conscientiousness scale	Sup. rating of effectiveness	Unclear if predictive of concurrent	$r = 0.25$ $r = 0.30$ $r = 0.33$ $r = 0.20$ $r = 0.22$
Hogan Reliability Scale (J. Hogan, R. Hogan & Briggs, 1984)	56 truck drivers	Reliability scale	Commendations/Suspensions	Concurrent	$r = 0.51$ $r = -0.28$
Hogan Reliability Scale (J. Hogan,	111 truck drivers	Reliability scale	Grievances filed Commendations Claims	Concurrent	$r = -0.18$ $r = 0.15$ $r = -0.25$

Peterson, R. Hogan & Jones, 1985)			filed for equipment failure		
Hogan Reliability Scale (Raza, Metz, Dyer, Coan, & J. Hogan, 1986)	201 hospital service workers	Reliability scale	No. times counseled for aberrant behavior	Concurrent	$r = -0.18$
Hogan Reliability Scale (Guier, 1984)	65 psychiatric counselors	Reliability scale	Sup. ratings of overall job performance	Concurrent	$r = 0.25$
Hogan Reliability Scale (Montgomery, Butler, & McPhail, 1987)	163 nuclear power plant workers	Reliability scale	Sup. ratings	Concurrent	$r = 0.21$
Hogan Reliability Scale (R. Hogan, Jacobson, J. Hogan, & Thompson, 1987)	76 service operations dispatchers	Reliability scale	Absences	Concurrent	$r = -0.49$
Hogan Reliability Scale (J. Hogan, Arneson, R. Hogan & Jones, 1986)	178 habilitation therapists	Reliability scale	Injuries sustained No. incidents filed with state insurance	Concurrent	$r = -0.17$ $r = -0.17$
Employment Productivity Index (Joy & Frost, 1987)	167 retail job applicants	Composite of dependability, interpersonal cooperation, and drug avoidance scales	Sup. ratings (mean) across 6 dimensions)	Predictive (3- month interval)	$r = 0.22$

Employment Productivity Index (Terris, 1986)	1,236 retail applicants	Composite of dependability, interpersonal cooperation, and drug avoidance scales	Employment status	Predictive (6 months)	% failing test: successful employees - 22%; fired for poor performance - 37%; fired for absence/tardiness - 37%; fired for other reasons - 47%
Phase II Profile	547 college students	Honesty score	Probability of cheating	Predictive	$r = -0.14$

(Sackett et al., 1989, p. 503-506)

#### ***II.5.4 Validity and Reliability of Integrity Tests***

Despite additional studies to the contrary, integrity test providers continue to cite Ones et al. (1993), and the operational validities within, as foundational support for the effectiveness of integrity tests in practice (Arch Profiles, 2012). Overt and personality-based integrity tests measure an individual's attitude toward deviant behaviors based on a broad spectrum of indices. Ones and Viswesvaran (2001), and Ones et al. (2003) each examined integrity tests from different perspectives. They discovered lower validity rates for theft than reported in Ones et al. (1993). Van Iddekinge et al. (2012) attempted to replicate Ones et al. (1993), but was unable to. Their study resulted in validity rates that were considerably lower than Ones et al. (1993), in addition, they challenged the methodology used by Ones et al. (1993). The following discussion highlights the key scholarly discoveries these of these four studies have brought to light in the discussion of the predictive validity of theft.

Ones et al. (1993) examined over 600 validity coefficients from 36 available integrity tests in a meta-analysis. Ones et al. (1993) found the mean operational validity for both personality-based and overt integrity tests to be positive and substantial. The summary of the operational validities ( $p$ ) can be found in Table 3. They originally found integrity tests to be valid predictors ( $p = 0.47$ ) of overall job performance for a composite of counterproductive behaviors on the job, which included theft and absenteeism, although these variables were not the primary focus of this study (Ones et al., 2003).

Subsequent studies by Ones and others revealed theft was less predictable than broad counterproductive behaviors and the validity was lower than initially reported. Ones and Viswesvaran (2001) focused on the incremental validity of personality measures used in the prediction of behaviors such as theft. After testing, the mean operational validity for prediction of theft was identified to be 0.13 (Table 4) for overt-integrity tests and 0.0 for personality-based integrity tests. This was considerably lower than the ( $p = 0.47$ ) previously reported in Ones et al. (1993).

Table 3. *Summary of Validity of Integrity Tests*

Category of analysis	$N$	$K$	mean $r$ / $SD$ ,	$SDn$	$p$	$SD$ ,
All integrity tests						
predicting overall job performance	68,772	222	.21 / .1019	.0701	.34	.13
All integrity tests						
predicting counterproductive						
behaviors' including theft	507,688	443	.33 / .2463	.2345	.47	.37

(Ones et al., 1993)

Table 4. *Updated Integrity Test Validities for Prediction*

Criterion	Type of integrity				
	test	<i>N</i>	<i>K</i>	<i>p</i>	<i>SD<sub>p</sub></i>
1. <i>Detected theft</i>	Overt	2434	7	0.13	0.12
2. Admitted theft	Overt	68618	63	0.42	0.33
3. Broad counterproductive behaviors	Personality-based	93092	62	0.29	0.02
4. Broad counterproductive behaviors	Overt	5598	10	0.39	0.13
5. Supervisory ratings of overall job performance	Overt and personality-based	7550	23	0.41	0

(Ones et al., 2001)

*Note.* Ones et al. (1993). *N* = total sample size; *K* = number of correlations; mean *r* = mean observed correlation; *p* = operational validity (mean *r* corrected for range restriction and unreliability in the criterion only); *SD<sub>p</sub>* = standard deviation of the true score validity.

As integrity tests became more popular, test providers began to adapt integrity tests to meet organizational demands and predict specific deviant behaviors related to individual occupational categories (Ones et al., 2003). Ones et al. (2003) conducted a meta-analysis of 28 integrity tests focusing on the validity rates of integrity tests as they relate to deviant behaviors, and specifically voluntary absenteeism. They argued absenteeism is a key facet of irresponsible behavior that is predictive of future deviant behaviors. They also compared the validity coefficients of integrity tests to FFM personality-based scales to determine the reliability of

predictable absenteeism and deviant behaviors. Although they analyzed personality based on FFM, the results were not presented in FFM trait format, making criteria and finding comparisons difficult.

Furthermore, Ones et al. (2003) ascertained the constructs utilized for predicting absenteeism were valid for personality-based integrity tests, but not for overt integrity tests. The concurrent designs of integrity tests in general, they argued, may lead to overestimates of predictive validity (Ones et al., 2003). For more specific criterion such as theft, the validity was significantly lower than previously reported in Ones et al. (1993) and Ones and Viswesvaran (2001). The narrower the criteria, the lower the predictive validity declining it to 0.0 (Ones et al., 2003). Ones et al. (2003) confirmed the tests are valid predictor across organizations and jobs for overall job performance as previously stated, but they discovered they have limited validity for some counterproductive behaviors and ‘composites of counterproductive behaviors.’ They also argued overt integrity tests, in general, are better predictors of job performance than the narrow criterion of theft which they were designed to detect.

Van Iddekinge et al. (2012) conducted an updated meta-analysis of Ones et al. (1993). Van Iddekinge et al. (2012) expressed concerns regarding some the methods and results of the Ones et al. (1993) study. Specifically, they found only 10% of Ones et al.’s (1993) data were from studies published in professional journals. Test publishers authored several studies used in the Ones et al. (1993) meta-analysis. This raised concern about the over-reliance on self-reports, the vested interests of the test publishers, and conflicts of interest with sponsored research. Van Iddekinge et al. (2112) was not able to obtain copies of the same tests for their study. The resulting analysis by Van Iddekinge et al. (2012) of the criterion-related validity revealed overt and personality-based integrity tests have validity rates in all areas that are much lower than

reported in Ones et al (1993) and Ones et al. (2003). They discovered the operational validity rates for deviant behaviors ranged from .06 to .27 instead of in the .30's (see Table 5).

Table 5. *Summaries of Validity of Integrity Tests*

*Meta-Analytic Estimates of Integrity Test Criterion-Related Validity for Job Performance and Training Performance*

Criterion/analysis	<i>k</i>	<i>N</i>	<i>r</i>	<i>p</i>	<i>SD<sub>p</sub></i>	% VE	90% CI	80% CV
<b>Job performance</b>								
Overall	74	13,706	.13	.18	.08	55.4	.15, .20	.07, .28
Without criteria that included CWB	63	11,955	.12	.15	.07	61.1	.13, .18	.06, .25
<b>Type of integrity test<sup>a</sup></b>								
Overt	18	2,213	.10	.14	.13	46.4	.07, .21	-.03, .30
Without influential case <sup>b</sup>	17	1,891	.08	.11	.11	56.0	.04, .17	-.04, .25
Personality-based	60	12,017	.14	.18	.07	64.1	.16, .21	.09, .27
<b>Study design<sup>c</sup></b>								
Concurrent	38	4,586	.16	.19	.09	60.4	.16, .24	.07, .32
Predictive	32	8,608	.12	.17	.09	49.9	.13, .20	.06, .27
<b>Study sample<sup>d</sup></b>								
Incumbents	47	6,191	.16	.20	.08	65.8	.17, .23	.10, .31
Applicants	24	7,104	.11	.15	.09	44.9	.11, .19	.04, .26
<b>Performance construct</b>								
Task performance	13	1,464	.13	.16	.00	100.0	.12, .21	.16, .16
Contextual performance	8	799	.11	.14	.00	100.0	.07, .22	.14, .14
<b>Author affiliation</b>								
<b>Test publishers</b>								
Computed validity	45	5,946	.17	.21	.09	60.3	.18, .25	.09, .33
Reported validity	45	5,946	.22	.27	.13	43.3	.23, .31	.10, .44
<b>Non-publishers</b>								
Overall	25	3,247	.09	.12	.10	56.1	.07, .17	-.01, .25
Developed integrity test	7	798	.15	.20	.09	66.8	.10, .29	.08, .31
Did not develop integrity test	18	2,449	.07	.10	.09	58.4	.04, .15	-.02, .22
Publishers and non-publishers	4	4,513	.12	.17	.00	100.0	.15, .18	.17, .17
<b>Publication status</b>								
Published studies	25	3,533	.12	.15	.10	53.4	.10, .20	.02, .28
Unpublished studies	49	10,173	.14	.18	.08	57.8	.16, .21	.09, .28
<b>Type of criterion<sup>e</sup></b>								
Ratings of performance	73	13,517	.13	.18	.09	53.6	.15, .20	.06, .29
Productivity records	6	799	.15	.15	.06	54.7	.07, .22	.05, .25
<b>Training performance</b>								
Overall	8	1,530	.13	.16	.09	40.2	.08, .23	.05, .28
Grades	5	824	.20	.23	.03	91.7	.16, .29	.19, .26
Instructor ratings	3	706	.05	.06	.07	61.3	-.05, .17	-.03, .15

Van Iddekinge et al. (2012)

### ***II.5.5 Contrast Groups and Integrity Tests***

O'Bannon et al. (1989) examined previous admission studies specifically for consistency of validity criteria. Although their sample was small, they found most admission studies used contrast groups to validate their study findings. They also found overt integrity tests with theft admissions consistently yielded higher validity coefficients than personality-based integrity tests.

Although validity rates were found to be higher with admission studies, O'Bannon et al. (1989) raised a number of concerns regarding how theft admissions may influence validity rates:

- Admissions may inflate validity coefficients;
- Individual personalities and admission criteria may influence the willingness to disclose past deviant behavior;
- While past behavior is often a good indicator of future behavior, it may not be suitable for all job applicants, i.e. inexperienced, young, etc.

Despite these concerns, Jones (1991) found the utilization of a contrast group design added support to the validation of the pre-employment tests. The purpose of a contrasting group study is to demonstrate that the groups, which are assumed to differ in integrity, yield mean differences in test scores. An examination of the mean score differences of a contrasting group could be a sound measure of the construct validity of integrity tests (Ones et al., 1993). According to Ones et al. (1993), if the integrity test is a sound measure of integrity, significant differences should be found between the contrasting groups. Miners and Capps (1996) suggested WC criminals should be considered as a contrast group in validation studies for integrity tests.

### ***II.5.6 Faking Honesty***

Donovan, Dwight, and Hurtz (2003) found that faking honesty occurred more often when applicants believed their dishonest responses could not be verified. A number of studies have compared personality-based integrity tests to overt-integrity tests and found overt-integrity tests were easier to fake due to the direct nature of the test items (see Alliger & Dwight, 2000; Berry et al., 2007; Lo Bello & Sims, 1993; Ryan & Sackett, 1987; for further discussion). Murphy (1989) found that faking honesty affected the reliability of integrity tests. The false negative



error occurs when dishonest individuals are assessed as having integrity. This can be the result of faking “good” on integrity tests. Studies have demonstrated that job applicants may modify responses and fake honesty to improve their chances of obtaining employment (Anderson, Warner, & Spencer, 1984; Barrick & Mount, 1991; Coyne & Bartram, 2002; Goldstein, 1971; Rosse, Stecher, Miller, & Levin, 1998).

Martin (1989) examined the failure rates provided by test publishers to determine the rate of false positives. Martin (1989) found pre-employment tests had failure rates of 40%. The failure rates were higher for integrity tests (44%) than for some personality tests (30%) on average, noting that nearly 50% of all individuals would be improperly classified as a result of pre-employment tests. Coyne and Bartram (2002) further explored this issue in their review of integrity test literature. They found individuals were able to “fake” honesty when tested. Pre-employment tests may actually reduce the number of honest applicants that are added to the job pool and simultaneously expose organizations to a higher number of applicants prone to deviant behaviors (Coyne & Bartram, 2002; Martin, 1989). As a result, Coyne and Bartram (2002) recommended test makers adopt additional control measures to limit the faking of honesty.

*False positives* are defined as incorrectly labeling individuals as dishonest (Camara & Schneider, 1994). The U.S. Congress Office of Technology Assessment (OTA) conducted a two-year study of integrity tests (US Congress, 1990). The OTA found 95.6% of integrity test takers who failed were incorrectly labeled as dishonest (US Congress, 1990). Although the OTA study has been criticized for only examining studies with actual theft and not a broad base of studies (Camara & Schneider, 1994; Rieke & Guastello, 1995), high rates of false positives have plagued pre-employment tests for years (Rieke & Guastello, 1995). To control for the higher

probability of false positives and faking honesty, a contrast group of WC inmates and a controlled environment, the federal prison, was utilized in this study.

### *II.5.7 Legality of Integrity Tests*

Coyne and Bartram (2002) noted that Arnold (1991), Murphy (1993), Sackett (1994), and Whitney, Diaz, Mineghino, and Powers, (1999) expressed concern regarding the fairness and privacy of integrity tests. In their study, Coyne and Bartram (2002) found that when compared to integrity tests, there is a relative lack of research concerning the fairness of interviews, biodata, references, and the polygraph. Fairness concerns relate to the exploitation, abuse, and discrimination against applicants regarding tests recommendations (Coyne & Bartram, 2002). Specifically, concerns have been raised within the literature regarding labeling of individuals who “fail” as dishonest. Another area of concern is privacy and employers’ invasion into the personal lives of job applicants.

Currently, the use of integrity tests does not violate the 1988 Employee Polygraph Protection Act. This was designed to protect individuals from widespread mislabeling and barring from the workforce (Sackett & Wanek, 1996). While Massachusetts bans the use of integrity tests and Rhode Island prohibits use of integrity tests as the sole basis for employment decisions, all other states allow integrity testing (Camara & Schneider, 1994). Brody (2010) found employers could use integrity tests as long as they did not disproportionately disqualify minorities, which violates Title VII of the Civil Rights Act. Nevertheless, as argued by Coyne and Bartram (2002), all parties, companies, and prospective employees, would be best served by using several pre-employment screens rather than only the integrity test in the pre-employment process. Brody (2010) asserts that integrity tests are actually more appropriate when they are related to a candidate’s job performance rather than as a pre-employment screen.\*\*\*

## **II.6 White-collar Criminals**

### ***II.6.1 Criminal Thinking***

WC criminals have been found to share some of the same traits (exploitativeness, remorselessness, psychopathy) as other criminals (Hare, 1999a). WC criminals rationalize their behaviors in a way similar to street criminals (Dhami, 2007). Criminal thinking refers to the pattern of thinking observed when a person justifies and rationalizes his or her norm-violating behavior by focusing on a social injustice to minimize the seriousness of the acts or by projecting blame onto the victims of the crime (Walters, 1995). According to Perri (2011), the thinking patterns and behaviors of WC criminals become so much a part of their character that they are no longer able to view the fraud as a crime. They view the fraud as beneficial to the organization. While criminal thinking is essential to the understanding of WC criminal behavior, Walters and Geyer (2004) found that first time WC offenders were less inclined to endorse criminal thinking patterns, identify with other criminals, and exhibit signs of a criminal lifestyle than repeat offenders. Criminal thinking is one facet of the overall pattern of behavior within WCC.

### ***II.6.2 Personality and White-collar Criminals***

Weisburd and Waring (2001) found WC offenders to be significantly different in many aspects from common street offenders and non-offenders. To better understand these differences, criminologists have explored the relationships between genetic, economic, social, and decision-making situations. Listwan, Piquero, and Van Voorhis (2010) found that early correctional research often directly tied personality to the deviant behaviors only for the classifications and treatment of offenders as opposed to the purpose of determining the causality of the criminal behavior. According to Listwan et al. (2010), strides have been made to incorporate personality

traits into understanding general criminology, but there remains a gap in understanding the difference between white-collar offenders and street offenders.

Collin and Schmidt (1993) measured the personality differences between convicted WC criminals and non-offending, upper-level employees. They used a personality-based integrity test, the California Psychological Inventory, and a biodata scale to detect differences in personality traits and honesty. Based on a sample of 365 inmates and 344 employees, Collin and Schmidt (1993) found large psychological differences between WC inmates and upper-level employees. WC inmates were found to have lower levels of Conscientiousness, Responsibility, and Socialization (Collins & Schmidt, 1993), suggesting that WC inmates have a stronger inclination to be risk-takers, opportunistic, manipulative and unethical than the upper-level employees. Collin and Schmidt (1993) further described the WCC inmates as self-reliant, irresponsible, and undependable. They found this combination to be indicative of serious future problems for the individual, including personal and financial difficulties (Collins & Schmidt, 1993).

Blickle, Schlegel, Fassbender, and Klein (2006) expanded on the Collin and Schmidt (1993) study. They measured the personality differences between convicted WC criminals and non-offending, upper-level employees. When the Blickle et al. (2006) study was implemented in Germany, there was not a German integrity scale or subclinical narcissism scale available. Therefore, they used alternative behavioral scales to measure the personality traits and honesty instead of a personality-based integrity tests as used by Collin and Schmidt (1993).

Blickle et al. (2006) found significant differences in personality traits of WC criminals and upper-level employees. Collins and Schmidt (1993) found WC inmates were often negatively associated with the dimensions of Socialization and Responsibility. This is

characterized by the tendency to be undependable, self-centered, manipulative, opportunistic, and risk takers. Blickle et al. (2006) found WC inmates demonstrated similar characteristics: seeking higher amounts of pleasure, exhibiting lower degrees of self-control, and having greater difficulty in resisting temptation. These same traits have been associated with the high Emotional Stability and low Agreeableness (McCrae & Costa, 2010). In addition, they found low levels of Integrity and high levels of Narcissism in WC criminals.

Unlike Collin and Schmidt (1993), Blickle et al. (2006) found WC criminals had high levels of Conscientiousness, although these differences in findings may be attributed to differences in population sample and study methods. The Collin and Schmidt (1993) study was conducted in prison, face-to-face. Each participant was supervised during the testing process to limit errors. In contrast, and as noted by Blickle et al. (2006), the German Federal Office of Criminal Investigation selected inmates to be included in the study. Participants subsequently received a questionnaire in the mail, completed the questionnaire, and returned it by mail. There was no direct contact with the participants or supervision provided by the researcher. The sampling differences between the two studies, the inability to validate who actually responded to the questionnaire and lack of verification that the respondent fit the target population in the Blickle et al (2006) study does raise some very practical and methodological concerns. Despite these concerns, this study remains one of the few studies that have attempted to study integrity tests within the target WC population. It is for this reason and the difficulty of studying this population that it continues to be cited despite these limitations.

### ***II.6.3 Psychopathy and White-collar Criminals***

According to Gough (1948), a continuum of socialization extends from individuals with traits of superior trustworthiness, high morality and rule compliance at one pole to those who are

deviant and hostile to societal rules at the other end. This continuum has been foundational to the research of deviant behaviors and integrity (Ones et al., 1993). Individuals on one extreme with stable personality traits such as manipulative, superficial charm, lack of remorse, deceitful, and shallow are characterized as psychopaths (Cleckley, 1941). Cleckley (1941) proposed psychopathy is based on a combination of sixteen core personality traits.

Gough (1948) found the concept of psychopathy related to “asocial” behavior. He found psychopaths have an inability to observe one’s self as an object or to associate him or herself with another's point of view. The psychopath lacks the ability to predict the consequences of his behavior. This is the result of an inability to evaluate his own behavior from another perspective (Gough, 1948).

Hare (1999b) revised Cleckley’s (1941) psychopathic model and developed a clinical psychometric test for psychopathy, PCL-R. The PCL-R measures both personality traits and behaviors related to psychopathy. The PCL-R is based on the following twenty common personality traits (Table 6):

Table 6. *Common Personality Traits of Psychopathy*

1. Glibness/superficial charm
2. Grandiose sense of self-worth
3. Need for stimulation
4. Pathological lying
5. Conning/manipulative
6. Lack of remorse or guilt
7. Shallow affect
8. Callous/lack of empathy

9. Parasitic lifestyle
10. Poor behavioral controls
11. Promiscuous sexual behavior
12. Early behavior problems
13. Lack of realistic goals
14. Impulsivity
15. Irresponsibility
16. Failure to accept responsibility
17. Many short-term relationships
18. Juvenile delinquency
19. Revocation of conditional release
20. Criminal versatility

Hare (1999a)

Psychopathic traits have also been identified as fraud risks (Boddy, 2006; Hare, 1999a; Ray, 2007 as cited in Perri, 2011). Perri (2011) argued that research supports the fact that WC offenders may demonstrate psychopathic traits as well as other anti-social personality traits such as Narcissism. Scherer, Baysinger, Zolynsky, and LeBreton (2013) differentiated between types of psychopaths. Clinical psychopaths are unable to maintain work, family, or social relationships (Hare, 1996). Sub-clinical psychopaths function at a lower capacity but the disorder does not negatively affect their relationships and judgment (LeBreton, Binning, & Adorno, 2006).

Some researchers have argued that psychopathy can be understood within the FFM framework as a mixture of high Extraversion, low Agreeableness and Conscientiousness, and a combination of low and high Emotional Stability/Neuroticism, including low anxiety,

depression, vulnerability to stress, and self-consciousness (Lynam, 2002; Miller, Lynam, Widiger, & Leukefeld, 2001; Widiger & Lynam, 1998). Other researchers, such as Williams and Paulhus (2004) and Jones and Hare (2015), have found contrary results. Williams and Paulhus (2004) found psychopathy shares some similar traits with drug abuse, violent assault, and bullying, but not WCC.

Jones and Hare (2015) studied destructive personalities such as Machiavellianism, psychopathy, and clinical narcissism (or the “Dark Triad”) has resulted in the utilization of short personality tests and psychopathic tests not developed and validated for maladaptive behaviors in an effort to limit and detect organizational risk. They argued that although Machiavellianism, psychopathy, and clinical narcissism share similar traits, they are separate and distinguishable clinical disorders. They also argued many employees, if not most, do not have clinical disorders (Jones & Hare, 2015). Because these are compound disorders and difficult to diagnose, a clinical psychometric test administered by an individual with advanced academic training in psychological testing and interpretation is required (Jones & Hare, 2015). Mislabeling individuals with these disorders based on misuse of an inadequate test, places individuals at high risk for termination, counseling, or disciplinary action (Jones & Hare, 2015).

While the concept of psychopathy is related to personality disorders and linked to WCC, clinical level impairments and other personality disorders are best identified with instruments designed for clinical diagnoses such as the Minnesota Multiphasic Personality Inventory (MMPI) or PCL-R (Jones & Hare, 2015; Perri, 2011; Scherer et al., 2013). This study uses the FFM framework that is not designed for compound and clinical diagnosis (see the previous discussion on FFM). Therefore, clinical personality disorder diagnoses are beyond the scope of this study.



#### *II.6.4 Narcissism in White-collar Criminals*

Sumanth and Cable (2011) examined how status and perception of organizational status affect the hiring process. Individual status builds on the theory that employee perceptions mediate deviant behaviors. Sumanth and Cable (2011) sampled 435 upper-level employees to determine the extent that employees demonstrated the behaviors such as self-aggrandizement and self-sufficiency. They found upper level employees demonstrated self-esteem, self-efficacy, Neuroticism, and locus of control more often when they perceived higher levels of individual status. The performance of upper-level employees was highly sensitive to changes in self-enhancement opportunities they perceived would bring about self-glorification and provide opportunities for admiration from others (Amernic & Craig, 2010). These behaviors were reflective of trait Narcissism, according to Sumanth and Cable (2011). Narcissism is defined as "self-admiration that is characterized by tendencies toward grandiose ideas, fantasized talents, exhibitionism, and defensiveness in response to criticism; interpersonal relationships are characterized by feelings of entitlement, exploitativeness, and a lack of empathy" (Raskin & Terry, 1988, p. 896).

Currently, there are more than 50 distinct labels used to describe the variability in pathological narcissism or clinical narcissism (Pincus & Lukowitsky, 2010). Clinical narcissism is a maladaptive disorder. Trait Narcissism or subclinical Narcissism, as opposed to clinical Narcissism, is considered a stable personality characteristic that serves as a self-regulatory mechanism in adults (Johnson, Kuhn Jr, Apostolou, & Hassell, 2012). Only recently has trait Narcissism been explored as a link to fraudulent behavior and fraud risk (Johnson et al, 2012). Because clinical narcissism is a maladaptive disorder and best diagnosed with a psychometric test designed for compound disorders, only trait Narcissism is explored in this study.

The core aspects of Narcissism have been described to be the themes of grandiosity and vulnerability (Pincus & Lukowitsky, 2010). When Narcissistic levels are elevated, an individual's sense of importance and belief in his abilities (grandiosity) increase, as well as the need for constant reinforcement from others (Johnson et al, 2012; Perri & Brody, 2011). Maccoby (2000) argued that many effective corporate leaders exhibit Narcissistic traits. For example, they take risks other executives might avoid, lack empathy, or cannot handle criticism (Maccoby, 2000). At the same time, high levels of Narcissistic traits have been associated with low levels of Integrity and have been found to lead to unethical behavior (Johnson et al, 2012).

Blickle et al. (2006) found that WC inmates had higher levels of Narcissism than non-WC. Similarly, Hare (1999a) found WC criminals tend to exhibit Narcissistic traits. Grijalva and Newman (2014) found trait Narcissism to be a stronger predictor of deviant behavior than Emotional Stability, Agreeableness, and Conscientiousness.

High levels of trait Narcissism have been associated with hostility, displaced blame, and antagonism (Rhodewalt & Morf, 1995). Rhodewalt and Morf (1995) found higher levels of trait Narcissism were associated with individuals who were more agreeable and more emotionally stable than low scorers were. These have been found to be markers indicative of individuals likely to commit deviant behaviors.

## **II.7 Summary**

In summary, personality traits have been found to play a key role in deviant behavior and fraud (Blickle et al., 2006; Collin & Schmidt, 1993; Greitzer et al., 2010; Henle & Gross, 2013; Ones et al., 2003; Salgado, 2002). FFM has provided a meaningful taxonomy for studying individual differences in personality. Three of the five personality dimensions, Emotional Stability/Neuroticism, Agreeableness, and Conscientiousness, have consistently demonstrated a

direct relationship to deviant work behaviors (Barrick et al., 2001; Berry et al., 2007; Mount et al., 2006; Ones, 1993; Ones et al., 2003; Sackett & Devore, 2001; Salgado, 2002). Within research, Conscientiousness has demonstrated the strongest predictive relationship, although there is debate over the appropriate level that is indicative of predictive WC behaviors. Studies such as Blickle et al. (2006), Brody, Melendy, & Perri, (2012), Collin and Schmidt (1993), Greitzer, Kangas, Noonan, and Dalton, (2010), Ones et al. (1993), and Ones et al. (2003) suggest that individual differences in personality traits can be used to help limit at risk hires during the pre-employment phase, thereby reducing the risk of deviant behaviors.

Therefore, the following behavioral relationships are proposed:

*Proposition 1:* Convicted white-collar criminals will demonstrate high levels of Emotional Stability/Neuroticism;

*Proposition 2:* Convicted white-collar criminals will demonstrate low levels of Agreeableness;

*Proposition 3:* Convicted white-collar criminals will demonstrate low levels of Conscientiousness.

Brody (2010) found integrity tests provide insights about an applicant's character. Integrity tests are the most commonly used pre-employment instruments (O'Bannon et al., 1989). There are two main types of integrity tests: "overt" and "personality-based" (Sackett et al., 1989). Overt-integrity tests are designed to assess admissions of historical theft and attitudes regarding theft or other deviant behaviors and illegal activities (Ones et al., 1993; Sackett, Burriss, & Callahan, 1989). The extant research suggests that the best way to measure theft is with overt integrity tests (Ones et al., 1993; Sackett et al., 1989). Faking honesty, mislabeling, and validation remain problems for personality-based and overt integrity tests (Camara & Schneider, 1994; Rieke & Guastello, 1995; Van Iddekinge et al., 2012). Both Blickle et al. (2006) and Collin and Schmidt (1993) found the best way to measure the differences between WC criminals

and non-WC criminals was with contrast groups and overt integrity tests. To further explore the relationship between WCC and pre-employment tests, a contrast group and overt integrity tests were selected for use in this study described here. Specifically, the WINT overt integrity test was selected.

Therefore, the following behavioral relationships are proposed:

*Proposition 4:* Convicted white-collar criminals will demonstrate low levels of Integrity;

*Proposition 5:* Overt-integrity tests will present a stronger indication for the propensity of deviant behaviors than personality-based tests.

Trait Narcissism is considered a stable personality characteristic that serves as a self-regulatory mechanism in adults (Johnson, Kuhn Jr, Apostolou, & Hassell, 2012). Blickle et al. (2006) and Hare (1999b) found that WC inmates had higher levels of trait Narcissism than non-WC. Grijalva and Newman (2014) found trait Narcissism to be a stronger predictor of deviant behavior than Emotional Stability, Agreeableness, and Conscientiousness.

Therefore, the following behavioral relationship is proposed:

*Proposition 6:* Convicted white-collar criminals will demonstrate higher levels of Narcissism.

The design of this study intended to test these six propositions is presented in Chapter III.

### **III CHAPTER III: STUDY DESIGN**

#### **III.1 Research Model and Setting**

This study draws on the research constructs of deviant behaviors, personality traits, Narcissism, and Integrity presented within the literature. The relationships between deviant behaviors and personality traits, deviant behaviors and Narcissism, and deviant behaviors and Integrity suggest the need for further exploration. As a result, this study empirically tests the efficacy of pre-employment tests to elicit a profile of predictive indicators of WC deviant behaviors from within a population of WC inmates as compared to the general population as purported by the test publishers. The usefulness of this study is derived from studies such as Blickle et al. (2006), Collin and Schmidt (1993), Greitzer et al. (2010), Ones et al. (1993; 2003), and Sackett et al. (1989), which have proposed (1) that WC criminals will have a personality and behavioral traits unique to WC inmates; (2) predictive personality and behavioral traits can be identified utilizing pre-employment tests; (3) predictive personality and behavioral traits can be utilized to limit at-risk hires; and (4) overt-integrity tests can be manipulated to fake honesty.

#### **III.2 Instruments and Questionnaire**

##### **Method**

This study examined the efficacy of pre-employment tests to identify relationships among deviant behaviors. It was an exploratory study, utilizing quantitative methods, to examine the efficacy of pre-employment tests as correlated and measured against a known deviant population of WC inmates. The study was conducted in two federal prison camps located in the eastern United States.

### **III.3 Study Participants**

#### ***III.3.1 Sample Selection***

Blickle et al. (2006) and Collin and Schmidt (1993) conducted comparative studies that included convicted WC criminals in prison. Collin and Schmidt (1993) found that criminals who held high-level white-collar positions in business presented profiles that varied from other WC inmates. Blickle et al. (2006) found fraudulent behavior was directly related to an individual's personality traits. Blickle et al. (2006) also found WC inmates presented different personality profiles when compared to non-criminal organizational managers. Building off the studies of Blickle et al. (2006) and Collin and Schmidt (1993), this study will compare the profiles of a population of WC inmates within the federal prison system with the profiles of the general population as provided by the test publishers. Participation in the study was confidential.

#### ***III.3.2 Recruitment***

Arrangements, contacts, and permissions for this study were made directly through the chief psychologist and warden associated with each federal prison and the Federal Bureau of Prison Research. Official permission to commence with this project was granted by the Georgia State University Office of Human Research, the Federal Bureau of Prison Research Review Board, both wardens, both chief psychologists, and the regional director of prisons. Participants were contacted through a flyer at the participating federal prisons. Flyers were posted in common areas throughout the prisons for two weeks prior to conducting the study. The flyer explained the general purpose and significance of the research, encouraged participation, and informed the inmates of the date and time of the study. It also stated that all participation and results would be confidential. The results would be reported only in summary form. There were no personal

inducements or rewards given for participation. On the day of the study, an informational meeting was held by the principal investigator to explain the general purpose of the study and allow inmates to ask questions. This was done to increase participation in the study. Those volunteering and accepted for participation in the study had to (a) be currently serving time in the Federal Prison system for (b) a WC offense, and (c) had to choose to voluntarily partake in this study.

### ***III.3.3 Tests***

Participants were assessed on the following instruments:

- Pre-employment tests
  - Integrity Test (WINT)
  - NEO-FFI-3 Personality Inventory
  - Narcissistic Personality Inventory (NPI)
- Study instruments
  - Demographic Questionnaire
  - Fraud Motive Assessment

These tests asked a series of questions designed to discern the participants’ opinions, personality, and integrity.

Table 7. *Completion Rate of Instruments*

Completion Rate	<i>N</i> = 20
Demographic Assessment	100 %
Integrity Test (WINT)	100 %
NEO-FFI-3 Personality Inventory	100 %

Narcissistic Personality Inventory (NPI)	100 %
Fraud Motive Assessment (optional)	80% (16 of 20)

---

Inmates were first presented with the demographic questionnaire. This form took approximately five minutes to complete. The purpose of the demographic questionnaire was to gather background information about the inmate, number of prior crimes committed, type of convictions, nature of convictions, and the violent or non-violent nature of those crimes, and to validate membership in the target population for this study. Although the population may appear to be a homogenous group of WC inmates, many factors may create variability within this population of interest. The personality inventory and the narcissism scale may enable identification of personality differences. The demographic questionnaire provided the ability to examine other differences in the inmates' personal background and the potential effect of these factors on the predictive indicators of WCC.

This study explored the specific relationship between WCC and pre-employment tests; therefore, it was relevant to use a test that directly measures theft. For this purpose, an overt integrity test was selected for this study, the Work Integrity Test (WINT) by ARCH Profiles (2012). It combined five component scores: lenient attitude towards dishonest behavior, perceived frequency of dishonest behavior, rationalizing of dishonest behavior, self-reported dishonesty, and social desirability into a total Integrity score (Arch Profiles, n.d.). The mean general population total integrity test score for the WINT is 69.65 ( $SD = 16.51$ ) (Arch Profiles, 2012). The standard WINT test scores range from 0 to 100. Scores greater than 40 generally indicate a potential for dishonest behavior. Scores greater than 80 generally indicate a strong potential for dishonest behavior (Arch Profiles, 2012). High scorers do not feel dishonest behavior should be punished, few people are honest, and dishonesty can be justified, and are



more likely to engage in dishonest behavior (Arch Profile, n.d.). Low scorers support punishing dishonest behavior, think people are fundamentally good, and dishonesty cannot be justified, and are less likely to engage in dishonest behavior (Arch Profile, n.d.). The WINT contains transparent questions directly related to theft. Theft admission has been found to increase the probability of assessing the behavior of interest, fraud.

Upon completion of the demographic questionnaire, participants were presented with the WINT. The WINT is a 59-question self-assessment and situational questionnaire. The WINT provided supplemental information on an individual's potential for dishonest behavior in the work environment. Participants were asked to rate the likelihood that they have or would engage in various scenarios or deviant behaviors proposed. The approximate time to complete was 30 minutes. Answers to the pre-employment instrument WINT were manually entered into the psychometric test provider website. This is a secure website site certified for pre-employment testing. The test provider electronically scored these tests. Both the raw and summary data were provided to the principal investigator for research.

Participants were presented with the WINT as the second assessment for the following reasons: it is the longest of the three psychometric tests presented in this battery; and, secondly, it is a key test in identifying deviant behaviors and study variables. Therefore, if participants chose to drop out of the study after completing only one test, the data collected from the integrity test would be of the greatest interest, hence the decision to give this test immediately following the demographic questionnaire.

The NEO-FFI-3 was the third instrument presented to participants. This is a 60-item abbreviated version of the NEO-PI-3 personality test (Costa, Jr, & McCrae, 2013). Use of the NEO-FFI-3 personality inventory is well known and widely used in research and pre-

employment screening (Greitzer et al., 2010; Judge et al., 2002; McCrae, Costa, Jr, & Martin, 2005; McCrae & John, 1992). The NEO-FFI-3 personality inventory utilizes questions directly from the NEO-PI-3 240-item questionnaire (Costa, Jr, & McCrae, 2013). Both tests use specific personality traits within each of the five basic personality dimensions, including Neuroticism (N) or Emotional Stability (ES), Extraversion (E), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O) (McCrae, Costa, Jr, & Martin, 2005) , to create a base level profile of the participant (Costa, Jr, & McCrae, 2013). The benefit of the NEO-FFI-3 over the NEO-PI-3 is the time it takes to administer the test that is considerably shorter. The NEO-FFI-3 took approximately 10 minutes and did not compromise external validity or reliability when compared to the NEO-PI-3 (Costa, Jr, & McCrae, 2013).

Both the NEO-FFI-3 and the NPI are utilized to measure personality trait differences within the study population. Both are valid indicators of trait distributions within the normal range as opposed to non-normal distributions associated with maladaptive behaviors and clinical diagnoses. Although the NEO-FFI-3 is the second longest test, it has the largest correlation of information with deviant behavior and counterproductive work behavior. Hence, the decision to present the NEO-FFI-3 third.

The Narcissistic Personality Inventory (NPI) is a 40-item, forced-choice questionnaire designed to measure individual differences in Narcissism as a personality trait. It was presented next. The NPI is designed to measure "normal" (trait) Narcissism, not clinical Narcissism (Rhodewalt & Morf, 1995). The NPI combines the seven component scores for authority, exhibitionism, superiority, entitlement, exploitativeness, self-sufficiency, and vanity into one overall Narcissism score (Raskin & Terry, 1988). The mean Narcissism score for the NPI is 15.55 ( $SD = 6.66$ ) (Raskin & Terry, 1988). While there is not a recognized cutoff point between

“normal” and “excessive” or “subclinical” for trait Narcissism (Johnson et al., 2012), the most widely used cutoffs for both men and women are (low  $\leq 14$  NPI;  $\geq 20$  = high NPI) (Emmons, 1984; Rhodewalt & Morf, 1998).

Raskin and Terry (1988) correlated the results of the NPI with the Institute of Personality Assessment and Research (IPAR)’s criterion variables for over 100 trait and behavior rankings. The IPAR sample found high NPI scorers to be relatively dominant, extraverted, exhibitionistic, aggressive, impulsive, self-centered, subjectively self-satisfied, self-indulgent, and nonconforming. The results of their studies supported the construct validity of the NPI and its component scales (Raskin & Terry, 1988). Scores range from 0 to 40. Responses are measured on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). The NPI was presented fourth and took approximately five minutes to complete.

Following the completion of the pre-employment instruments, participants were asked to fill out the Fraud Motive Assessment. The purpose of this instrument was to gather participants’ opinions and perspectives in relation to their current conviction for WCC and how to better prevent WCC. The Fraud Motive Assessment was an optional, fill-in-the-blank document for inmates who chose to participate. There were 12 open-ended questions. All 20 participants were presented with the Fraud Motive Assessment to review. Sixteen completed the instrument (Table 9). Four returned the form blank. On average, it took approximately 15 minutes to complete.

The psychometric profiles created, along with individual responses to the demographic questionnaire and Fraud Motive Assessment, were used to assess the efficacy of the pre-employment tests and the relationships between deviant behavior and the proposed study variables.

### **III.4 Study Procedures**

Participants were given a brief introduction to the research study, general directions, and an informed consent form. The general directions instructed participants to complete the instruments according to the individual instrument instructions and in the order presented. Participants received and completed all study material under the supervision of the principal investigator. Each participant was assigned an individual identification number to be used on the demographic questionnaire, all three pre-employment instruments and the Fraud Motive Assessment. This number was for internal tracking purposes only as no other identifying information was associated with these instruments.

All instruments were administered via pencil and paper, on site, within each federal prison camp. The testing time for the pre-employment tests and demographic test varied from five minutes to thirty minutes for each individual test. Total time to conduct the study took approximately sixty minutes. At the conclusion of the pre-employment testing phase, all inmates were given the opportunity to complete the optional Fraud Motive Assessment. This is a pencil and paper fill-in-the-blank questionnaire. The Fraud Motive Assessment took approximately fifteen minutes to complete. The total number of participants was 20. No incentive was offered for participation. Participation was voluntary and confidential. No participants dropped out of the study (Table 9). All tests and questionnaires were in English.

## **IV CHAPTER IV: RESULTS**

### **IV.1 Data Analysis**

The completed pre-employment instruments were analyzed. The means, standard deviations and correlations of the study variables were analyzed in order to draw conclusions about the efficacy of these instruments' ability to identify indicators of WCC. The Fisher Exact Test method was employed to determine the statistical significance of data with regards to the research questions. Fisher Exact Test is a nonparametric statistical test that measures the difference, or goodness of fit, between two or more samples to determine if the difference in the distributions of the samples is due to chance or small sample sizes. T-tests and other nonparametric measures were also used to explore the relationships among the data. All of the data were compared to the general population on an individual participant level and as a whole, per instrument. This information was analyzed utilizing non-parametric tests within SPSS and Excel.

### **IV.2 Demographics**

The sample comprised 20 male WC inmates ( $N=20$ ). Demographic information revealed that 18 of the 20 participants were age 40 or older and 11 were over the age of 54, resulting in mean age of 52.2 years (Table 8). At the time of their crime, 17 were employed full time in a position of trust, such as owner (12) or upper management (3). The majority were college educated holding either a bachelor's degree (8) or graduate degree (6) (Table 8). Fourteen (70%) were considered "first time offenders." This is slightly lower than the ACFE's purported 85%. Of the six prior offenses cited, five were WC offenses. The sixth was an unrelated non-violent offense. No participant reported convictions for violent offenses, past or present (Table 8). Bank fraud, conspiracy, tax crimes, and wire fraud were the most common convictions. Note, while only 20 inmates participated in this study, some were convicted of multiple WC crimes.

Therefore, there are more WC crimes reported than participants. In addition, 2 of 20 or 10% of the participants were convicted of committing frauds while external to the organization and 90% were convicted of frauds while internal to the organization (see Table 8).

Table 8. *Demographic Questionnaire Summary*

Age	N	Education	%	Position	N	Type	N	Priors	N
18-25	0	High school	2	Employee	0	Bank fraud	5	None	14
26-32	1	Some college	4	Upper mgmt	3	Bribery	1	Priors	6
33-39	1	College grad	8	Owner	12	Conspiracy	5	WCC	5
40-46	5	Graduate degree	6	CEO	2	Tax fraud	4	Violent	0
47-53	2			Board member	2	Mail fraud	3	Other	1
54+	11			Other	1	Wire fraud	5	External convictions	
						Other frauds	3	Bank fraud	1
								Other fraud	1
Totals	20		20		20		26		

### IV.3 Research Question Analysis

The propositions in this study are based on the behavioral relationships between deviant behavior and the study variables. Empirical support regarding the constructs and efficacy of the pre-employment tests with regards to WCC is dependent on the extent of predictive values measured in these variables: Emotional Stability/Neuroticism, Agreeableness, Conscientiousness, Narcissism, and Integrity.

This section will examine the data as they relate to the proposed propositions. Participation in this study was low; therefore, the sample size was small. As a result, non-parametric tests and other tests designed for small samples were used to analyze the data. Means, standard deviations, frequencies, *t*-tests, and correlations were used to evaluate the proposed relationships. The six propositions are summarized here:

*Proposition 1:* Convicted white-collar criminals will demonstrate high levels of Emotional Stability/Neuroticism;

*Proposition 2:* Convicted white-collar criminals will demonstrate low levels of Agreeableness;

*Proposition 3:* Convicted white-collar criminals will demonstrate low levels of Conscientiousness;

*Proposition 4:* Convicted white-collar criminals will demonstrate low levels of Integrity;

*Proposition 5:* Overt-integrity tests will present a stronger indication for the propensity of deviant behaviors than personality-based tests;

*Proposition 6:* Convicted white-collar criminals will demonstrate higher levels of Narcissism.

#### ***IV.3.1 Preliminary Comparison of WC to the General Population***

An independent *t*-test compared the scores from each of the three pre-employment tests to the general population scores provided by the test providers. The scores from the sample were compared to the general population average as measured by the test publishers. The *t*-scores, means, standard deviations, medians, range, and *N*'s are summarized in Table 9. Based on the research, it was expected that WC inmates would present profiles that were significantly different from the general population in all five areas tested. Of the five variables measured, Emotional Stability/ Neuroticism and Conscientiousness were significantly different from the general population at the  $p < .05$  and  $p < .10$  respectively. The WC population had lower than average level of Emotional Stability/ Neuroticism as opposed to the high levels proposed. In contrast, they presented higher than average levels of Conscientiousness as opposed to the low levels proposed.

As for Integrity, this population was expected to have a lower level of integrity than the general population. While it was lower, it was not significantly lower as expected. As a group,

these results suggest that WC criminals may have different behavioral profiles than the general population.

Table 9. *WC Inmates vs. General Population Statistics*

Pre-employment Instruments	Study					General Population			
	T-scores	M	SD	Median	Range	Sig	N	M	SD
NEO-FFI-3 (Personality Inventory)									
Emotional Stability/ Neuroticism	-2.295	<b>16.65</b>	8.087	17	3 - 34	.033	635	<b>20.8</b>	7.7
Agreeableness	.294	32.55	6.840	33	16 - 44	.772	635	32.1	6.0
Conscientiousness	1.848	<b>35.95</b>	8.351	37	17 - 47	.080	635	<b>32.5</b>	6.3
NPI (Narcissism)	-.539	14.65	7.050	11	6 - 29	.596	1018	15.5	6.66
									16.5
WINT (Integrity)	-.783	<b>67.25</b>	15.427	69	39 - 88	.443	1672	<b>69.95</b>	1

### ***IV.3.2 Propositions***

*Proposition 1: Convicted white-collar criminals will demonstrate higher levels of Emotional Stability/Neuroticism when compared to the general population.*

Four of the 20 WC inmates sampled demonstrated high levels of Emotional Stability/Neuroticism (“ES/N”, Table 10). A high score in Emotional Stability indicates individuals who may experience chronic negative effects and development of a variety of psychiatric disorders. However, eight inmates demonstrated low levels of Emotional



Stability/Neuroticism, or scores of less than 16. Low scorers are considered secure and emotionally stable, and able to handle stress. A significant portion of this population, 16 of 20, (Table 10) were within the normal or low ranges, lending support to the argument that deviant behaviors are voluntary (McCrae & Costa, 2010; Mount et al., 2006). The mean score ( $M=16.65$ ,  $SD=8.087$ ,  $t(19) = -2.295$ ,  $p = .033$ ) as compared to the general population average ( $M=20.8$ ,  $SD=7.7$ ,  $N=279$ ) (McCrae & Costa, 2010) (Table 9) for Emotional Stability/Neuroticism were significantly different from the general population. Also, the mean was not high as proposed (greater than 23), and at odds with the majority of the research literature. Due to the size of this sample, the median and range were also considered. The median of 17 was not significantly different from the general population mean. In addition, the frequency of inmates with this trait was low. Based on these findings, Proposition 1 lacked support.

Table 10. *Summary Findings of Pre-employment Tests*

<b>Recommend</b>	<b>Integrity score</b>	<b>Prior Convictions</b>	<b>ES/N</b>	<b>A</b>	<b>C</b>	<b>N</b>
Hire	<b>84</b>					
Hire	<b>83</b>	Priors	High			
Hire	<b>78</b>		High		Low	Narcissistic
Hire	<b>74</b>					
Hire	<b>74</b>					
Hire	<b>70</b>			Low		Narcissistic
Hire	<b>54</b>	Priors				Narcissistic
Hire	<b>50</b>	Priors				
Hire	<b>39</b>	Priors		Low		
Do not	<b>88</b>					

Do not	<b>86</b>					Narcissistic
Do not	<b>85</b>	Priors				
Do not	<b>84</b>			Low		Narcissistic
Do not	<b>68</b>					
Do not	<b>61</b>		High			
Do not	<b>58</b>				Low	
Do not	<b>58</b>	Priors	High		Low	Narcissistic
Do not	<b>56</b>					
Do not	<b>50</b>					
Do not	<b>45</b>					Narcissistic

*Proposition 2: Convicted white-collar criminals will demonstrate lower levels of Agreeableness when compared to the general population.*

Three of the 20 inmates sampled demonstrated low levels of Agreeableness (“A”, Table 10). The mean score was ( $M=32.55$ ,  $SD=6.840$ ,  $t(19) = .294$ ,  $p = .772$ ) compared to the general population average ( $M=32.1$ ,  $SD=6.0$ ,  $N=279$ ) (McCrae & Costa, 2010) (Table 9) for Agreeableness, it was not significantly different from the general population. It was also not low as was proposed (less than 27) given the majority of the research literature, where the mean for Agreeableness was higher 32.55. Due to the size of this sample, the median and range were also taken considered. The median of 33 was not significantly different from the general population mean. Nine of the 20 inmates demonstrated high levels of Agreeableness or scores greater than 33. However, a significant portion of this population, 17 of 20 (Table 10), scored within the normal or high ranges. This supports the argument that this trait may be correlated to rationalization of rule-breaking (Barrick & Mount, 1991; Cunningham, 1989). High scorers are considered good-natured, flexible, tolerant, and forgiving (McCrae & Costa, 2010). In addition,

individuals who are flexible and forgiving have been viewed as more dishonest by tests providers (Coyne & Bartram, 2002). Based on these findings, Proposition 2 lacked support.

*Proposition 3: Convicted white-collar criminals will demonstrate lower levels of Conscientiousness when compared to the general population.*

The mean score for Conscientiousness ( $M=35.95$ ,  $SD=8.351$ ,  $t(19) = 1.848$ ,  $p = .080$ ) compared to the general population average ( $M=32.5$ ,  $SD=6.3$ ,  $N=279$ ) (McCrae & Costa, 2010) (Table 9) was high, although not significantly higher compared to the general population at the .05 level, but the .10 level. Due to the size of this sample, the median and range were also considered. The median of 37 was significantly different ( $p = .000$ ,  $\alpha = .05$ ) from the general population mean. With small samples, those scoring on the extremes can significantly affect the mean score. A median score in this case may be more reflective of the true population mean. As for frequency, 12 participants demonstrated high levels (greater than 35) of Conscientiousness compared to three with low levels (less than 29), (“C”, Table 10) as proposed within the majority of the research literature. Based on these findings, Proposition 3 lacked support.

High scorers of Conscientiousness are considered reliable, hard-working, and achievement-oriented. Low scorers are considered disorganized and easy-going (Barrick & Mount, 1991; McCrae & Costa, 2010). Based on their findings, Collin and Schmidt (1993) argued WC inmates are associated with lower levels of Conscientiousness while Blickle et al. (2006) argued that WC criminals have higher levels Conscientiousness. An equal variance  $t$ -test revealed a statistically reliable difference between the mean high scorers for Conscientiousness ( $M = 41.5$ ,  $SD = 4.295$ ) and the mean low scorers for Conscientiousness ( $M = 22.33$ ,  $SD = 4.725$ ,  $t(13) = -6.803$ ,  $p = .000$ ,  $\alpha = .05$ ). These findings lend support to Blickle et al.’s (2006) findings.

*Proposition 4: Convicted white-collar criminals will demonstrate lower levels of Integrity than when compared to the Integrity scores for the general population.*

Individual Integrity scores as calculated by test publishers of equal to or greater than 40 are indicative of potentially dishonest behavior. Integrity scores equal to or greater than 80 indicate a strong potential for dishonest behavior (Arch Profiles, 2012). Test providers make recommendations for hire based on the total Integrity score and other indicators. Low integrity scores should correlate with recommendations for hire and high scores should correlate with recommendations not to hire. Although, Sackett, Burris, and Callahan (1989) found integrity test recommendations for hire had significant correlations with deviant behaviors other than theft which they were designed to detect.

Individual Integrity scores within this sample range from 39 to 88 (see Table 10). A *t*-test failed to reveal a significant difference in the study mean for Integrity scores ( $M=67.25$ ,  $SD=15.427$ ,  $t(19) = -.696$ ,  $p = .495$ ) compared to the general population mean ( $M=69.95$ ,  $SD=16.51$ ,  $N=1672$ ) (ARCH Profiles, 2012) (Table 9). The median was also considered. The median of 69 was not significantly different from the general population mean. However, by subdividing the sample into groups, categorized by recommended for hire and not recommended for hire and comparing the groups means, a significant difference is revealed. The recommended for hire group ( $M=58.78$ ,  $SD=12.337$ ,  $t(8) = -3.745$ ,  $p = .006$ ) compared to the not recommended for hire group ( $M=74.18$ ,  $SD=14.593$ ,  $t(10) = 3.500$ ,  $p = .006$ ). Comparing the groups to the general population, a significant difference in the means was revealed for the recommended for hire group ( $M=58.78$ ,  $SD=12.337$ ,  $t(8) = -2.717$ ,  $p = .026$ ). The study mean for Integrity and the mean Integrity score for the recommendations for hire were found to be significantly correlated ( $r = .510$ ,  $p = .022$ ). These findings lend support to integrity test recommendations for hire related to

Integrity scores and to the supposition that WC inmates criminals demonstrate lower levels of Integrity. Based on these findings, Proposition 4 is supported. The findings should be explored further with a larger population to determine if the results are consistent.

*Proposition 5: Overt-integrity tests will present a stronger indication for the propensity of deviant behaviors than personality inventories.*

O'Bannon et al. (1989) and Sackett and Harris (1984) found integrity tests struggled with theft detection and theft admissions validation. Participants in this study were asked directly about the dollar value, commission, and age of most recent theft act (Table 11). All members of this sample were convicted WC inmates. Of the 20 participants, only 11 admitted to committing thefts as adults. Six admitted to additional prior convictions. One participant even claimed to have never committed any form of theft (Table 11).

Coyne and Bartram (2002) argued that individuals who were more honest were more often penalized by test providers. On the contrary, this study found six of the nine who admitted to recent thefts of \$1000 or more (Table 11) were recommended for hire. A significant correlation was found between the mean Integrity scores and prior convictions ( $r = .535$ ,  $p = .015$ ). Nine participants were recommended for hire and 11 were not recommended for hire (Table 11). Of the nine participants who were recommended for hire, four had prior WC convictions. A significant correlation was also found between the amount stolen and inclusion in the recommended for hire group even with prior convictions ( $r = .770$ ,  $p = .006$ ). The mean Integrity score was found to be a significantly correlated with the amount of money stolen ( $r = -.501$ ,  $p = .024$ ). Of the 11 not recommended for hire, only five admitted to recently committing acts of theft, three of which were greater than \$1000 (Table 11). A significant correlation was

found between recommendations for hire and Integrity scores and recency of theft acts ( $r = .510$ ,  $p = .022$ ).

Table 11. *Summary Theft Admissions*

Recommend	Age of Most Recent Theft Admission		Never Stolen	Admitted Theft	Prior Convictions
	Less than 18	Over 18			
Hire	X			\$1-5	
Hire	X			\$5-20	Priors
Hire	X			\$5-20	
				\$1000	
Hire		X		\$10,000	Priors
				\$1000	
Hire		X		\$10,000	
				\$1000	
Hire		X		\$10,000	
Hire		X		\$10,000+	
Hire		X		\$10,000+	Priors
Hire		X		\$10,000+	Priors
Do not	X			\$1-5	
Do not	X			\$1-5	
Do not		X		\$5-20	
Do not	X			\$5-20	
Do not		X		\$20-100	Priors

Do not	X		\$20-100	
Do not		X	\$100-500	
Do not		X	\$10,000+	
Do not		X	\$10,000+	Priors
Do not	X		\$10,000+	
Do not		X	\$0	

---

These findings suggest that test providers may take theft admissions into account when making recommendations for hire. These finding also lend support to Coyne and Bartram’s (2002) claim that job applicants may modify responses to improve their chances of obtaining employment. Overt integrity tests directly ask about theft and theft behaviors, but they do not validate participants’ answers. Participants are not obligated to reveal historical thefts or dishonest behaviors.

A frequency test revealed that the WINT overt integrity test determined that 11 of the 20 participants (55%) should not be recommended for hire. Using a cross tabulation, the integrity test recommended hiring four participants with additional prior WC convictions and five without ( $p < .640$ , Fisher Exact Test) (Table 12). Using admission criteria, this indicates a failure rate of 45% for the integrity test in this study.

Table 12. *Recommendations for Hire Summary*

Recommend	Prior Convictions		Totals
	None	Priors	
Hire	5	4	9
Do not	9	2	11

<b>Totals</b>	14	6	20
---------------	----	---	----

Two participants presented profiles of high Emotional Stability/Neuroticism, low Conscientiousness and trait Narcissism. This personality profile did not match the purported profile of WC inmates in previous research. Of these two participants, only one presented with low Integrity ( $p < .10$ , Fisher Exact Test) and was not recommended for hire (WINT score = 58). This inmate also admitted to a recent theft. The second inmate was recommended for hire (WINT score = 78) and did not admit to a recent theft. Personality tests in this study did not identify a profile of any participants as an individual likely to commit deviant behaviors (Table 10).

Based on the sample population of WC inmates tested, it was expected that this sample would elicit “profiles” indicative of the deviant behaviors, which both personality tests and integrity tests are designed to identify and which organizations seek to identify in order to limit risk. As indicated previously, Murphy (1989) found failure rates of pre-employment tests ranged from 30% to 60%. Failure rates for personality tests in this study were found to be higher than for overt integrity test, While both tests failed to identify all members of the WC population as potential risks and the total integrity score proved to be an unreliable indicator of risk, overt integrity tests identified a larger number of potential risks than the personality indicators. Based on these findings, Proposition 5 is supported

*Proposition 6: Convicted white-collar criminals will demonstrate higher levels of Narcissism when compared to the general population.*

A  $t$ -test failed to reveal a significant difference in the study mean for trait Narcissism, ( $M = 14.65$ ,  $SD = 7.050$ ,  $t(19) = .539$ ,  $p = .596$ ) when compared to the general population average ( $M$



=15.5,  $SD=6.66$ ,  $N=1018$ ) (Raskin & Terry, 1988) (Table 9). The median and range were also taken considered. The median of 11 was significantly different ( $p = .000$ ,  $\alpha = .05$ ) from the general population mean. With small samples, those scoring on the extremes can significantly affect the mean score of the sample. A median score in this case may be more reflective of the true population mean. When measuring the frequency of WC inmates with trait Narcissism, seven (35%) participants demonstrated trait Narcissism (“Narcissism”, Table 10). Based on these findings, Proposition 6 lacks support.

Although Grijalva and Newman (2014) found trait Narcissism was not a significant predictor of deviant work behaviors in general, Blickle et al. (2006) found that WC inmates had higher levels of trait Narcissism when compared to the general population. An equal variance  $t$ -test revealed a statistically reliable difference between the mean high scorers for trait Narcissism ( $M = 23.14$ ,  $SD = 3.078$ ) and the mean low scorers for trait Narcissism ( $M = 10.07$ ,  $SD = 3.040$ ,  $t(18) = -9.129$ ,  $p = .000$ ,  $\alpha = .05$ ). In comparison to other personality traits, Narcissism may be more prevalent than other traits such as Emotional Stability/Neuroticism and Agreeableness, based on prevalence in this sample. These findings may suggest that trait Narcissism, although not a significant predictor of deviant behavior may be a significant Narcissistic trait within WC inmates. The relationship between trait Narcissism the WC population should be sampled further with a larger population.

## V CHAPTER V: DISCUSSION

### V.1 Personality Traits/FFM

McCrae and Costa (2010) found that personality traits could be used to identify deviant behaviors. Research has found that deviant behaviors can be reliably measured with the FFM and NPI tests. FFM and the NPI did result in measureable trait scores for each of the personality constructs in this study. However, analysis of these traits, the frequency, personality profile, and mean significance in comparison to the general population mean with which these traits appeared within this sample were insignificant. Within this sample of WC inmates, it would be expected that these tests could identify “profiles” of individuals indicative of deviant behavior. The fact that the personality tests did not identify even one profile indicative of deviant behavior may be a factor of the tests themselves. Dilchert et al., 2014 found the personality tests lacked the sensitivity to test the full range of personality. Some inmates may fall outside the normal range of personality traits. If this population has a number of individuals with maladaptive traits, FFM and NPI may not be sensitive enough to measure the precise range of their personality.

Collin and Schmidt (1993) measured personality differences between convicted WC criminals and upper-level employees. They found that WC inmates had lower levels of Conscientiousness, responsibility, and socialization. This study compared WC inmates to the general population as opposed to a specific group of individuals. This may explain the contrary personality findings associated with FFM. In this study, the level of Conscientiousness was found to be higher than average. The general population averages provided include some upper-level management and CEOs, but is was not limited to upper-level employees alone. A significant portion of the inmates in this study maintained upper-level positions (85% in total); 12 were owners, three upper-level management and two were CEOs. Therefore, the difference

in expected results may be attributed to the difference in comparative positions and traits unique to the individuals' upper-level positions.

With regards to personality, none of the participants' profiles were consistent with previous deviant behavior research that is indicative of the likelihood of fraud. For example, 16 participants measured either in the normal or low range of Emotional Stability/ Neuroticism, indicating individuals who are secure and emotionally stable, and able to handle stress. Yet, these individuals are convicted WC criminals. One perspective that should be considered is that personality and Integrity can be moderated by the strength of a situation and organizational context (Henle & Gross, 2013). Dalal (2005) found deviant behavior was adaptive and influenced by perceptions. Events preceding the inmates' crimes may have encouraged or suppressed displays of personality or Integrity. Perceptions of fairness to employees, of corporate policies, and of applicable laws or rules may have influenced their decision to commit fraud. A sense of responsibility to family, business, or employees and the strength of these situational factors in conjunction with the ease of access and control as owners/CEOs may have increased the likelihood fraud. At the time of the study, these moderating events may no longer influence inmates' perceptions or situations creating a low range to normal range scenario for Emotional Stability/ Neuroticism.

The relationship between WCC and trait Narcissism has only recently begun to be explored. Studies have had mixed results in identifying trait Narcissism as a predictor of deviant work behaviors (Blickle et al., 2006; Grijalva & Newman, 2014). An equal variance *t*-test revealed a statistically reliable difference between the mean high scorers for trait Narcissism and the mean low scorers for trait Narcissism. In comparison to other personality traits, Narcissism was more prevalent than other traits such as Emotional Stability/Neuroticism and Agreeableness,

based on prevalence in this sample, although small. Seven (35%) of the study's participants indicated high levels of trait Narcissism. A frequency of seven is more than the frequency results of the individual proposed FFM personality traits for this sample (Table 10). Although, trait Narcissism may not be a significant predictor of deviant behavior, these findings may suggest that trait Narcissism is more prevalent than other personality traits within the WC sample (Table 10). On the other hand, this may be a factor of a small sample. A larger sample may yield different results. In addition, this may be the result of a variable not yet tested such as education, tenure, position, etc. Measuring the prevalence of these traits within the context of a larger sample of WC criminals would be beneficial for future research and pre-employment tests.

## **V.2 False Honesty**

The faking honesty has been an issue associated with integrity tests, especially for overt-integrity tests (see the discussion above on faking honesty). Coyne and Bartram (2002) claimed that job applicants may modify responses to improve their chances of obtaining employment. Studies found faking honesty occurred more often when individuals believed their dishonest answers could not be verified. Overt integrity tests ask direct questions about the dollar value, commission, and age of most recent theft act (Table 11). All members of this sample were convicted WC inmates. Of the 20 participants, only 11 (55%) admitted to committing thefts as adults. One even claimed he had never committed theft. Faking-honesty continues to be an issue for overt-integrity tests that need to be addressed. Additional control measures should be added to specifically limit faking honesty.

## **V.3 Failure Rates**

According to Arch Profiles (2012), scores of 40 or more are likely to suggest engagement in dishonest behavior. Based on scoring parameters provided by Arch, it would be presumed that

individuals with scores of 40 or higher would have low Integrity and should not be recommended for hire. Twelve participants scored between 40 and 80 and six were above 80. In total nine (45%) of the 20 WC inmates were recommended for hire. Six of the nine that were recommended for hire had scores between 40 and 80; one was above 80. Martin (1989) found the failure rates of integrity tests to be approximately 44% and failure rates for pre-employment tests ranged from 30% to 60%. This study found the failure rate of the overt-integrity test to be slightly higher, approximately 45% and 100% for the personality tests.

#### **V.4 Total Integrity Scores**

Organizations receive the total Integrity score, a recommendation from the test providers to “hire” or not hire,” and some additional information about how the applicant tested, but not the raw scores. Scores greater than 40 generally indicate a potential for dishonest behavior. Nine inmates were recommended for hire, eleven were not. The average Integrity score for the recommend for hire group was  $M=58.78$ , and the do not hire group was  $M=74$ . The average Integrity score for those who were recommended was significantly lower than the general population average of 69.95 ( $p = .006$ ). However, the distribution of scores for the two groups were the similar to each other “hire” (39 - 88) and “do not hire” (44 - 88) (Table 10).

The recommended for hire group had a larger percent of participants who admitted to recent, large thefts compared to the do not hire group (Table 11). A correlation revealed a strong positive relationship between the total integrity test score and the amount of money stolen for the do not hire group,  $r = .62, p < .05$ . While the recommend for hire group did not reveal a significant correlation with the amount of money stolen  $r = -.23, (p = n.s)$ . It does raise the question, how are theft admission criteria used? Are the criteria applied consistently? Since all of the participants are convicted WC inmates serving federal prison sentences, it is presumed that

all 20 should have elicited behavioral profiles that would have received do not hire recommendations. Ones et al., 2003 argued the narrower the criteria, the lower the predictive validity. This may have contributed to the consistency inability to detect low integrity. Never the less, admissions of theft and amounts of theft are apparent in this test which would presumably result in a consistent indicator of behavior. What is apparent is integrity tests make recommendation of integrity based on factors that are not easily identified or interpreted. Based on these findings, it can be derived that the total Integrity score alone is not a reliable indicator of integrity.

Despite the false positives, the WINT integrity test was able to identify 11 of the 20 WC inmates as lacking Integrity and not recommend them for hire. Failure rates and faking-honesty are still a concern, but in this study, the overt-integrity test was more effective than personality tests in identifying personalities with a propensity for deviant behaviors. Organizations need to be aware of the failure rates. Pre-employment tests, while able to identify some issues of deviant behavior, are not a fail-safe. They must be used in combination with other pre-employment screening tools. Based on the results of this study, an overt-integrity test may have a higher probability of detecting traits indicative of WCC than personality tests.

In summary, this study contributes to the body of knowledge through an examination of the relationships of personality traits, behavioral traits, and deviant behaviors of WC criminals. The findings highlight some traits and test related issues that expand understanding of WC criminals and pre-employment tests. This knowledge will encourage efficacious future research and may eventually lead to more effective fraud risk mitigation.

## **VI CHAPTER VI: EXPECTED CONTRIBUTIONS AND LIMITATIONS**

### **VI.1 Contribution to Theory**

Researchers continue to study the relationship between deviant behaviors and pre-employment tests. Unfortunately, there are a large number of behaviors considered to be deviant behaviors. As long as the dimension and constructs remain poorly defined (Bennett & Robinson, 2000; Camara & Schneider, 1994; Gruys & Sackett 2003; MacLane & Walmsley, 2010; Sackett et al., 1989) future research will continue to struggle with the theoretical development within the literature. To fill this gap, a focused literature review on deviant behaviors, pre-employment tests, and theft was presented. This was done to demonstrate the development of the constructs and dimension of deviant behaviors throughout literature, provide a clear illustration of the issues surrounding deviant behaviors in research, and clarify definitions and their usage. With the appropriate definitions, clear constructs, and a well-defined dimension, more efficacious research in relation to WCC and pre-employment tests can occur. This study represents a small step toward a better understanding of deviant behaviors and advancing the theory of deviant behaviors and pre-employments for future research.

### **VI.2 Contribution to Practice**

The WINT overt-integrity test positively identified 11 of the 20 WC inmates as individuals with low Integrity and who should not be recommended for hire. Although this study found the overall Integrity score was not significantly different from the general population, it did demonstrate a relationship between the WC inmates' integrity and recommendation for hire. Integrity scores are based on the probability of an individual repeating similar behavioral traits and patterns in the future. An overt-integrity test is designed to identify those behaviors and make recommendations based on them. The ability to identify individuals who pose a high risk of theft and is a continuing concern for organizations who use these tests. This study discovered

that although 11 inmates were not recommended for hire, there were inconsistencies of theft admissions and recommendations for hire, total integrity score and recommendations for hire, and faking honesty.

In this study, nine convicted WC inmates were recommended for hire. The integrity tests failed to place nine (45%) of the inmates in the category of do not hire. Personality-based tests failed on 100% of these. While results of this study demonstrated the ability to identify those who fake honesty, it can also be assumed that mis-labeling as a false positive will occur in the opposite direction as well. Individuals who should be recommended for hire have as much of a chance of being mis-labeled as dishonest and of being eliminated from the job pool based on these failure rates. Sackett and Wanek (1996) expressed concerns about widespread mislabeling of applicants as dishonest and of falsely barring applicants from the workforce. Coyne and Bartram (2002) found failure rates reduced the number of honest applicants available to organizations and therefore expose organizations to a higher number of applicants prone to deviant behaviors (Coyne & Bartram, 2002; Martin, 1989). Organizations rely on these tests to provide candidate pools with a lower risk profile, not higher risk profiles. Additional control measure are needed to limit faking honesty and false positives.

Integrity tests were designed to help mitigate the risk of theft from entering the organization. Overt integrity tests ask for direct admissions of theft and theft behavior. Of the nine inmates who were recommended for hire, six of them admitted to large thefts. Three of these individuals also had prior convictions for WCC. In addition, the evidence suggests the theft admission data collected was not consistently applied to the screening process of the individuals. If these tests are to be affective in detecting and mitigating theft risks for organizations they need to improve the criteria used to identify and screen WC behaviors, as well as consistently apply



the key indicators in the screening process. Additional research into WC related indicators might improve theft mitigation and hire recommendations.

Niehoff and Paul (2000) argued that additional research was needed on the validity of the fraudulent constructs embedded within integrity tests before these tests could be confidently used for screening new hires. This study supports the need for further research into the constructs and measures used with respect to fraud, faking honesty, and false positives. Additional research with contrast groups such as WC inmates, admission testing, and theft validation studies would improve the validity and reliability of these tests. It may reduce failure rates of pre-employment tests and increase public trust in their credibility as a fraud reduction tools.

### **VI.3 Limitations**

Methodologically, some limitations of the research must be noted. The most obvious limitation is sample size (N=20). Small sample sizes can result in false positives when conducting analysis. As a result, non-parametric tests and statistical analysis appropriate for this size sample were used.

Another limitation is that the variables studied were measured utilizing self-reports. Self-reports may suffer from inaccurate information as the information is difficult to validate if it can be validated at all. This is also true of other sources of data. Nevertheless, it cannot be guaranteed that the data collected was unbiased. There is an indication, as noted in the findings, that answers received on the integrity test were possibly skewed to favor higher total Integrity scores or false honesty. In addition, organizations primarily rely on the total score from integrity test providers and their recommendations when hiring applicants. The total Integrity score was not found to be a consistent indicator of integrity in this study as it relates to WCC. Future research into the variables utilized in self-reports of WC crime and admission testing (i.e. prison

studies, prison records, parole records) may reveal additional control measures and insights into improving the efficacy of these tests.

Another limitation to note is the restrictions imposed by the multiple Institutional Review Boards for this study. The population sampled is a vulnerable population, therefore strict restrictions were placed on the questions, conversations, and interactions permitted with this population throughout this study. Only the questions approved by the Institutional Review Boards were permitted. No additional information was permitted to be collected for this study. Due to these factors, generalizations to other WC populations and the general population should be made carefully.

Finally, Due to the type of study conducted and limitations of using a populations of WC criminals, pre and post testing of inmates was not possible. This did not provided for a comparison study of changes in behaviors, traits, personality and integrity prior to their crimes and prison time.

#### **VI.4 Conclusion**

Fraud continues to be pervasive and expensive (ACFE, 2012; 2014a; Brody, 2010; Brody et al., 2012; Coyne & Bartram, 2002; Greitzer et al., 2010; Henle & Gross, 2013; MacLane & Walmsley, 2010; Perri, 2011; Perri & Brody, 2011; Van Iddekinge et al., 2012). As a result, organizations need to find ways to mitigate the risk of fraud. Test publishers continue to promote the abilities of pre-employment tests while ignoring the tests' shortcomings. Pre-screening job applicants with tools such as pre-employment tests may help organizations to reduce inaccuracies (Brody, 2010), but it may also expose the organization to additional risks (Lee et al., 2005). Due to this additional risk, it is important for organizations to keep these tests in perspective. They should not be the sole basis for employment decisions.

Despite these limitations, this research revealed significant insights into the relationship between pre-employment tests and WCC. WCC has a correlation with low-Integrity. Recommendations for hire are related to the total Integrity scores, amount of money stolen and recency of theft. These relationships bring to question what criterion are integrity tests measuring: theft, honesty, or integrity? Are they measuring the most reliable criterion for prediction of deviant behaviors? Although the failure rates for the overt-integrity test were found to be 45%, it was found to be a better indicator of the propensity for deviant behavior than the personality measures, but is this reliable enough? This study adds empirical support to growing research on pre-employment tests and their ability to detect indicators of deviant behaviors, specifically fraud. This study also expands knowledge of the role of behavioral traits as predictive fraud indicators and their use in pre-employment tests.

## REFERENCES

- Alliger, G. M., & Dwight, S. A. (2000). A meta-analytic investigation of the susceptibility of integrity tests to faking and coaching. *Educational and Psychological Measurement*, 60(1), 59-72.
- Amernic, J. H., & Craig, R. J. (2010). Accounting as a facilitator of extreme narcissism. *Journal of Business Ethics*, 96(1), 79-93.
- Anderson, C. D., Warner, J. L., & Spencer, C. C. (1984). Inflation bias in self-assessment examinations: Implications for valid employee selection. *Journal of Applied Psychology*, 69(4), 574.
- ARCH Profiles. (2012). *WINT (Work Integrity Test) Psychometric Report*.
- ARCH Profiles. (n.d.). *WINT (Work Integrity Test) – Operational Definitions*.
- Arnold, D. W., (1991). To test or not to test: Legal issues in integrity testing. *Forensic Reports*, 4(2), 213-224.
- Association of Certified Fraud Examiners. (2012). *ACFE Report to the Nations on Occupational Fraud and Abuse, 2012 Global Fraud Study*. Retrieved from [http://www.acfe.com/uploadedfiles/acfe\\_website/content/rtnn/2012-report-to-nations.pdf](http://www.acfe.com/uploadedfiles/acfe_website/content/rtnn/2012-report-to-nations.pdf)
- Association of Certified Fraud Examiners. (2014a). *ACFE Report to the Nations on Occupational Fraud and Abuse, 2014 Global Fraud Study*. Retrieved from <http://www.acfe.com/rtnn/docs/2014-report-to-nations.pdf>
- Association of Certified Fraud Examiners. (2014b). *ACFE Report to the Nations on Occupational Fraud and Abuse, 2014 Global Fraud Study; About the Report. Internal Threats*. Retrieved from <http://www.acfe.com/rtnn-introduction.aspx>

- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: a meta-analysis. *Personnel Psychology*, 44(1), 1-26.
- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next?. *International Journal of Selection and Assessment*, 9(1-2), 9-30.
- Baruch, Y. (2005). Bullying on the net: Adverse behavior on e-mail and its impact. *Information & Management*, 42(2), 361-371.
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85(3), 349.
- Becker, T. E. (1998). Integrity in organizations: Beyond honesty and conscientiousness. *Academy of Management Review*, 23(1), 154-161.
- 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(2), 410.
- Bies, R. J., Tripp, T. M., & Kramer, R. M. (1997). At the breaking point: Cognitive and social dynamics of revenge in organizations. In R. A. Giacalone (Ed.) & J. Greenberg (Ed.), *Antisocial behavior in organizations* (pp. 18-36). Thousand Oaks, CA: Sage Publications.
- Blickle, G., Schlegel, A., Fassbender, P., & Klein, U. (2006). Some personality correlates of business white-collar crime. *Applied Psychology*, 55(2), 220-233.
- Boddy, C. R. (2006). The dark side of management decisions: Organisational psychopaths. *Management Decision*, 44(10), 1461-1475.
- Brody, R. G. (2010). Beyond the basic background check: hiring the “right” employees. *Management Research Review*, 33(3), 210-223.

- Brody, R. G., Melendy, S. R., & Perri, F. S. (2012). Commentary from the American Accounting Association's 2011 annual meeting panel on emerging issues in fraud research. *Accounting Horizons*, 26(3), 513-531.
- Camara, W. J., & Schneider, D. L. (1994). Integrity tests: Facts and unresolved issues. *American Psychologist*, 49(2), 112.
- Cattell, R. B. (1946). *Description and measurement of personality*. Oxford, England: World Book Company.
- Cleckley, H. (1941). *The mask of sanity; an attempt to reinterpret the so-called psychopathic personality*. Oxford, England: Mosby.
- Collins, J. M., & Schmidt, F. L. (1993). Personality, integrity, and white collar crime: A construct validity study. *Personnel Psychology*, 46(2), 295-311.
- Costa, P. T., Jr., & 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(5), 853.
- Costa, P. T., Jr., & McCrae, R. R. (2013). The NEO™ Inventories: NEO™ Five Factor Inventory-3 (NEO™-FFI-3) Publisher: PAR <https://shop.acer.edu.au/acer-shop/group/NEOFFI-3/X>
- Coyne, I., & Bartram, D. (2002). Assessing the effectiveness of integrity tests: A review. *International Journal of Testing*, 2(1), 15-34.
- Cressey, D. R. (1950). The criminal violation of financial trust. *American Sociological Review*, 738-743.

- Cullen, M. J., & Sackett, P. R. (2003). Personality and counterproductive workplace behavior. *Personality and work: Reconsidering the role of personality in organizations*, 14(2), 150-182.
- Cunningham, M. R. (1989). Test-taking motivations and outcomes on a standardized measure of on-the-job integrity. *Journal of Business and Psychology*, 4(1), 119-127.
- Cunningham, M. R., & Ash, P. (1988). The structure of honesty: Factor analysis of the Reid Report. *Journal of Business and Psychology*, 3(1), 54-66.
- Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology*, 90(6), 1241.
- Dhami, M. K. (2007). White-collar prisoners' perceptions of audience reaction. *Deviant Behavior*, 28(1), 57-77.
- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, 41(1), 417-440.
- Dilchert, S., Ones, D. S., & Krueger, R. F. (2014). Maladaptive personality constructs, measures, and work behaviors. *Industrial and Organizational Psychology*, 7(1), 98-110.
- Donovan, J. J., Dwight, S. A., & Hurtz, G. M. (2003). An assessment of the prevalence, severity, and verifiability of entry-level applicant faking using the randomized response technique. *Human Performance*, 16(1), 81-106.
- Dorminey, J., Fleming, A. S., Kranacher, M. J., & Riley Jr, R. A. (2012). The evolution of fraud theory. *Issues in Accounting Education*, 27(2), 555-579.
- Edelhertz, H. (1970). *The nature, impact, and prosecution of white-collar crime* (pp. 27). Washington, DC: National Institute of Law Enforcement and Criminal Justice.

- Emmons, R. A. (1984). Factor analysis and construct validity of the Narcissistic Personality Inventory. *Journal of Personality Assessment*, 48(3), 291.
- Engleman, D., & Kleiner, B. H. (1998). Effective employment screening practices. *Career Development International*, 3(4), 164-168.
- Eysenck, H. J. (1953). *Uses and abuses of psychology*. Oxford, England: Penguin Books.
- Forensic, K. P. M. G. (2006). *Fraud risk management: Developing a strategy for prevention, detection, and response*. Switzerland: KMPG International.
- Fiske, D. W. (1949). Consistency of the factorial structures of personality ratings from different sources. *The Journal of Abnormal and Social Psychology*, 44(3), 329.
- Goldstein, I. L. (1971). The application blank: How honest are the responses?. *Journal of Applied Psychology*, 55(5), 491.
- Gough, H. G. (1948). A sociological theory of psychopathy. *American Journal of Sociology*, 359-366.
- Gough, H. G. (1994). Theory, development, and interpretation of the CPI socialization scale. *Psychological Reports*, 75(1), 651-700.
- Greitzer, F. L., Kangas, L. J., Noonan, C. F., & Dalton, A. C. (2010). *Identifying at-risk employees: A behavioral model for predicting potential insider threats*. Richland, Washington: Pacific Northwest National Laboratory.
- Grijalva, E., & Newman, D. A. (2015). Narcissism and counterproductive work behavior (CWB): Meta-analysis and consideration of collectivist culture, big five personality, and narcissism's facet structure. *Applied Psychology*, 64(1), 93-126.
- Gruys, M.L. (2000). *The dimensionality of deviant employee behavior in the workplace*. (Unpublished doctoral



thesis). University of Minnesota, Minnesota.

<http://search.proquest.com/docview/304626982?accountid=11920>

Gruys, M.L. (2000). *The dimensionality of deviant employee behavior in the workplace*.

Unpublished doctoral thesis, University of Minnesota, Minnesota. Retrieved from

<http://search.proquest.com/docview/304626982?accountid=11920>

Gruys, M. L., & Sackett, P. R. (2003). Investigating the dimensionality of counterproductive work behavior. *International Journal of Selection and Assessment*, 11(1), 30-42.

Guion, R.M. (1998). *Assessment measurement and prediction for personnel decision*. London: Lawrence Erlbaum Associates Publishers.

Hare, R. D. (1996). Psychopathy a clinical construct whose time has come. *Criminal Justice and Behavior*, 23(1), 25-54.

Hare, R. D. (1999a). *The Hare Psychopathy Checklist-Revised: PLC-R*. MHS, Multi-Health Systems.

Hare, R. D. (1999b). *Without conscience: The disturbing world of the psychopaths among us*. Guilford Press.

Henle, C. A., & Gross, M. A. (2013). An examination of the relationship between workplace deviance and employee personality. *Deviant and Criminal Behavior in the Workplace*, 50-70.

<http://books.google.com/books?id=9wPu8JgzJKoC&lpg=PA50&ots=aBjoFxl1us&dq=sing%20integrity%20testing%20in%20pre-employment%20hiring%20decisions%20about%20behavior%20predictability&lr&pg=PA50#v=onepage&q&f=false>

- Johnson, E. N., Kuhn Jr, J. R., Apostolou, B. A., & Hassell, J. M. (2012). Auditor perceptions of client narcissism as a fraud attitude risk factor. *Auditing: A Journal of Practice & Theory*, 32(1), 203-219.
- Jones, J.W. (1991). *Preemployment honesty testing: Current research and future directions*. New York, NY: Quorum.
- Jones, D. N., & Hare, R. D. (2015). The mismeasure of psychopathy: A commentary on Boddy's PM-MRV. *Journal of Business Ethics*, 1-10.
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, 87(3), 530.
- Kelloway, E. K., Loughlin, C., Barling, J., & Nault, A. (2002). Self-reported counterproductive behaviors and organizational citizenship behaviors: Separate but related constructs. *International Journal of Selection and Assessment*, 10(1-2), 143-151.
- LeBreton, J. M., Binning, J. F., & Adorno, A. J. (2006). Subclinical psychopaths. *Comprehensive Handbook of Personality and Psychopathology*, 1, 388-411.
- Lee, K., Ashton, M. C., & de Vries, R. E. (2005). Predicting workplace delinquency and integrity with the HEXACO and five-factor models of personality structure. *Human Performance*, 18(2), 179-197.
- Listwan, S. J., Piquero, N. L., & Van Voorhis, P. (2010). Recidivism among a white-collar sample: Does personality matter?. *Australian & New Zealand Journal of Criminology*, 43(1), 156-174.
- LoBello, S. G., & Sims, B. N. (1993). Fakability of a commercially produced pre-employment integrity test. *Journal of Business and Psychology*, 8, 265-273.

- Lynam, D. R. (2002). *Fledgling psychopathy: A view from personality theory* [Peer commentary on the paper "Law and human behavior" by D. Seagrave and T. Grisso]. Retrieved from <http://dx.doi.org/10.1023/A:1014652328596>
- Maccoby, M. (2000). Narcissistic leaders. *Harvard Business Review*, 78(1), 92-101.
- MacLane, C. N., & Walmsley, P. T. (2010). Reducing counterproductive work behavior through employee selection. *Human Resource Management Review*, 20(1), 62-72.
- Marcus, B., Höft, S., & Riediger, M. (2006). Integrity tests and the five-factor model of personality: A review and empirical test of two alternative positions. *International Journal of Selection and Assessment*, 14(2), 113-130.
- Martin, S. L. (1989). Honesty testing: Estimating and reducing the false positive rate. *Journal of Business and Psychology*, 3(3), 255-267.
- McCrae, R. R., & Costa Jr, P. T. (1985). Comparison of EPI and psychoticism scales with measures of the five-factor model of personality. *Personality and Individual Differences*, 6(5), 587-597.
- McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52(1), 81.
- McCrae, R. R., & Costa, P. T. (2010). *NEO Inventories for the NEO Personality Inventory-3 (NEO PI-3), NEO Five-Factor Inventory-3 (NEO-FFI-3) and NEO Personality Inventory-revised (NEO PI-R): Professional Manual*. Psychological Assessment Resources.
- McCrae, R. R., Costa, Jr, P. T., & Martin, T. A. (2005). The NEO-PI-3: A more readable revised NEO personality inventory. *Journal of Personality Assessment*, 84(3), 261-270.

- McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality, 60*(2), 175-215.
- McDougall, W. (1932). Of the words character and personality. *Journal of Personality, 1*(1), 3-16.
- Miller, J. D., Lynam, D. R., Widiger, T. A., & Leukefeld, C. (2001). Personality disorders as extreme variants of common personality dimensions: Can the five factor model adequately represent psychopathy?. *Journal of Personality, 69*(2), 253-276.
- Miners, J. B., & Capps, M. H. (1996). *How honesty testing works*. Greenwood Publishing Group.
- Mowen, J. C. (2000). *The 3M model of motivation and personality: Theory and empirical applications to consumer behavior*. Springer Science & Business Media.
- Mount, M., Ilies, R., & Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: The mediating effects of job satisfaction. *Personnel Psychology, 59*(3), 591-622.
- Murphy, K.R. (1993). *Honesty in the workplace*. Belmont, California: Brooks/Cole.
- Niehoff, B. P., & Paul, R. J. (2000). Causes of employee theft and strategies that HR managers can use for prevention. *Human Resource Management, 39*(1), 51-64.
- Norman, W. T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *The Journal of Abnormal and Social Psychology, 66*(6), 574.
- O'Bannon, R. M., Goldfinger, L. A., & Appleby, G. S. (1989). *Honesty and integrity testing: A practical guide*. Atlanta, GA: Applied Information Resources.
- O'Brien, C. (2011). *Prison visits, a conversation with white-collar inmates*. Unpublished Manuscript.

- Oliphant, B. J., & Oliphant, G. C. (2001). Using a behavior-based method to identify and reduce employee theft. *International Journal of Retail & Distribution Management*, 29(10), 442 – 451.
- Ones, D.S. (1993). *The construct validity of integrity tests*. (Unpublished doctoral dissertation). University of Iowa, Iowa City.
- Ones, D. S., & Viswesvaran, C. (2001). Integrity tests and other criterion-focused occupational personality scales (COPS) used in personnel selection. *International Journal of Selection and Assessment*, 9(1-2), 31-39.
- Ones, D. S., Viswesvaran, C., & 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(4), 679.
- Ones, D. S., Viswesvaran, C., & Schmidt, F. L. (2003). Personality and absenteeism: a meta-analysis of integrity tests. *European Journal of Personality*, 17(S1), S19-S38.
- Palanski, M. E., & Yammarino, F. J. (2007). Integrity and leadership: Clearing the conceptual confusion. *European Management Journal*, 25(3), 171-184.
- Perri, F. S. (2011). White-collar criminals: The ‘kinder, gentler’ offender?. *Journal of Investigative Psychology and Offender Profiling*, 8(3), 217-241.
- Perri, F. S. (2013). Visionaries or false prophets. *Journal of Contemporary Criminal Justice*, 29(3), 331-350.
- Perri, F. S., & Brody, R. G. (2011). The Sallie Rohrbach story: Lessons for auditors and fraud examiners. *Journal of Financial Crime*, 18(1), 93-104.
- Pincus, A. L., & Lukowitsky, M. R. (2010). Pathological narcissism and narcissistic personality disorder. *Annual Review of Clinical Psychology*, 6, 421-446.

- Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology, 54*(5), 890.
- Rhodewalt, F., & Morf, C. C. (1995). Self and interpersonal correlates of the Narcissistic Personality Inventory: A review and new findings. *Journal of Research in Personality, 29*(1), 1-23.
- Rhodewalt, F., & Morf, C. C. (1998). On self-aggrandizement and anger: A temporal analysis of narcissism and affective reactions to success and failure. *Journal of Personality and Social Psychology, 74*(3), 672.
- Rieke, M. L., & Guastello, S. J. (1995). Unresolved issues in honesty and integrity testing. *American Psychologist, 50*(6), 458-459.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal, 38*(2), 555-572.
- Rosenfeld, P., Giacalone, R. A., & Riordan, C. A. (1995). *Impression management in organizations: Theory, measurement, practice*. Van Nostrand Reinhold.
- Ray, J. V. (2007). *Psychopathy, attitudinal beliefs, and white collar crime*. (Graduate thesis). University of South Florida, Florida.
- Rosse, J. G., Stecher, M. D., Miller, J. L., & Levin, R. A. (1998). The impact of response distortion on preemployment personality testing and hiring decisions. *Journal of Applied Psychology, 83*(4), 634.
- Ryan, A. M., & Sackett, P. R. (1987). Pre-employment honesty testing: Fakability, reactions of test takers, and company image. *Journal of Business and Psychology, 1*(3), 248-256.

- Sackett, P. R. (1994). Integrity testing for personnel selection. *Current Directions in Psychological Science*, 73-76.
- Sackett, P. R. (2002). The structure of counterproductive work behaviors: Dimensionality and relationships with facets of job performance. *International Journal of Selection and Assessment*, 10(1-2), 5-11.
- Sackett, P. R., Burris, L. R., & Callahan, C. (1989). Integrity testing for personnel selection: An update. *Personnel Psychology*, 42(3), 491-529.
- Sackett, P.R., & Devore, C.J. (2001). Counterproductive behaviors at work. In N. Anderson, D. Ones, C. Sinangil, & C. Viswesvaran (Eds.), *International Handbook of Work Psychology 1*, 145-164. London: Sage.
- Sackett, P.R., & Harris, M.M. (1984). Honesty testing for personnel selection: A review and critique. *Journal of Personnel Psychology*, 37, 221-244.
- Sackett, P. R., & Wanek, J. E. (1996). New developments in the use of measures of honesty integrity, conscientiousness, dependability trustworthiness, and reliability for personnel selection. *Personnel Psychology*, 49(4), 787-829.
- Salgado, J. F. (2002). The Big Five personality dimensions and counterproductive behaviors. *International Journal of Selection and Assessment*, 10(1 - 2), 117-125.
- Scherer, K. T., Baysinger, M., Zolynsky, D., & LeBreton, J. M. (2013). Predicting counterproductive work behaviors with sub-clinical psychopathy: Beyond the Five Factor Model of personality. *Personality and Individual Differences*, 55(3), 300-305.
- Staub, E. (Ed.). (1980). *Personality: Basic aspects and current research*. Prentice Hall.

- Sumanth, J. J., & Cable, D. M. (2011). Status and organizational entry: How organizational and individual status affect justice perceptions of hiring systems. *Personnel Psychology*, 64(4), 963-1000.
- Tupes, E. C., & Christal, R.E. (1961.). *Recurrent personality factors based on trait ratings* (No. ASD-TR-61-97). Personnel Research Lab Lackland Afb TX. Retrieved from <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=AD0267778>
- Tupes, E. C., & Christal, R. E. (2006). Recurrent personality factors based on trait ratings. *Journal of Personality*, 60(2), 225-251.
- U. S. Congress, Office of Technology Assessment. (1990). *The use of integrity tests for pre-employment*. Washington DC: U.S. Government Printing Office.
- Van Iddekinge, C. H., Roth, P. L., Raymark, P. H., & Odle-Dusseau, H. N. (2012). The criterion-related validity of integrity tests: An updated meta-analysis. *Journal of Applied Psychology*, 97(3), 499.
- Walters, G. D., & Geyer, M. D. (2004). Criminal thinking and identity in male white-collar offenders. *Criminal Justice and Behavior*, 31(3), 263-281.
- Walters, G. D. (1995). The psychological inventory of criminal thinking styles Part I: Reliability and preliminary validity. *Criminal Justice and Behavior*, 22(3), 307-325.
- Weisburd, D., & Waring, E. (2001). *White-collar crime and criminal careers*. Cambridge University Press.
- Whitney, D. J., Diaz, J., Mineghino, M. E., & Powers, K. (1999). Perceptions of overt and personality-based integrity tests. *International Journal of Selection and Assessment*, 7(1), 35-45.



Widiger, T. A., & Lynam, D. R. (1998). Psychopathy and the five-factor model of personality. *Psychopathy: Antisocial, Criminal, and Violent Behavior*, 171-187.

Williams, K. M., & Paulhus, D. L. (2004). Factor structure of the Self-Report Psychopathy scale (SRP-II) in non-forensic samples. *Personality and Individual Differences*, 37(4), 765-778.

## APPENDIX

### Appendix A

#### Survey Instrument 1. Demographics and Background Information

**Instructions:** Please complete the questionnaire below. For each statement with categories, choose the item that **best matches you**. If a category does not match you exactly, select the choice that is least objectionable or is closest to you. You should be able to complete this questionnaire approximately 5 minutes.

1. Age?  
 18–25     26–32     33–39     40–46     47–53     Over 54

2. Are you currently serving time for a White-Collar Crime?  
 Yes     No

3. What type of White-Collar Crime were you convicted of?

<input type="radio"/> Bank Fraud	<input type="radio"/> FDA Violation
<input type="radio"/> Bribery	<input type="radio"/> Forgery
<input type="radio"/> Conspiracy	<input type="radio"/> Illegal Business Operations (Non – Drug)
<input type="radio"/> Counterfeiting	<input type="radio"/> Mail Fraud
<input type="radio"/> Credit Card Fraud	<input type="radio"/> Misapplication of bank funds
<input type="radio"/> Embezzlement	<input type="radio"/> Theft of bank funds
<input type="radio"/> Extortion	<input type="radio"/> SEC Violation
<input type="radio"/> Failure to File Taxes	<input type="radio"/> Wire Fraud
<input type="radio"/> False Income Tax	<input type="radio"/> other _____

4. What was your position where the offense took place?  
 Employee     Management     Upper Management     CEO     Owner     Board Member/ External to company

5. How long were you employed at this organization at the time of the offense?  
 0–1     1–2     2–5     5–10     10–15     Over 15

6. What was your highest level of education at the time of your White-collar offense?  
 High School     Some college     College graduate     Graduate degree

7. Are you serving time for another crime concurrently?  
 Yes     No

**If no**, go to question 8.

- If yes**, is the conviction for a violent offense?
- Yes       No

- If yes**, is the violent offense related to your White-Collar conviction?
- Yes       No

8. Do you have any prior non-violent convictions?

- Yes       No

9. Do you have any prior violent convictions?

- Yes       No

10. Are any of your prior convictions for White-Collar Crime?

- Yes       No

**If yes**, what type of White-Collar Crime were you convicted of?

---

---

---

---

## Appendix B

### Survey Instrument 2.Narcissistic Personality Quiz

**Instructions:** Here is a list of 40 statements, one in Column A and the opposite in Column B. You may identify with either statement. For each statement, choose the item from Column A or B that **best matches you**. If neither statement matches you, select the choice that is least objectionable or is closer to you. You should be able to complete the quiz in approximately 10 minutes.

	A	B
1.	<input type="radio"/> I have a natural talent for influencing people.	<input type="radio"/> I am not good at influencing people.
2.	<input type="radio"/> Modesty doesn't become me.	<input type="radio"/> I am essentially a modest person.
3.	<input type="radio"/> I would do almost anything on a dare.	<input type="radio"/> I tend to be a fairly cautious person.
4.	<input type="radio"/> When people compliment me I sometimes get embarrassed.	<input type="radio"/> I know that I am good because everybody keeps telling me so.
5.	<input type="radio"/> The thought of ruling the world frightens the hell out of me.	<input type="radio"/> If I ruled the world it would be a better place.
6.	<input type="radio"/> I can usually talk my way out of anything.	<input type="radio"/> I try to accept the consequences of my behavior.
7.	<input type="radio"/> I prefer to blend in with the crowd.	<input type="radio"/> I like to be the center of attention.
8.	<input type="radio"/> I will be a success.	<input type="radio"/> I am not too concerned about success.
9.	<input type="radio"/> I am no better or worse than most people.	<input type="radio"/> I think I am a special person.
10.	<input type="radio"/> I am not sure if I would make a good leader.	<input type="radio"/> I see myself as a good leader.
11.	<input type="radio"/> I am assertive.	<input type="radio"/> I wish I were more assertive.
12.	<input type="radio"/> I like to have authority over other people.	<input type="radio"/> I don't mind following orders.
13.	<input type="radio"/> I find it easy to manipulate people.	<input type="radio"/> I don't like it when I find myself manipulating people.
14.	<input type="radio"/> I insist upon getting the respect that is	<input type="radio"/> I usually get the respect that I deserve.

	due me.	
15.	<input type="radio"/> I don't particularly like to show off my body.	<input type="radio"/> I like to show off my body.
16.	<input type="radio"/> I can read people like a book.	<input type="radio"/> People are sometimes hard to understand.
17.	<input type="radio"/> If I feel competent I am willing to take responsibility for making decisions.	<input type="radio"/> I like to take responsibility for making decisions.
18.	<input type="radio"/> I just want to be reasonably happy.	<input type="radio"/> I want to amount to something in the eyes of the world.
19.	<input type="radio"/> My body is nothing special.	<input type="radio"/> I like to look at my body.
20.	<input type="radio"/> I try not to be a show off.	<input type="radio"/> I will usually show off if I get the chance.
21.	<input type="radio"/> I always know what I am doing.	<input type="radio"/> Sometimes I am not sure of what I am doing.
22.	<input type="radio"/> I sometimes depend on people to get things done.	<input type="radio"/> I rarely depend on anyone else to get things done.
23.	<input type="radio"/> Sometimes I tell good stories.	<input type="radio"/> Everybody likes to hear my stories.
24.	<input type="radio"/> I expect a great deal from other people.	<input type="radio"/> I like to do things for other people.
25.	<input type="radio"/> I will never be satisfied until I get all that I deserve.	<input type="radio"/> I take my satisfactions as they come.
26.	<input type="radio"/> Compliments embarrass me.	<input type="radio"/> I like to be complimented.
27.	<input type="radio"/> I have a strong will to power.	<input type="radio"/> Power for its own sake doesn't interest me.
28.	<input type="radio"/> I don't care about new fads and fashions.	<input type="radio"/> I like to start new fads and fashions.
29.	<input type="radio"/> I like to look at myself in the mirror.	<input type="radio"/> I am not particularly interested in looking at myself in the mirror.
30.	<input type="radio"/> I really like to be the center of attention.	<input type="radio"/> It makes me uncomfortable to be the center of attention.
31.	<input type="radio"/> I can live my life in any way I want to.	<input type="radio"/> People can't always live their lives in

		terms of what they want.
32.	<input type="radio"/> Being an authority doesn't mean that much to me.	<input type="radio"/> People always seem to recognize my authority.
33.	<input type="radio"/> I would prefer to be a leader.	<input type="radio"/> It makes little difference to me whether I am a leader or not.
34.	<input type="radio"/> I am going to be a great person.	<input type="radio"/> I hope I am going to be successful.
35.	<input type="radio"/> People sometimes believe what I tell them.	<input type="radio"/> I can make anybody believe anything I want them to.
36.	<input type="radio"/> I am a born leader.	<input type="radio"/> Leadership is a quality that takes a long time to develop.
37.	<input type="radio"/> I wish somebody would someday write my biography.	<input type="radio"/> I don't like people to pry into my life for any reason.
38.	<input type="radio"/> I get upset when people don't notice how I look when I go out in public.	<input type="radio"/> I don't mind blending into the crowd when I go out in public.
39.	<input type="radio"/> I am more capable than other people.	<input type="radio"/> There is a lot that I can learn from other people.
40.	<input type="radio"/> I am much like everybody else.	<input type="radio"/> I am an extraordinary person.