

January 2013

# Self-Control, Attitudinal Beliefs, and White-Collar Crime Intentions

Melissa Anne Lugo

University of South Florida, [mel.anne.lugo@gmail.com](mailto:mel.anne.lugo@gmail.com)

Follow this and additional works at: <http://scholarcommons.usf.edu/etd>



Part of the [Criminology and Criminal Justice Commons](#)

---

## Scholar Commons Citation

Lugo, Melissa Anne, "Self-Control, Attitudinal Beliefs, and White-Collar Crime Intentions" (2013). *Graduate Theses and Dissertations*.  
<http://scholarcommons.usf.edu/etd/4721>

This Thesis is brought to you for free and open access by the Graduate School at Scholar Commons. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Scholar Commons. For more information, please contact [scholarcommons@usf.edu](mailto:scholarcommons@usf.edu).

Self-control, Attitudinal Beliefs, and White-Collar Crime Intentions

by

Melissa A. Lugo

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Masters of Arts  
Department of Criminology  
College of Behavioral and Community Sciences  
University of South Florida

Major Professor: Shayne Jones, Ph.D.  
Wesley Jennings, Ph.D.  
Ráchael Powers, Ph.D.

Date of Approval:  
June 18, 2013

Keywords: corporate crime, personality traits, general theory of crime, environmental  
crime, interaction effects

Copyright © 2013, Melissa A. Lugo

## **DEDICATION**

I would like to thank several people who have helped me out tremendously during my time at USF. I would like to thank Dr. Ráchael Powers and Dr. Wesley Jennings for their patience and assistance while serving as my committee members. I also would like to thank Dr. Michael Leiber for showing me early on, the ways of research and sparking my interest in academia. A tremendous thank you goes to my mentor Dr. Shayne Jones for all your guidance and putting up with my neurotic tendencies. I truly appreciate everything you have taught me and I know I will be more than prepared for my doctorate school endeavors. Also, I would like to thank the criminology faculty at USF, graduate students, and my friends. Most importantly, I would like to dedicate this thesis to my parents and my boyfriend Justin for their unwavering support, which I am so grateful for and has meant more to me than they can imagine.

## TABLE OF CONTENTS

List of Tables .....	ii
List of Figures .....	iii
Abstract .....	iv
Chapter 1: Introduction .....	1
Chapter 2 Literature Review .....	6
White Collar Crime .....	6
Criminological Theories: Explaining White-Collar Crime .....	9
Macro-Level Theories .....	9
Micro-Level Theories .....	13
Self-Control and White-Collar Crime .....	22
Personality, Self-Control, and White-Collar Crime .....	27
Considering Mediation and Moderation .....	30
Summary .....	31
Chapter 3 Current Study .....	33
Methodology .....	33
Data .....	33
Measures .....	34
Dependent Variables .....	34
Environmental White-Collar Crime Intentions .....	34
Environmental Attitudes Index (EAI) .....	34
Independent Variable .....	35
Grasmick Self-Control Scale (GSCS) .....	35
Control Variables .....	35
Procedure .....	36
Analytic Plan .....	36
Hypotheses .....	38
Chapter 4 Results .....	40
Bivariate Results .....	40
Mediation Results .....	41
Moderation Results .....	42
Chapter 5 Discussion .....	44
References .....	52

## LIST OF TABLES

Table 1: Descriptive Statistics for the Sample on Age, Sex, Race, Environmental White-Collar Crime (WCC) Intentions, Grasmick Self-Control Scale (GSCS), and Attitudes (EAI) .....	33
Table 2: Pearson's Zero-Order Correlations for Age, Sex, Race, Environmental White-Collar Crime (WCC) Intentions, Grasmick Self-Control Scale (GSCS), and Attitudes (EAI) .....	40
Table 3: The Effects of the Grasmick Self-Control Scale and Attitudes on Environmental White-Collar Crime (WCC) Intentions .....	41

**LIST OF FIGURES**

Figure 1: Mediation Model of the Effect of Attitudes on the Relationship between  
Self-Control (GSCS) and Environmental White-Collar Crime (WCC)  
Intentions..... 38

## **ABSTRACT**

Gottfredson and Hirschi's general theory of crime (1990) has received a great deal of empirical examination in the criminology, yet the application of this theory to white-collar crime offenders has not received a great deal of attention. Research that has been conducted in the realm of white-collar crime has yielded mixed support for low self-control in explaining such offenses (Simpson and Piquero, 2002; Reed and Yeager, 1996; Langton et al., 2006; Blickle, 2006). The current study seeks to supplement the literature by focusing not simply on the direct causal links between self-control and white-collar offending, but also exploring how attitudes play a role between self-control and intentions to engage in white-collar crime. Specifically, this study examines whether attitudes towards environmental offending mediate and moderate the relationship between self-control and intentions to engage in environmental white-collar crime. The results indicated that attitudes toward environmental offending did have a mediating effect, but the effect of attitudes did not significantly vary as a function of self-control. Subsequently, simple slopes analysis found that the effect of attitudes was only significant among those with average and high levels of self-control. Implications for the general theory of crime and future directions for white-collar crime research are discussed.

## CHAPTER ONE: INTRODUCTION

White-collar crime appears to not fit the traditionally held notions of criminal activity; that crime is indicative of impoverished neighborhoods and a poor upbringing. The emergence of white-collar crime found its roots in sociology, when Edward Ross (1907) addressed the concept white-collar crime during a sociological address in 1896 by adapting the term “criminaloid” to describe those who commit crimes that are not viewed as fitting the stereotype of the typical offender (Ross, 1907). Sutherland advanced this notion in greater detail and was the first to label these offenses as “white-collar crime” and described it as “a crime committed by a person of respectability and high social status in the course of his occupation” (Sutherland, 1949:2) The effects of white-collar crime are not limited to only the corporate sector, but the costs, both financial and physical, are extremely detrimental to all of society (Lynch and Michalowski, 2006; Burns, Lynch, and Stretesky, 2008; Friedrichs, 2009).

There is a substantial focus on common offenses, such as Part One offenses as measured by the FBI’S Uniform Crime Reports, which proves to be troublesome. While this focus is necessary and informative, it is limited in that it fails to consider that white-collar crimes are not only criminal, but even more harmful to society than Part One offenses. In comparison to ordinary crimes, Sutherland (1940) notes that it is often held that white-collar crime has significantly more detrimental effects to society in terms of monetary damage and victims. The financial cost of white-collar crime trumps that of street crime, with costs nearing 1 trillion dollars (Lynch and Michalowski, 2006).

Corporate crime alone is 20 to 25 times more costly than street crime and with the inclusion of fraud and abuse in government spending the estimate increases the cost to 50 times greater than street crime (Lynch and Michalowski, 2006).

The effect of white-collar crime is not merely limited to financial damage. In addition, there are physical costs that can shatter the preconceived notion that only conventional crime is associated with the loss of lives. White-collar crime can produce unsafe working environments, high levels of pollution, along with distributing unsafe products to consumers. Burns and Lynch (2004) estimated that close to 200,000 individuals in the United States die annually from exposure to toxic pollution. Pollution plagues the United States to such an extent that approximately 85 percent of Americans are exposed to detrimental air toxins which is about 10 times more than the amount of victims that come from traditional forms of crime (Burns, Lynch, and Stretesky, 2008; Friedrichs, 2009). In addition, work-related diseases and accidents account for more than 50,000 deaths in the United States (Reiman, 2007). The victims that are subject to the physical harms of white-collar often do not even know how to assign culpability to the organizations or individuals at fault, even in those instances where they believe that someone is to blame for their condition (Croall, 2007; Vaughan, 1980; Walkalate, 1989).

Despite the costs and the media portrayal of white-collar crime with cases like HSBC and Enron, the study of white-collar crime remains an under-developed area of scholarship. In terms of the literature, much of the focus is placed on macro-level assessments of white-collar crime in relation to capitalist pressures and the need to secure profit in a competitive economy (Vaughan, 1981, 1992; Barnett, 1981; Clinard and Yeager, 1980). Other theories focus on the actor more directly, attempting to reveal what

factors influence the behavior of individuals in the commission of white-collar offenses. Both macro- and micro-level will be discussed in Chapter 2. Another specific theory that will be elaborated upon in Chapter 2 is Gottfredson and Hirschi's (1990) general theory of crime, with a focus on the key construct – self-control – advanced in that theory.

The applicability of low self-control to white-collar crime, as posited by the general theory of crime, has been subject to a great deal of debate. Hirschi and Gottfredson (1993) contend that the generality of their theory does extend to white-collar crime, although they speculate that white-collar offenses are a small proportion of criminal acts that do not occur at a high frequency (Hirschi and Gottfredson, 1993). While Hirschi and Gottfredson believe their theory encompasses all types of crime, the nature of the white-collar offenders may negate self-control propositions, for these individuals are ambitious and appear to make well-calculated decision unlike the typical offender (Simpson and Piquero, 2002; Reed and Yeager, 1996). Although the white-collar offender has been found to not fit the mold of a low self-control offender, there have been studies that suggest white-collar offenders display hedonistic tendencies as well as lower levels of self-control (Coleman, 1987; Bickle, 2006). Issues arise in the white-collar crime and self-control literatures when self-control is interpreted in the absolute sense by comparing white-collar offenders to street offenders. In order to advance our understanding of white-collar crime offending, a relative interpretation of self-control within the white-collar crime population may prove to be a more beneficial analysis. That is, instead of considering the full range of self-control within the general population, it might be insightful to understand how self-control varies among subsets of

the population. In the current discussion, that subset would be among those who are in, or have the potential to be a part of corporate settings.

Assessments of white-collar crime should not only include a micro-level assessment of white-collar crime but an examination of how white-collar offenders vary from one another. The question is, among a somewhat homogenous, noncriminal sample, can self-control differentiate between those who are more likely to engage in white-collar crime compared to those who are less likely to engage in such behavior? Therefore, the current study seeks to add to the literature by analyzing the varying levels of self-control in relation to white-collar crime intentions while taking into account the effect of ethical attitudes. By examining ethical attitudes, one can gain insight into why individuals lower in self-control might engage in white-collar crime. For instance, those who are lower on self-control may be more prone to develop and use attitudes that are congruent with white-collar crime. This would suggest that the mechanism linking low self-control and white-collar offending is via attitudes (i.e., a mediation effect). In addition, among those who acquire attitudes consistent with white-collar crime, there might be a tendency for those lower in self-control to be more influenced by them (i.e., a moderation effect). Utilizing an undergraduate student sample, the current study seeks to tease out the effect ethical attitudes have on the relationship between varying levels of self-control and white-collar crime intentions through mediation and moderation analyses. Extant studies have assessed the relationship between white-collar crime and self-control, although the mediating and moderating effect has not been evaluated.

In the following chapter (Chapter 2), various theoretical perspectives will be explored. Chapter 2 will not represent an exhaustive overview of every criminological

theory that is applicable, or has been utilized, in regards to white-collar crime. Rather the purpose is to give the reader a sense of how white-collar crime has been understood in the criminological literature. In chapter 3, the methodology of the current study will be discussed. Specifically, the sample, measures, analytic plan, as well as hypotheses will be presented. The results will be discussed in Chapter 4. The results will first consist of bivariate analyses, followed by multivariate analyses. The mediation and moderation effects of attitudes will also be presented in this chapter. Finally in Chapter 5 there will be a discussion of the results along with how the results of the current study fit with, and expand upon, the broader literature on white-collar crime.

## CHAPTER TWO: LITERATURE REVIEW

### *White-Collar Crime*

The emergence of white-collar crime can be traced to sociology, when Edward Ross addressed the concept white-collar offenses in 1896 by adapting the term *criminaloid*. A *criminaloid* makes use of the vulnerabilities in society through exploitation and does not fit the stereotype of a typical offender (Ross, 1907). Similar to white-collar crime offenders, a criminaloid is not viewed as culpable by the public as well as in their own perception of self. Sutherland (1940) further supports this notion when he defines white-collar crime as “crime in the upper or white-collar class, composed of respectable or at least respected business and professional men” (p.1). White-collar offenses are typically organized, rational, as well as deliberate and its’ offenders do not perceive themselves as law violators for the do not fit the stereotype of a common criminal (Sutherland, 1949).

Although, Sutherland is often hallmarked as the father of white-collar crime, he did not make a clear distinction between the different types of white-collar and the influence of structural forces (Geis, 2007; Meier, 2001). A simple definition of white-collar crime is hard to come by, for there are opposing views as to what constitutes these acts. For instance, some acts that could be defined as white-collar crime are codified in the criminal law, while other acts are administrative violations. Also, discrepancies arise when deciding if a corporate entity or rather an individual is responsible for the commission of white-collar crime. Due to the discrepancy on how to define white-collar

crime, a meeting was assembled among criminologists to devise a definition that would comprise all the elements of white-collar crime, which included:

White collar crimes that are illegal or unethical acts that violate fiduciary responsibility of public trust committed by an individual or organization, usually during the course of legitimate occupational activity, by persons of high or respectable social status for personal or organizational gain. (Helmkamp, Ball, & Townsend, 1996:351).

The definition provided in 1996 does prove to be useful as a guiding framework; however, there are still discrepancies present when measuring white-collar crime. For instance, government agencies appear to place a greater emphasis on recording features of the offense, as opposed to characteristics of the offender. As will be discussed shortly, the reliance on an organizational unit of analysis has limitations in terms of understanding white-collar offenders.

In order to understand how one defines white-collar, there are different means of operationalizing white-collar crime. Friedrich (2009) suggests two potential approaches in defining white-collar crime, which are the *typological*, and *operational* approaches (p. 6). The *typological* approach seeks to classify white-collar crimes into organized categories in hopes that clarity may provide a better understanding when conducting research. Friedrichs (2009) separates white-collar crime into typologies that include: corporate crime; occupational crime; governmental crime; state-corporate crime, crimes of globalization, and finance crime; and lastly, enterprise, entrepreneurial, techno-, and avocational crime. Corporate crime involves criminal acts, such as theft, violence, and financial manipulation, committed by officers and employees. Occupational crime

includes service crime, retail crime, and other crimes committed with an illegal or harmful financial purpose within a legitimate occupation. Governmental crime is categorized as state crime and political white-collar crime commissioned through government sanctions. A combination of corporate, governmental, international financial institution or occupational crime is indicative of the state-corporate crime, crimes of globalization, and high finance crime. The final categories of enterprise, entrepreneurial, techno-, and avocational crime are more residual forms of white-collar offenses that include crimes that are committed outside one's occupation, such as insurance fraud and tax evasion. By parsing white-collar crime into these more specific variants, Friedrichs suggests that a better understanding of specific forms of white-collar crime can be made. Furthermore, these white-collar crime typologies allow researchers to focus on specific white-collar crimes that may have more in common with one another.

The *operational* approach aims to provide a starting point for empirical studies as well as to quantitatively compare studies. An example of this approach is using a definition that describes a federally prosecuted offender that has violated eight federal crime categories that include: bribery, tax offenses, credit and lending institution fraud, postal and wire fraud, antitrust violations, securities fraud, bank embezzlement, and false claims and statements (Wheeler et al., 1988). Similar to the typological approach, the operational approach seeks to move beyond the heterogeneity by focusing on specific types of white-collar crimes. It differs from the typological approach by relying on existing federal crime categories. The purpose of this, as the name suggests, is to provide researchers with specific types of white-collar crimes that can be found in extent data, and thus readily utilized an empirical investigation. Setting a point in which studies can

empirically test white-collar crime is necessary for optimal generalizability and to provide clear, concise results.

### ***Criminological Theories: Explaining White-Collar Crime***

It is apparent that white-collar crime is a complex issue that can be difficult to conceptualize, especially what constitutes white-collar crime and whether it should be separated into typologies. Most criminological theories focus on the offense rather than the white-collar crime offender by attributing the causes to societal forces. However, there are some theoretical approaches that focus more on the offender and the offense. In order to gain a better understanding of white-collar crime as well as the nature of a white-collar offender, the following two sections will focus on the theoretical and empirical status of macro- and micro-level theories.

#### *Macro-Level Theories*

Economic, social, and legal factors can contribute to the facilitation of white-collar crime by corporations. Structural explanations of white-collar crime have been assessed through the realm of conflict theories, along with organizational perspectives. The structure of capitalist society propagates white-collar crime committed by organizations due to the increased need for profit in a competitive economic environment (Barnett, 1981). From an organizational standpoint, white-collar crime is further substantiated with the existence of norms, culture, and organizational structure that reinforce criminal ventures (Vaughan, 1981, 1992).

Merton's (1968) anomie theory can be utilized as a guiding framework when understanding white-collar crime at the aggregate level. In an environment characteristic of an anomic structure, the common individualistic goal of monetary success is

applicable at the corporate level with the increased need to secure profit in a competitive market economy (Merton, 1968; Passas, 1990). In turn those who work for corporations that desire to achieve monetary success are linked to the institutional goal of profit and are often used as pawns for the sake of corporate success (Merton, 1957; Passas, 1990; Vaughn, 1983). Stemming from Merton, a macro-level assessment of Agnew's (1992) general strain theory indicated that corporations engage in white-collar crime due to a blockage of economic goals and the need for profit (Agnew et al., 2009; Coleman, 1987; Vaughan, 1982; Clinard and Yeager, 1980).

Utilizing a corporate-level approach and facets of Merton's concept of anomie, organizational theories view the corporation as a dominant force in facilitating white-collar crime (Finney and Lesieur, 1982; Kramer, 1982; Vaughn, 1998; Gross, 1978, Simpson and Piquero, 2002). It is not solely corporate individuals who are deviant, but the corporation as well (Erman and Lundman, 1992). Through the use of "pressure" and "stress," an individual's choices are influenced by the corporation through cultural beliefs, politics, and external contingencies that are representative of the organization's culture (Vaughn, 1998; Vaughn, 1992; Clinard and Yeager, 1980, Friedrichs, 2009). The organizational culture of corporations is a dominant force that can dictate the actions of employees to such a vast extent that unethical behaviors become a "way of life" (Sonnenfeld and Lawrence, 1978; Hochstetler and Copes, 2001). Middle-range corporate officials typically succumb to the pressures from the corporation and view it as a necessary step to reach the overall institutional goal (Gross, 1978). In terms of the corporation deciding to turn to deviant methods, Finney and Lesieur (1982) state that corporations engage in criminal activity under limited rationality in order to reach their

goals as well as alleviate financial issues. The concept of limited rationality presents itself when there are limited legitimate opportunities for a corporation to achieve a desired goal therefore innovation takes place in the form of criminal enterprises (Finney and Lesieur, 1982; Passas, 1990; Box, 1983).

In conjunction with anomic premises, Messner and Rosenfeld's (1994) institutional anomie theory posits that criminal acts can be attributed to the materialistic focus of society and the need for monetary success. The strong emphasis on economic prosperity can dominate over other institutions, such as education and family. There are four core values that Messner and Rosenfeld (1994) outline, which include achievement, individualism, universalism and materialism that comprise the concept of the "American dream". The four tenets describe the need for individual achievement of monetary success, regardless of the available opportunities to reach this goal (Schoepfer and Piquero, 2006). In other words, a dark side of the American dream is success by any means necessary. The applicability of institutional anomie theory to white-collar crime is apparent through the culturally accepted goal of economic profit in an increasing competitive business sector (Coleman, 1987). Schoepfer and Piquero (2006) found mixed support for institutional anomie theory when assessing embezzlement. For example, the additive effects suggested that increasing levels of high school dropout rates was associated with increased embezzlement. The economy was also found to predict embezzlement, but not in a way supportive of institutional anomie theory, for increased unemployment was associated less embezzlement. Although one would expect increased unemployment to lead to increasing rates of embezzlement, Schoepfer and Piquero (2006) suggest that in order for embezzlement to occur in the white-collar crime context

an individual must be employed. Despite the mixed findings, these researchers suggested that institutional anomie theory proves to be promising in explaining white-collar crime.

Another set of theories that have demonstrated applicability and understanding white-collar crime are conflict theories. Conflict theories examine how crime results from the biased nature of law coupled with the elitist power that enacts these laws. The nature of a capitalist society promotes ideas that are egoistic as well as competitive that can lead to criminal responses. From a Marxist perspective, the capitalist nature of society produces an increased need to gain profit and maintain a superior status. When capitalist society is subject to economic hardship then the pressure to commit crimes, especially white-collar crimes, increases (Reiman and Headlee, 1981). When concerning the upper class, a capitalistic society employs the worst type of crime through the exploitation of the lower class, by those in control (Engles, 1895). Engles contends that exploitation leads to a substantial amount of deaths in factories due to unfit working conditions that are knowingly produced by those in power. The exploitation and harm of individuals by the elitist group still remains today in corporations and is referred to as *crimes of capital* (Michalowski, 1985). Corporations feel the pressure from society to succeed and will violate laws in order to increase profit if the benefits outweigh the costs (Glasbeek, 2007; Barnett, 1981). If law violation is in congruence with those in power, such as political figures, then white-collar crime activity will be protected through a form of immunity from legal sanctions (Friedrichs, 2004). Arguably, some laws and regulations are in place to maintain the status of those in power and to protect the nature of capitalist society (Lynch and Michalowski; 2006). In addition, with globalization of corporations there is

an increased need to fulfill capitalist ideology of maximizing profit through the expansion of markets at all costs (Tombs and Whyte, 2003; Pearce and Tombs, 2002).

Structural theories of white-collar crime place a heavy reliance on the organization as a unit of analysis. Although the corporation is a factor that should be considered, corporations themselves are vague and loosely coupled and individual-level factors, such as motivation, cannot be assessed from an organizational standpoint (Hagan, 1989; Cressey, 1989). Focusing on a capitalist economy may suggest that all corporations have similar interests when in fact some may even work against the predominant capitalist interests (Friedrichs, 2009; Bohn, 1982). If economic pressures from a capitalist society, are the major driving force for white-collar crime among organizations, such as the unequal distribution of power in the market sector, then all (or most) corporations that have the means should engage in white-collar crime. It is evident that a macro-level assessment of white-collar crime provides some insights into the occurrence of these acts, but it is equally clear that not all corporations buckle under capitalist pressures and commit criminal acts, specifically white-collar offenses (Simpson and Koper, 1997; Vaughan, 1997). In order to understand why some individuals within a capitalistic culture engage in white-collar crime, while others do not, the next section will focus on micro-level theories to account for these individual-level differences.

#### *Micro-Level Theories*

In the following section, a variety of micro-level theories that have been applied to the study of white-collar crime will be discussed. Specifically, some of the empirical findings bases on general strain theory (Agnew, 1992; Langton and Piquero, 2007), opportunity perspectives (Cohen and Felson, 1979; Eck, 1994; Benson et al., 2009,

Piquero et al., 2005), along with elements of control (Tittle, 1995), neutralizations (Cressey, 1953; Clinard and Yeager, 1980), social control and bonding (Lasley, 1988; Colvin et al., 2002) and social learning (Piquero et al., 2005; Higgins and Makin, 2004; Jones and Kavanagh, 1996) will be reviewed. Thus, the section highlights the individual level factors that can influence the propensity to engage in white-collar crime offending.

In the corporate setting economic strains appear to be the primary motivator, but when concerning the white-collar offender a socio-psychological approach can better explain individual propensity for white-collar crime. Agnew's (1992) general strain theory specifically assessing psychological reactions to negative aspects present in one's life. The key point of general strain theory is that it is not inherently tied to economic strain, but rather the failure to achieve positively valued goals, removal of positive stimuli, and the presence of negative stimuli that can produce anger (Agnew, 1992). From a white-collar crime standpoint, corporate employees may turn to white-collar offending for fear of losing their current status and the failure of reaching occupational goals (Wheeler, 1992; Weisburd et al., 1991; Agnew, 1992). Langton and Piquero (2007) examined the relationship between Agnew's (1992) general strain theory and white-collar offending and found that different types of white-collar crimes had different motivations, such as financial concerns and "fear of falling" from their current employment status (Wheeler, 1992).

Utilizing a sample of convicted white-collar offenders from seven federal judicial districts, Langton and Piquero (2007) separated eight types of white-collar crime offenses into a hierarchical pattern. Antitrust and securities violations require more organization and involve multiple offenders to enact; therefore these types of white-collar crime are

categorized as complex, large-scale corporate crimes. As expected, Langton and Piquero (2007) found that business motives, rather than personal or financial motives that are individualistic, were positively and significantly related to antitrust offenses and securities violations. Mid-level white-collar crimes included mail fraud, bribery, and false claims. When concerning mid-level crimes, Langton and Piquero (2007) found some support for general strain theory with a positive significant relationship between strain and false claims, but no support was found in regards to specific motivations. The remaining mid-level white-collar offenses were not significantly related to strains, suggesting that those with high social status may be susceptible to different types of strain. The lower-level white-collar crimes, which included embezzlement, tax offenses and credit card fraud, had significant relationships with strain as well. Specifically, those who had financial concerns were more likely to participate in embezzlement and credit fraud. In addition, personal and negative emotions were related to increases in tax fraud offending. The application of general strain theory to white-collar crime offending has not been extensively examined, but there is some support for the theory in explaining different types of white-collar crime, such as embezzlement and security violations (Langton and Piquero, 2007).

In order for a white-collar crime to occur, the opportunity to engage in such acts must be present. The opportunity perspective does not simply focus on the presence of opportunity, but what constitutes these opportunities that makes it a setting conducive to crime. Different opportunity structures create various forms of white-collar crime (Benson et al., 2009). Different opportunity structures are a reflection of the corporation, such that the occurrence of a white-collar offense is dependent on available means. For

example, physicians can rely on the normative confusion that stems from Medicaid to cover up overcharging the patient (Benson et al., 2009; Coyne, 1991). Specifically, the notion of “common place” is central to opportunity perspectives, such as routine activity theory, that prompts interaction between white-collar offenders and their victims (Eck and Clarke, 2003). Opportunity coupled with the calculation of costs and benefits can motivate a corporate manager to engage in white-collar acts (Vaughan, 1998; Kagan and Scholz, 1984).

In terms of applying an opportunity perspective to white-collar offenders, routine activities theory can shed light on why some corporate individuals commit white-collar crime. Routine activities theory is comprised of three conditions that must be met in order for crime to occur, which include: a target, a motivated offender, and lack of capable guardians (Cohen and Felson, 1979; Eck, 1994; Benson et al., 2009). Routine activities theory can be adapted in such a way that it can be applied to white-collar crime. For white-collar crime to take place there are three conditions to fulfill: the presence of white-collar offenders, victims and an occupational or organizational setting that prompts contact between the offender and the victim (Benson et al., 2009). An example of how routine activities theory’s can be applied to white-collar crime is in cases of insurance fraud. The hospital would be the offender, the victim is the insurance company, and the network that facilitates contact and crime is the system for submitting insurance claims. The guardian in the insurance fraud scheme could be the reviewer of claims or a hospital employee that realizes the patient has been overcharged (Benson et al., 2009).

White-collar crime offenders are believed to be educated and have the ability to make sound decisions in their life. Corporate crimes are typically well planned as well as

carefully calculated in order to secure profit (Kadish, 1977). Rational choice theory extends to white-collar offenders for a cost-benefit analysis is conducted and the likelihood of getting caught is rather low (Braithewaite and Geis, 1982). For instance, the explosion of the Challenger space shuttle is an example of employees knowingly engaging in risky decision-making, which was condoned by the National Aeronautics and Space Administration biases towards risky behavior (Vaughan, 2006). The Challenger is an example of the organization proliferating risky decision-making and in turn employees are not concerned with detection rates. Therefore white-collar crime appears to be a viable choice when the potential gain outweighs a rather low rate of detection. In support, Piquero and colleagues (2005) found that respondents were less likely to engage in white-collar offending if the certainty of punishment was high. Also, Piquero and colleagues (2005) noted that deciding to engage in corporate offenses was dependent on situational, individual, and personality characteristics, being that financial gain and the likelihood of being reprimanded were influential. The commission of white-collar crime in the realm of rational choice theory is exemplified when a physician engages in fraudulent billing. The physician views the fraudulent act as an attractive opportunity to gain money, the effort is minimal due to electronic accessibility, there is low risk of detection with the presence of only electronic review, and the justification is that physicians are not appropriately reimbursed by Medicaid or Medicare (Benson et al., 2009). The perceived certainty and severity of formal sanctions is an important aspect when applying rational choice premises to white-collar crime (Paternoster and Simpson, 1992). A concept that can be applied to white-collar offenses under the umbrella of rational choice theory is

*bounded rationality*, which indicates that rationality may be based on incomplete information and the action is rational at the moment (Simon, 1976).

The essence of “control” is another factor that has been assessed among white-collar crime offenders, specifically Tittle’s (1995) control balance theory. Control balance theory contends that there is a “control balance ratio” that dictates crime as well as deviance. The “control balance ratio” is the amount of control an individual exerts in comparison to the amount of control that he or she is subject to. In conjunction with the “control balance ratio,” the desire for autonomy is another major component of control balance theory (Tittle, 1995). Deviance or criminal behavior arises when there is a surplus of control or a lack of control. Control surplus occurs when the amount of control an individual is subject to is less than the amount of control exerted by that individual. A lack of control, also referred to as a control deficit, results when the amount of control exercised by an individual is less than the amount of control he or she is subject to.

A number of deviant acts can arise from control surpluses and deficiencies, but when concerning white-collar offenders it is typically control surpluses that lead to white-collar crime (Piquero and Piquero, 2006). Depending on the level of control surplus a white-collar offender may engage in price-fixing, exploitation of political figures, or the authorization of toxic dumping (Tittle, 1995; Piquero and Piquero, 2006). Although control balance theory in regards to white-collar crime has not been extensively examined in the criminological literature, Piquero and Piquero (2006), utilizing a sample of adults enrolled in higher education business courses, found a significant positive relationship between those who had control surpluses with exploitative intentions. In addition, control deficits were found to be positively related to exploitative intentions, but this effect was

not significant. These findings provide empirical support for key provisions advanced control theory.

Neutralization can also prove to be vital when comprehending how an individual with high social status and who conforms to societal norms engage in white-collar criminal behavior. Besides white-collar offenders being rational actors, the justification behind their actions is equally important. White-collar offenders who engage in embezzlement have been found to rationalize their criminality by indicating that they were merely “borrowing” the money (Cressey, 1953). Additionally, Green (1990) found that employee theft was committed because the offender believed that no one was getting hurt and the store can afford it. The mentality that “everyone is doing it” also extends to techniques of neutralization among corporate executives who believe illegal work practices are commonplace in the corporate world (Clinard and Yeager, 1980). Sykes and Matza’s (1957) “techniques of neutralization,” in conjunction with Box’s (1983) drift presumptions that juvenile delinquents oscillate between conventional and delinquent norms, can be adapted by corporate officials, as suggested by Friedrichs (2009). Corporate officials may not see that they are culpable and may state that the law violation was an accident or the laws in place are not clear (Friedrichs, 2009). For instance, the denial of injury to the victim or even the lack of acknowledgement that there is a victim will also come into play when the criminal act is turned into solely an economic gain in the viewpoint of the corporate official.

The concepts of attachment and commitment are central cores to social control theory that can be applied to white-collar crime offending. Lasley (1988) examined automobile corporations and found that executives who had strong corporate attachments

and commitments were less likely to commit white-collar crime against their employers than those who has weak social (corporate) bonds. Strong bonds to a corporation does not necessarily entail that an individual will not engage in white-collar crime. A corporate executive that is strongly bonded to the corporation may engage in white-collar crime if it is for the sole purpose of benefitting the company (Friedrichs, 2009). Weak social bonds, as posited by social control theory, can contribute to criminal outcomes. Colvin and Pauly (1983) suggest that weak bonds stem from coercive relations of control. Corporate environments can foster coercive relationships that can intimidate an individual to engage in white-collar offending (Braithewaite, 1995; Colvin, 2000; Colvin et al., 2002). Social bonds play a role in coercive environments, for those who have low social bonds may view illegitimate corporate activities as a means to gain social support (Colvin et al., 2002). The nature of the company, as well as the strength of the bond, both need to be considered when understanding the role of social control theory to white-collar crime.

In addition to bonds, learning is another vital component in understanding the individual motivations to engage in white-collar crime. Differential association has been used to explain criminality through the process of learning and Sutherland contends that criminality is learned at all social levels, not just among those who belong to a lower socioeconomic status (Sutherland, 1940). In an assessment of students, Vowell and Chen (2004) examined cheating a form of student white-collar crime and found significant support for differential association in comparison to other theories when explaining cheating. Specifically, differential association is further supported with Higgins and Makin (2004) research regarding software piracy and college students. Higgins and Makin found that associating with deviant peers did condition the effect of self-control

regards to software piracy. However, there are findings that fail to provide support for differential association theory. For instance, Cressey (1953) evaluated embezzlement practices and found that embezzlers did not have differential contact with other embezzlers, but decided to engage in embezzlement as a result of their personal financial issues. Thus, there is mixed support for differential associations.

Moving beyond Sutherland's conceptualizations, Akers' (1985) social learning approach offers additional insights that can be applied to white-collar crime. Social learning theory moves beyond differential association by including differential reinforcement, imitation, and definitions that can be applied to white-collar crime. When deciding to engage in unethical acts, Jones and Kavanagh (1996) found that managerial influence was significantly related to unethical behaviors among those who were older and had more work experience. This is consistent with social learning in that Jones and Kavanagh (1996) surmised that those who had work experience viewed their boss as an example of what constituted proper business behavior, which is consistent with the concept of imitation. Piquero and colleagues (2005) found in their sample of MBA students that engaging in corporate crime was contingent on the perceived attitudes of the board of directors and coworkers they were close to, suggesting differential associations and reinforcement are important. The effect of the corporate climate was found to influence individuals to an extent that nullified the influence of peer and family attitudes supporting ethical attitudes (Piquero et al., 2005). For example, a number of respondents claimed that they would engage in corporate crime that could lead to the injuring and even death of innocent people in the event that there were strong pressures emanating from the corporate climate (Piquero et al., 2005). Also, Geis (1967) found that employees

in the electric industry learned the ways of illegal price-fixing and it was deemed he “established way of life.” Embracing the corporate environment can ultimately lead to learning definitions favorable to white-collar crime through the imitation of unethical behaviors from top corporate officials and in turn the behavior can be reinforced either through monetary gain or job security.

As this brief review suggests, there are a number of micro-level theories that have been applied to the study and understanding of white-collar crime. Furthermore, there is empirical support for the notion exploring white-collar crime the individual level yields important insights. In the following section, another micro-level theory will be reviewed—self-control theory. While this theory has received widespread empirical support (Pratt and Cullen, 2000), its utility in understanding white-collar crime has been more mixed. However, as will be demonstrated, this theory might very well hold value in explaining why some individuals engage in white-collar crime while others do not.

### ***Self-Control and White-Collar Crime***

Gottfredson and Hirschi’s general theory of crime (1990) states that individuals who exhibit criminality exude impulsiveness and virtually no acknowledgement of the long-term consequences of antisocial behavior. One of the basic premises of the general theory of crime is that parenting leads to the establishment of self-control. The theory places a heavy importance on child rearing practices, for it is the gateway to the establishment of self-control or lack thereof (Gottfredson & Hirschi, 1990; Longshore, 1998). Gottfredson and Hirschi suggest that all individuals are born with low self-control. In order to acquire self-control, effective parenting must be employed. They specifically point to three factors that represent good parenting, and that can lead to the acquisition of

self-control. Those factors are (1) monitoring and supervision, (2) recognition of antisocial behavior, (3) and fair and consistent punishment for misbehavior. In the event that parents do not engage in these behaviors, the child will have difficulty developing self-control. Furthermore, they suggest that self-control must be acquired early on in the life course – by approximately 8 to 10 years of age. If self-control is not acquired by this point, the theorists suggest it is unlikely for the individual to possess sufficient levels of self-control to inhibit their antisocial behavior.

Gottfredson and Hirschi (1990) discuss six facets that are indicative of low self-control: self-centeredness, temper, risk-taking, physical activity preference over verbal communication, impulsivity, and lack of the consideration for the long-term. Along with exhibiting the six elements of low self-control, the theory indicates that those low on self-control will also engage in analogous behaviors, such as gambling and substance abuse (Keane et al., 1993, Piquero, Gibson, and Tibbetts, 2002; Winfree and Bernat, 1998). In addition, Pratt and Cullen (2000) found self-control to be moderately related to crime in their meta-analysis of self-control studies.

The reason why white-collar offenders are of interest in the general theory of crime is that they appear to not fit the typical portrayal of criminality, for they are employed and often have a degree of educational attainment. Although much of the literature posits that white-collar individuals are quite distinct compared to the typical offender, Hirschi and Gottfredson (1987) argue that the assumption of being in the corporate world does not suggest success, but rather white-collar offenders have marginal income and minimal power. The type of individual that engages in white-collar offending is arguably risk-taking and somewhat impulsive, for their job and reputation is on line

(Hirschi and Gottfredson, 1987). Minimal effort is another component of the general theory of crime that can be applied to white-collar offending (Gottfredson and Hirschi, 1990). Although some may argue that white-collar crime takes planning and careful calculation, many white-collar offenses result from the pursuit of quick profit that circumvents legitimate routes. In contrast, it can be much more time-consuming and challenging to earn a living without defrauding investors, performing unnecessary surgeries, and following safety regulations. Among those in the business sector who had lower levels of self-control, they would rather engage in criminal shortcuts that lead to profit within 2 to 4 years versus utilizing legitimate routes that may take 30 years for a substantial profit gain. Comparing the amount of time and effort put into a street offender's act to that of a white-collar act will lead to misguided conclusions, for it is clear that the white-collar offense takes a considerably larger investment compared to street crime. However, that investment is considerably less compared to legally accepted methods.

There are few studies in the criminological literature that address the ability of the general theory of crime to explain white-collar crime. Rather than assessing the differences in self-control between white-collar offenders and street offenders, the key to understanding self-control among white-collar offenders is to compare individual differences within the white-collar population (Hirschi and Gottfredson, 1987). It is not an offense distinction that separates all types of crime, but rather individual differences within a group of individuals who share similar locational attributes (Hirschi and Gottfredson, 1987). When examining the consideration of the long-term, those who commit employee theft were found to be short-sighted and did not take into account long-

term employment (Thomas et al., 2001; Hollinger and Clark, 1983). In addition, Langton et al. (2006) found that self-control was the strongest predictor of the likelihood in engaging in employee theft among a sample of college students. In regards to examining convicted white-collar offenders against their non-criminal counterparts, Blickle et al. (2006) found that when compared to white-collar criminals, non-criminal managers had a greater degree of behavior self-control.

Some of the literature claims the generality of the theory cannot encompass all types of crime (Braithwaite, 1985; Steffensmeier, 1989), while others suggest white-collar crime goes against the minimal effort premise unlike typical crimes (Geis, 2000). Disparities arise when studies assume that white-collar crime offenders are a homogenous group, especially when compared to the common street offender. In an analysis of master's of business students, Simpson and Piquero (2002) found no relationship between low self-control and corporate offending, as well as little evidence supporting analogous behaviors as proposed by self-control theory. These findings led the researchers to conclude that managers carefully calculated the costs and benefits of offending since they valued their job. Although Simpson and Piquero (2002) did not find an association between corporate offending intentions and indicators of low self-control, aspects indicative of the general theory of crime were supported. For example, respondents were more inclined to engage in white-collar offending for the sake of career benefits, which is consistent with the self-centeredness facet of low self-control. In addition, Simpson and Piquero's (2002) findings may suggest a lack of impulsivity, but the fact that corporate managers engage in white-collar crime despite the costs is indicative of risk-taking. Also, Piquero and Benson (2004) suggest that white-collar

crime individuals with high self-control engage in corporate offending for fear they will lose their financial status and see illegal financial gain as a way out (Piquero & Benson, 2004). Despite Piquero and Benson's (2004) findings indicating that offenders with high self-control engage in white-collar crime as a pragmatic solution, the key point is that these individuals engaged in offending for their own self-interest, which goes against Reed and Yeager's (1996) notion that individuals offend for the sake of the corporation. In addition, Herbert and colleagues (1998) suggest that although corporate officials may have relatively high levels of self-control (at least compared to common criminals), they may engage in low self-control behaviors, such as self-interest offenses, if the opportunity presents itself.

The assumption that all white-collar offenders are invariable from one another may lead to misleading findings when assessing self-control. The belief that white-collar offenders engage in criminal acts on the behalf of the corporation may not be a common occurrence. White-collar offenders can embody characteristics that are commonly associated with other offenders when examining the general theory of crime, for some utilize lying and cheating for the sake of personal gain (Shapiro, 1990; Hirschi and Gottfredson, 1987). Those who engage in white-collar offending appear to share the same characteristics as common criminals, even though white-collar offenders do not possess the same levels as common criminals. For example, white-collar offenders have been found to exhibit hedonistic tendencies and engage in criminal opportunities to gain pleasure and more money (Coleman, 1987; Blickle et al., 2006). Thus, self-control may matter when one looks at differences between a white-collar offender and an individual in the corporate world who does not commit white-collar offenses. Although the previous

studies provide mixed support for Gottfredson and Hirschi's theory, there is support for low-self control tendencies, such as impulsivity and conscientiousness in the psychological literature.

### ***Personality, Self-Control, and White-Collar Crime***

Personality, or rather the notion of psychological traits explaining white-collar crime, was discredited when Sutherland (1949) presumed that corporations create circumstances of corporate law breaking. In addition to the literature on the general theory of crime and white-collar offending, there are facets of self-control that have been examined in the psychological literature. Studies have been conducted indicating that white-collar offenders do exhibit specific personality traits, such as narcissism, that distinguished them from white-collar non-offenders (Alalehto, 2003; Blickle et al., 2006).

A competitive work environment can foster grandiose, dominant, and egocentric traits that comprise a narcissistic personality (Blickle et al., 2006, Bromberg, 1965). Significantly higher rates of narcissism have been found among convicted white-collar crime offenders when compared to non-offenders who hold similar business manager positions. An aggressive workplace setting can engender self-absorbed and hedonistic tendencies that will increase the likelihood of an individual partaking in white-collar crime (Blickle et al., 2006). Also, Hogan and Hogan (2001) found the presence of subclinical narcissism among those in managerial positions who had career derailments. As prior theories suggest, the self-interest in monetary gain is a characteristic of a white-collar crime offender (Braithewaite, 1992; Simpson et al., 1998).

Behaviors typically associated with low self-control, such as callousness, are associated with psychopathy (Paulhus and Williams, 2002; Blickle et al., 2006). When

examining environmental offending among a sample of undergraduate students, Ray and Jones (2010) found that certain facets of psychopathy were associated with intentions to engage in toxic dumping. Carefree Nonplanfulness (CN) and Machiavellian Egocentricity (ME) tendencies had the strongest associations to environmental offending, which suggests that those high on CN and ME subscales do not carefully calculate alternative solutions to problems and manipulate others in order to accomplish self-interested goals (Ray and Jones, 2010). In relation to low self-control behaviors, the preference to engage in toxic dumping for the sake of profit over safety and legality suggests a lack of consideration for potential long-term goals (e.g., criminal conviction, harming others). Also, these individuals display hedonistic interests as posited by the general theory of crime considering the preference for illegal means to secure profit over timely legal ventures.

In a sample comparing white-collar crime offenders against a non-offender group employed in upper-level positions, Collins and Schmidt (1993) found that “social conscientiousness” proved to be the significant distinguishing quality that differentiated convicted white-collar crime offenders from corporate officials. “Social conscientiousness” included personal values, sense of duty and responsibility, behavioral control, and risk-taking behavior. Low scores on social conscientiousness are indicative of risk-taking, lack of conscientiousness, disregard of rules, and undependability. Much like the self-interest component of the general theory of crime, Collins and Schmidt state that low responsibility scores are indicative of self-indulgence and a lack of dependability. In an analysis of participants from five organizations in Korea, which included 47 percent administrative personnel in a government organization and 33 percent insurance

salespersons, Lee and colleagues (2005) found that the honesty-humility facet of the Big Five was indicative of antisocial behavior in the workplace. Specifically, Lee and colleagues (2005) found that honesty-humility was shown to related to antisocial work behaviors that included dishonesty and exploitation, such as falsifying workplace related information. When considering self-control, low scores on honesty-humility are representative of those with low self-control since these individuals are considered to be self-centered and display hedonistic tendencies (Blickle et al., 2006; Lee, Ashton and Shin, 2005).

A typology of personalities has been applied to white-collar offenders when assessing how they act in the corporate setting. Feeley (2006) discusses the competitive personality of white-collar offenders and these offenders can have three different personality typologies, which include: the positive extrovert, disagreeable businessman, and neurotic corporate officials. When concerning lower levels of self-control, the positive extroverts are both highly extroverted and have low levels of self-control prompting aggressive behavior that makes them more likely to commit white-collar acts than those extroverts with self-control (Collins and Griffin, 1998; Feeley, 2006). Those with positive extrovert personalities and neurotic tendencies are more susceptible to engaging in white-collar offending (Walters and Geyer, 2004; Feeley, 2006).

Although the relationship between low self-control and white-collar offending has not been extensively examined, it is fair to say that the general theory of crime has received much more support for understanding common, street crimes compare to white-collar crimes. Yet, there are both theoretical and empirical reasons to believe that self-

control matters when understanding white-collar offending. The purpose of the current study is to expand upon extent research to provide more clarity to the field.

### ***Considering Mediation and Moderation***

Extending beyond the main effects of self-control (or similar constructs), scholars are beginning to find that social psychological factors might mediate the relationship between self-control and antisocial outcomes. Wright and colleagues (2001) found that the relationship between self-control and antisocial behavior is partly due to the presence of antisocial and prosocial ties. Specifically, relationships in realm of work, school, peer, family, and intimate partners can mediate the effect of self-control on antisocial behavior. Additionally, there can be a “social-amplification effect” that can occur meaning that the influence of criminogenic forces, such as antisocial peers, will be greatest among those who are on those who have a greater criminal propensity, like those with low self-control (Wright et al., 2001; Gibson and Wright, 2001; Doherty, 2006; Ousey and Wilcox, 2007). Similarly, Intravia and colleagues (2011), when examining Hirschi's (2004) reconceptualization of self-control, found that peer costs, being caught, and salience exerted a significant mediating effect on delinquency. Additionally, Jones and colleagues (2011) found that perceived costs have significantly mediated the effect of thrill seeking on engaging in substance abuse behaviors. Studies suggest that the effect of inhibitors, both internal and external, can be lessened or amplified with the presence of costs or attitudinal mechanisms that can exert a mediating influence.

Along with the mediating effect of criminogenic forces on the relationship between self-control and antisocial behavior, these factors can in turn be moderated by self-control. Jones and Lynam (2009) found that there were significant interaction effects

between impulsivity and neighborhood perceptions in terms of offending. Specifically, lack of premeditation had a stronger effect in neighborhoods perceived as being lower in supervisions (Jones and Lynam, 2009). When concerning prosocial bonds, Wright and colleagues (2001) found that the strongest effect was among those with low-to-moderate levels of self-control. Additionally, antisocial ties had a more pronounced effect in facilitating crime among those with low self-control (Wright et al., 2001; Ousey and Wilcox, 2007). Conversely, Yarbrough and colleagues (2012) did not find that peers were significantly moderated by self-control, but this may have been due to the operationalization of perceived peer delinquency. In the capacity of attitudes, both Ousey and Wilcox (2007) and Yarbrough et al. (2012) failed to find that definitions (similar to attitudes) favorable to crime significantly varied as a function of self-control. Unfortunately, the literature examining the moderating effects of self-control, relevant to the present study, is limited in nature. Examining interaction effects among criminological constructs and psychological forces can prompt a better understanding of the nuances that arise between self-control and antisocial behavior. Despite the importance of understanding the mediating effect of criminological constructs and the moderating effects of self-control, to date there are no studies that assess these aspects among white-collar crime offenders.

### ***Summary***

Theoretical explanations examining white-collar crime have explored both macro- and micro-level assessments. At the organizational level, white-collar crime has been explained through economic capitalist conflict that prompts organizations to engage in white-collar crime for the sake of profit (Passas, 1990; Engles, 1895; Michalowski, 1985;

Glasbeek, 2007). While macro-level assessments are important in understanding the context in which white-collar crime can occur, examinations at the individual level can lead to a more comprehensive understanding of white-collar occurrences. Strains (Agnew, 1992; Langton and Piquero, 2007), opportunity (Cohen and Felson, 1979; Benson et al., 2009), along with concepts of control (Tittle, 1995; Piquero and Piquero, 2006), neutralizations (Cressey, 1953; Clinard and Yeager, 1980), social control and social bonding (Lasley, 1988; Colvin et al., 2002) and social learning (Piquero et al., 2005; Jones and Kavanagh, 1996) can further explain white-collar criminality. Likewise, the general theory of crime is an explanation of criminal propensity that is of particular interest in understanding white-collar crime. Previous studies of the general theory of crime have provided mixed support in regards to the generality of low self-control in explaining white-collar offending (Langton et al., 2006, Bickle, 2006; Simpson and Piquero, 2002; Reed and Yeager, 1996). Additionally, incorporating psychological dimensions about white-collar offenders can shed some light as to why these individuals engage in corporate offending (Collins and Schmidt, 1993; Bickle, 2006; Lee, Ashton and Shin, 2005). With the limited empirical literature at hand, there is a need for more research to be conducted, especially when concerning self-control. In the next chapter, chapter 3, the methodology of the current study will be presented, which will include: the sample, measures, analytic plan and hypotheses.

## CHAPTER THREE: CURRENT STUDY

### *Methodology*

#### *Data*

The current study utilized data comprised of undergraduate students attending a large state university located in Florida in 2007 (n = 316). The undergraduates were enrolled in a criminology course that was taken as a general elective requirement. The course is not limited to only criminology undergraduate students and as a result there are students in the sample that represent various majors and colleges within the university. The questionnaire was administered in-person.

Characteristics of the sample are presented in Table 1. The mean age of the sample was approximately 22 years old (sd = 3.33). The sample was 58% female (n=184) and 42% male (n=131). The dichotomized race variable indicated that approximately 67% of the sample was white and 33% of the sample was non-white.

**Table 1.** Descriptive Statistics for the Sample on Age, Sex, Race, Environmental White-Collar Crime (WCC) Intentions, Grasmick Self-Control Scale (GSCS), and Attitudes (EAI)

<i>Variables</i>	N	X	SD	Minimum	Maximum
Age	316	21.73	3.33	18	43
Male	315	.42	-	0	1
Non-white	314	.33	-	0	1
Environmental WCC Intentions	284	.27	-	0	1
GSCS	294	67.32	9.98	35	96
EAI	276	15.76	3.97	6	26

## ***Measures***

### *Dependent Variables*

*Environmental White-Collar Crime Intentions:* To assess white-collar crime intentions, a scenario was presented to participants. The scenario consisted of a fictional depiction of white-collar crime, specifically environmental crime. The scenario was indicative of a real-life situation and the names assigned to the characters were not gender biased in order to allow participants of both genders to imagine themselves in this situation. The scenario depicted involved a fictitious character who consciously decided to engage in toxic dumping. Participants were asked to indicate the likelihood they would do as the character had done (i.e., engage in toxic dumping). Specifically, they responded to the statement, "I would always act as Jordan did." Participants indicated their level of agreement with this statement by circling either False (F), Mostly False (MF), Mostly True (MT), or True (T). Due to the highly skewed distribution of the responses, this variable was dichotomized such that 0 = no likelihood the respondent would act as the character did, and 1 = some likelihood.

*Environmental Attitudes Index (EAI):* In order to assess individual level justification for environmental offending a 7-item ( $\alpha=0.64$ ) self-report instrument was designed. This scale has been used in the past when examining white-collar crime intentions, specifically environmental offending, by Ray and Jones (2010). The scale was designed to assess attitudes that favored engaging in environmental crimes (e.g. *Corporations should not be held responsible for unknown harm to the environment due to one of their products*, and *The alleged impact of industry on the environment is exaggerated*). For each of the items, respondents indicated their level of agreement with

each statement based on a 5-point likert scale by choosing disagree strongly (1), disagree (2), neutral (3), agree (4), and agree strongly (5). The descriptive statistics for this scale are noted in Table 1. Higher scores indicate that respondents held attitudes that are supportive of violations against the environment. Lower scores suggested that individuals held attitudes that are at odds with environmental offending.

*Independent Variable:*

*Grasmick Self-Control Scale (GSCS):* The Grasmick scale is a 24-item ( $\alpha=0.84$ ) self-report measure of self-control that has been found to be a reliable and valid measure across various types of samples (Grasmick et al., 1993; Piquero and Rosay, 1998; Nagin and Paternoster, 1993). The 24 items are used to tap into the 6 facets of self-control, which include: impulsiveness, simple tasks, risk seeking, physical activity, self-centeredness, and temper. Respondents indicated their level of agreement with statements (e.g., *I often act on the spur of the moment without stopping to think*, and *When things get complicated, I tend to quit or withdraw*) by choosing one of the following responses: strongly agree (1), agree somewhat (2), disagree somewhat (3), and strongly disagree (4). Descriptive statistics of the Grasmick scale are presented in Table 1. Higher scores on the Grasmick scale indicate higher levels of self-control.

*Control Variables:*

The present study will include several control variables: age, sex, and race. Respondents indicated their age at the time the questionnaire was administered. Sex was recorded as either female (0) or male (1). Respondents indicated their race by choosing one of the following categories: 0 = American Indian, 1 = Asian, 2 = Black or African-American, 4 = Native Hawaiian or other Pacific Islander, 5 = White, or 6 = other. The

sample was predominately white (67%), and was therefore recoded (0 = white; 1 = non-white).

### ***Procedure***

This study was approved by the University's Institutional Review Board (IRB) and followed pertinent ethical guidelines when conducting human subjects research. Respondents were students from an undergraduate criminology course and were given the opportunity to participate in a research study for extra credit points. Students in a pre-approved class were presented with the description of the study and the opportunity to participate. Before participants began directions were provided and they were told that their responses would be confidential. In addition, participants were told that they would be given extra credit for participating in the study. The time to complete the questionnaire took approximately 25-30 minutes. Once those willing to participate completed the questionnaire, the students were asked to return their completed responses by the end of class. An alternative option pertaining to the content of the course was available to students who did not want to participate in the study, but who still wanted to earn extra credit.

### ***Analytic Plan***

The characteristics of the sample and the distribution of the control variables were first assessed (Table 1). Specifically, sample means and frequencies are presented on age, sex, and race.

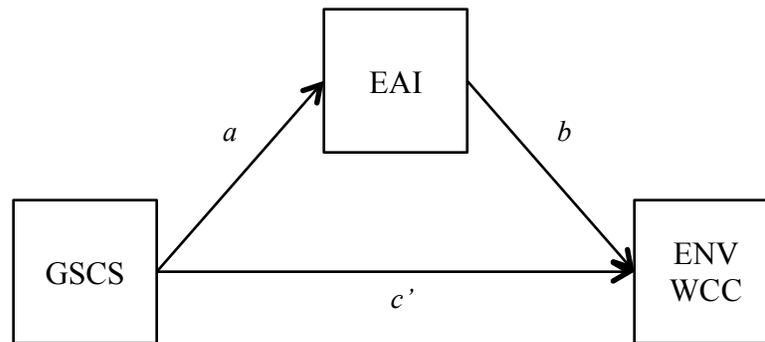
The first set of analyses will focus on the bivariate correlations among the study variables. This will be followed by multivariate analyses; specifically, logistic regression will be performed. Because this study is focused on understanding the mechanisms by which

self-control might exert an effect on criminal intentions, mediation analyses will be used. Moderation analyses will also be conducted, as another key interest being examined in this study is whether attitudes favorable to environmental crime exert differential effects on intentions to engage in toxic dumping as a function of self-control. Both mediation and moderation analyses are discussed in more detail below.

The Preacher and Hayes (2008) indirect method that provides bootstrapped confidence intervals was used. A relationship was first assessed among self-control (GSCS), and environmental attitudes index (EAI), which is the *a* path in the mediation model. The mediation model is presented in Figure 1. The *b* path is then assessed by examining the relationship between EAI and intentions to engage in toxic dumping. The last set of analyses for the mediation model includes the total (*c*) and direct (*c'*) effect of self-control on environmental white-collar crime intentions. There are two key advantages to using this method for assessing mediation. First, the method does not inherently assume normality and symmetry among the sampling distribution, but instead uses resampling methods. This is important for it does not assume a normality of the sampling distribution. Second, this method provides estimates of the effect as well as standard errors. This allows for hypothesis testing in that t-test (for continuous relationships) and Wald (for dichotomous outcomes) statistics can be calculated. This will permit more definitive conclusions about whether attitudes significantly mediate self-control and environmental white-collar crime intentions.

Moderation analyses were conducted to assess if there were significant interactions occurring among the constituent terms. The effect of attitudes (EAI) may vary as a function at different levels of self-control. If there is significant interaction,

simple slopes will be calculated. Simple slopes will provide an estimate of the magnitude and direction of the effects of attitudes at low (-1 sd) and high (+1 sd) levels of self-control.



**Figure 1.** Mediation Model of the Effect of Attitudes on the Relationship between Self-Control (GSCS) and Environmental White-Collar Crime

### *Hypotheses*

The aim of this study is to examine the relationship between self-control and intentions to engage in environmental crime, a form of white-collar crime. In addition, the current research will assess if individuals who are lower on self-control are more prone to develop and use attitudes that are congruent with environmental offending. It is hypothesized that individuals who have lower levels of self-control will be more inclined to hold attitudes that are consistent with environmental white-collar crime, and will be more likely to intend to engage in environmental offending compared to those with higher levels of self-control. A list of hypotheses relevant to this study are presented below:

#### *Hypotheses for Environmental White-Collar Crime:*

- (1) Self-control (GSCS) will be negatively related to environmental white-collar crime intentions.

- (2) Attitudes toward environmental offending (EAI) will be positively related to environmental white-collar crime intentions.
- (3) GSCS will be negatively related to EAI.
- (4) Attitudes will significantly mediate the relationship between GSCS and EAI.
- (5) The effect of attitudes towards environmental offending will be more pronounced among individuals scoring lower on the GSCS than those scoring higher on GSCS.

## CHAPTER FOUR: RESULTS

### *Bivariate Results*

For all the variables in the study a Pearson's zero-ordered correlation was assessed and presented in Table 3. Bivariate correlations indicated that self-control (GSCS), was negatively and significantly related to environmental attitudes index (EAI) ( $r = -.379, p < .001$ ). Self-control was also negatively and significantly related to intentions to engage in environmental crime ( $r = -.342, p < .001$ ). Attitudes toward environmental crime were positively and significantly related to environmental white-collar crime intentions ( $r = .236, p < .001$ ). These results support hypotheses 1 through 3. In order to provide a more rigorous examination of these relationships, and test the remaining hypotheses, the focus will shift to the multivariate models.

**Table 2.** Pearson's Zero-Order Correlation for Age, Sex, Race, Environmental White-Collar Crime (WCC) Intentions, Grasmick Self-Control Scale (GSCS), and Attitudes (EAI)

<i>Variable</i>	1	2	3	4	5	6
1. Age	-					
2. Male	.018	-				
3. Non-white	-.004	-.021	-			
4. Environmental WCC Intentions	-.102	.223**	-.020	-		
5. GSCS	.243**	-.234**	.042	.342**	-	
6. EAI	-.073	-.289**	-.020	.236**	.379**	-

\* $p < .05$ , \*\* $p < .001$

### ***Mediation Results***

A logistic regression analysis was first examined to test the effect of the control variables and self-control (GSCS) on environmental white-collar crime intentions (see Model 1, Table 3). Sex was the only control variable that was significantly related towards environmental white-collar crime intentions indicating that males are more likely to intend to engage in environmental white-collar crime ( $b = .983$ ,  $SE(b) = .312$ ,  $Wald = 9.948$ ,  $p = .002$ ). Self-control (GSCG) was significantly and negatively related to environmental white-collar crime intentions ( $b = -.085$ ,  $SE(b) = .019$ ,  $Wald = 20.551$ ,  $p < .001$ ).

**Table 3.** The Effects of the Grasmick Self-Control Scale and Attitudes on Environmental White-Collar Crime (WCC) Intentions

<i>Variable</i>	<i>Model 1</i>				<i>Model 2</i>			
	<i>b</i>	<i>SE</i>	<i>Wald</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>Wald</i>	<i>p</i>
Age	-.027	.059	.213	.645	-.030	.060	.254	.614
Male	.983	.312	9.948	.002	.855	.321	7.089	.008
Non-white	-.081	.328	.061	.805	-.084	.333	.064	.800
GSCS	-.085	.019	20.551	.000	-.071	.020	13.268	.000
EAI					.110	.046	5.622	.018
Nagelkerke R <sup>2</sup>			.227				.255	

The next set of analyses focused on the extent to which the effect of self-control on intentions to engage in toxic dumping was mediated by attitudes toward environmental crime. The relationship between the independent variable, self-control (GSCS), and the mediator, the environmental attitudes index (EAI) was first assessed. Self-control (GSCS) was significantly and negatively related to environmental attitudes index (EAI) ( $b = -.14$ ,  $SE(b) = .02$ ,  $t = -5.90$ ,  $p < .001$ ). Therefore, the effect of self-

control on environmental white-collar crime intentions could possibly be mediated by the environmental attitudes index (EAI). Thus, a mediation analysis will be conducted to fully examine the extent of this relationship on environmental white-collar crime intentions.

EAI was significantly and positively related to environmental white-collar crime intentions ( $b = .11$ ,  $SE(b) = .05$ ,  $Wald = 5.62$ ,  $p = .02$ ). GSCS demonstrated a significant total effect on environmental white-collar crime intentions ( $b = -.08$ ,  $SE(b) = 0.02$ ,  $Wald = 19.89$ ,  $p < .001$ ) and continued to maintain a direct effect after the inclusion of EAI ( $b = -.07$ ,  $SE(b) = .02$ ,  $Wald = 13.27$ ,  $p < .001$ ). Furthermore, additional analyses indicated that there was a significant indirect effect of GSCS on intentions to engage in environmental offending operating through EAI. Specifically, the 95% bias corrected confidence interval indicated that this indirect effect was  $-.031$  -  $-.004$ . These results indicate that while the effect of self-control on intentions to engage in toxic dumping are largely direct, attitudes mediate the relationship as well. Thus, part of the reason that individuals higher in self-control are less likely to engage in toxic dumping is because they hold attitudes that are not favorable to this kind of behavior.

### ***Moderation Results***

In order to fully assess the effect of attitudes (EAI) as a function of self-control (GSCS) an interaction term was created using the mean-centered values for GSCS and EAI. The results failed to indicate that the influence of attitudes varied as a function of self-control ( $b = .010$ ,  $SE(b) = .006$ ,  $Wald = 2.676$ ,  $p = .102$ ). Although there was not a significant interaction, simple slopes analyses were conducted to further tease out the relationship between attitudes (EAI) and self-control (GSCS).

The effect of attitudes at average ( $b = .141$ ,  $SE(b) = .051$ ,  $Wald = 7.576$ ,  $p = .006$ ) and high ( $b = .237$ ,  $SE(b) = .093$ ,  $Wald = 6.411$ ,  $p = .011$ ) levels of self-control were significant. However, the effect of attitudes at low levels of self-control was not significant ( $b = .046$ ,  $SE(b) = .058$ ,  $Wald = .639$ ,  $p = .424$ ). Although the interaction term failed to reach conventional levels of significance, there was evidence of a trend in the simple slopes analyses that indicated the effect of attitudes on intention to engage in toxic dumping were stronger at high levels of self-control. That is, attitudes play a more influential role for intentions among those in higher in self-control. This non-significant trend was inconsistent with hypothesis 5.

## CHAPTER FIVE: DISCUSSION

The general theory of crime has received a great deal of attention in criminological research, however, the research assessing the relationship between self-control to white-collar crime offending is lacking. The goals of the present study sought to add to existing research by assessing the nature of self-control in regards to white-collar crime offending and how attitudes affects this relationship. A negative relationship was found among self-control and intentions to engage in environmental crime, as predicted in hypothesis (1). Specifically, those with higher levels of self-control (based on scores from the GSCS) were less likely to engage in toxic dumping. On the contrary, those with lower scores on the GSCS indicated a greater willingness to engage in this crime. Although many scholars claim that self-control is not influential in explaining why some individuals are more inclined to engage in white-collar crimes and that these individuals engage in such acts for the sake of the corporation (Geis, 2000; Simpson and Piquero, 2002; Piquero and Benson, 2004), the results of the present study suggest differently.

Although Gottfredson and Hirschi (1990) contend that it is self-control alone that is the only relevant factor in explaining criminal propensity, this notion failed to receive support. It was not only self-control that was related to environmental white-collar crime intentions, but attitudes towards environmental white-collar crime (EAI) as well. EAI scores were positively related to white-collar crime intentions as predicted in hypothesis (2). This indicates that those who hold attitudes favorable to environmental white-collar

crime are more likely to have intentions to engage in such behavior. Attitudes have been found to have an influential effect on whether an individual engages in white-collar crime (Piquero et al., 2005; Geis, 1967). Specifically, attitudes can shape a corporate employee's viewpoint as to whether a white-collar act is an "established way of life" for the sake of profit or if there are strong influences stemming from the corporate climate (Geis, 2007).

The third hypothesis was also validated; self-control was significantly related to attitudes toward environmental white-collar crime. In particular, those with lower scores on the GSCS were more likely to hold attitudes consistent with white-collar crime intentions. In other words, individuals who are lower in self-control are more inclined to develop and/or adopt beliefs that environmental crimes are acceptable. The relationship between self-control and attitudes also suggests a possible mechanism linking self-control and environmental crime.

With the utilization of regression analysis, attitudes toward environmental white-collar crime were found to mediate the relationship between self-control and intentions to engage in white-collar crime as predicted in hypothesis (4). Specifically, the tendency for those who are lower in self-control to be more likely to engage in toxic dumping can be partly attributed to these individuals holding attitudes that are more conducive to environmental white-collar crime behavior. As indicated in the general theory of crime, those with low-self control are often hedonistic and self-centered (Lee, Ashton and Shin, 2005; Blickle et al., 2006). In addition, low self-control individuals holding attitudes consistent with environmental white-collar crime intentions may be more inclined to intend to engage in such behavior due to a strong self-interest in monetary gain and the

lack of consideration of potential long-term detrimental effects (Ray and Jones, 2010, Williams and Paulhus, 2004).

It is important to note that while attitudes did mediate the relationship between self-control and intentions to engage in toxic dumping, a direct effect of self-control remained. Future research should explore other potential mediators. For instance, Wright and colleagues (Wright et al., 2001) found that the link between self-control and antisocial behavior is partly attributable to prosocial and antisocial ties. That is, relationships in the domains of school, work, family, romantic partners, and peers mediate the effect of self-control on antisocial behavior. Such factors might also help to explain how self-control is related to white-collar crimes. It is important for the field of criminology to move beyond simple analyses that uncover correlates of antisocial behavior by focusing on the mechanisms through which correlates act.

Another important advancement for criminology generally will be how correlates of antisocial behavior operate interactively. The current study also explored this possibility by focusing on whether attitudes have differential effects across different levels of self-control. The moderation analysis indicated that the effect of attitudes did not significantly vary as a function of self-control. Although this was not consistent with hypothesis (5), it is consistent with some previous research. Two previous studies (Ousey and Wilcox, 2007; Yarbrough et al., 2012) failed to find that definitions favorable to crime varied as a function of self-control. Those findings, along with those noted in the current study, suggest that definitions (or attitudes) operate similarly regardless of an individual's level of self-control. Thus, it would appear that definitions/attitudes are sufficiently influential criminogenic forces for all individuals.

Similar to the discussion above regarding mediators, future research should explore if there are other factors that moderate the relationship between self-control and white-collar offending. Although Yarbrough et al. (2012) failed to find an effect for delinquent peers, Ousey and Wilcox (2007) and Wright et al. (2001) found that among those with low self-control, antisocial ties (peers) did in fact promote crime more strongly. In other words, the criminogenic effect of antisocial peers was stronger for those lower in self-control than among those higher in self-control. Wright and colleagues also found prosocial ties offered greater protection against offending for those lower in self-control. Therefore, it may be that those more at risk may be more influenced by social factors (with the exception of attitudes). These are areas that future research should explore in more depth.

Despite the failure to find a significant interaction, simple slopes analysis was used to parse out the effect of attitudes at different levels of self-control and the analysis provided some interesting results. The effect of attitudes at low levels of self-control was not more pronounced than those with higher levels of self-control as predicted. In fact, the effect of attitudes among those scoring lower on the GSCS yielded a non-significant effect. It was at average and high levels of self-control where the effect of attitudes was significant with the effect being strongest at high self-control. It may be that those who have lower levels of self-control already have a great deal of criminal propensity, so much so that the effect of attitudes is rendered null. However, attitudes may have a sufficient impact among those who have average and high levels of self-control and can influence these individuals to engage in antisocial behavior. In accordance with attitudes, social conscientiousness can greatly influence high self-control individuals in whether he

or she will engage in such behavior (Collins and Schmidt, 1993). Those who lack social lack social conscientiousness are characterized as risk-takers, undependable, and disregard rules. Therefore attitudes, or rather perceptions, may not have an effect on an individual already low in self-control (Collins and Schmidt, 1993).

Although the last hypothesis was not supported, the study provides some useful insight in terms of policy implications. The effect of attitudes did have an influential effect on the relationship between self-control and environmental white-collar crime. Therefore, policy should address the criminogenic influence of attitudes consistent with white-collar crime through ethics training. It may be that individuals do not grasp the consequences of their white-collar actions, such as taking shortcuts for immediate profit, in the real world since these individuals may be too far removed from the impact of their actions (Mangan, 2006; Friedrichs, 2009). A corporate entity should not place a heavy emphasis on gaining profit as the sole interest of one's career but rather teach their workers that the quality of work is more important, as well as the safety of others. Adopting mandatory ethics training, along with a code of ethics that underlines behaviors that are deemed illegal and unethical, should be an integral part of a corporation's management process (Metzger et al., 1993; Clegg et al., 2007). The key is to not simply develop a code of ethics but to ensure that employees understand that unethical actions have tangible and extremely detrimental outcomes.

Like many other studies, there are some limitations present in this research. The reliance on undergraduate students as a convenience sample limits the generalizability. Although this is a limitation, a number of other studies have utilized this method when examining white-collar crime (Simpson and Piquero, 2002; Ray and Jones, 2010;

Piquero, Tibbetts, and Blankenship, 2005; Jones and Kavanagh, 1996; Rayburn and Rayburn, 1996). The use of an incarcerated white-collar offender can provide its own benefits but assessing the intention or propensity of an individual to engage in white-collar crime acts before the subject apprehended can provide useful insight.

Subsequently, most individuals in the corporate sector have a college degree therefore one can argue that a college sample can be a useful tool in assessing behaviors that can lead to later criminal outcomes, especially white-collar crime intentions. Also, many students who attend college will end up in a corporate setting. In order to truly understand white-collar offending and what behaviors are indicative of this population it is vital to study individuals prior to the commitment of such acts by examining intentions.

The use of vignettes as a method to depict an example of environmental white-collar crime offending can appear to be a limitation in the present study. There are inherent issues that can arise from this type of methodology, such that individuals may not be able to visualize themselves in the scenario depicted, but the literature has found that intentions can serve as a vital tool for they are related to actual behavior (Webb and Sheeran, 2006; Green, 1998; Ray and Jones, 2010; Kim and Hunter, 1993). Additionally, vignettes have been effectively used by a number of studies when examining self-control (Simpson and Piquero, 2002; Nagin and Paternoster, 1993; Ray and Jones, 2010). In terms of white-collar crime intentions, Simpson and Piquero (2002) successfully utilized the vignette methodology among a sample of business administration (MBA) students.

No method of examining white-collar offending is immune from methodological limitations. For instance, there are over-reporting and under-reporting issues present in both official and self-report data. In addition, official data sources on white-collar crime

are virtually non-existent. Therefore vignettes are a useful alternative to tap into this behavior.

Intentions are important in understanding white-collar offending. Future studies can benefit from not only examining intentions, but assessing the behavior and personality of individuals prior to entering a corporate setting, and see how these aspects change during the course of corporate employment. For instance, a corporate official already lower on self-control (compared to others in the corporate environment) may be adversely affected by the corporate climate and undergo behavior change that can be conducive to white-collar crime intentions. In addition, this study only examined micro-level influence on intentions to engage in environmental white-collar offending. Subsequent research may want to assess the impact of macro-level environmental influences, such as the corporate setting, or better yet the interaction between personality and the environment.

Although only one type of white-collar crime was examined in this study, the mediation and moderation analyses implemented to examine the relationship between self-control and environmental white-collar crime intentions was a novel approach among the existing white-collar crime literature examining self-control. Subsequent studies may want to improve upon this research by utilizing mediation, moderation and simple slopes techniques to fully assess the impact of self-control on white-collar by examining the impact of other factors (e.g., antisocial peers, corporate bonds) that may mediate or have an interaction effect on the relationship.

Despite the presence of commonplace limitations in the present study, the research at hand did add to the criminological literature examining white-collar

offending. Comparing white-collar offenders to non-white-collar offenders who work in the same corporate setting can be very difficult. As noted previously, white-collar offenders are rarely caught and a majority of those imprisoned are apprehended for lesser white-collar crimes, such as small-scale embezzlement. In addition, administering self-reports to individuals in a corporation is a difficult medium to gain access to, and those higher up in the corporate sector may not be willing to disclose any information. Also, previous studies examining the relationship between self-control and white-collar typically focused on direct causal links or comparing white-collar offenders to the common street offender when it is evident that the two populations will differ in regards to self-control (Hirschi and Gottfredson, 1987; Simpson and Piquero, 2002). To date this is the only study that has examined the effect of attitudes on the relationship between self-control and environmental crime intentions utilizing mediation, moderation, and simple slopes analysis. Although the study may be limited in scope when pertaining to different types of white-collar offending, the research provides a vital foundation for future research to use when fleshing out the relationship between self-control and white-collar crime.

## REFERENCES

- Alalehto, T. (2003). Economic crime: Does personality matter? *International Journal of Offender Therapy and Comparative Criminology*, 47(3): 335-355.
- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, 30: 47-87.
- Agnew, R., Piquero, N.L., & Cullen, F.T. (2009). General strain theory and white-collar crime. In *The criminology of white-collar crime*. Editors S.S. Simpson & D. Weisburd. New York, NY: Springer.
- Akers, R.L. (1985). *Deviant behavior: A social learning approach*. Belmont, CA: Wadsworth.
- Barnett, H.C. (1981). Corporate capitalism, corporate crime. *Crime & Delinquency*, 27: 4-23.
- Benson, M., & Moore, E. (1992). Are white-collar and common offenders the same? An empirical and theoretical critique of a recently proposed general theory of crime. *Journal of Research in Crime and Delinquency*, 29(3): 251-272.
- Benson, M.L., Madensen, T.D., & Eck, J.E. (2009). White-collar crime from an opportunity perspective. In *The criminology of white-collar crime*. Editors S.S. Simpson & D. Weisburd. New York, NY: Springer.
- Blickle, G., Schlegel, A., Fassbender, P., & Klein, U. (2006). Some personality correlates of business white-collar crime. *Applied Psychology: An International Review*, 55(2): 220-233.
- Bohn, R.M. (1982). Capitalism, socialism and crime. In *Rethinking criminology*. Editor H.E. Pepinsky. Beverly Hills, CA: Sage.
- Box, S. (1983). *Power, crime and mystification*. London: Tavistock.
- Braithewaite, J. (1985). White collar crime. *Annual Review of Sociology*, 11:1-25.
- Braithewaite, J. (1992). Poverty, power and white-collar crime: Sutherland and the paradoxes of criminological theory. In *White-collar crime reconsidered*. Editors K. Schlegel & D. Weisburd. Boston: Northeastern University Press.

- Braithewaite, J. (1995). White collar crime. In *White-Collar Crime: Classic and Contemporary Views*. Editors G.Geis, R.F. Meier, & L. Salinger. New York: FreePress.
- Braithewaite, J., & Geis, G. (1982). On theory and action for corporate crime control, *Crime & Delinquency*, 28: 292-314.
- Bromberg, W. (1965). *Crime and the mind*. New York: Macmillan.
- Burns, R.G., Lynch, M.J., & Stretesky, P. (2008). *Environmental law, crime, and justice*. New York: LFB Scholarly Publishing.
- Clegg, R., Kornberger, M., & Rhodes, C. (2007). Organizational ethics, decision making, undecidability. *The Sociological Review*, 55: 404+.
- Clinard, M.B., & Yeager, P.C. (1980). *Corporate Crime*. New York: Free Press.
- Cohen, L.E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, 44: 588-608.
- Coleman, J.W. (1987). Toward an integrated theory of white-collar crime. *American Journal of Sociology*, 93(2): 406-439.
- Collins, J.M., & Griffin, R.W. (1998). The psychology of counterproductive performance. In *Dysfunctional behavior in organizations: Non-violent dysfunctional behavior*. Editor R.W., 219-226.
- Collins, J.M., & Schmidt, F.L. (1993). Personality, integrity, and white-collar crime: A construct validity study. *Personnel Psychology*, 46(2): 295-311.
- Colvin, M. (2000). *Crime and coercion: An integrated theory of chronic criminality*. New York: St. Martin's Press.
- Colvin, M., & Pauly, J. (1983). A critique of criminology: Toward an integrated structural-marxist theory of delinquency production. *American Journal of Sociology*, 90(3): 513-331.
- Colvin, M., Cullen, F.T., & Vander Ven, T. (2002). Coercion, social support, and crime: An emerging theoretical consensus. *Criminology*, 40(1): 19-42.
- Coyne, H. (1991). *Scam: How con men use the telephone to steal your money*. London, UK: Duckworth.
- Cressey, D.R. (1953). *Other people's money: The social psychology of embezzlement*. New York: Free.

- Cressey, D.R. (1989). The poverty of theory in corporate crime research. In *Advances in criminological theory*. Editors W.S. Laufer & F. Adler. New Brunswick, NJ: Transaction.
- Croall, H. (2007). Victims of white-collar and corporate crime. In *Victims, Crime and Society*. Editors P. Davies, P. Francis, & C. Greer. London: SAGE.
- Doherty, E.E. (2006). Self-control, social bonds, and desistance: A test of life-course interdependence. *Criminology*, 44: 807-833.
- Eck, J.E. (1994). *Drug markets and drug places: A case-control study of the spatial structure of illicit drug dealing*. Unpublished Ph.D. dissertation. Department of Criminology and Criminal Justice. University of Maryland, College Park.
- Eck, J.E., & Clarke, R.V. (2003). Classifying common police problems: A routine activity approach. In *Theory for practice in situational crime prevention*, Crime Prevention Studies. Editors M.J. Smith & D.B. Cornish, 16: 7-39. Monsey, NY: Criminal Justice Press.
- Engles, F. (1895). *The condition of the working class in England*. Translated by W.O. Henderson & W.H. Chaldner. Stanford, CA: Stanford University Press.
- Erman, M.D., & Lundman, R.J. (eds.) (1992). *Corporate and Governmental Deviance*. (4<sup>th</sup> ed.). New York: Oxford University Press.
- Evans, D. T., Cullen, F.T., Burton, V.S., Dunaway, G.R., & Benson, M. (1997). The social consequences of self-control: Testing the general theory of crime. *Criminology*, 35(3): 475-504.
- Feeley, D. (2006). Personality, environment, and the causes of white-collar crime. *Law and Psychology review*, 30: 201-213.
- Finney, H.C., & Lesieur, H.R. (1982). A contingency theory of organizational crime. In *Research in the sociology of organizations*. Editor S.B. Bacharach. Greenwich, CT: JAI Press.
- Friedrichs, D.O. (2004). Enron et al.: Paradigmatic white collar crime cases for the new century. *Critical Criminology*, 12(2): 113-132.
- Friedrichs, D.O. (2009). *Trusted Criminals: White collar crime in contemporary society* (4<sup>th</sup> ed.). Belmont, CA: Thomson Wadsworth.
- Geis, G. (1967). The heavy electrical equipment antitrust cases of 1961. In *Criminal Behavior Systems*. Editors M. Clinard & R. Quinney. New York: Holt, Rinehart & Winston.

- Geis, G. (2000). On the absence of self-control as the basis for a general theory of crime: A critique. *Theoretical Criminology*, 4(1): 35-53.
- Geis, G. (2007). *White-collar and corporate crime*. Upper Saddle River, NJ: Pearson.
- Gibson, C., & Wright, J. (2001). Low self-control and coworker delinquency: A research note. *Journal of Criminal Justice*, 29P 483-492.
- Glasbeek, H. (2007). The corporation as a legally created site of irresponsibility. In *International handbook of white-collar and corporate crime*. Editors H.N. Pontell & G. Geis. New York, NY: Springer.
- Gottfredson, M., & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.
- Grasmick, H.G., Tittle, C.R., Bursik, R.J., Jr., & Arneklev, B.J. (1993). Testing the core empirical implications of Gottfredson and Hirschi's general theory of crime. *Journal of Research in Crime and Delinquency*, 30: 5-29.
- Green, G.S. (1990). *Occupational crime*. Chicago: Nelson Hall.
- Green, D. (1998). Measures of illegal behavior in individual-level deterrence research. *Journal of Research in Crime & Delinquency*, 26: 253-275.
- Gross, E. (1978). Organizational crime: A theoretical perspective. In *Studies in Symbolic Interaction*, ed. N. Denzin, 55-85. Greenwich, Connecticut: JAI.
- Hagan, J., & Parker, P. (1989). White-collar crime and punishment: The class structure and legal sanctioning of securities violations. *American Sociological Review*, 50(3): 302-316.
- Helmkamp, J., Ball, J., & Townsend, K. (eds.) (1996). *Definitional dilemma: Can and should there be a universal definition of white collar crime?* Morgantown, WV: National White Collar Crime Center.
- Herbert, C., Green, G., & Larragoite, V. (1998). Clarifying the reach of a general theory of crime for organizational offending: A comment on Reed and Yeager. *Criminology*, 36(4): 867-884.
- Higgins, G.E, & Makin, D.A (2004). Does social learning theory condition the effects of low self-control on college students' software piracy? *Journal of Economic Crime Management*, 2(2): 1-21.
- Hirschi, T. (2004). Self-control and crime. In *Handbook of self-regulation: Research, theory, and application*, Editors R.F. Baumeister & K.D. Vohs. New York, NY: Guilford.

- Hirschi, T., & Gottfredson, M. (2000). In defense of self-control. *Theoretical Criminology*, 4(1): 55-69.
- Hirschi, T., & Gottfredson, M. (1993). Commentary: Testing the general theory of crime. *Journal of Research in Crime and Delinquency*, 30(1): 47-54.
- Hirschi, T., & Gottfredson, M. (1989). The significance of white-collar crime for a general theory of crime. *Criminology*, 27(2): 359-371.
- Hirschi, T., & Gottfredson, M. (1987). Causes of white-collar crime. *Criminology*, 25(4): 949-974.
- Hochstetler, A., & Copes, H. (2001). Organizational culture and organizational crime. In *Crimes of privilege: Readings in white-collar crime*. Editors N. Shover & J.P. Wright. New York: Oxford University Press.
- Hogan, R., & Hogan, J. (2001). Assessing leadership: A view from the dark side. *International Journal of Selection and Assessment*, 9: 40-51.
- Hollinger, R., & Clark, J. (1983). *Theft by employees*. Lexington, MA: Lexington Books.
- Johnson, P.E., & Grazioli, S. (1993). Fraud detection: Intentionally and deception in cognition. *Accounting, Organizations, and Society*, 18(5): 467-488.
- Jones, G.E., & Kavanagh, M.J. (1996). An experimental examination of the effects of individual and situational factors on unethical behavioral intentions in the workplace. *Journal of Business Ethics*, 15(5): 511-523.
- Jones, S., & Lynam, D.R. (2009). In the eye of the impulsive beholder: The interaction between impulsivity and perceived informal social control on offending. *Criminal Justice and Behavior*, 36(3): 307-321.
- Jones, S., Lynam, D.R., & Piquero, A.R. (2011). Substance use, personality, and inhibitors: Testing Hirschi's predictions about the reconceptualization of self-control. *Crime and Delinquency*, 56: 1182-1200.
- Kadish, S.H. (1977). The use of criminal sanctions in the enforcement of economic regulations. In *White-collar crime*. Editors G. Geis & R.F. Meier. New York: Free Press.
- Kagan, R.A., & Scholz, J.T. (1984). The criminology of the corporation and regulatory enforcement strategies. In *Enforcing regulation*. Editors K. Hawkins & J. Thomas. Boston, MA: Kluwer-Nijhoff Publishers.
- Keane, C., Paul, S.M., & Teevan, J.J. (1993). Drinking and driving, self-control, and gender: Testing a general theory of crime. *Journal of Research in Crime and Delinquency*, 30: 30-46.

- Kim, M., & Hunter, J. (1993). Relationships among attitudes, behavioral intentions, and behavior: A meta-analysis of past research. *Communications Research*, 20: 331-364.
- Kramer, R.C. (1982). Corporate crime: An organizational perspective. In *White-collar and economic crime*. Editors P. Wickman & T. Dailey. Toronto: Lexington Books.
- Langton, L., Piquero, N.L., & Hollinger, R.C. (2006). An empirical test of the relationship between employee theft and low self-control. *Deviant Behavior*, 27: 537-565.
- Langton, L., & Piquero, N.L. (2007). Can general strain theory explain white-collar crime? A preliminary investigation of the relationship between strain and select white-collar offenses. *Journal of Criminal Justice*, 35: 1-15.
- Lasley, J. R. (1988). Toward a control theory of white collar offending. *Journal of Quantitative Criminology*, 4: 347-362.
- Lazarus, R.J. (1993). Pursuing “environmental justice”: The distributional effects of environmental protection. *Northwestern University Law Review*, 87: 787-857.
- Lee, K., Ashton, M.C., & Shin, K. (2005). Personality correlates of workplace anti-social behavior. *Applied Psychology: An International Review*, 54(1): 81-98.
- Longshore, D. (1998). Self-control and criminal opportunity: A prospective test of the general theory of crime. *Social Problems*, 45: 102-113.
- Lynch, M.J., & Michalowski, R. (2006). *Primer in radical criminology: Critical perspectives on crime, power & identity* (4<sup>th</sup> ed.). New York: Criminal Justice Press.
- Mangan, L. (2006). Agents of fortune. *The Chronicle of Higher Education* (June 23): A13-16.
- Meier, R.F. (2001). Geis, Sutherland, and white-collar crime. In *Contemporary issues in crime and criminal justice*. Editors H.N. Pontell & D. Shichor. Upper Saddle River, NJ: Prentice Hall.
- Merton, R.K. (1957). Social theory and anomie. *American Sociological Review*, 3: 672-682.
- Merton, R.K. (1968). *Social theory and social structure*. New York: The Free Press.
- Messner, S., & Rosenfeld, R. (1994). *Crime and the American dream*. Belmont, CA: Wadsworth.

- Metzger, M., Dalton, D.R., & Hill, J.W. (1993). The organization of ethics and the ethics of organizations: The case of expanded organizational ethics audits. *Business Ethics Quarterly*, 3:27-43.
- Michalowski, J. (1985). *Order, law and crime*. New York, NY: Random House.
- Ousey, G.C., & Wilcox, P. (2007). The interaction of antisocial propensity and life-course varying predictors of delinquent behavior: Difference by method of estimation and implications for theory. *Criminology*, 45: 313-354.
- Passas, N. (1990). Anomie and corporate deviance. *Contemporary Crises*, 4: 157-178.
- Paternoster, R., & Simpson, S.S. (1992). A rational choice theory of corporate crime. In *Routine Activity and Rational Choice*. Editors R.V. Clarke & M. Felson. New Brunswick, NJ: Transaction.
- Paulhus, D.L., & Williams, K.M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36: 556-563.
- Pearce, F., & Tombs, S. (2002). States, corporations, and the 'new' world order. In *Controversies in white-collar crime*. Editor G. Potter. Cincinnati, OH: Anderson.
- Piquero, A.R., & Bouffard, J. (2007). Something old, something new: A preliminary investigation of Hirschi's redefined self-control. *Justice Quarterly*, 24(1): 1-27.
- Piquero, A.R., Gibson, C.L., & Tibbetts, S.G. (2002). Does self-control account for the relationship between binge and alcohol-related behaviors? *Criminal Behaviour and Mental Health*, 12(2): 135-154.
- Piquero, A.R., & Rosay, A.B. (1998). The reliability and validity of Grasmick et al.'s self-control scale: A comment on Longshore et al. *Criminology*, 36(1): 157-173.
- Piquero, N.L., & Benson, M.L. (2004). White-collar crime and criminal careers: Specifying a trajectory of punctuated situational offending. *Journal of Contemporary Criminal Justice*, 20(2): 148-165.
- Piquero, N.L., Exum, M. L., & Simpson, S.S. (2005). Integrating the desire-for-control and rational choice in a corporate crime context. *Justice Quarterly*, 22(2): 252-280.
- Piquero, N.L., & Piquero, A.R. (2006). Control balance and exploitative corporate crime. *Criminology*, 44(2): 397-430.
- Piquero, N.L., Tibbetts, S.G., & Blankenship, M.B. (2005). Examining the role of differential association and techniques of neutralization in explaining corporate crime. *Deviant Behavior*, 26: 159-188.

- Pratt, T., & Cullen, F. (2000). The empirical status of Gottfredson and Hirschi's general theory of crime: A meta-analysis. *Criminology*, 38(3): 931-964.
- Preacher, K.J., & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3): 879-891.
- Ray, J.V., & Jones, S. (2010). Self-reported psychopathic traits and their relation to intentions to engage in environmental offending. *International Journal of Offender Therapy and Criminology*, 55(1): 370-391.
- Rayburn, J.M., & Rayburn, L.G. (1996). Relationship between Machiavellianism and Type A personality and ethical orientation. *Journal of Business Ethics*, 15: 1209-1219.
- Reed, G. E., & Yeager, P.C. (1996). Organizational offending and neoclassical criminology: Challenging the reach of a general theory of crime. *Criminology*, 34(3): 357-382.
- Reiman, J. (2007). *The rich get poorer and the poor get prison*. (8<sup>th</sup> ed.). Allyn & Bacon.
- Reiman, J.H., & Headlee, S. (1981). Marxism and criminal justice policy. *Crime & Delinquency*, 27: 24-47.
- Riemer, S.H. (1941). Embezzlement: Pathological basis. *Journal of Criminal Law and Criminology*, 32(4): 411-423.
- Ross, E.A. (1907). *Sin and society*. Boston: Houghton Mifflin.
- Schoepfer, A., & Piquero, N.L. (2006). Exploring white-collar crime and the American dream: A test of institutional anomie theory. *Journal of Criminal Justice*, 34: 227-235.
- Shapiro, S.P. (1990). Collaring the crime, not the criminal: Reconsidering the concept of white-collar crime. *American Sociological Review*, 55(3): 346-365.
- Shover, N., & Hochstetler, A. (2006). *Choosing white-collar crime*. New York: Cambridge University Press.
- Simon, H. (1976). *Administrative behavior* (3<sup>rd</sup> ed.) New York, NY: Free Press.
- Simpson, S.S., Paternoster, R., & Piquero, N. L. (1998). Exploring the micro-macro link in corporate crime research. In *Research in the sociology of organizations*, Editors P.A. Bamberger & W.J. Sonnenstuhl, 15: 35-68. Stamford, CT: JAI.

- Simpson, S.S., & Koper, C.S. (1997). The changing of the guard: Top management team characteristics, organizational strain, and antitrust offending, 1960-1988. *Journal of Quantitative Criminology*, 13: 373-404.
- Simpson, S., & Piquero, N.L. (2002). Low self-control, organizational theory, and corporate crime. *Law & Society Review*, 36(3): 509-539.
- Sonnenfeld, J., & Lawrence, P.R. (1978). Why do companies succumb to price-fixing. *Harvard Business Review*, 56: 145-157.
- Steffensmeier, D. (1989). On the causes of “white-collar” crime: An assessment of Hirschi and Gottfredson’s claims. *Criminology*, 27(2): 345-358.
- Sutherland, E. H. (1940). White-collar criminality. *Sociological Review*, 5(1): 1-12.
- Sutherland, E.H. (1944). Is “white collar crime” crime? *American Sociological Review*, 10(2): 132-139.
- Sutherland, E.H. (1949). *White-collar crime*. New York: Holt, Rinehart & Winston.
- Sykes, G., & Matza, D. (1957). Techniques of neutralization: A theory of delinquency. *American Sociological Review*, 22: 664-670.
- Thomas, P., Wolper, R., Scott, K., & Jones, D. (2001). The relationship between immediate turnover and employee theft in the restaurant industry. *Journal of Business and Psychology*, 15: 561-577.
- Tittle, C.R. (1995). *Control balance: Toward a general theory of deviance*. Boulder, Colorado: Westview.
- Tombs, S., & Whyte, D. (Eds.) (2003). *Unmasking the crimes of the powerful and scrutinizing states and corporations*. New York: Peter Lang.
- Vaughan, D. (1980). Crime between organizations: Implications for victimology. In *White collar crime: Theory and research*. Editors G. Geis & E. Stotland. Beverly Hills, CA: Sage.
- Vaughan, D. (1981). Developments in “white-collar crime” theory and research. In *The mad, the bad, and the different*. Editors C.R. Huff & I. Barak. 135-148. Lexington, Mass.: Lexington Books.
- Vaughan, D. (1982). Toward understanding unlawful organizational behavior. *Michigan Law Review*, 80: 1377-1382.
- Vaughan, D. (1983). *Controlling unlawful organizational behavior: Social structure and corporate misconduct*. Chicago: University of Chicago Press.

- Vaughan, D. (1992). The macro-micro connection in white-collar crime theory. *White-Collar Crime Reconsidered*. Editors Kip Schlegel and David Weisburd. Northeastern University Press.
- Vaughan, D. (1997). Anomie theory and organizations: Culture and the normalization of deviance at NASA. In *The future of anomie theory*. Editors N. Passos & R. Agerw. Boston: Northeastern University Press.
- Vaughan, D. (1998). Rational choice, situated action, and the social control of organizations. *Law & Society Review*, 32(1): 23-61.
- Vaughan, D. (2006). NASA revisited: Theory, analogy, and public sociology. *American Journal of Sociology*, 112: 353-393.
- Vowell, P.R., & Chen, J. (2004). Predicting academic misconduct: A comparative test of four sociological inquiries. *Sociological Inquiry*, 74(2): 226-249.
- Walkalate, S. (1989). *Victimology: The victim and the criminal justice process*. London: Unwin Hyman.
- Walters, G.D., & Geyer, M.D. (2004). Criminal thinking and identity in male white-collar offenders. *Criminal Justice and Behavior*, 31(3), 263-281.
- Webb, T.L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of experimental evidence. *Psychological Bulletin*, 132: 249-268.
- Weisburd, D., Wheeler, S., Waring, E., & Bode, N. (1991). *Crimes of the middle classes*. New Haven, CT: Yale University Press.
- Weisburd, D., & Waring, E. (2001) *White-collar crime and criminal careers*. Cambridge, England: University Press.
- Wheeler, S., Weisburd, D., Waring, E., & Bode, N. (1988). White collar crime and criminals. *American Criminal Law Review*, 25: 331-357.
- Wheeler, S. (1992). The problem of white-collar crime motivation. In *White collar crime reconsidered*. Editors K. Schlegel & D. Weisburd. Boston, MA: Northeastern University Press.
- Winfrey, Jr., L., & Bernat, F.P. (1998). Social learning, self-control, and substance abuse by eighth grade students: A tale of two cities. *Journal of Drug Issues*, 28(2): 539-558.

- Wright, B.R.E, Caspi, A., Moffitt, T.E., & Silva, P.E. (2001). The effects of social ties on crime vary by criminal propensity: a life-course model of interdependence. *Criminology*, 39: 321-352.
- Yarbrough, A., Jones, S., Sullivan, C., Sellers, C., & Cochran, J. (2012). Social learning and self-control: Assessing the moderating potential of criminal propensity. *International Journal of Offender Therapy and Comparative Criminology*, 56(2): 191-202.