

University of Central Florida

**STARS**

---

Electronic Theses and Dissertations

---

2018

## A Behavioral Model of Law Enforcement Applicant Characteristics Derived from a Simulated Cheating Task: Implications for Pre-Employment Hiring Practices

Julian Montaquila  
*University of Central Florida*



Part of the [Law Enforcement and Corrections Commons](#)

Find similar works at: <https://stars.library.ucf.edu/etd>

University of Central Florida Libraries <http://library.ucf.edu>

This Doctoral Dissertation (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of STARS. For more information, please contact [STARS@ucf.edu](mailto:STARS@ucf.edu).

---

### STARS Citation

Montaquila, Julian, "A Behavioral Model of Law Enforcement Applicant Characteristics Derived from a Simulated Cheating Task: Implications for Pre-Employment Hiring Practices" (2018). *Electronic Theses and Dissertations*. 6256.

<https://stars.library.ucf.edu/etd/6256>

A BEHAVIORAL MODEL OF LAW ENFORCEMENT APPLICANT  
CHARACTERISTICS DERIVED FROM A SIMULATED CHEATING TASK:  
IMPLICATIONS FOR PRE-EMPLOYMENT HIRING PRACTICES

by

JULIAN MCCAIN MONTAQUILA  
B.A. Clemson University, 2008  
M.A. East Carolina University, 2011  
M.S. East Carolina University, 2012  
M.S. University of Central Florida, 2017

A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of Modeling and Simulation  
in the College of Sciences  
at the University of Central Florida  
Orlando, Florida

Spring Term  
2018

Major Professor: Bruce D. Caulkins

© 2018 Julian McCain Montaquila

## ABSTRACT

Recently, numerous high-profile instances of police misconduct and corruption have been thrust into the national spotlight. Hiring police officers who will act with integrity and not betray public trust remains essential. The present research experimentally examines this phenomenon by evaluating pre-employment assessment results against applicant performance on a simulated cheating task (i.e., The Dots Task) in order to derive information to improve contemporary pre-employment screening and selection models. Four case examples are presented which depict malicious actors who possessed privileged access, assumed no one would ever scrutinize their activities, and attempted to leverage a lack of oversight for their personal benefit. A literature review of previous research findings is presented, and results from the current study are discussed. Spearman correlation analyses consistently indicated that participants who cheated were predisposed to moral disengagement via advantageous comparison. Participants who left all or part of their monetary award were less prone to general moral disengagement, particularly displacement of responsibility, while the opposite effect was observed for participants who took more than their earned award. Impression management was positively associated with stealing extra money, and cheating was more common among participants with elevated distorted thought patterns, including obsessional thinking, paranoid ideation, and alienation/perceptual distortion. Stepwise linear multiple regression analyses further substantiated the relationship between cheating and both distorted thought patterns and impression management, as well as provided evidence that (1) internalizing morality as part of one's self-identity and (2) warmth act as protective

factors against cheating behavior. Positive relationships between cheating and distortion of consequences were also present within multiple regression analyses. Behavioral models produced from stepwise linear multiple regression analyses offer the potential to predict the likelihood and severity of cheating behavior that an individual may be predisposed to commit based upon their pre-employment assessment data, thereby enhancing pre-employment screening and selection decisions.

# TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION .....	1
A Glimpse at Contemporary and Historical Police Misconduct & Corruption.....	1
Significance of the Current Work.....	3
Informing Contemporary Screening & Selection Models .....	4
Michael T. Slager: Ex-North Charleston Police Officer.....	5
David L. Harding: Ex-New York State Trooper .....	8
Terrance O’Brien, Matthew Hudak, & John Cichy: Ex-Schaumburg Police Officers.....	12
Carl Force & Shaun Bridges: Ex-DEA & Ex-U.S. Secret Service Agents .....	15
The Precursor.....	15
Untangling the Exchange of Online Messages.....	16
Identifying a Rogue Agent ... or Two .....	17
In Summation: Common Themes & Significance of the Problem .....	20
Divergent Motives .....	20
Common Recommendations.....	21
The Central Problem: Environment vs. Individual.....	22
CHAPTER 2: LITERATURE REVIEW .....	24
Gatekeeping: Sensitivity, Specificity, Selecting-In, & Screening-Out.....	24
Who Comes In, and Who Stays Out? .....	24
Sensitivity & Specificity: The Error Term .....	25
Sensitivity & Specificity: Conclusions .....	27
The Dots Task: An Introduction & Relevance to Examining Police Misconduct.....	28
The Dots Task: An Overview & Theoretical Underpinnings .....	30
The Dots Task: Implications for Improving Sensitivity & Specificity.....	32
The Dots Task & Related Experiments: Previous Findings .....	33

Perceived Inauthenticity & Self-Alienation .....	33
Creativity, Dishonesty, & Implications for Informing California POST Dimensions .....	35
The “Morning Morality Effect”: Cognitive Fatigue as a Mediator to Self-Regulation.....	36
The Effect of Moral Disengagement and Moral Identity .....	37
Self-Regulatory Capacity, Moral Disengagement, & Moral Identity: Implications for Screening & Selection Models .....	40
The Present Research.....	41
CHAPTER 3: METHOD .....	43
Participants .....	43
Procedure .....	44
Materials .....	46
Demographic Questionnaire .....	46
Additional Assessments & Questionnaires.....	47
The Dots Task.....	48
Study Design.....	50
CHAPTER 4: RESULTS .....	52
The Dots Task: Descriptive Statistics .....	52
Outcome Variables of Interest .....	52
The Dots Task: Outcome Variables.....	52
Self-Payment Outcome Variables .....	54
Predictor Variables of Interest .....	54
Correlation Analyses .....	55
What-the-Hell Effect: Correlation Analysis .....	55
Total Right Percent Error: Correlation Analysis .....	56
Right Ambiguous Percent Error: Correlation Analysis .....	57

Right Unambiguous Percent Error: Correlation Analysis .....	58
2-Dot Percent Error: Correlation Analysis .....	59
4-Dot Right Percent Error: Correlation Analysis .....	59
Raw Reward Amount for Completed Participants in Cents: Correlation Analysis.....	60
Disparity Between Envelope and Award: Correlation Analysis .....	61
Money Stolen: Correlation Analysis .....	62
Extra Money Left: Correlation Analysis .....	62
Disparity Amount: Correlation Analysis.....	63
Did Not Take Any Reward: Correlation Analysis.....	64
Money Apparently Stolen to Round to the Next Largest Integer: Correlation Analysis .....	65
Money Inexplicably Stolen: Correlation Analysis .....	65
Stepwise Multiple Linear Regression Analyses .....	66
Total Right Percent Error: Multiple Regression.....	66
Right Ambiguous Percent Error: Multiple Regression.....	67
Right Unambiguous Percent Error: Multiple Regression.....	67
2-Dot Right Percent Error: Multiple Regression.....	68
4-Dot Right Percent Error: Multiple Regression.....	68
Raw Reward Amount for Completed Participants in Cents: Multiple Regression .....	69
Disparity Amount: Multiple Regression.....	69
CHAPTER 5: DISCUSSION .....	70
Significance of Average Reward Amounts .....	70
Predictors Consistently Correlated with Dishonesty .....	71
Conclusions Based on Correlation Analyses .....	71
Predictors of Implicit & Explicit Forms of Dishonesty Derived from The Dots Task .....	71
Predictors of Explicit Forms of Dishonesty Derived from Self-Payment.....	72



Predictors Consistently Included in Models Derived from Multiple Regression Analyses .....	73
Moral Identity Measure .....	73
Moral Disengagement Measure.....	74
Protective Services Report, Plus.....	75
Hypothesis Testing .....	76
Significance of Findings .....	78
Limitations .....	81
Future Directions .....	84
APPENDIX: IRB APPROVAL LETTER .....	85
REFERENCES.....	88

## **CHAPTER 1: INTRODUCTION**

### A Glimpse at Contemporary and Historical Police Misconduct & Corruption

Recently, several high-profile incidents have brought police misconduct and corruption under national scrutiny. The media attention surrounding many of these events have included the presentation of video recordings filmed on the cellphone cameras of bystanders, witnesses, and even victims of this illegal behavior. Much of the same media attention surrounding these events has been quick to highlight and attribute the origin of many of these incidents as stemming from explicit and implicit forms of racial bias, prejudice, and discrimination. While this is likely true, the underlying problem is certainly not limited to racial prejudice and discrimination. The root causes of such incidents are likely much more complex and varied in regard to their scope and magnitude.

For the purpose of the current research, misconduct and corruption may best be conceptualized as existing at opposite positions of the same continuum. On one end, misconduct may best be operationalized as acts of serious rule or policy violations which may not in and of themselves illegal, but rather are demonstrative of a deliberate unwillingness to meet the standards of responsibility, confidence, and professionalism required of a safety-sensitive public trust position. As such, misconduct would represent more than simple mistakes or omissions made as a result of human error or relatively minor lapses in momentary judgement. While gross negligence may meet the threshold of misconduct, minor errors that would not otherwise be indicative that the individual

intended to behave irresponsibly or unethically would not encompass misconduct.

Rather, misconduct may better describe actions or behavior that may not represent illegal behavior, but fall more within the umbrella of “conduct unbecoming.” Corruption, on the other hand, would be demonstrative of unmistakably intentional and deliberate acts to commit crimes and otherwise abuse public trust for personal gain.

Based upon these operationalized definitions, attempting to screen-out applicants who may be susceptible to committing minor instances of misconduct may be difficult, if unfeasible. Moreover, attempts to correctly identify and screen-out applicants with potential vulnerabilities to relatively minor misconduct behavior may result in unnecessary false positives. Thus, it may be beneficial to examine what constructs underlie serious instances of misconduct and corruption and would most merit attention in the context of pre-employment screening and selection.

Police misconduct and corruption, while only recently being thrust so intensely under the national spotlight, has existed and been studied for decades. In reviewing several case studies, it becomes evident that research findings related to personnel security, moral and social psychology, and insider threat all contribute information relevant to the scrutiny of this important problem. Moreover, the subsequent case studies suggest that one common theme across variants of this problem (e.g., excessive force, evidence fabrication, theft) is the presence of actors who often actively and intentionally exploit opportunities to betray their position of public trust. While the type and form may vary, integrity, or the absence thereof, appears to remain a central element within police misconduct and corruption.

## Significance of the Current Work

By nature of design, law enforcement officers are required to act with integrity and professionalism in situations where little oversight or supervision may exist. In many instances, the testimony of a law enforcement officer may be the only evidence tendered against a defendant in a criminal case. Further, hiring decisions based upon contemporary use of contemporary screening and selection guidelines and dimensions tend to be more unidimensional in nature, and typically do not take into account how interrelationships between various traits affect one another. This study examines the extent to which performance on a simulated cheating task (i.e., The Dots Task) may yield results that better inform such interrelationships so that present screening and selection instruments can be better utilized in identifying persons who are less likely to betray the authority and public trust of a law enforcement officer.

Specifically, incorporating multiple independent variables derived from pre-employment assessment data within a stepwise linear multiple regression analysis against cheating behavior dependent variables will aid in the establishment of behavioral models. Such an exercise will not only allow personnel security practitioners to examine the strength and direction (i.e., positive or negative) of the relationships between pre-employment assessment data and cheating behavior, but it will also provide a corresponding percentage of variance accounted for by the model. Thus, the resulting behavioral models would prospectively afford practitioners the ability to mathematically calculate the percentage of likelihood and level of severity at which an applicant may engage in cheating behavior based upon that applicant's pre-employment assessment data. Ultimately, practitioners could apply the outcomes of such behavioral models to

either screen-out applicants who produce aberrantly high cheating scores indicative of susceptibility to corruption (versus mere misconduct) or select-in applicants who produce relatively low cheating scores that could be demonstrative of a resistance to the influence of cheating behavior.

### Informing Contemporary Screening & Selection Models

Both the U.S. Security Clearance Adjudication Guidelines and the California Peace Officer Psychological Screening Manual have previously been recommended as models for the screening and selection process of safety-sensitive employees. (Montaquila & Godwin, 2016). Developed by the California Commission on Peace Officer Standards and Training (Spilberg & Corey, 2014), the California Peace Officer Psychological Screening Manual is presently the most frequently employed and thoroughly specified document enumerating psychological screening and selection considerations for local and state law enforcement applicants (Montaquila & Godwin, 2016). Presently, U.S. Security Clearance Adjudication Guidelines have thirteen primary focus areas (Hadley, 2005; Montaquila & Godwin, 2016; Young, Harvey, & Staal, 2011), while the California Peace Officer Psychological Screening Manual focuses upon ten dimensional areas to inform screening and selection decisions (Montaquila & Godwin, 2016; Spilberg & Corey, 2014, pp. 51–72). Overall, the thirteen adjudicative guidelines and ten psychological screening dimensions cut across several broad domains, including (1) Alcohol, drug, substance abuse, and other risk taking behaviors, (2) financial considerations, (3) handling of protected information and use of information technology systems, (4) personal, ethical, and criminal conduct, as well as decision-making and

judgement, (5) psychological, emotional, stress tolerance, impulse control, and sexual behavior, (6) social competence and teamwork, (7) assertiveness and persuasiveness, (8) conscientiousness and dependability, (9) adaptability and flexibility, and (10) allegiance to America devoid of foreign influence (Montaquila & Godwin, 2016).

Based on a comparison of these areas of concern, the conduct displayed in the following case examples cut across multiple areas of concern enumerated in both the California Peace Officer Psychological Screening Manual and the U.S. Security Clearance Adjudication Guidelines. Nevertheless, several common elements emerge across these case studies, including a lack of oversight and supervision and the presence of individual actors who believed no other person would ever second guess their work, nor ever have the ability or be willing to put forth the effort to scrutinize their schemes. It is also interesting that in at least three of these case studies, impropriety appeared to germinate in an environment of two or more people, sometimes in instances where these actors were unaware of the malevolent activities of other individuals with whom they were working. The following case studies provide an intimate perspective and overall sense of the significance of the problem, as well as allude to the importance of the goal of the present research.

Michael T. Slager: Ex-North Charleston Police Officer

Perhaps one of the most notorious and high-profile cases of police misconduct to receive recent national media attention is the shooting death of Walter L. Scott. On the morning of April 4, 2016 (Mai-Duc, 2015), Michael T. Slager, a former North Charleston police officer in South Carolina stopped Mr. Scott in what began as a routine traffic stop

(Berman & Lowery, 2016; Dixon & Lewin, 2016; Mai-Duc, 2015). Although the stop began as a result of a simple broken break light (Berman & Lowery, 2016; Dixon & Lewin, 2016), it culminated with ex-officer Slager discharging eight shots at Mr. Scott (Dixon & Lewin, 2016; Mai-Duc, 2015). Five bullets ultimately made contact with Mr. Scott (Dixon & Lewin, 2016; Mai-Duc, 2015), with four rounds striking his back and the fifth reportedly grazing his ear (Mai-Duc, 2015).

Investigators from the South Carolina Law Enforcement Division (SLED) arrived at the location of the incident at approximately 10:30am that same morning, a response time that put them at the scene less than one hour from the time of the shooting. However, ex-officer Slager declined to speak with state criminal investigators at the scene, and instead informed them that he had retained an attorney (Mai-Duc, 2015). Thereafter, investigators reached out to Slager's attorney who, in turn, indicated that he would make Slager available for questioning on April 7 at his law office. The day before the meeting was set to take place, Slager released a statement through his attorney that he and Mr. Scott had struggled for control of his Taser. Slager indicated that the struggle led to his feeling threatened, which thereby resulted in him discharging his duty weapon (Mai-Duc, 2015).

Investigators were finally able to begin interviewing Slager on the morning of April 7, 2016 (Mai-Duc, 2015). In the statement he made to state investigators, Slager asserted that Mr. Scott was actually moving toward him with his own Taser at the point in time when he discharged his duty weapon (Berman & Lowery, 2016; Dixon & Lewin, 2016). However, an independent witness captured the majority of the event on a cellphone recorded video (Berman & Lowery, 2016; Dixon & Lewin, 2016; Mai-Duc,

2015). In contrast to Slager's own statement, the video evidence depicted Mr. Scott running away from Slager after a brief struggle (Dixon & Lewin, 2016). As Mr. Scott is running away from Slager, Slager is shown to firing multiple shots, many of which appear to strike Mr. Scott in the back as he flees (Berman & Lowery, 2016). Upon the conclusion of Slager's interview with investigators at his attorney's law office, Slager was arrested and subsequently terminated from the North Charleston Police Department (Mai-Duc, 2015).

By June 2015, Slager was officially indicted for Walter Scott's homicide by a state grand jury, with a trial date eventually being set for October 31, 2016 (Berman & Lowery, 2016). However, Slager was eventually also charged federally. The federal indictment, filed during the second week of May 2016, charged Slager with a civil rights violation, using a weapon during a criminal felony act of violence, and obstruction of justice (Berman & Lowery, 2016; Dixon & Lewin, 2016). The civil rights violation specifically stems from the alleged violation of Mr. Scott's constitutional right to remain "... free from the use of unreasonable force by a law enforcement officer," while the obstruction of justice charge arose from Slager's intentionally false statements to state investigators alleging that Mr. Scott was moving toward him with a Taser when Slager fired his weapon (Berman & Lowery, 2016; Dixon & Lewin, 2016). Following the issuance of a federal arrest warrant, Slager was turned over to the FBI that same week (Berman & Lowery, 2016). In response to the federal charges, the attorney for the Scott family has issued a statement that the changes prompted by the killing of Mr. Scott means that his death was not "in vain" (Berman & Lowery, 2016; Dixon & Lewin, 2016). Although the state homicide prosecution ended in a mistrial in December 2016, Slager



pleaded guilty in to the federal excessive force charge of “deprivation of rights under the color of law” in exchange for the other two federal charges and the state homicide charges being dropped (Yan, Shah, & Grinberg, 2017). In the wake of the scandal and in an apparent attempt to improve police accountability, the Governor of South Carolina issued an order mandating that police officers be required to deploy body cameras in the course of their duties (Dixon & Lewin, 2016).

### David L. Harding: Ex-New York State Trooper

The case of Michael T. Slager evidences the disturbing way in which a law enforcement officer, acting unlawfully in the course of his official duty, can produce false statements and intentionally lie to other investigators under the assumption that no one would be capable of impeaching his version of events. While these revelations serve as a shocking wakeup call for those who may be reluctant to believe that someone occupying a position of public trust could so readily employ deception to conceal his own misdeeds, it is certainly not the first such documented event. The events surrounding the scandal centered upon former New York State Trooper David L. Harding demonstrate a much more prolonged and intricate form of deception.

David L. Harding was considered to be on a path for greatness within the New York State Police. He completed his undergraduate degree in criminology, and eventually went on to earn a master’s degree in communications (Nordheimer, 1992). He finished at the top of his academy class and delivered the valedictory speech to his cohort at the New York State Police Academy. If that weren’t enough, Harding was promoted to investigator after working less than one year as a New York State Trooper

(Nordheimer, 1992). However, Harding's fate changed as a result of a 1991 job application and interview (Nordheimer, 1992; Perez-Pena, 1997). In an interview for a position with the Central Intelligence Agency (CIA), Harding reportedly bragged about falsifying evidence (Nordheimer, 1992; Perez-Pena, 1997), including fingerprint evidence (The New York Times, 1993). In an apparent attempt to impress the CIA and boast about his ability to execute covert operations (Nordheimer, 1992; Perez-Pena, 1997), Harding additionally admitted to falsifying the weight of a cocaine seizure in order to procure a more severe charge for the perpetrator involved in that case, the theft of \$1,000.00 in a New York State Police narcotics sting operation, as well as a series of smaller thefts (Nordheimer, 1992). The CIA subsequently notified the U.S. Department of Justice, who in turn eventually notified New York State officials (Nordheimer, 1992; Perez-Pena, 1997).

During the resulting inquiry, a special prosecutor, Nelson E. Roth, was appointed to oversee the subsequent investigation (Nordheimer, 1992; Perez-Pena, 1997; The New York Times, 1993). Following a review of thousands of cases between 1984 through 1992, a total of six troopers were identified as having been involved in evidence falsification. In sum, 36 cases were deemed to exist where troopers fabricated evidence, while an additional 10 cases may have also been tainted. Five of the troopers eventually pleaded guilty, and the sixth was acquitted in two separate trials. Nevertheless, that trooper was forced to resign in 1993 (Perez-Pena, 1997). As part of a plea agreement, former New York State Trooper Robert M. Lishansky testified in open court regarding how he fabricated evidence in 21 criminal cases. Lishansky stated that he first began falsifying evidence after Harding, who was Lishansky's supervisor, taunted him for

failing to solve any criminal cases using fingerprint evidence during his first year as an investigator (The New York Times, 1993). For his part, Harding ultimately pleaded guilty to evidence falsification in four cases (Nordheimer, 1992; The New York Times, 1993), which included pleading guilty to perjury in at least two of the cases (Nordheimer, 1992).

Generally, the investigators involved would wait for a suspect to be identified, and then falsify evidence and claim that they had located the suspect's fingerprints at a crime scene (Nordheimer, 1992; Perez-Pena, 1997; The New York Times, 1993). While Harding either presented fingerprints that he claimed to have lifted at a crime scene or provided photographs of the prints he had claimed to have lifted, Harding never provided exhibits of the fingerprints on the actual surfaces where he claimed to have lifted the prints (Nordheimer, 1992). Lishansky indicated that he himself had used a photocopier when fabricating fingerprint evidence. Further, Lishansky stated that he worked alone in 16 cases, but that he had worked in concert with other troopers in another five instances of evidence tampering. In one instance, Lishansky disclosed that Harding modified the date on fingerprint evidence while in the direct presence of a local county district attorney (The New York Times, 1993). In another case, Harding and Lishansky schemed to falsify fingerprint evidence in the quadruple homicide of a local family before a suspect had even been identified. After seizing two gasoline cans used in the commission of the crime (The New York Times, 1993), Lishansky and Harding later claimed to have located a suspect's fingerprints on the cans (Nordheimer, 1992; Perez-Pena, 1997; The New York Times, 1993).

Almost all of the troopers who were indicted worked in Troop C, with the exception of one trooper assigned to Troop F; however, he had long been an associate of three of the other troopers who were charged criminally (Perez-Pena, 1997). Many individuals who reviewed the scandal were most disturbed by the lack of difficulty associated with breaching proper New York State Police protocol, as well as that superiors never brought the falsified evidence into question (Nordheimer, 1992). Indeed, a lack of fear of being detected by superiors was cited as being a contributing factor to scandal, as was the perception that some supervisors may have maintained a willful ignorance of the activity. Special prosecutor Nelson Roth characterized Troop C as a group of rogue troopers who were very self-assured that no one would ever scrutinize their activities. Some of the troopers who were eventually indicted even held onto the evidence that would later be used secure charges against them, such as falsified fingerprint cards (Perez-Pena, 1997). In the wake of the scandal, the New York State Police established new standards designed to defeat such evidence tampering efforts in the future. This includes requiring signatures from at least two investigators on all crime scene reports (Perez-Pena, 1997; The New York Times, 1993), as well as verification from at least two supervisors that fingerprint evidence was actually discovered at crime scenes (The New York Times, 1993). Additionally, policy now requires that photographs of fingerprint evidence be taken (Perez-Pena, 1997; The New York Times, 1993), particularly before those fingerprints are lifted from an object (The New York Times, 1993), and that fingerprint matches made in criminal cases now be sent for validation to the New York State Police central laboratory (Perez-Pena, 1997).

After the discussion of the escapades of David Harding and the other former troopers within Troop C of the New York State Police, as well as the many provisions and reforms that were put into place to prevent such activities from recurring, one would hope that there would never be a recurrence of such behavior. Certainly, one would hope that scope of prevalence of the criminality observed within Troop C would be unlikely to be repeated, at least not in such a strikingly similar pattern of events. However, the scandal that ultimately shook members of the Schaumburg Police Department in Illinois suggests that series of circumstances that unfolded within Troop C of the New York State Police did not merely occur in a vacuum.

At the beginning of January 2013, Terrance O'Brien, Matthew Hudak, and John Cichy were tactical officers within the Schaumburg Police Department's Special Investigations Division (Ward & McCoppin, 2014), also referred to as the Special Investigations Bureau (Hinkel, 2015). The unit, which was responsible for investigations involving gang activity, narcotics violations, and running undercover operations, has since been depicted as a close-knit group who were able to engage in criminal activity without ever drawing the attention of supervisors (Ward & McCoppin, 2014). The scandal broke as a result of evidence that surfaced that the ex-officers were in fact forcing informants to purchase, steal, and distribute narcotics on their own behalf (Hinkel, 2015; Ward & McCoppin, 2014), predominately in the form of marijuana and cocaine (Hinkel, 2015).

Authorities first learned of the illegal activity when officers of the Carol Stream Police Department arrested an individual for narcotics violations. Following their arrest,

the individual disclosed that officers from the Schaumburg Police Department had forced them to engage in the narcotics distribution (Ward & McCoppin, 2014). Following the informant's cooperation, a sting operation led by the Drug Enforcement Administration (DEA) was initiated (Hinkel, 2015). Shortly thereafter the revelations, money and narcotics were placed at a local storage locker establishment. After being made aware of its existence by an informant, O'Brien stood watch while Hudak and Cichy unlawfully made entry and stole the money, all after surveillance cameras had been placed in the area (Ward & McCoppin, 2014).

Numerous lawsuits have since emerged (Hinkel, 2015; Ward & McCoppin, 2014), with many alleging that ex-officers perpetrated frequent civil rights violations (Hinkel, 2015). One suit describes how Hudak recruited one informant, which included Hudak being found openly placing a tracking device on the individual's vehicle during the day. Hudak informed the owner that he would ensure his incarceration if they did not agree to work as an informant. Later, the informant purchased narcotics while under surveillance by Hudak and O'Brien, with Hudak subsequently telling the informant that a residence would be raided as a result of the surveillance operation and they would provide the informant with a portion of the illicit earnings (Hinkel, 2015).

Other lawsuits have implicated the ex-officers in numerous other illegal activities, including one incident in which Hudak allegedly pistol-whipped an individual. These activities include theft of money, theft of firearms, effecting arrests without proper probable cause, and conducting searches without a warrant. As of February 2015, the total estimated costs of the lawsuits approximated almost half a million dollars; however, several cases were still pending at that time (Hinkel, 2015). Furthermore, numerous

criminal cases involving the three ex-officer were dropped (Hinkel, 2015; Ward & McCoppin, 2014), while an additional three convictions were overturned (Hinkel, 2015). O'Brien, who as part of a plea deal agreed to testify against Hudak and Cichy, eventually confessed to official misconduct, armed violence, burglary, and possession of a controlled substance (Ward & McCoppin, 2014).

The scandal also prompted an external review (Hinkel, 2015; Ward & McCoppin, 2014), in which the contracted consultant cited lack of oversight in supervision and ineffective communication among the most significant contributors to the situation (Hinkel, 2015). Following the sting operation, arrest, and resulting revelations, a new chief was hired to lead the Schaumburg Police Department (Hinkel, 2015; Ward & McCoppin, 2014), who went on to describe the agency as having been a “culture of dysfunction.” Schaumburg officers who provided information as part of the external review process stated that previous chiefs seemed more preoccupied with their own impression management than the actual operational effectiveness of the agency itself. Amongst the shortcomings cited within the 140-page document produced during the external review were findings that implicated the existence of holes in supervision and command structure, as evidenced by the agency’s decision to eliminate the rank of lieutenant. This was believed to have contributed to a lack of oversight over Special Investigations. In an effort to correct several of the problems enumerated within the external audit, the lieutenant position was reestablished and Special Investigations was ultimately disbanded in favor of a tactical group responsible for investigating not only gang and narcotics activities, but other criminal activity as well (Hinkel, 2015).

## The Precursor

Based upon an analysis of the case studies presented so far, one might surmise that the implementation of body worn cameras or improved administrative supervision would prove to be effective remedies in addressing duplicity in law enforcement. However, as technological advancements and the speed at which knowledge is disseminated both increase exponentially, so too does the sophistication in which malicious actors may seek to take advantage of systems and situations for their own benefit. Thus, it would seem that the story of ex-DEA Special Agent Carl Force, ex-U.S. Secret Service Special Agent Shaun Bridges, and the Baltimore Silk Road Task Force may have actually given the tale of David Harding and Troop C of the New York State Police a 21<sup>st</sup> Century upgrade.

It was in 2013 that a massive multi-year investigation into Silk Road, which at the time was the largest darkweb narcotics exchange, was beginning to come to a head. Authorities were closing in on the website's operator, an individual who had previously only been known to law enforcement as "Dread Pirate Roberts," or "DPR" for short. However, DPR was eventually identified as 29-year-old San Francisco resident Ross Ulbricht. The Federal Bureau of Investigation (FBI) ultimately tracked Ulbricht to a San Francisco Public Library where he was arrested while communicating with Silk Road subordinates on his laptop (Farivar & Mullin, 2016).



## Untangling the Exchange of Online Messages

Following the arrest, investigators began shifting through the vast numbers of online exchanges that Ulbricht participated in as DPR. Several significant subjects and topics of conversation stood out. Several months prior to Ulbricht's arrest in January 2013, DPR was found chatting with an associate, who employed the online alias "Nob," regarding a recent theft of bitcoin from the Silk Road. The theft of the 20,000 bitcoins, an online cryptocurrency, was estimated to be valued at \$350,000.00 at the time. Ulbricht almost immediately suspected Silk Road forum administrator Curtis Green was behind the theft (Farivar & Mullin, 2016). In addition to the fact that Green's account was used to commit the theft, Green had also recently been arrested by law enforcement as a result of his connection to Silk Road. In Ulbricht's online exchange with Nob, Ulbricht first request that Green be beaten and subsequently forced to return the bitcoin. However, Ulbricht later altered the request from a simple beating to murder, and agreed to Nob's requested payment of 80,000 bitcoins for the job. On February 28, 2013, Ulbricht received notification from Nob that Green's remains had been destroyed, following which Nob received the remaining 40,000 bitcoin payment for his services (Farivar & Mullin, 2016).

Unfortunately for Ulbricht, this was not the end of his troubles with Green, as Ulbricht was contacted by an individual using the moniker "Death From Above" on April 1, 2013. The message explicitly stated that Death From Above was knew DPR was involved in the disappearance and murder of Green, and they went on to attempt to coerce DPR to pay \$250,000.00; however, the extortion attempt failed (Farivar & Mullin, 2016). Nevertheless, Ulbricht sent Nob 400 bitcoins, as well as an additional 525

bitcoins two months thereafter, hoping to receive information Nob claimed to have obtained from a source within the Department of Justice regarding the investigation into Silk Road. A similar offer was also made by another online persona known as “French Maid,” who stated that for \$100,000.00, they would provide information regarding the government investigation into Silk Road (Farivar & Mullin, 2016).

### Identifying a Rogue Agent ... or Two ...

In the days, weeks, and months after Ulbricht’s arrest, the investigators who began wading through the vast Silk Road database would eventually learn that the true identity belonging to each of the three monikers were one, in fact, one in the same. DEA Special Agent Carl Force had been working undercover as part of the Baltimore Task Force that was investigating Silk Road. However, not all of the online exchanges between Force and Ulbricht were above board. It was later determined that several of the bitcoin payments Ulbricht made in the hope of obtaining information regarding the federal investigation into Silk Road were eventually deposited directly into personal accounts belonging to Force (Farivar & Mullin, 2016). Following Ulbricht’s arrest, Force hurriedly began attempting to transfer the bitcoin he had unlawfully accrued into actual legal tender. On October 12, 2013, Force opened an account with Bitstamp, a Slovenia-based company designed to convert bitcoins into actual currency, using a Social Security card, proof of residence, and driver’s license all belonging to one of his DEA undercover identities. Bitstamp, however, was able to recognize that the documents did not belong to a legitimate person and confronted Force, who, in turn, admitted that the documents were illegitimate. Force subsequently provided Bitstamp copies of his law

enforcement credentials, badge, resume, a water bill, and his actual identification.

Bitstamp reluctantly allowed the account to be opened, and Force made two bitcoin transfers into his bank account in November 2013 (Farivar & Mullin, 2016).

Concerned regarding the behavior, Bitstamp General Counsel George Frost reported the suspicious behavior to a U.S. Secret Service Special Agent with whom Frost had previously worked, Shaun Bridges. Bridges stated that he would refer the matter forward, but nothing seemed to transpire thereafter. After exchanging approximately \$80,000.00 worth of bitcoin in April 2014, Bitstamp employees reviewed Force's IP logs and discovered that he had been connecting to his Bitstamp account through Tor, the anonymization network designed to mask a user's physical location (Farivar & Mullin, 2016). When Force attempted to exchange \$200,000.00 worth of bitcoins on April 28, 2014, Frost froze his Bitstamp account. During a prearranged and unrelated meeting scheduled for May 1, 2014, Frost brought the matter to the attention of the U.S. Attorney's Office in San Francisco. Although authorities were initially speculative and hesitant to initiate an investigation; however, Force coincidentally contacted Bitstamp on May 2, 2014 requesting that his transaction records be deleted. Frost ensured that the records were not deleted, contacted the U.S. Attorney's Office regarding the development, and an investigation was opened the same day (Farivar & Mullin, 2016).

In the subsequent investigation that would lead to Force's undoing, authorities also reached out to Frost's previous contact, Shaun Bridges, regarding the investigation. After initially expecting Bridges to be concerned or perplexed regarding the matter, Bridges actually acted oppositional and defensive. As investigators continued to unravel Force's illicit activities, it was discovered that Force was actually present in the proffer session of

Curtis Green, who was never actually killed. Force, acting as Nob, led Ulbricht to believe that he had killed Green, and thereafter attempted to extort Ulbricht for money under the Death From Above moniker. However, there was still some speculation as to what had actually happened in regard to the bitcoin theft involving Green's Silk Road forum administrator account (Farivar & Mullin, 2016). Although initial suspicion fell upon Force, investigators also began to notice a pattern of bitcoin movement that appeared rather different from Force's more simplistic transfers. Eventually, the bitcoin stolen with Curtis Green's account were traced back to an account in the name and home address of one individual, Shaun Bridges. Bridges, as it turned out, was also a member of the Baltimore Task Force was a co-worker of Force. He was also present during Curtis Green's proffer session, where Green provided the password to his Silk Road forum administrator account. In the aftermath of the event, investigators failed to find any evidence that Force and Bridges were at any time working together (Farivar & Mullin, 2016). Somewhat similar to the New York State Police Troop C scandal where the five troopers who confessed to evidence falsification denied being aware of the other's activities (Perez-Pena, 1997), investigators have indicated that Force and Bridges appeared to have been operating similar, but entirely independent schemes (Farivar & Mullin, 2016).

## In Summation: Common Themes & Significance of the Problem

### Divergent Motives

In reviewing these case studies, several divergent motivations appear to emerge. The primary motivation for Carl Force and Shaun Bridges appeared to be one of profit and greed. Farivar & Mullin (2016) note that within almost 3 months of opening his Bitstamp account, Carl Force had managed to payoff mortgage, which had an outstanding balance of approximately \$130,000.00. On the suspicion that Shaun Bridges was preparing to flee the United States, federal authorities arrested Bridges at his home the day before he was schedule to turn himself in to begin his lengthy prison sentence. Among the items in his possession at the time were records for three offshore companies (Farivar & Mullin, 2016). Following the Schaumburg Police Department scandal, an Assistant State Attorney involved in the case articulated Terrance O'Brien's motives as boiling down to being a thrill for the crime, and O'Brien's lawyer stated that he had become absorbed in the societal culture of drugs (Ward & McCoppin, 2014). Matthew Hudak and John Cichy themselves described their time off after work on Friday as being "coke Fridays" (Hinkel, 2015). David Harding and the other corrupt troopers within Troop C seemed to be looking for a convenient and expeditious way of closing cases and convicting suspects they believed to be guilty of a crime. Nordheimer (1992) described the opinion of the brother of one of the victims from the high-profile quadruple homicide where David Harding planted fingerprint evidence. Specifically, Harding's ambition to advance his own career helped drive the evidence tampering. Another New York State

Police superior also provided insight into David Harding's motives, indicating that Harding was enthralled by the attention he received as a result of his investigations (Nordheimer, 1992). Finally, one might best surmise that Michael Slager shot Walter Scott out of contempt, anger, and frustration, and then attempted to construct a legally acceptable version of events in order to conceal his own crime.

### Common Recommendations

In response to the New York State Police Troop C scandal, additional oversight was recommended in the collection and handling of fingerprint evidence (Perez-Pena, 1997; The New York Times, 1993). In the aftermath of the Schaumburg Police scandal, insufficient and ineffective oversight was highlighted as a significant facilitator of the corruption. As a result of the scandal and the findings of an independent review, a new chief was hired and the rank of lieutenant was reinstated within the Schaumburg Police Department (Hinkel, 2015). Following the shooting of Walter Scott by Michael Slager, the Governor of South Carolina issued an order mandating that body cameras be instituted and worn by police officers (Dixon & Lewin, 2016).

Thus, in response to the discovery of several instances of police misconduct, a common recommendation is the imposition of more stringent oversight and accountability. However, the implementation of such recommendations alone may be insufficient to prevent this problem from emerging in other departments and agencies. With the development of body cameras, one would hope that developments in technology may provide a more realistic approach for enhancing oversight and accountability of law enforcement personnel. Nevertheless, the corruption which took place within the context

of the Silk Road investigation suggests that technological advancements can also afford bad actors additional opportunities to leverage the system for personal gain.

### The Central Problem: Environment vs. Individual

In providing a thorough description of the previous case studies, the present research is not attempting to intimate that the problems of police misconduct and corruption are especially common or pervasive. Rather, these case studies demonstrate how even isolated instances of this type of criminal behavior can have far-reaching and serious consequences. Moreover, the amalgamated lessons derived from these individual cases demonstrate the potential ramifications to agencies who do not institute effective measures to prevent or mitigate potential improprieties before they propagate and become more serious problems.

Sometimes in an attempt to innovate, organizations merely mechanize old methods of performing occupational responsibilities. As a result, established procedures are simply left in place instead of implementing any type of reimagined process (Power, 2012). In essence, this may be what one observes in the recommendations following police misconduct and corruption scandals. That is, the recurrent tendency to place a bandage of increased oversight on the problem instead of exerting all the energy and effort necessary to redesign components of the law enforcement screening and selection process. One central tenant that is not explicitly mentioned in the context of the recommendations following any of the aforementioned scandals is the need to hire trustworthy and ethical police officers. Should enhanced oversight and accountability actually prove effective in preventing the development of future such scandals, the

concept of better supervising individuals who would otherwise be considered disreputable and immoral police officers would likely be in no way satisfying to members of the general public who may already be distrustful of law enforcement.

Notwithstanding the contribution of the individual to police corruption and misconduct, the New York State Police Troop C scandal may also provide evidence as to the interplay and influence of environment upon members of law enforcement officers. As previously noted, information suggested that ex-NYSP Investigator Lishansky only began fabricating fingerprint evidence after being encouraged to do so by Harding, who had mocked him for having not used fingerprint evidence to “solve” cases during Lishansky’s first year as an investigator (The New York Times, 1993). In regard to the six ex-Troopers who were criminally charged and the several supervisors who implicated in the scandal, the special prosecutor appointed to investigate the scandal found it very difficult to believe that three generations of police investigators within Troop C would have been fabricating evidence without teaching, learning, or communicating with one another (Perez-Pena, 1997). Consequently, the interplay and influence of the environment should not be underestimated. Nevertheless, only so much can be done at the individual level in order to control the environment of a law enforcement agency. Rather, the individual can control how he or she reacts to their environment. Thus, oversight and accountability may play an important role in preventing the germination of police corruption; however, personnel screening and selection should likely be considered key to combating the problem. Specifically, screening-out untrustworthy individuals and selecting-in persons more resilient to malicious group influence should remain essential personnel security objectives.



## CHAPTER 2: LITERATURE REVIEW

### Gatekeeping: Sensitivity, Specificity, Selecting-In, & Screening-Out

#### Who Comes In, and Who Stays Out?

In describing his 31-year career as a polygraph examiner within the Central Intelligence Agency (CIA), Sullivan (2008, p. 11) articulated what he considered to be the role he and his colleagues assumed as being “gatekeepers.” Specifically, it was their responsibility to “... keep the bad guys out, while letting some good guys in” (Sullivan, 2008, p. 11). Similarly, practitioners (e.g., background investigators, hiring managers, operational psychologists) who act in a capacity for screening and selection of safety-sensitive employees, including law enforcement officers (LEOs), are charged with an almost identical responsibility. That is, these professionals must ensure that those unfit for appointment to positions of public authority do not assume these roles and gain access to the sensitive information and power that accompany such occupations. Consistent with the criteria guiding security clearance processing in for individuals who are not believed to be loyal to the United States, trustworthy, reliable, or able to protect sensitive information, such individuals should be screened-out (Montaquila & Godwin, 2016; Young, Harvey, & Staal, 2011). Simultaneously, the proper execution of the screening and selection process necessitates that practitioners also be capable of identifying and selecting-in those applicants who would appropriately use the resources, sensitive information, and power that accompany positions of public authority.

In essence, Sullivan's (2008, p. 11) description of gatekeeping resonates with the application of sensitivity and specificity to assessment procedures. In the context of test construction and evaluation in epidemiology, Gordis (2009, p. 86) specifies how test validity is comprised of both sensitivity and specificity. The sensitivity of a test is a metric indicating the degree to which individuals who possess a condition of interest are correctly identified, whereas specificity represents the ability of a test to correctly identify individuals who do not have a condition of interest. In other words, test sensitivity is the extent to which individuals who possess a given condition are accurately identified as "positive," while test specificity is the extent to which individuals who do not possess a given condition are accurately identified as "negative" (Gordis, 2009, p. 86-87).

### Sensitivity & Specificity: The Error Term

In a perfect world, screening and selection tools implemented by practitioners would have both perfect sensitivity and specificity. However, screening instruments are rarely able to accomplish the feat of completely identifying both true positive and true negatives without the presence of any error term. In reality, both false positives and false negatives will be present. In these situations, some individuals who do not possess the condition of interest will inaccurately test positive, while other individuals who do possess the condition of interest will inaccurately test negative (Gordis, 2009, p. 87-88). As Sullivan's (2008, p. 11) statement alludes, the concept of false positives and false negatives are both important to understand in the context of a screening capacity (Gordis, 2009, p. 88). The significance of this point as it relates to police pre-employment hiring

decisions is that it means that some good applicants will be inaccurately denied employment, and some “bad guys” will inevitably make it past the gates to employment as an LEO, which in this case is likely the more frightening possibility of the two error terms.

In order to fully comprehend the significance of false positives and false negatives, one must also understand the reciprocal nature in which sensitivity and specificity operate within screening procedures. If a practitioner increases the threshold for specificity, opting to maximize the ability to identify correct negative cases, then sensitivity of the screening procedure subsequently decreases. Conversely, if a practitioner increases the threshold for sensitivity, opting to maximize the ability to identify correct positive cases, then specificity of the screening procedure subsequently decreases (Gordis, 2009, p. 86-89). Knowing this, practitioners are faced with a dilemma as to whether a screening procedure is defaulted to be sensitive at the cost of specificity. If so, the procedure is more prone to producing false positive results. The alternative would be to default the screening procedure to be specific at the cost of sensitivity, in which case the procedure is more prone to false negative results. In sum, practitioners are faced with evaluating whether the consequences of false positive or false negative are more disadvantageous.

One of the most significant disadvantages of false positives is the anxiety they produce among the persons who invalidly screen positive. In addition, the stigma from a positive test can be difficult to expunge, even if subsequent tests are negative. Moreover, false positive results can negatively impact a person’s employability (Gordis, 2009, p. 88). Nevertheless, false negative screening results can have similarly dire consequences.

For instance, someone who is given incorrect negative results on a test to screen for cancer may feel relieved as a short-term, immediate benefit. However, the long-term consequences could be a matter of life-and-death (Gordis, 2009, p. 88). Thus, the question becomes a matter as to whether false positives (i.e., high sensitivity) or false negatives (i.e., high specificity) are preferable in a pre-employment screening procedure. Based upon Sullivan's (2008, p. 11) conceptualization of his responsibilities as a gatekeeper in keeping "the bad guys out, while letting some good guys in," it would seem as though the argument was made for establishing sensitivity over specificity in pre-employment screening and selection. That is, it is much more important to be able to correctly identify true "bad guys" at the expense of producing false positive results for some of the "good guys."

#### Sensitivity & Specificity: Conclusions

While obviously unfair for those who receive false positive results, the danger of false negatives is that they potentially allow unfit individuals access to high-risk security sensitive employment and possess a position of public authority where the misuse of the power and access to privileged information can have dire consequences for society at large. In regard to research, development, and advancement in personnel security evaluations, the question becomes how one can reliably evaluate potential integrity issue indicators and make accurate screen-out and screen-in decisions while minimizing the likelihood of a committing a false positive. Furthermore, almost all applicants will display a range of both positive and negative traits and it may be difficult to screen-in or

screen-out an applicant based upon outcomes exclusively within only one or two dimensional areas.

In sum, it's difficult to categorize a candidate as being absolutely good or bad. Depending on one's perspective, the exact same traits observed in any applicant can be deemed either positive or negative. This is further complicated when assessing personality traits such as honesty and integrity in a pre-employment context where applicants are more likely to portray themselves in an overly favorably light, a concept otherwise termed "faking good." In addition, applicants who possess either a more conservative or less conservative response pattern tend to be at an elevated susceptibility for false negatives and false positives, respectively. Thus, response bias can be another major obstruction to accuracy in personnel security screening and selection. Consequently, any technique or procedure that may improve the accuracy with which personnel security specialists establish thresholds for lethal characteristics, including integrity issues, could possess significant applied utility.

#### The Dots Task: An Introduction & Relevance to Examining Police Misconduct

The case examples thus far have demonstrated how Michael Slager, David Harding, Robert Lishansky, Terrance O'Brien, Matthew Hudak, John Cichy, Carl Force, and Shaun Bridges were all presented with similar opportunities to cheat and game the criminal justice system and attempted to play it to their own advantages. A visual perception task, developed by Gino, Norton, & Ariely (2010) and described by Gino & Ariely (2012), was originally created in order to examine how wearing counterfeit versus authentic fashion products may influence human behavior. This perceptual task has since

been deployed in experiments conducted by Gino & Ariely (2012) and Kouchaki & Smith (2014) in an effort to examine other aspects of dishonesty and unethical behavior. As referred to by Ariely (2013, p. 129), this perceptual task eventually became known as “The Dots Task.” According to Ariely (2013, p. 129-130), the original intent behind this perceptual task, eventually known as “The Dots Task,” “... was to observe how cheating evolves over time in situations where people have many opportunities to act dishonestly.” Essentially, the law enforcement profession offers a very similar potential, the opportunity to behave dishonestly and take advantage of situations where no other person may ever be able to readily identify what truly transpired.

As it relates to the issues of police misconduct and public corruption, a tool that truly has the capability to examine such concepts could produce very practical findings. Specifically, such a tool could help identify and remove law enforcement applicants from the hiring process who may deliberately provide dishonest responses or very easily succumb to the what-the-hell effect. As previously described by Ariely (2013, p. 130), the concept of an honesty threshold describes the verge at which a person may progress from engaging in possible occasional cheating while simultaneously attempting to maintain an honest self-image to a point where he or she begins cheating frequently with no concern of maintaining an honest self-image. As such, The Dots Task could help illuminate which law enforcement applicants have a high or above average honesty threshold, which by definition may be prospectively indicative of an individual more resilient and resistant to the temptations of dishonesty and unethical behavior. In order to better understand the relevance of such concepts in addressing impropriety in law enforcement, one should first consider the basic tenants behind The Dots Task.

## The Dots Task: An Overview & Theoretical Underpinnings

In its original iterations, The Dots Task consisted of a square bisected into two triangles by a diagonal line. In the course of completing the task, 20 randomly and unevenly scattered dots would flash within the square for a duration of 1-second. Dots appeared on either side of the diagonal line (Ariely, 2013, p. 127-128; Gino & Ariely, 2012; Gino, Norton, & Ariely, 2010; Kouchaki & Smith, 2014), but would sometimes also fall on top of the line (Gino & Ariely, 2012). Participants are instructed to select which side of the divider the majority of the dots fall, left or right. Some trials are unambiguous in that it is clearly evident where the majority of the dots lie, whereas other trials are ambiguous and it is more challenging to identify the side containing the majority of dots. The first iteration of The Dots Task contained a series of 100 practice trials followed by 200 compensated trials (Ariely, 2013, p. 128; Gino, Norton, & Ariely, 2010), the second iteration contained fewer practice trials followed by 200 compensated trials (Gino & Ariely, 2012), and a third iteration contained only 100 compensated trials (Kouchaki & Smith, 2014). Regardless of where the majority of dots fall, participants are compensated 0.5 cents for left-handed selections and 5 cents for right-handed selections (Ariely, 2013, p. 128-129; Gino & Ariely, 2012; Gino, Norton, & Ariely, 2010; Kouchaki & Smith, 2014). Thereby, participants are given a direct conflict of interest as to whether they will maximize their reward or perform the task as accurately as possible (Ariely, 2013, p. 129; Gino & Ariely, 2012; Gino, Norton, & Ariely, 2010). Further, participants are continually provided feedback regarding both their individual trial and cumulative earnings as the progress forward through The Dots Task. At the end of The Dots Task, participants record their award amount on a collection slip that they hand to the

researcher at the conclusion of the study (Gino & Ariely, 2012; Gino, Norton, & Ariely, 2010). The researcher then pays the participant based upon the amount denoted on the collection slip (Gino & Ariely, 2012). In sum, The Dots Task provides a manipulation of response bias; whereby, participants are evaluated based upon the likelihood that they will provide one type of response (maximizing payment) versus another (performing accurately).

Finally, Ariely (2013, p. 130-131) continued his description of the purpose of The Dots Task in stating the impetus for its development originated from an interest as to whether study volunteers would attempt to maintain an honest self-image by engaging in only occasional cheating, thereby benefitting from cheating without damaging their own self-perception. Moreover, the original development team was curious as to whether study volunteers would ever reach an “honesty threshold,” at which point their cheating behavior would begin to dramatically increase in frequency. The researchers subsequently termed this behavioral pattern, the point where participants finally succumb to cheating and dramatically increase their rate of dishonest responses, as the “what-the-hell effect” (Ariely, 2013, p. 130-131). As it may relate to law enforcement screening and selection procedures, information derived from The Dots Task could potentially assist in identifying and selecting-in candidates with a lower propensity for rationalization their own actions and a higher honesty threshold. Simultaneously such research could produce information that would inform the screening-out of candidates who are more likely to succumb to the what-the-hell effect, and, therefore, presumably less conscientious and more impulsive.



### The Dots Task: Implications for Improving Sensitivity & Specificity

As described by Spilberg & Corey (2014, p. 61), the Integrity/Ethics dimension of the California POST Peace Officer Psychological Screening Manual states that law enforcement officers should possess "... attributes such as honesty, impartiality, trustworthiness, and abiding laws, regulations, and procedures." This dimension further specifies that law enforcement officers should not "abuse the system," "use one's position for personal gain," or bend rules or in any other way attempt "to beat the system." Counterproductive behaviors outlined under this dimension include lying, providing false testimony or otherwise committing perjury, being untruthful regarding personal mistakes or oversights, stealing, tampering with evidence, making material misrepresentations of fact, omitting facts, providing misleading statements, and breaking rules under the presumption that ends justify means. In sum, any action that would seriously call into question a person's trustworthiness or rectitude would sufficiently satisfy law enforcement screen-out criteria based upon the Integrity/Ethics dimension. As is clearly evidenced by each of the previously described case studies, all of the respective actors displayed serious counterproductive behaviors enumerated under the Integrity/Ethics dimension. These case studies are, of course, extreme examples of police corruption. Nevertheless, counterproductive behaviors identified under the Integrity/Ethics dimension need not be extreme in order to justify cause for concern. As stated by Hadley (2005) regarding Guideline E: Personal Conduct of the Adjudicative Guidelines for Determining Eligibility for Access to Classified Information, "untrustworthiness, unreliability, lack of candor, unwillingness to comply with rules and regulations" as well as "a pattern of dishonesty or rule violations" may all be cause for

concern or even disqualifying. Thus, untrustworthiness and duplicity of any kind is worthy of scrutiny in the context of personnel security screening and selection.

Although the deployment of The Dots Task within a pre-employment sample of LEO candidates could have the projected benefit of improving the sensitivity and specificity of current screening and selection procedures, it will certainly not be able to eliminate the error term. By prospectively being able to identify applicants with a higher honesty threshold, researchers hope to be able to better inform better screen-in decision-making. Alternatively, the prospect of identifying applicants who willfully provide dishonest response patterns or easily succumb to the what-the-hell effect, researchers hope to be able to derive more accurate and reliable screen-out criteria. Finally, future development in applicant assessment should be geared toward obtaining a better global understanding of candidate profiles versus the narrower evaluation of specific candidate traits. In service of this goal, previous research employing The Dots Task and other similar experimental manipulations appear to provide promising preliminary insight therein.

### The Dots Task & Related Experiments: Previous Findings

#### Perceived Inauthenticity & Self-Alienation

Gino, Norton, & Ariely (2010) conducted two separate experiments within the context of the same study whereby participants completed The Dots Task while wearing counterfeit and authentic fashion products. The purpose of this inquiry was to examine

the concept of self-signaling, or the notion that we as individuals actually define our own identity and character based mostly upon interpretations and inferences derived from our own actions (Ariely, 2013, p. 122-123). In the first experiment employing The Dots Task, participants wearing counterfeit products exhibit statically significant higher levels of dishonesty than did participants in the authentic condition (Ariely, 2013, p. 123-126; Gino, Norton, & Ariely, 2010). The second experiment replicated this finding, as well as demonstrated that this effect remained consistent regardless as to whether participants self-selected their condition or were randomly assigned across conditions (Gino, Norton, & Ariely, 2010).

Two additional experiments were conducted within this same study that assessed dependent variable measures other than those produced by The Dots Task (Gino, Norton, & Ariely, 2010). Results from one of these experiments indicated that participants assigned to the counterfeit condition judged the statements and behavior of other hypothetical scenario-based actors as being more dishonest, unethical, and untruthful than did participants in the authentic condition (Ariely, 2013, p. 131-134; Gino, Norton, & Ariely, 2010). Results from the second of these experiments found that participants within the counterfeit condition reported significantly greater feelings of inauthenticity, as measured by a self-alienation instrument. This effect mediated the relationship between wearing counterfeit fashion apparel and dishonesty on another simulated cheating manipulation, and self-alienation (i.e., feelings of inauthenticity) was a significant predictor of an elevated dishonest response pattern (Gino, Norton, & Ariely, 2010).

## Creativity, Dishonesty, & Implications for Informing California POST Dimensions

In another study employing The Dots Task, the relationship between dishonesty, intelligence, and creativity was examined. Findings indicated that dishonesty and creativity were significantly positively correlated with one another (Ariely, 2013, p. 170-172; Gino & Ariely, 2012). However, intelligence was not found to be significantly correlated with dishonesty or creativity (Gino & Ariely, 2012). Subsequent simulated cheating task manipulations provided evidence suggesting that even a transiently primed creative mindset leads to significant elevations in dishonesty (Gino & Ariely, 2012), and that the relationship between dishonesty and creativity lies within one's enhanced ability to produce rationalizations and justifications for unethical conduct (Ariely, 2013, p. 170-172; Gino & Ariely, 2012). In one experiment, the creativity scores of extreme cheaters (individuals who had cheated almost entirely) were higher than the creativity scores of participants who had not cheated as profoundly (Ariely, 2013, p. 176-177).

Results describing the link between dishonesty and creativity are most relevant for informing the Adaptability/Flexibility and Decision-Making/Judgment dimensions of the California POST Peace Officer Psychological Screening Manual. While creativity, adaptability, and innovative decision-making will remain assets in hiring LEO candidates, it may be beneficial to more closely examine the moderators of the relationship between dishonesty and creativity. Perhaps certain personality traits or characteristics, such as a strong moral identity and/or a low propensity for moral disengagement, may actually negate the perceived risk of unethical behavior in highly creative individuals.

## The “Morning Morality Effect”: Cognitive Fatigue as a Mediator to Self-Regulation

Ariely (2013, p. 98) describes the theoretical tenants underlying why human beings are more prone to succumb to temptation while exhausted as being related to an interplay between the dynamics of impulsivity and rationality. Specifically, the concept of ego depletion posits that exerting the willpower necessary to withstand a desire or desires over time requires effort that eventually weakens one’s ability to abstain from temptation (Ariely, 2013, p. 100-101). In other words, continuous deliberate exertion of self-control directly diminishes the same cognitive resources required for the exertion the self-control behavior, which thereby temporarily diminishes one’s capacity for decision-making or intentional action (Barnes, Schaubroeck, Huth, & Ghumman, 2011).

Consistent with this notion are research findings indicating a negative correlation between unethical behavior and sleep quantity, while self-control is positively correlated with sleep quantity. After assessing unethical behavior across several work environments, a positive correlation was identified between the dependent variable of unethical activity and both variables of poor quality and poor quantity of sleep.

Cognitive fatigue, as measured by the Shirom & Melamed (2006) cognitive fatigue scale, was identified as mediating the correlation between quantity of sleep and unethical behavior. Researchers concluded that these findings provided support for that Ego Depletion model explains the relationship between sleep deprivation and unethicality (Barnes et al., 2011). Ariely (2013, p. 102-103) also highlights previous research where parole board judges were found to be more likely to grant parole while feeling reinvigorated at the beginning of the day and after lunch, as cognitive burden was

believed to build up across the workday which contributed to status quo decisions of denying parole. These findings are particularly relevant to the current research.

Drawing upon previous research examining the effects of cognitive load upon impulsive decision-making, Ariely (2013, p. 103-104) and his colleagues decided to empirically examine the question for themselves. As self-control is believed to be the mechanism through which individuals are able make more socially responsible decisions over more self-serving biases, researchers sought to examine whether if engaging in a preliminary self-control activity would subsequently lead to increased dishonesty on a simulated cheating task (Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009). This, indeed, was confirmed and replicated across two separate studies (Gino, Schweitzer, Mead, & Ariely, 2011; Mead et al., 2009). However, Mead et al. (2009) conducted two additional experiments as part of the same study, where participants in the self-control depletion conditions were not engaged in statically significant higher levels of cheating behavior, but were also found to be more prone to voluntarily place themselves in situations where they would be able to cheat and would thereafter cheat more than non-depleted participants who voluntarily placed themselves in the same situation (Ariely, 2013, p. 104-106, 108-112; Mead et al., 2009).

### The Effect of Moral Disengagement and Moral Identity

In their exploration of the mediators and moderators relevant to the relationship between ego depletion and dishonesty, Kouchaki & Smith (2014) sought to examine the influence of time of day upon participant performance on The Dots Task. Participants self-selected for either a morning (8:00am to 12:00pm) or afternoon (12:00pm to 6:00pm)

research session. The results confirmed that dishonesty was significantly elevated among the afternoon condition versus the morning condition, and was eventually termed “the morning morality effect.” An additional experiment where participants were randomly assigned to morning and afternoon conditions replicated these findings (Kouchaki & Smith, 2014), thereby suggesting that individuals who exhibited dispositional dishonesty did not merely self-select for afternoon appointments. This same experiment deployed the Shirom & Melamed (2006) cognitive fatigue scale, the same cognitive fatigue instrument deployed by Barnes, Schaubroeck, Huth, & Ghumman (2011), and found that participants assigned to the afternoon condition reported elevated levels of cognitive fatigue as compared to the participants assigned to the morning condition (Kouchaki & Smith, 2014). Thus, contribution of cognitive fatigue appears to common to both Kouchaki & Smith’s (2014) examination of the influence of time of day upon unethical behavior, as well as Barnes, Schaubroeck, Huth, & Ghumman’s (2011) examination of the influence of lack of sleep upon unethical behavior.

However, Kouchaki & Smith (2014) took their inquiry further and also sought to examine the extent to which self-regulatory degradation during the course of a day impacted moral awareness, which was found to attenuate during the natural progression of the day. These results are consistent with those of Gino et al. (2011), which identified a positive relationship between the attenuation of moral awareness and diminished self-regulatory capacity. Kouchaki & Smith (2014) assessed deliberate cheating via The Dots Task, and found that dishonesty was significantly correlated with time of day. However, this strength of this correlation was reduced when controlling for moral awareness, was found to significantly mediate the relationship between time of day and deliberate

dishonesty on The Dots Task. Moral awareness and dishonesty, as measured by The Dots Task, were negatively correlated with one another (Kouchaki & Smith, 2014).

In a final component experiment within the same study, Kouchaki & Smith (2014) attempted to evaluate the effect of moral disengagement upon the morning morality effect. The 8-item Moral Disengagement Measure, as developed by Moore, Detert, Klebe Treviño, Baker, & Mayer (2012), was utilized to assess the inclination of participants to morally disengage. Results demonstrated that individuals who demonstrated high levels of morally disengagement were less affected by the morning morality affect than those participants who demonstrated a lower propensity for moral disengagement. As Kouchaki & Smith (2014) allude in their discussion, the low baseline of individuals with a high propensity for moral disengagement essentially creates a floor effect, whereby participants with a lower intrinsic inclination for moral disengagement have farther to fall in regard to the morning morality effect. Similarly, one experiment conducted by Gino et al. (2011) sought to evaluate the influence of moral identity, as measured by 5-items of the Aquino & Reed (2002) Moral Identity Measure, upon dishonesty and self-regulatory capacity. Moral identity and self-regulatory depletion were both separate significant predictor variables for dishonesty. However, moral identity was actually found to moderate the relationship between dishonesty and diminished self-regulatory capacity (Gino et al., 2011).



## Self-Regulatory Capacity, Moral Disengagement, & Moral Identity: Implications for Screening & Selection Models

The aforementioned findings regarding self-regulatory capacity, moral disengagement, and moral identity have multiple implications for contemporary pre-employment screening and selection models. In regard to both the California POST Psychological Screening dimensions and the U.S. Security Clearance Adjudicative Guidelines, self-regulatory capacity would likely load across multiple dimensions, which, if true, would make it a prime target for future study in the context of pre-employment evaluations. Similarly, information derived from the study of moral disengagement and moral identity would likely benefit the development and understanding of multiple dimensions and guidelines as well. However, when taken together, the information derived from the previously described studies on self-regulatory capacity, moral disengagement, and moral identity appear most relevant and valuable to better understanding the California POST Integrity/Ethics and Emotional Regulation/Stress Tolerance dimensions, as well as the Personal Conduct and Psychological Conditions guidelines.

In sum, one would surmise from the previous research findings that higher self-regulatory capacity would be a screen-in asset for LEO applicants; however, Kouchaki & Smith (2014) demonstrated that a high propensity for moral disengagement produced relatively consistent dishonest behavior regardless of the influence of self-regulatory behavior. The explanation provided by Kouchaki & Smith (2014) indicated that these individuals were not at all attempting to regulate their dishonesty, therefore time of day

had no effect. Applicants displaying such integrity issues should likely be screened-out of the pre-employment process. However, even applicants with low moral disengagement still began to engage in dishonest behavior upon experiencing ego depletion. It was not until Gino et al. (2011) examined the moderating effect of moral identity, that researchers observed a stark difference in individuals who were able to successfully remain resilient to ego-depletion. As a result, it would appear that a high degree moral identity possesses much promise as a pre-employment screen-in characteristic. Nevertheless, Shalvi, Gino, Barkan, & Ayal (2015) have suggested that it is still possible for an individual to strongly value their morality, while still engaging in deliberate unethical activities. Namely, it is hypothesized that such individuals employ self-serving justifications both before and after initiating deliberate ethical conduct (Shalvi et al., 2015). Thus, both moral identity and moral disengagement will likely remain important to informing current screening and selection models. While moral identity may serve to help identify individuals more resilient to succumbing to dishonesty as a result of ego depletion, assessment of moral disengagement may provide an additional buffer against any persons who are successfully able to rationalize their own dishonest, unethical, and immoral conduct while still maintaining a moral sense of self.

### The Present Research

Based upon the preexisting empirical evidence conducted on dishonesty and corresponding performance on The Dots Task, the first hypothesis states that assessment scales and subscales that quantify conscientiousness, self-regulatory capacity, and/or impulse control will produce statistically significant negative correlations with dishonesty

as measured by The Dots Task. The second hypothesis is a continuation of the first hypothesis and specifies that the statistically significant negative correlation between The Dots Task dishonesty outcomes and assessment scales and subscales that quantify conscientiousness, self-regulatory capacity, and/or impulse control will be moderated by moral disengagement and moral identity, as consistent with previous findings of Gino et al. (2011) and Kouchaki & Smith (2014). In accordance with previous findings obtained by Ariely (2013, p. 172-177), the third hypothesis states that any pre-employment measure of intelligence will not produce statistically significant correlations, either positive or negative, with performance on The Dots Task. As both Ariely (2013, p. 170-172) and Gino & Ariely (2012) have found elevated levels of creativity to be correlated with increased cheating behavior, the fourth hypotheses states that assessment scales and subscales that quantify components of the adaptability and flexibility will be positively correlated with measurements of dishonesty from The Dots Task. Additionally, the fifth hypothesis states that the assessment scales and subscales that quantify applicant moral identity will be negatively correlated with dishonesty as measured by The Dots Task. Finally, the sixth hypothesis states that moral disengagement assessment scales and subscales will be significantly correlated with dishonesty as measured by The Dots Task.

## CHAPTER 3: METHOD

### Participants

Participants were recruited from a private personnel evaluation firm responsible for providing screening and selection services for safety-sensitive employees (SSEs) in the southeastern United States. During the standard telephone call in which applicants are contacted to schedule their face-to-face interview, prospective study participants were provided a brief description of the study and asked if they would be interested in volunteering.

Prospective participants who verbally agreed to participate were slotted for an appointment based upon the normal scheduling procedure for the applicant face-to-face interview. In order to minimize the extent to which applicants may have concern that their study task performance may impact the outcome of their hiring recommendation, participants did not complete study tasks until the conclusion of their evaluation. Further, the informed consent process explicitly explained that study outcomes would be kept entirely separate from their formal evaluation, and that all pre-employment data from the formal evaluation would be duplicated, segregated from their formal evaluation file, and anonymized for the purposes of this study. Finally, the informed consent form stated that prospective participants retained the right to revoke their consent to participate regardless of their initial verbal consent during scheduling, as well as possessed the right to cease their participation any time after beginning the study.

## Procedure

After reviewing a brief informed consent form and confirming their interest in volunteering, participants were randomly assigned anonymous study identification numbers. Participants were informed that they would have the opportunity to earn up to \$10.00 based upon their performance on a brief computerized perceptual task (i.e., The Dots Task). Prior to the administration of The Dots Task, participants were first administered a series of self-report instruments which they were informed could take approximately 15 to 20 minutes to complete. These questionnaires and assessment included the following: (1) a brief demographic survey, (2) the Moral Identity Measure, (3) the Moral Disengagement Measure, and (4) the Shirom-Melamed Burnout Measure (SMBM). Thereafter, participants completed The Dots Task while seated in front of a laptop, which required an additional 6 to 10 minutes to complete.

At the conclusion of The Dots Task, participants were asked to pay themselves with money from a blank envelope based on their results. The blank envelope contained nine 1-dollar bills, three quarters, one dime, two nickels, and five pennies. For any participant who inquired as to whether or not the research assistant needed to confirm their reward amount or self-payment, the research assistant was prepared to respond with the following statement: “You’re practically law enforcement by now. We believe you.” This statement was specifically tailored to include “...We believe you...” versus “...We trust you...” given that the word “trust” may have been more likely to instill a sense of guilt, whereas “believe” may have been slightly more likely to instill a sense of authority or empowerment for the participant. Participants were then asked to secure their personal earnings from the study, close the self-sealing adhesive envelope with the remaining

money, and place the envelope in a cardboard box containing other sealed envelopes before approaching the researcher to complete a 1-item exit questionnaire. To ensure that the envelope the participant placed in the box can be traced back to their anonymous participant number, all original envelopes were discretely marked with the participant's identification number in invisible ink before being provided to the participant.

Additionally, envelopes provided to participants possessed small but perceptible differences in their physical attributes as compared to the prop envelopes present in the cardboard box. Additionally, a small sign was placed on the box with the following statement: "Tally Remaining Funds Within Five Business Days Of:". The date listed on the sign was changed daily and indicated that the day the participant completed the task fell on the third of the five business days, thereby suggesting that previous participants had already placed envelopes in the box over the previous two days and that additional participants would prospectively deposit envelopes within the box over the following two days. This procedure further ensured that participants who chose to inflate their earnings were not discouraged from choosing to do so based upon their concern that the researcher would identify their overpayment. Kouchaki & Smith (2014) have previously suggested that "right-handed" response patterns during ambiguous trials of The Dots Task were reflective of self-interest bias. As such, the aforementioned design allowed investigators to quantify more deliberate and explicit forms of cheating, as compared with the more easily rationalized forms of cheating resulting from poor management of conflict of interest and bias that may have been more characteristic of The Dots Task.

Prior to leaving, participants will be provided a debriefing statement and the true purpose of The Dots Task will be explained. Participants will also complete a 1-item exit

questionnaire evaluating the extent to which they suspected the true nature of The Dots Task. Following the participant's departure, de-identified copies of their pre-employment evaluation paperwork will be procured and stored electronically for later comparison against their performance upon the measures completed as part of this research.

### Materials

#### Demographic Questionnaire

A 15-question demographic questionnaire was the first instrument completed by participants. This questionnaire included items asking the participant to report the type of law enforcement position for which they were applying, their desires and motivations for pursuing a law enforcement position, whether they have ever previously failed to successfully complete the law enforcement personnel screening and selection process, the extent of their law enforcement training and experience, their degree of satisfaction with the law enforcement profession, and their law enforcement career aspirations. Questions pertaining to the extent of the applicant's law enforcement experience were included in order to compare the performance of "rookie" applicants with that of applicants who had previously held law enforcement positions. In order to assess possible moderating variables upon the time-of-day effect, three additional questions were also included that inquired as to whether applicants had consumed breakfast, lunch, a snack, or caffeine within 90 minutes of beginning the study.

## Additional Assessments & Questionnaires

Four additional questionnaires were included as a part of the current study. These included the following: (1) the Shirom-Melamed Burnout Measure (SMBM), (2) the Moral Identity Measure (MIM), (3) the Moral Disengagement Measure (MDM), and (4) a 1-item exit questionnaire. The purpose of the first three instruments was to examine both the mediating and moderating effects of moral attentiveness and self-control/ego depletion against participant performance on The Dots Task. The variant of the SMBM employed in this study was based upon a previous version discussed by Shirom & Melamed (2006), from which the 5-item cognitive-fatigue scale was pulled and utilized within the third experiment examining the morning morality effect described by Kouchaki & Smith (2014). In this study, elevated levels of cognitive fatigue, as evidenced by higher SMBM ratings, was identified among afternoon cohort participants, who engaged in significantly higher levels of dishonesty than morning cohort participants (Kouchaki & Smith, 2014). The SMBM version used in this study contained a total of 14-items, and the following 3-subscales: physical fatigue (6-items), cognitive weariness (5-items), and emotional exhaustion (3-items). The SMBM also produces a total index, with scores ranging from a minimum of 14 to a maximum of 98.

The MIM, originally developed by Aquino & Reed (2002), consists of a total of 10-items, and the following 2-subscales: Internalization (5-items) and Symbolization (5-items). The MIM also produces a total index, with scores ranging from a minimum of 10 and a maximum of 70. Gino et al. (2011) had previously only selected only 5-items from the MIM in order to assess moral identity; however, the present study will utilize the full 10-item MIM. The MDM, originally developed by Moore et al. (2012), was developed in



order to be capable of producing a 24-item, 16-item, or 8-item version, with items loading across the following 8-subscales: Moral Justification, Euphemistic Labelling, Advantageous Comparison, Displacement of Responsibility, Diffusion of Responsibility, Distortion of Consequences, Dehumanization, and Attribution of Blame. Each subscale either contains 3-items, 2-items, or 1-item, based upon whether the user is employing the 24-item, 16-item, or 8-item version of the MDM, respectively. Similar to both the SMBM and MIM, the MDM also contains a total index which is derived by calculating the sum of all MDM items. Kouchaki & Smith (2014) previously utilized the 8-item version of the MDM. For the purposes of the present research, all three versions of the MDM are being calculated and incorporated for analysis.

Finally, the 1-item exit questionnaire was designed to assess the extent to which participants suspected the true purpose of The Dots Task, and provided a scaled 4-option mutually exclusive response ranging from “... no clue ...” to “... absolutely knew ...” from which the participants selected.

### The Dots Task

The Dots Task required participants to view a vertically bisected square for the duration of approximately 6 to 10 minutes. During this time, dots flashed on both sides of the bisected square in 1-second intervals. An unequal number of dots always appeared between the left and right side of the bisection; however, the proportion of dots varied between trials. In ambiguous trials, the dot difference between the left and right bisections were either 2- or 4-dots. In unambiguous trials, the dot difference between the left and right bisections was 6-dots. Participants were required to select which side of the

bisected square (right or left) possessed more dots within each trial. The payment schedule remained fixed, and participants were always compensated 0.5 cents for left-sided responses and 5 cents for right-sided responses. Nevertheless, the participant's mandate remained constant in that the task still required the participant to select the bisection containing the most dots. The Dots Task consists of 10 practice trials and 200 actual trials.

Participants who complete The Dots Task with 100% accuracy will receive a payout of \$4.60. Participants who inflate their performance (either as a result of implicit bias, explicit bias, difficulty managing conflict-of-interest, or simple poor perceptual accuracy) will receive anywhere between \$4.60 and \$10.00, depending upon how persistently he or she makes the "More on right" selection. Any participant who deliberately chooses to disregard the study directions and maximize his or her payout by persistently selecting "More on right" will receive a payout of \$10.00. Inaccurate performance favoring the "More on left" selection may result in a payment under the accurate payout of \$4.60. In this scenario, payouts may range between \$1.00 and \$4.60, depending upon how persistently the participant makes the "More on left" selection.

In regard to the calculation of the dependent variables, the percent error will be calculated to determine the accuracy of participant responses on 2-dot, 4-dot, and 6-dot differences on both right-sided and left-sided trials. This will produce an accuracy metric across all of the six possible combinations (2-dot left-sided, 2-dot right-sided, 4-dot left-sided, etc.). Furthermore, two separate conglomerate percent error terms for 2-dot and 4-dot left-handed trials, as well as 2-dot and 4-dot right-handed trials will be calculated in order to evaluate the accuracy on left and right ambiguous trials. The percent error terms

for 6-dot left-handed and 6-dot right-handed trials will serve as the accuracy metrics for left and right unambiguous trials. The cumulative percent error for left-handed trials, as well as the cumulative percent error for right-handed trials will also both serve as dependent variable dishonesty indicators. Finally, the amount of dishonest payment, as well as the percentage of dishonest payment, will be used as dependent variable dishonesty indicators.

### Study Design

Participants will be divided into two conditions (law enforcement vs. corrections). A quasi-experimental design was employed in order to account for the effect of time-of-day upon participant performance. Based upon the timestamp indicator within The Dots Task metadata, participant performance was grouped within the following three mutually exclusive sessions: (1) 9:00am to 12:00pm, (2) 12:00pm to 3:00pm, and (3) 3:00pm to 6:00pm. The purpose of these session groups was to examine the extent to which the pattern of ego depletion described by Ariely (2013, p. 102-103) among parole judges in the morning and after lunch would also be identified in this law enforcement sample. Participants who were prospectively set to start or stop The Dots Task within a 10-minute interval of either the beginning or end or one of these three time groups were asked to wait to begin the task until 1-minute past the hour. In order to more extensively examine the potential of any effect of time-of-day upon participant performance, data was also grouped into the following two mutually exclusive sessions: (1) 9:00am to 1:30pm and (2) 1:30pm to 6:00pm.

Participants' demographic survey responses, MDM, MIM, PSR+, and subsequent assessment scales and subscales will first be evaluated for their possible influence upon participants' dishonesty indicators on The Dots Task. Normality tests were conducted, including Kolmogorov-Smirnov and Shapiro-Wilk statistics, in order to examine the overall skewness and parametric distribution of the dataset. To evaluate whether assessment scale and subscale scores correlate with participants' dishonesty indicators, independent Spearman correlation analyses were run between participants' individual dishonesty indicators and participants' assessment (MDM, MIM, PSR+, etc.) scale and subscale scores. For the purpose of hypothesis testing, an ANOVA will be used to test the independent variables of law enforcement group (LEO vs. corrections) and time of day (9:00am to 12:00pm vs. 12:00pm to 3:00pm vs. 3:00pm to 6:00pm) against dishonesty dependent variables. A stepwise multiple linear regression analysis will be used to evaluate the contribution of independent variables in predicting the total variance observed among dishonesty dependent variables. Data analysis will be performed using excel spreadsheets, SPSS, and similar statistical analysis software.

## CHAPTER 4: RESULTS

### The Dots Task: Descriptive Statistics

Of the 104 participants who completed The Dots Task in its entirety, the mean award amount was \$5.24 (524.1 cents) with a standard deviation \$1.23 (123.6 cents). Again, a precisely honest reward amount was \$4.60. The median reward amount equated to \$4.93 (493.8 cents), while the mode equaled \$4.64 (464.5 cents). The threshold for 1-standard deviation from the mean rested at \$6.47 (647.7 cents), 2-standard deviations from the mean was positioned at \$7.71 (771.3 cents), and 3-standard deviations from the mean was established at \$8.94 (894.8 cents). Only a total of five participants scored 2-standard deviations above the mean.

### Outcome Variables of Interest

#### The Dots Task: Outcome Variables

A total of eighteen individual outcome variables (a.k.a., dependent variables) were derived from participants' performance on The Dots Task, prospectively measuring participants' implicit level of cheating. The outcome variables related to Dots Task reward amount include: (1) Dishonest Payment Percentage, (2) Total Payment, (3) Raw Reward Amount for All Participants in Cents, (4) Raw Reward Amount for Completed Participants in Cents, and (5) Total Payment for Completed Participants in Dollars. Correlation analyses were completed to examine redundancy among these five outcome

variables. Correlation analyses revealed  $p$ -values equal to 1.0, which indicated that each of these outcome variables essentially measured the identical construct. To eliminate redundancy, Raw Reward Amount for Completed Participants in Cents was selected as the outcome variable of interest.

Outcome variables related to participant performance “error” on The Dots Task included: (1) Total Percent Error, (2) Ambiguous Percent Error, (3) Unambiguous Percent Error, (4) 2-Dot Percent Error, (5) 4-Dot Percent Error, and (6) 6-Dot Percent Error. Each of the aforementioned metrics measuring percent error were calculated for both the left and right sides of The Dots Task, essentially producing a total of twelve individual outcome variables. However, both left and right percent error are essentially reciprocal outcome variables. This was supported by correlation analyses, which revealed  $p$ -values equal to 1.0 between corresponding measures of left and right percent error. Additionally, the metrics measuring Unambiguous Percent Error and 6-Dot Percent Error were also demonstrated as having  $p$ -values equal to 1.0, as these metrics were both measurements of participants’ error on 6-Dot trials. To eliminate redundancy, (1) Total Right Percent Error, (2) 2-Dot Percent Error, (3) 4-Dot Percent Error, (4) Right Ambiguous Percent Error, and (5) Right Unambiguous Percent Error were selected as the target outcome variables of interest. Finally, The What-the-Hell Effect was included as an outcome variable. While all of the previously mentioned outcome variables on The Dots Task were continuous variables, The What-the-Hell Effect was the only variable that was categorical. However, The What-the-Hell Effect was dichotomously dummy coded as either “0” or “1” (with “1” indicating its presence) so that it could be included in Spearman correlation analyses.

## Self-Payment Outcome Variables

An additional seven outcome variables were derived from participants' self-payment phase of the experiment, prospectively measuring participants' explicit level of stealing. Correlation analyses did not reveal any redundancy among these variables, and all were retained as outcome variables of interest. These target outcome variables include: (1) Disparity Between Envelope & Award, (2) Money Stolen, (3) Extra Money Left, (4) Disparity Amount, (5) Did Not Take Any Reward, (6) Money Apparently Stolen to Round to Next Largest Integer, and (7) Money Inexplicably Stolen. Of these outcome variables, only Disparity Amount was continuous. The remaining six outcome variables were categorical, and were all dichotomously dummy coded as either "0" or "1" so that they could be easily included in either Pearson or Spearman correlation analyses.

## Predictor Variables of Interest

Following the removal of redundant outcome variables, the remaining fourteen target outcome variables were incorporated into Spearman correlation analyses with the prospective predictor variables. These prospective predictor variables (a.k.a., independent variables) examined included the following: (1) Disqualified, an indicator as to whether the applicant had ever been disqualified during the post-conditional pre-employment hiring process for a law enforcement position; (2) Previous Law Enforcement Experience (2-Point Code), a dichotomous measure as to whether the applicant had any previous law enforcement experience; (3) the index score and two subscales of the Moral Identity Measure; (4) the 24-item, 16-item, and 8-item versions of

the index score and eight subscales of the Moral Disengagement Measure; and (5) all scales and subscales of the Protective Services Report, Plus (PSR+). Both the Disqualified and Previous Law Enforcement Experience predictor variables were categorical, and were all dichotomously dummy coded as either “0” or “1” so that they could be easily included in Spearman correlation analyses.

### Correlation Analyses

Correlation analyses were completed in order to evaluate the presence of any possible correlative relationship between dependent and independent variables. Normality tests were first conducted to evaluate the appropriateness of employing Pearson versus Spearman correlation analyses. Both Kolmogorov-Smirnov and Shapiro-Wilk statistics indicated that all seven target dependent variables were non-normally distributed. Additionally, all dependent variables were positively skewed, with the exception of the self-payment dependent variable of Disparity Amount, which was negatively skewed. As a result, Spearman Correlation analyses were completed between all of the target outcome variables of interest (for both The Dots Task and Self-Payment) and predictor variables.

### What-the-Hell Effect: Correlation Analysis

In order to determine the relationship between the What-the-Hell Effect and the study independent variables, Spearman correlation analyses were run. A weak, positive correlation was identified with the PSR+ Infrequency Percentile subscale, which was



statistically significant,  $r_s (n = 83) = .217, p = .048$ . A weak, negative correlation was identified with the PSR+ Acquiescence Raw Score, which was statistically significant,  $r_s (n = 83) = -.264, p = .016$ . A moderate, positive correlation was identified with the PSR+ QuickEval subscale, which was statistically significant,  $r_s (n = 83) = .396, p < .00$ . A weak, positive correlation was identified with the PSR+ Depressive Characteristics subscale, which was statistically significant,  $r_s (n = 83) = .263, p = .016$ . Finally, a weak, positive correlation was identified with the PSR+ Paranoid Ideation subscale, which was statistically significant,  $r_s (n = 83) = .277, p = .011$ .

#### Total Right Percent Error: Correlation Analysis

In order to determine the relationship between the Total Right Percent Error and the study independent variables, Spearman correlation analyses were run. A weak, positive correlation was identified with the MDM 16-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 104) = .218, p = .026$ . A weak, positive correlation was also identified with the MDM 8-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 104) = .236, p = .016$ . A weak, negative correlation was identified with the PSR+ Reasoning subscale, which was statistically significant,  $r_s (n = 83) = -.258, p = .019$ . A weak, negative correlation was identified with the PSR+ Intellectual Efficiency score, which was statistically significant,  $r_s (n = 83) = -.222, p = .043$ . A weak, positive correlation was identified with the PSR+ Distorted Thought Patterns subscale, which was statistically significant,  $r_s (n = 83) = .224, p = .042$ . A weak, negative correlation was identified with the PSR+ Risk Taking subscale, which was statistically significant,  $r_s (n = 83) = -.257, p = .019$ . A weak,

positive correlation was identified with the PSR+ Anxious Depression subscale, which was statistically significant,  $r_s (n = 83) = .219, p = .046$ . A moderate, positive correlation was identified with the PSR+ Paranoid Ideation subscale, which was statistically significant,  $r_s (n = 83) = .383, p < .00$ . Finally, a weak, positive correlation was identified with the PSR+ Obsessional Thinking subscale, which was statistically significant,  $r_s (n = 83) = .247, p = .025$ .

#### Right Ambiguous Percent Error: Correlation Analysis

In order to determine the relationship between the Right Ambiguous Percent Error and the study independent variables, Spearman correlation analyses were run. A weak, positive correlation was identified with the MDM 16-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 104) = .209, p = .033$ . A weak, positive correlation was also identified with the MDM 8-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 104) = .223, p = .023$ . A weak, negative correlation was identified with the PSR+ Reasoning subscale, which was statistically significant,  $r_s (n = 83) = -.250, p = .023$ . A weak, negative correlation was identified with the PSR+ Risk Taking subscale, which was statistically significant,  $r_s (n = 83) = -.251, p = .022$ . A moderate, positive correlation was identified with the PSR+ Paranoid Ideation subscale, which was statistically significant,  $r_s (n = 83) = .389, p < .00$ . Finally, a weak, positive correlation was identified with the PSR+ Obsessional Thinking subscale, which was statistically significant,  $r_s (n = 83) = .247, p = .025$ .

## Right Unambiguous Percent Error: Correlation Analysis

In order to determine the relationship between the Right Unambiguous Percent Error and the study independent variables, Spearman correlation analyses were run. A weak, positive correlation was identified with the MDM 24-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 104) = .211, p = .031$ . A weak, positive correlation was again identified with the MDM 16-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 104) = .262, p = .007$ . A weak, positive correlation was also identified with the MDM 8-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 104) = .266, p = .006$ . A weak, positive correlation was identified with the PSR+ Infrequency Percentile score, which was statistically significant,  $r_s (n = 83) = .227, p = .039$ . A weak, negative correlation was identified with the PSR+ Warmth subscale, which was statistically significant,  $r_s (n = 83) = -.248, p = .024$ . A weak, positive correlation was identified with the PSR+ Sensitivity subscale, which was statistically significant,  $r_s (n = 83) = .297, p = .006$ . A weak, positive correlation was identified with the PSR+ Self-Reliance subscale, which was statistically significant,  $r_s (n = 83) = .218, p = .048$ . A weak, negative correlation was identified with the PSR+ Emotional Adjustment subscale, which was statistically significant,  $r_s (n = 83) = -.238, p = .030$ . Finally, a moderate, positive correlation was identified with the PSR+ Paranoid Ideation subscale, which was statistically significant,  $r_s (n = 83) = .391, p < .00$ .

## 2-Dot Percent Error: Correlation Analysis

In order to determine the relationship between the 2-Dot Percent Error and the study independent variables, Spearman correlation analyses were run. A weak, positive correlation was identified with the MDM 16-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 104) = .223, p = .023$ . A weak, positive correlation was again identified with the MDM 8-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 104) = .238, p = .015$ . A weak, negative correlation was also identified with the MDM 8-Item Dehumanization subscale, which was statistically significant,  $r_s (n = 104) = -.198, p = .044$ . A moderate, positive correlation was identified with the PSR+ Paranoid Ideation subscale, which was statistically significant,  $r_s (n = 83) = .329, p = .002$ . Finally, a weak, positive correlation was identified with the PSR+ Obsessional Thinking subscale, which was statistically significant,  $r_s (n = 83) = .244, p = .026$ .

## 4-Dot Right Percent Error: Correlation Analysis

In order to determine the relationship between the Total Right Percent Error and the study independent variables, Spearman correlation analyses were run. A weak, negative correlation was identified with the PSR+ Reasoning subscale, which was statistically significant,  $r_s (n = 83) = -.271, p = .013$ . A weak, negative correlation was identified with the PSR+ Intellectual Efficiency score, which was statistically significant,  $r_s (n = 83) = -.267, p = .015$ . A weak, positive correlation was identified with the PSR+ Anxious Depression subscale, which was statistically significant,  $r_s (n = 83) = .292, p = .007$ . A

moderate, positive correlation was identified with the PSR+ Paranoid Ideation subscale, which was statistically significant,  $r_s (n = 83) = .374, p < .00$ . Finally, a moderate, positive correlation was identified with the PSR+ Alienation/Perceptual Distortion subscale, which was statistically significant,  $r_s (n = 83) = .304, p = .005$ .

#### Raw Reward Amount for Completed Participants in Cents: Correlation Analysis

In order to determine the relationship between the Total Right Percent Error and the study independent variables, Spearman correlation analyses were run. A moderate, negative correlation was identified with the PSR+ Extraversion subscale, which was statistically significant,  $r_s (n = 83) = -.303, p = .005$ . A weak, positive correlation was also identified with the PSR+ Anxiety subscale, which was statistically significant,  $r_s (n = 83) = .261, p = .017$ . A moderate, negative correlation was identified with the PSR+ Warmth subscale, which was statistically significant,  $r_s (n = 83) = -.330, p = .002$ . A weak, positive correlation was identified with the PSR+ Vigilance subscale, which was statistically significant,  $r_s (n = 83) = .253, p = .021$ . A weak, negative correlation was identified with the PSR+ Emotional Adjustment subscale, which was statistically significant,  $r_s (n = 83) = -.263, p = .016$ . A weak, negative correlation was identified with the PSR+ Intellectual Efficiency score, which was statistically significant,  $r_s (n = 83) = -.216, p = .050$ . A weak, negative correlation was identified with the PSR+ Interpersonal Relationships subscale, which was statistically significant,  $r_s (n = 83) = -.271, p = .013$ . A weak, negative correlation was identified with the PSR+ Risk Taking subscale, which was statistically significant,  $r_s (n = 83) = -.267, p = .015$ . A weak, positive correlation was identified with the PSR+ Anxious Depression subscale, which was statistically

significant,  $r_s (n = 83) = .250, p = .023$ . A moderate, positive correlation was identified with the PSR+ Paranoid Ideation subscale, which was statistically significant,  $r_s (n = 83) = .447, p < .00$ . A moderate, positive correlation was identified with the PSR+ Alienation/Perceptual Distortion subscale, which was statistically significant,  $r_s (n = 83) = .356, p = .001$ . Finally, a weak, negative correlation was identified with the PSR+ Threat Immunity subscale, which was statistically significant,  $r_s (n = 83) = -.218, p = .048$ .

#### Disparity Between Envelope and Award: Correlation Analysis

In order to determine the relationship between the presence of a Disparity Between the Envelope/Award and the study independent variables, Spearman correlation analyses were run. A weak, negative correlation was identified with the MDM 24-Item Index score, which was statistically significant,  $r_s (n = 107) = -.208, p = .032$ . A weak, negative correlation was again identified with the MDM 16-Item Index score, which was statistically significant,  $r_s (n = 107) = -.207, p = .033$ . A weak, negative correlation was also identified with the MDM 24-Item Displacement of Responsibility subscale, which was statistically significant,  $r_s (n = 107) = -.192, p = .048$ . Again, a weak, negative correlation was also identified with the MDM 16-Item Displacement of Responsibility subscale, which was statistically significant,  $r_s (n = 107) = -.212, p = .029$ . A weak, negative correlation was identified with the PSR+ Anxiety subscale, which was statistically significant,  $r_s (n = 86) = -.224, p = .038$ . A weak, negative correlation was identified with the PSR+ Vigilance subscale, which was statistically significant,  $r_s (n = 86) = -.274, p = .011$ . A weak, negative correlation was identified with the PSR+

Tension subscale, which was statistically significant,  $r_s (n = 86) = -.276, p = .010$ .

Finally, a weak, negative correlation was identified with the PSR+ Health Concerns subscale, which was statistically significant,  $r_s (n = 86) = -.216, p = .045$ .

#### Money Stolen: Correlation Analysis

In order to determine the relationship between the presence of Money Stolen and the study independent variables, Spearman correlation analyses were run. A weak, positive correlation was identified with the PSR+ Impression Management Raw Score, which was statistically significant,  $r_s (n = 86) = .298, p = .005$ . A moderate, positive correlation was similarly identified with the PSR+ Impression Management Percentile score, which was statistically significant,  $r_s (n = 86) = .304, p = .004$ . Finally, a weak, negative correlation was identified with the PSR+ Tension subscale, which was statistically significant,  $r_s (n = 86) = -.218, p = .044$ .

#### Extra Money Left: Correlation Analysis

In order to determine the relationship between the presence of Extra Money Left and the study independent variables, Spearman correlation analyses were run. A weak, negative correlation was identified with the MDM 24-Item Index score, which was statistically significant,  $r_s (n = 107) = -.213, p = .027$ . A weak, negative correlation was again identified with the MDM 16-Item Index score, which was statistically significant,  $r_s (n = 107) = -.195, p = .044$ . A weak, negative correlation was also identified with the MDM 8-Item Index score, which was statistically significant,  $r_s (n = 107) = -.196, p = .043$ . A

weak, negative correlation was identified with the MDM 24-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 107) = -.255, p = .008$ . A weak, negative correlation was again identified with the MDM 16-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 107) = -.248, p = .010$ . A weak, negative correlation was also identified with the MDM 8-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 107) = -.238, p = .013$ . A weak, negative correlation was identified with the MDM 24-Item Displacement of Responsibility subscale, which was statistically significant,  $r_s (n = 107) = -.220, p = .023$ . A weak, negative correlation was again identified with the MDM 16-Item Displacement of Responsibility subscale, which was statistically significant,  $r_s (n = 107) = -.200, p = .039$ . A moderate, negative correlation was identified with the PSR+ Vigilance subscale, which was statistically significant,  $r_s (n = 86) = -.324, p = .002$ . Finally, a weak, negative correlation was identified with the PSR+ Health Concerns subscale, which was statistically significant,  $r_s (n = 86) = -.223, p = .039$ .

#### Disparity Amount: Correlation Analysis

In order to determine the relationship between the Disparity Amount of self-payment and the study independent variables, Spearman correlation analyses were run. A weak, positive correlation was identified with the MDM 24-Item Index score, which was statistically significant,  $r_s (n = 107) = .198, p = .041$ . A weak, positive correlation was identified with the MDM 24-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 107) = .285, p = .003$ . A weak, positive correlation was again identified with the MDM 16-Item Advantageous Comparison subscale, which was



statistically significant,  $r_s (n = 107) = .290, p = .002$ . A weak, positive correlation was also identified with the MDM 8-Item Advantageous Comparison subscale, which was statistically significant,  $r_s (n = 107) = .285, p = .003$ . A weak, positive correlation was identified with the MDM 24-Item Displacement of Responsibility subscale, which was statistically significant,  $r_s (n = 107) = .212, p = .028$ . Finally, a moderate, positive correlation was identified with the PSR+ Vigilance subscale, which was statistically significant,  $r_s (n = 86) = .314, p = .003$ .

#### Did Not Take Any Reward: Correlation Analysis

In order to determine the relationship between participants who Did Not Take Any Reward Disparity and the study independent variables, Spearman correlation analyses were run. A weak, positive correlation was identified with whether participants had ever previously been Disqualified, which was statistically significant,  $r_s (n = 107) = .207, p = .033$ . A weak, negative correlation was identified with the MDM 24-Item Index score, which was statistically significant,  $r_s (n = 107) = -.209, p = .031$ . A weak, negative correlation was again identified with the MDM 16-Item Index score, which was statistically significant,  $r_s (n = 107) = -.226, p = .020$ . A weak, negative correlation was also identified with the MDM 8-Item Index score, which was statistically significant,  $r_s (n = 107) = -.191, p = .049$ . A weak, negative correlation was identified with the MDM 16-Item Distortion of Consequences subscale, which was statistically significant,  $r_s (n = 107) = -.202, p = .037$ . A weak, negative correlation was identified with the PSR+ Independence subscale, which was statistically significant,  $r_s (n = 86) = -.254, p = .018$ . A weak, negative correlation was identified with the PSR+ Dominance subscale, which

was statistically significant,  $r_s (n = 86) = -.284, p = .008$ . Finally, a moderate, negative correlation was identified with the PSR+ Vigilance subscale, which was statistically significant,  $r_s (n = 86) = -.308, p = .004$ .

#### Money Apparently Stolen to Round to the Next Largest Integer: Correlation Analysis

In order to determine the relationship between instances when Money was Apparently Stolen to Round to Next Largest Integer and the study independent variables, Spearman correlation analyses were run. A weak, positive correlation was identified with the PSR+ Impression Management Raw Score, which was statistically significant,  $r_s (n = 86) = .275, p = .010$ . A weak, positive correlation was also identified with the PSR+ Impression Management Percentile score, which was statistically significant,  $r_s (n = 86) = .281, p = .009$ .

#### Money Inexplicably Stolen: Correlation Analysis

In order to determine the relationship between instances where Money was Inexplicably Stolen and the study independent variables, Spearman correlation analyses were run. Only a weak, negative correlation was identified with the PSR+ Paranoid Ideation subscale, which was statistically significant,  $r_s (n = 86) = -.216, p = .046$ .

## Stepwise Multiple Linear Regression Analyses

Stepwise multiple linear regression analyses were completed in order to evaluate the possible contribution of the study independent variables in explaining variance among the scale (a.k.a., continuous) dependent variables of interest. In regard to The Dots Task, the following six outcome variables were examined: (1) Total Right Percent Error, (2) Right Ambiguous Percent Error, (3) Right Unambiguous Percent Error, (4) 2-Dot Right Percent Error, (5) 4-Dot Right Percent Error, and (6) Raw Reward Amount for Completed Participants in Cents. In regard to self-payment, the only outcome variable examined was Disparity Amount. Thus, a total of six models were produced to which individual independent variables, when examined together, predict the majority of the variance in the aforementioned dependent variables.

### Total Right Percent Error: Multiple Regression

A stepwise multiple linear regression was calculated to predict Total Right Percent Error based upon the study independent variables. A significant regression equation was found ( $F(5, 77) = 13.943, p < .000$ ), with an  $R^2$  of .475. Participants' predicted Total Right Percent Error is equal to  $1.000 + .011$  (MIM Index)  $- .054$  (MIM Internalization)  $+ .069$  (MDM 8-Item Distortion of Consequences)  $+ 1.036$  (PSR+ QuickEval)  $+ .051$  (PSR+ Paranoid Ideation). All independent variables included in the model were significant predictors of Total Right Percent Error.

### Right Ambiguous Percent Error: Multiple Regression

A stepwise multiple linear regression was calculated to predict Right Ambiguous Percent Error based upon the study independent variables. A significant regression equation was found ( $F(8, 74) = 10.464, p < .000$ ), with an  $R^2$  of .531. Participants' predicted Right Ambiguous Percent Error is equal to  $.779 - .062$  (PSR+ Apprehension)  $+ .066$  (PSR+ Obsessional Thinking)  $+ .013$  (PSR+ Impression Management Raw Score)  $- .046$  (PSR+ Warmth)  $+ .014$  (MIM Index)  $- .055$  (MIM Internalization)  $+ 1.078$  (PSR+ QuickEval)  $+ .071$  (PSR+ Paranoid Ideation). All independent variables included in the model, with the one exception of PSR+ Impression Management Raw Score, were significant predictors of Right Ambiguous Percent Error.

### Right Unambiguous Percent Error: Multiple Regression

A stepwise multiple linear regression was calculated to predict Right Unambiguous Percent Error based upon the study independent variables. A significant regression equation was found ( $F(7, 75) = 16.057, p < .000$ ), with an  $R^2$  of .600. Participants' predicted Right Unambiguous Percent Error is equal to  $.822 - .050$  (PSR+ Apprehension)  $+ .057$  (PSR+ Obsessional Thinking)  $- .036$  (MDM 16-Item Attribution of Blame)  $- .035$  (MIM Internalization)  $+ .080$  (MDM 16-Item Distortion of Consequences)  $+ .049$  (PSR+ Paranoid Ideation)  $+ 1.103$  (PSR+ QuickEval). All independent variables included in the model were significant predictors of Right Unambiguous Percent Error.

## 2-Dot Right Percent Error: Multiple Regression

A stepwise multiple linear regression was calculated to predict 2-Dot Right Percent Error based upon the study independent variables. A significant regression equation was found ( $F(8, 74) = 8.130, p < .000$ ), with an  $R^2$  of .468. Participants' predicted 2-Dot Right Percent Error is equal to  $.633 + .046$  (PSR+ Obsessional Thinking)  $+ .019$  (PSR+ Impression Management Raw Score)  $- .052$  (PSR+ Warmth)  $+ .013$  (MIM Index)  $- .051$  (MIM Internalization)  $+ .049$  (MDM 8-Item Distortion of Consequences)  $+ .802$  (PSR+ QuickEval)  $+ .051$  (PSR+ Paranoid Ideation). All independent variables included in the model, with the exceptions of the PSR+ Obsessional Thinking subscale and the MDM 8-Item Distortion of Consequences subscale, were significant predictors of 2-Dot Right Percent Error.

## 4-Dot Right Percent Error: Multiple Regression

A stepwise multiple linear regression was calculated to predict 4-Dot Right Percent Error based upon the study independent variables. A significant regression equation was found ( $F(8, 74) = 11.421, p < .000$ ), with an  $R^2$  of .553. Participants' predicted 4-Dot Right Percent Error is equal to  $1.103 - .021$  (MDM 24-Item Attribution of Blame)  $- .060$  (PSR+ Apprehension)  $+ .071$  (PSR+ Obsessional Thinking)  $+ .056$  (MDM 16-Item Distortion of Consequences)  $+ .009$  (MIM Index)  $- .058$  (MIM Internalization)  $+ .057$  (PSR+ Paranoid Ideation)  $+ 1.302$  (PSR+ QuickEval). All independent variables included in the model, with the exception of MIM Index, were significant predictors of 4-Dot Right Percent Error.

### Raw Reward Amount for Completed Participants in Cents: Multiple Regression

A stepwise multiple linear regression was calculated to predict Raw Reward Amount for Completed Participants in Cents based upon the study independent variables. A significant regression equation was found ( $F(8, 74) = 12.979, p < .000$ ), with an  $R^2$  of .584. Participants' predicted Raw Reward Amount for Completed Participants in Cents is equal to  $727.318 + 5.038$  (MIM Index)  $- 19.341$  (MIM Internalization)  $- 11.350$  (MDM 24-Item Diffusion of Responsibility)  $+ 27.141$  (MDM 16-Item Distortion of Consequences)  $+ 6.412$  (PSR+ Impression Management Raw Score)  $- 25.167$  (PSR+ Warmth)  $+ 334.622$  (PSR+ QuickEval)  $+ 28.560$  (PSR+ Paranoid Ideation). All independent variables included in the model were significant predictors of Raw Reward Amount for Completed Participants in Cents.

### Disparity Amount: Multiple Regression

A stepwise multiple linear regression was calculated to predict Disparity Amount based upon the study independent variables. A significant regression equation was found ( $F(4, 81) = 8.556, p < .000$ ), with an  $R^2$  of .297. Participants' predicted Disparity Amount is equal to  $-5.634 - .590$  (PSR+ Independence)  $+ .679$  (PSR+ Dominance)  $+ .396$  (PSR+ Extraversion)  $+ .480$  (Vigilance). All independent variables included in the model were significant predictors of Disparity Amount.

## CHAPTER 5: DISCUSSION

### Significance of Average Reward Amounts

Again, the mean reward amount for the 104 participants who completed The Dots Task in its entirety was \$5.24, while a precisely honest award amount was \$4.60. Thus, results from the current study suggest that the overwhelming majority of law enforcement applicants attempted to act honestly and do what they understood to be the right thing. Given the nature of The Dots Task, perseverative errors, perceptual inaccuracies, and response bias may all contribute to a participant's earning more than the \$4.60 "honest" reward amount. Thus, any reward over \$4.60 may not necessarily be indicative of explicit or even implicit cheating.

Nevertheless, the higher the reward increases above the honest reward threshold of \$4.60, the more likely it is that the participant is engaging in implicit or even explicit cheating. As it pertains to the results of this study, the five participants who scored 2-standard deviations above the mean are likely exhibiting cheating behavior that would be more indicative of corruption versus misconduct or even simple human error. Conversely, those participants who either took less money than they earned or no money at all may demonstrate a tendency toward supererogation, or a willingness to go above and beyond the call of duty.

### Predictors Consistently Correlated with Dishonesty

In examining the number of statistically significant correlations resulting from the Spearman correlation analyses, several predictor variables consistently produced significant correlations with outcome variables. Regarding the Moral Disengagement Measure (MDM), the MDM Advantageous Comparison subscale remained consistently positively correlated with participant “error” on The Dots Task in one or more of their various forms (e.g., 24-, 16-, and/or 8-Item versions). In regard to the Protective Services Report, Plus (PSR+), the PSR+ Paranoid Ideation, QuickEval, Obsessional Thinking, Alienation/Perceptual Distortion, and Distorted Thought Patterns subscales remained consistently positively correlated with participant “error” on The Dots Task.

In looking at self-payment metrics, consistently correlated MDM scales and subscales include the MDM Index, Advantageous Comparison, and Displacement of Responsibility. The PSR+ Impression Management subscales were consistently correlated with whether participants stole money, or stole money to ostensibly round the reward amount to the closest even integer of money.

### Conclusions Based on Correlation Analyses

#### Predictors of Implicit & Explicit Forms of Dishonesty Derived from The Dots Task

Based upon the findings derived from Spearman correlation analyses, The MDM Advantageous Comparison subscale, which measures the extent to which one minimizes



his or her own unethical conduct in comparison to the more severe unethical behavior of others, appears to be a particularly salient individual predictor variable across various dishonesty indicators. Specifically, Advantageous Comparison appeared to possess positive relationships associated with related to dishonesty, and negative relationships associated with honesty. Additionally, PSR+ subscales indicative of distorted thought patterns, including the PSR+ Paranoid Ideation, QuickEval, Obsessional Thinking, Alienation/Perceptual Distortion, and Distorted Thought Patterns subscales, also produced significant correlations across dishonesty metrics. The PSR+ Paranoid Ideation subscale appeared particularly salient among dishonesty metrics. Collectively, these PSR+ subscales are indicative of unusual patterns of thinking or endorsements of unusual ideologies, and appeared to possess positive relationships associated with dishonesty. As they may relate to dishonesty, higher scores on these collective metrics may also be indicative of elevated distorted perceptions of persecution, as well as elevated antisocial traits. Given that all of these aforementioned predictor variables appeared to correlate across both The Dots Task and self-payment dishonesty outcome variables, they may well represent predictors of more global forms of dishonesty, including both implicit cheating and explicit stealing. Alternatively, these predictor variables may simply be more sensitive and closely associated with the psychological constructs that help facilitate both implicit and explicit forms of dishonesty.

#### Predictors of Explicit Forms of Dishonesty Derived from Self-Payment

The MDM Displacement of Responsibility and PSR+ Impression Management subscales demonstrated additional significant correlations with self-payment outcome

variables. Displacement of Responsibility measures the degree to which one is likely succumb to moral disengagement in situations where they were pressured to do so by authority figures or friends. As it may pertain to the concept of dishonesty, Displacement of Responsibility may represent a method by which individuals may be better able to rationalize their own unethical behavior by not accepting personal fault for their own actions. The PSR+ Impression Management subscale assesses the extent to which a respondent may portray himself or herself in an overly favorable or socially desirable point of view. As it may relate to dishonesty, Impression Management may provide an avenue for rationalization whereby person either justify their own unethical behavior as actually being ethical, or perhaps are more fully cognizant of their own unethical behavior and attempt to conceal it from others by projecting an overly ethical or socially desirable image of themselves.

#### Predictors Consistently Included in Models Derived from Multiple Regression Analyses

##### Moral Identity Measure

In examining the final models of the various continuous level outcome variables derived from The Dots Task, several predictor variables were consistently included. In regard to the Moral Identity Measure (MIM), the MIM Index score and MIM Internalization subscale were consistently present across the various models. The MIM Internalization subscale provides a measure of the degree to which it is intrinsically important for an individual to be a moral person, while the MIM Index represents a

combination of the MIM Internalization and MIM Symbolization subscales. Thus, the MIM Index represents both the self-reported scores as to how important morality is to the respondent, as well as to what degree the respondent attempts to project that image outwardly. Within all models in which it was included, the MIM Internalization subscale was negative correlated with dishonesty, as measured by The Dots Task. However, the MIM Index was consistently positively correlated with dishonesty. Thus, the extent to which it is intrinsically important for someone to be a moral person appears to be a protective factor against dishonest behavior. However, individuals who report an internal desire to be moral persons and simultaneously attempt to project a moral image of themselves appear to be at an elevated risk for dishonest behavior. Thus, elevated MIM Index scores may very well be related to topics such as “faking good” in pre-employment assessment evaluations or “the halo effect” associated with fraud perpetrators.

### Moral Disengagement Measure

Regarding the MDM, the MDM Distortion of Consequences (16- and 8-Item versions) and Attribution of Blame (24- and 16-Item versions) subscales were consistently present across the various models. The MDM Distortion of Consequences subscale assesses the extent to which a person is prone to minimizing the probable consequences associated with unethical conduct. Within all of the models in which it was included, the MDM Distortion of Consequences subscale was consistently positively correlated with dishonesty, as measured by The Dots Task. Thus, higher scores on The Dots Task may be indicative of individuals who are more likely to engage in dishonest behavior as a result of the fact that they do not believe that will face any serious

repercussions for their actions. The MDM Attribution of Blame subscale represents a measure of the degree to which the respondent is prone to victim blaming type behavior. Within all of the models in which it was included, the MDM Attribution of Blame subscale was negatively correlated with dishonesty, as measured by The Dots Task. While this negative correlation may initially appear counterintuitive, low scores on the MDM Attribution of Blame subscale may be related to an individual's propensity to not hold themselves accountable for unethical behavior.

#### Protective Services Report, Plus

Finally, the PSR+ Paranoid Ideation, QuickEval, Obsessional Thinking, Impression Management, Apprehension, and Warmth subscales were consistently present across models. The PSR+ Paranoid Ideation, QuickEval, and Obsessional Thinking subscales represent different facets of psychopathology and distorted thought patterns. Specifically, elevations on these metrics are indicative of resentment, predisposition to feelings of persecution, unreasonable suspiciousness, as well as irrational fear and worry. Within each of the models in which these subscales were included, all were positively correlated with dishonesty, as measured by The Dots Task. As a whole, these subscales are indicative of elevated antisocial traits. Similarly, the PSR+ Impression Management subscale was positively correlated with dishonesty, as measured by The Dots Task, in each of the models in which it was included. As previously noted, the PSR+ Impression Management subscale is indicative of the degree to which an individual may be predisposed to providing unduly positive or socially appealing responses.

Conversely, the PSR+ Warmth and Apprehension subscales were negatively correlated with dishonesty, as measured by The Dots Task, in each of the models in which they were included. The PSR+ Warmth subscale evaluates an individual's general level of individual empathy, caring, and emotional attentiveness. The PSR+ Apprehension subscale represents a measure of the level at which a person considers the detrimental consequences of their actions, possesses a strong sense of obligation, sets high self-expectations, and remains concerned for the wellbeing of others. High scores on the PSR+ Apprehension subscale can also be indicative of excessive guilt, self-doubt, and poor self-confidence. Taken together, these subscales represent the antithesis of antisocial traits and behavior, which would explain their observed negative relationship with dishonesty.

### Hypothesis Testing

Based upon the results of the correlation and stepwise multiple linear regression analyses, conclusions can be drawn regarding the previously stated hypotheses. The first hypothesis stated that assessment scales and subscales that quantify conscientiousness, self-regulatory capacity, and/or impulse control would produce statistically significant negative correlations with dishonesty, as measured by The Dots Task. However, no statistically significant correlations were identified between the PSR+ Perfectionism subscale and outcome variables derived from either The Dots Task or self-payment. The second hypothesis was a continuation of the first hypothesis and asserted that a moderation effect would be found between conscientiousness or impulse control and

dishonesty. As no initial correlative relationship was identified, the second hypothesis also could not be supported.

As previous findings obtained by Ariely (2013, p. 172-177), failed to identify any significant correlations between cheating on The Dots Task and measures of intelligence, the third hypothesis indicated that these results would be replicated. However, negative correlations were identified between cheating on The Dots Task and the PSR+ Reasoning and Intellectual Efficiency subscales. Elevated scores on the PSR+ Reasoning subscale are indicative of individuals who are capable of rapidly understanding abstract construct and learning new information. Similarly, high PSR+ Intellectual Efficiency subscale scores are associated with decisiveness and quick problem-solving skills. However, neither the PSR+ Reasoning or Intellectual Efficiency subscales represent raw or direct measures of intellect. While the current research supports the notion that measures of intellectual efficiency may lead to more accurate performance on The Dots Task, no evidence was found that were either confirmatory or contradictory of the previous findings discussed by Ariely (2013, p. 172-177).

Consistent with findings from both Ariely (2013, p. 170-172) and Gino & Ariely (2012) which identified elevated levels of creativity as being correlated with increased cheating behavior, the fourth hypotheses asserted that assessment scales and subscales that quantify components of the adaptability and flexibility would be positively correlated with dishonesty, as measured by The Dots Task. However, no significant correlations were produced between any dishonesty outcome variables in this study and the PSR+ Abstractedness or Openness to Change subscales. The PSR+ Abstractedness subscale represents a measure of creativity and imaginativeness, while the PSR+ Openness to

Change subscale reflect the degree to which a person is open-minded and receptive of unfamiliar environments. Thus, differences between the current study findings and those of previous experimental research may be attributable to the differing measures of creativity employed, as well as differing experimental manipulations and sample populations.

The fifth hypothesis states, which asserted that assessment scales and subscales that quantify applicant moral identity would be negatively correlated with dishonesty, as measured by The Dots Task. As previously described, this hypothesis was supported by statistically significant positive correlations between the MIM Internalization subscale and dishonesty, as measured by The Dots Task. Similarly, the sixth hypothesis stated that moral disengagement assessment scales and subscales would produce significant correlations associated with dishonesty, as measured by The Dots Task. As previously described, this hypothesis was supported by statistically significant correlations between various MDM scales and subscales and dishonesty, as measured by The Dots Task and self-payment.

### Significance of Findings

The findings of the present research possess significance for improving personnel security and pre-employment evaluations for safety-sensitive positions among several areas. First, significant Spearman correlations were consistently produced with various scales and subscales of the MIM and MDM. Additionally, both MIM and MDM scales and subscales were including alongside various PSR+ scales in subscales in the models produced during stepwise multiple linear regression analyses. Thus, it would appear as

though measures of moral identity and moral disengagement provide information not presently available through contemporary pre-employment assessment measures, such as the PSR+. Thus, evaluations of moral identity and moral disengagement may be useful adjuncts to current pre-employment screening and selection measures.

Second, no statistically significant correlations were produced between outcome variables based upon The Dots Task and self-payment and the PSR+ Integrity/Control subscale predictor variable. This suggests that the simulated cheating and stealing tasks produced as part of this study represent unique and distinct forms of integrity testing that may not be replicated within other pre-employment screening and selection evaluations.

Third, models produced as a result of stepwise multiple linear regression analyses demonstrate how multiple behavioral indicators can be combined to more effectively predict outcome variables of interest in pre-employment assessments and evaluations. Furthermore, the establishment of such models lends the potential of their use in predicting future applicants' performance on The Dots Task or self-payment dishonesty outcome variables.

Finally, the correlations observed with the MDM Distortion of Consequences subscale suggests that individuals who exhibit elevated levels of cheating behavior on The Dots Task and self-payment outcome variables may simply not care whether or not they caught engaging in unethical behavior. Rather, they may be more concerned with whether or not they will face any consequences of their conduct. As such, this suggests that the cheating behavior measured by The Dots Task may be indicative of one or more types of respondents. That is, respondents who believe their unethical behavior will not be discovered, and respondents who may not care as to whether their unethical behavior



is discovered so long as they do not face any consequences for their conduct. In reviewing the previously described New York State Police Troop C scandal, one may obtain a clearer perspective of this distinction. Specifically, David Harding appeared to be relatively open regarding his evidence planting and fabrication scheme with at least some of the other New York State Troopers with whom he worked. Obviously, his downfall was catalyzed by openly discussing these activities during a polygraph examination he took as part of a job interview with the CIA. Not only did Harding not believe that his illegal and unethical actions would have severe negative consequences for his life and career, but he actually seemed to believe that they would be viewed favorably by the CIA.

In sum, the results of this study provide potentially useful information in determining what negative applicant characteristics would be most merit a decision to screen-out the applicant versus what prosocial applicant traits would be most useful to select-in. As it pertains to negative applicant characteristics, applicants who are more prone to moral disengagement, displace responsibility, minimize the possible consequences of certain behaviors, or make advantageous comparisons should be screened-out. Such characteristics are likely indicative of an individual who would otherwise provide rationalizations or superficial justifications to support the commission of misconduct or corrupt acts. Excessive attempts at impression management may also be cause for concern, as they may be indicative of an individual hiding ulterior motives, who is prone to dishonesty, or who casts a façade in order to remain above reproach. In regard to clinical characteristics that may be worthy of a screen-out decision during a psychological or medical evaluation, distorted thought patterns indicative of unnecessary

suspicion, paranoia, alienation, or antisocial tendencies would represent cause for concern. Alternatively, the prosocial antitheses of these negative traits include a propensity toward warmth, responsibility, and internalizing moral virtue as an inherent part of one's own self-identity. It is recommended to select-in applicants who exhibit such prosocial traits.

### Limitations

While the findings produced from the current study are promising, several limitations still exist. First, the data associated with this study was non-normally distributed (a.k.a., non-parametric). As a result, Spearman correlations analyses were deployed over the more powerful Pearson correlation analyses used for normally distributed data. Moreover, stepwise multiple linear regression analyses are best completed with normally distributed data. Thus, the fact that the dataset produced from the current study is non-normally distributed suggests that some caution be used in interpreting the overall strength of the observed relationships.

In regard to the stepwise linear multiple regression analyses, even the strongest model produced (Right Unambiguous Percent Error) only possessed an  $R^2$  of .600. Thus, Right Unambiguous Percent Error on The Dots Task could only be predicted with roughly 60% accuracy. While this is still very promising and may have significant utility in informing current pre-employment screening and selection decisions, personnel security professionals should still remain cognizant of the limitations of such models and associated relationships. Additionally, Version 3.1 of the statistical analysis software G\*Power was used to compute the post hoc achieved power of each of the produced

models based upon the  $R^2$  values, total sample size, and number of predictor variables. With a significance level set to 0.05, all models were found to possess sufficient statistical power. Nevertheless, other statistical guidelines suggest that the participant sample size is insufficient to support the number of predictor variables entered in each of the seven regression models for medium (versus large) effect sizes. Specifically, these guidelines suggest that no more than three predictor variables be included in each of the seven models. The revised models would include the following: a significant regression equation was found for Total Right Percent Error ( $F(3, 79) = 16.259, p < .000$ ), with an  $R^2$  of .382. Participants' predicted Total Right Percent Error is equal to  $-.234 + .074$  (MDM 8-Item Distortion of Consequences)  $+ 1.009$  (PSR+ QuickEval)  $+ .069$  (PSR+ Paranoid Ideation). All independent variables included in the model were significant predictors of Total Right Percent Error; a significant regression equation was found for Right Ambiguous Percent Error ( $F(3, 79) = 13.862, p < .000$ ), with an  $R^2$  of .345. Participants' predicted Right Ambiguous Percent Error is equal to  $.857 - .028$  (MIM Internalization)  $+ .991$  (PSR+ QuickEval)  $+ .067$  (PSR+ Paranoid Ideation). All independent variables included in the model were significant predictors of Right Ambiguous Percent Error; a significant regression equation was found for Right Unambiguous Percent Error ( $F(3, 79) = 20.354, p < .000$ ), with an  $R^2$  of .436. Participants' predicted Right Unambiguous Percent Error is equal to  $-.357 + .062$  (MDM 16-Item Distortion of Consequences)  $+ .063$  (PSR+ Paranoid Ideation)  $+ 1.030$  (PSR+ QuickEval). All independent variables included in the model were significant predictors of Right Unambiguous Percent Error; a significant regression equation was found for 2-Dot Right Percent Error ( $F(3, 79) = 10.203, p < .000$ ), with an  $R^2$  of .279. Participants'

predicted 2-Dot Right Percent Error is equal to  $-.088 + .075$  (MDM 8-Item Distortion of Consequences)  $+ .842$  (PSR+ QuickEval)  $+ .061$  (PSR+ Paranoid Ideation). All independent variables included in the model were significant predictors of 2-Dot Right Percent Error; a significant regression equation was found for 4-Dot Right Percent Error ( $F(3, 79) = 16.073, p < .000$ ), with an  $R^2$  of  $.379$ . Participants' predicted 4-Dot Right Percent Error is equal to  $.825 - .029$  (MIM Internalization)  $+ .070$  (PSR+ Paranoid Ideation)  $+ 1.156$  (PSR+ QuickEval). All independent variables included in the model were significant predictors of 4-Dot Right Percent Error; a significant regression equation was found for Raw Reward Amount for Completed Participants in Cents ( $F(3, 79) = 16.212, p < .000$ ), with an  $R^2$  of  $.381$ . Participants' predicted Raw Reward Amount for Completed Participants in Cents is equal to  $472.528 - 19.170$  (PSR+ Warmth)  $+ 343.654$  (PSR+ QuickEval)  $+ 31.437$  (PSR+ Paranoid Ideation). All independent variables included in the model were significant predictors of Raw Reward Amount for Completed Participants in Cents; and a significant regression equation was found for Disparity Amount ( $F(3, 82) = 9.165, p < .000$ ), with an  $R^2$  of  $.251$ . Participants' predicted Disparity Amount is equal to  $-4.995 + .232$  (PSR+ Dominance)  $+ .259$  (PSR+ Extraversion)  $+ .339$  (Vigilance). All independent variables included in the model were significant predictors of Disparity Amount.

Finally, personnel security professionals who wish to employ information derived as part of this study should be aware that although the findings may assist in identifying applicants who are more likely to engage in dishonest behavior, it would still remain difficult if not impossible to determine what specific type of dishonest behavior an applicant may eventually commit. Further, there is no guarantee that an applicant who

would appear to produce elevated levels of dishonesty on The Dots Task outcome variables based upon the corresponding models would actually go on to exhibit dishonest behavior while employed in a safety-sensitive employment position. In sum, the information produced as part of this study can assist personnel security professionals in making better informed and more accurate screening and selection decisions; however, it cannot help completely eliminate the error term.

### Future Directions

Future studies should seek to evaluate correlative relationships and possible moderating effects, including time-of-day and applicant fatigue, associated with predictor variables included in the current models. Additionally, future studies should seek to develop models and evaluate correlative relationships associated with specific sub-groups of law enforcement officers (e.g., police officers, deputy sheriffs, probation/parole officers, and state agents). As efforts are made to improve and further develop existing models, such models should be empirically tested during actual pre-employment screening and selection evaluations. Feedback from the applied use of such models should be used to further improve and refine the models.

**APPENDIX: IRB APPROVAL LETTER**



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Julian Montaquila**

Date: **August 16, 2016**

Dear Researcher:

On 08/16/2016 the IRB approved the following human participant research until 08/15/2017 inclusive:

Type of Review: UCF Initial Review Submission Form  
Project Title: Research and Development in Current Law Enforcement Pre-employment Evaluations  
Investigator: Julian Montaquila  
IRB Number: SBE-16-12363  
Funding Agency:  
Grant Title:  
Research ID: N/A

The scientific merit of the research was considered during the IRB review. The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu>.

If continuing review approval is not granted before the expiration date of 08/15/2017, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form(s).

All data, including signed consent forms if applicable, must be retained and secured per protocol for a minimum of five years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained and secured per protocol. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewska, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

*Kamille Chap*

Signature applied by Kamille Chaparro on 08/16/2016 08:46:33 AM EDT

IRB Coordinator



## REFERENCES

- Aquino, K., & Reed, A. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, *83*, 1423-1440.
- Ariely, D. (2013). *The (honest) truth about dishonesty: How we lie to everyone—especially ourselves*. New York, NY: HarperCollins Publishers.
- Barnes, C. M., Schaubroeck, J., Huth, M., & Ghumman, S. (2011). Lack of sleep and unethical conduct. *Organizational Behavior and Human Decision Processes*, *115*, 169-180.
- Berman, M., & Lowery, W. (2016, May 11). Former South Carolina police officer who fatally shot Walter Scott indicted on federal civil rights violation. *The Washington Post*. Retrieved November 16, 2016, from <https://www.washingtonpost.com/news/post-nation/wp/2016/05/11/former-north-charleston-officer-who-shot-walter-scott-indicted-on-federal-civil-rights-violation/>
- Dixon, C., & Lewin, T. (2016, May 11). South Carolina officer faces federal charges in fatal shooting. *The New York Times*. Retrieved November 16, 2016, from [http://www.nytimes.com/2016/05/12/us/south-carolina-officer-faces-federal-charges-in-fatal-shooting.html?\\_r=0](http://www.nytimes.com/2016/05/12/us/south-carolina-officer-faces-federal-charges-in-fatal-shooting.html?_r=0)
- Farivar, C., & Mullin, J. (2016, August 17). Stealing bitcoins with badges: How Silk Road's dirty cops got caught. *Ars Technica*. Retrieved November 16, 2016, from <http://arstechnica.com/tech-policy/2016/08/stealing-bitcoins-with-badges-how-silk-roads-dirty-cops-got-caught/>

- Gino, F., & Ariely, D. (2012). The dark side of creativity: Original thinkers can be more dishonest. *Journal of Personality and Social Psychology*, *102*, 445-459.
- Gino, F., Norton, M. I., & Ariely, D. (2010). The counterfeit self: The deceptive costs of faking it. *Psychological Science*, *21*, 712-720.
- Gino, F., Schweitzer, M. E., Mead, N. L., & Ariely, D. (2011). Unable to resist temptation: How self-control depletion promotes unethical behavior. *Organizational Behavior and Human Decision Processes*, *115*, 191-203.
- Gordis, L. (2009). Chapter 5: Assessing the validity and reliability of diagnostic and screening tests. In *Epidemiology* (4th ed.; pp. 85-108). Philadelphia, PA: Saunders.
- Hadley, S. J. (2005, December 29). *Adjudicative guidelines for determining eligibility for access to classified information*. Washington, DC: The White House. Retrieved May 16, 2016, from <http://www.fas.org/sgp/isoo/guidelines.html>
- Hinkel, D. (2015, February 16). Schaumburg chief: 'Culture of dysfunction' before 3 officers arrested. *Chicago Tribune*. Retrieved February 3, 2016, from <http://www.chicagotribune.com/suburbs/schaumburg-hoffman-estates/news/ct-schaumburg-cop-trial-met-20150213-43-story.html>
- Kouchaki, M., & Smith, I. H. (2014). The morning morality effect: The influence of time of day on unethical behavior. *Psychological Science*, *25*, 95-102.
- Mai-Duc, C. (2015, April 14). Walter Scott shooting: Officer Slager refused to speak to investigators on scene. *Los Angeles Times*. Retrieved November 16, 2016, from <http://www.latimes.com/nation/nationnow/la-na-nn-south-carolina-shooting-officer-timeline-20150414-story.html>

- Mead, N. L., Baumeister, R. F., Gino, F., Schweitzer, M. E., & Ariely, D. (2009). Too tired to tell the truth: Self-control resource depletion and dishonesty. *Journal of Experimental Social Psychology, 45*, 594-597.
- Montaquila, J. M., & Godwin, C. N. (2016). Personnel security and open source intelligence: Employing social media analytics in pre-employment screening and selection. *Journal of Information Privacy and Security, 12*, 145-159.
- Moore, C., Detert, J. R., Klebe Treviño, L., Baker, V. L., & Mayer, D. M. (2012). Why employees do bad things: Moral disengagement and unethical organizational behavior. *Personnel Psychology, 65*, 1-48.
- Nordheimer, J. (1992, November 15). Trooper's fall shakes both police and public. *The New York Times*. Retrieved May 23, 2015, from <http://www.nytimes.com/1992/11/15/nyregion/trooper-s-fall-shakes-both-police-and-public.html?pagewanted=all>
- Perez-Pena, R. (1997, February 4). Supervision of troopers faulted in evidence-tampering scandal. *The New York Times*. Retrieved April 26, 2015, from <http://www.nytimes.com/1997/02/04/nyregion/supervision-of-troopers-faulted-in-evidence-tampering-scandal.html>
- Power, B. (2012, May 15). Are your employees drivers or victims of process innovations? *Harvard Business Review*. Retrieved June 28, 2017, from <https://hbr.org/2012/05/make-people-drivers-not-passen>
- Shalvi, S., Gino, F., Barkan, R., & Ayal, S. (2015). Self-serving justifications: Doing wrong and feeling moral. *Current Directions in Psychological Science, 24*, 125-130.

- Shirom, A., & Melamed, S. (2006). A comparison of the construct validity of two burnout measures in two groups of professionals. *International Journal of Stress Management, 13*, 176-200.
- Spilberg, S. W., & Corey, D. M. (2014). *Peace officer psychological screening manual*. West Sacramento: California. California Commission on Peace Officer Standards and Training.
- Sullivan, J. F. (2008). *Gatekeeper: Memoirs of a CIA polygraph examiner*. Washington, DC: Potomac Books, Inc.
- The New York Times. (1993, April 16). Former state trooper explains ways he fabricated evidence. *Author*. Retrieved April 26, 2015, from <http://www.nytimes.com/1993/04/16/nyregion/former-state-trooper-explains-ways-he-fabricated-evidence.html>
- Ward, C., & McCoppin, R. (2014, March 21). Ex-schaumburg cop pleads guilty to drug charges. *Chicago Tribune*. Retrieved February 3, 2016, from [http://articles.chicagotribune.com/2014-03-21/news/chi-cop-pleads-guilty-drug-charges-20140321\\_1\\_terrance-o-brien-matthew-hudak-john-cichy](http://articles.chicagotribune.com/2014-03-21/news/chi-cop-pleads-guilty-drug-charges-20140321_1_terrance-o-brien-matthew-hudak-john-cichy)
- Yan, H., Shah, K., & Grinberg, E. (2017, May 2). Ex-officer Michael Slager pleads guilty in shooting death of Walter Scott. *CNN*. Retrieved June 28, 2017, from <http://www.cnn.com/2017/05/02/us/michael-slager-federal-plea/index.html>
- Young, J., Harvey, S., & Staal, M. A. (2011). Chapter 3—Ethical considerations in the conduct of security clearance evaluations. In C. H. Kennedy & T. J. Williams (Eds.), *Ethical practice in operational psychology: Military and national*

*intelligence applications* (pp. 51-68). Washington, DC: American Psychological Association.