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Christopher K. Eller

*Virginia Commonwealth University*, [ellerck@vcu.edu](mailto:ellerck@vcu.edu)

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**Can Using the Internal Audit Function as a Training Ground for Management Deter  
Internal Auditor Fraud Reporting?**

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of  
Philosophy in Business at Virginia Commonwealth University.

**by**

Christopher Kevin Eller

Ph.D. Candidate

Accounting Department, School of Business  
Virginia Commonwealth University

Committee Members:

Chair: Benson Wier, Ph.D.

Professor of Accounting  
Virginia Commonwealth University

Co-Chair: Alisa G. Brink, Ph.D.

Associate Professor of Accounting  
Virginia Commonwealth University

Carolyn S. Norman, Ph.D., CPA

Professor and Chair of the Department of Accounting  
Virginia Commonwealth University

D. Jordan Lowe, Ph.D.

Professor of Accounting  
Arizona State University

Virginia Commonwealth University

Richmond, Virginia

November, 2014

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## **Abstract**

### **CAN USING THE INTERNAL AUDIT FUNCTION AS A TRAINING GROUND FOR MANAGEMENT DETER INTERNAL AUDITOR FRAUD REPORTING?**

**By C. Kevin Eller, Ph.D., CPA (inactive)**

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business at Virginia Commonwealth University.

Virginia Commonwealth University, 2014.

Chair: Benson Wier, Ph.D.  
Professor of Accounting  
Virginia Commonwealth University

Co-Chair: Alisa G. Brink, Ph.D.  
Associate Professor of Accounting  
Virginia Commonwealth University

This study examines the effects of using the internal audit function as a training ground for management and fraud magnitude on internal auditor fraud reporting decisions. Using a 2x2 between-participants experiment, the current study manipulates the use of the internal audit function as a management training ground (used as a training ground vs. not used as a training ground) and fraud magnitude (large fraud, defined as 30 percent of net income vs. small fraud, defined as one percent of net income). The results indicate that internal auditors may be less likely to report a fraud to their superior when the internal auditors are being groomed for management positions. No effect is found for fraud magnitude, as respondents indicated a similar willingness to report small frauds as large frauds. These findings contribute to the whistleblowing literature and the internal audit objectivity literature by demonstrating that undesirable repercussions associated with using the internal audit function as a management training ground can extend to the internal auditor fraud reporting decision.

## I. INTRODUCTION

Since the Sarbanes-Oxley Act of 2002 (SOX), there has been a resurgence in demand for the corporate internal audit function. Audit committees have increased their reliance on internal auditors to notify them about the financial and operating condition of firms (Oxner and Oxner 2006). Often charged with both consulting and compliance roles, internal auditors have a difficult set of responsibilities to perform. A chief concern regarding internal auditors' dual roles is objectivity, and specifically whether internal auditors are able to be objective given their often conflicting roles. Objectivity refers to an internal auditor's ability to fairly assess a situation without being unduly influenced by personal interests or the interests of others (IIA 2009). Internal auditors are mandated to be objective and independent (IIA 2013a; IIA 2009). However, situational factors often make objectivity and independence difficult to achieve. For example, most internal auditors in the U.S. are eligible to participate in incentive-based compensation plans, such as stock ownership or performance-based bonuses (DeZoort, Houston, and Reisch 2000; Dickens and O'Reilly 2009). These sorts of pressures can reduce internal auditor objectivity (Schneider 2003) and incentivize internal auditors to "bias their audit evaluations to maximize their personal wealth by maximizing reported company performance" (DeZoort, Houston, and Peters 2001, 261).

The current study examines one such pressure: using the internal audit function as a management training ground (MTG). MTG refers to a procedure in which individuals are hired into or transferred into the internal audit department for a short term before being promoted to a management position. The practice of using the internal audit function as a MTG has become very common in recent years (Abbott, Parker, and Peters 2010; Oxner and Oxner 2006; Goodwin

and Yeo 2001) as internal audit is often viewed as a “fishing pond full of high potential” (Sarens and de Beelde 2006, 234). Specifically, the current study examines the effects of using internal audit as a MTG on fraud reporting. Internal auditors are arguably in the ideal position to deter and detect fraud (Hillison, Pacini, and Sinason 1999). Furthermore, internal auditors’ job roles generally prescribe them to report discovered wrongdoing (e.g., Miceli and Near 2002; Near and Miceli 1986; Near and Miceli 1988; Near, Dworkin, and Miceli 1993; Rezaee 2005). However, a recent blog posting from Institute of Internal Auditors (IIA) president and CEO, Richard Chambers, makes it clear that internal auditors are not immune to moral failures and poor decisions. In this posting, Richard Chambers notes that internal auditors are “human” and are “subject to the same pressures...as everyone else in the enterprise” (Chambers 2012a). The posting continues with Chambers noting several cases where internal auditors’ ethical compasses failed “rather spectacularly.” To illustrate his argument, he lists several hypothetical scenarios that contain ethical dilemmas, one of which follows:

You are in a rotational assignment in internal audit. You are slated to rotate into an undetermined business unit in a year. You just audited the business unit in which you most want to work, and have some critical findings. Do you report them or sit on them? (2012a).

As illustrated in this scenario, rotational internal audit assignments can be particularly problematic for auditor objectivity. To this point, prior research indicates that using the internal audit function as a MTG reduces auditor objectivity with regard to management’s aggressive accounting choices, risk assessment, and investment decisions (Rose, Rose, and Norman 2013; Hoos, Messier, Smith, and Paulette 2013). However, research has not yet examined the potential dysfunctional effects of MTG on internal auditor fraud reporting, also known as whistleblowing.<sup>1</sup>

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<sup>1</sup> When referring to internal auditors, some prefer the term “reporting” rather than “whistleblowing” (e.g., Jubb 2000). For purposes of this study, the terms are used interchangeably.

The current study posits that using the internal audit function as a MTG could lead to dysfunctional whistleblowing effects, as it could reduce the likelihood that internal auditors will report discovered fraud. Relying on motivated reasoning theory and economic incentive theory, it is hypothesized that internal auditors who are being groomed for a management position will be less likely to report a financial statement fraud compared to auditors not being groomed for management. The magnitude of the fraud could also influence the internal auditors' reporting intentions. While hypothesized that larger frauds are more likely to be reported (e.g., Robinson, Robertson, and Curtis 2012), internal auditors face unique incentives to report smaller frauds (Sarens and de Beelde 2006) rather than larger frauds, so the potential impact of fraud magnitude is somewhat unclear.

Using a 2x2 between-participants experiment, the current study manipulates the use of the internal audit function as a MTG (used as a training ground vs. not used as a training ground) and fraud magnitude (large fraud, defined as 30 percent of net income vs. small fraud, defined as one percent of net income). Results suggest that internal auditors are significantly less likely to report a discovered fraud when the internal auditor is being groomed for a management position. However, no effect is found for fraud magnitude, as internal auditors appear equally likely to report large and small frauds.

In addition, the current study examines the components of the Schultz, Johnson, Morris, and Dyrnes (1993) Model of Discretionary Reporting in relation to MTG use and fraud magnitude. The Schultz et al. (1993) model holds that three primary factors influence the reporting decision: the perceived seriousness of the act, the perceived responsibility to report, and the perceived personal costs associated with reporting. As expected, results indicate that participants perceived large frauds to be more serious than small frauds. In regard to perceived

responsibility to report, no effect of MTG or fraud magnitude is found. Specifically, participants indicated a strong belief that the internal auditor has a personal responsibility to report fraud, regardless of fraud magnitude or use of the internal audit function as a MTG. Finally, it is expected that when the internal audit function is used as a MTG, the perceived personal costs associated with a large fraud will be higher than when internal audit is not used as a MTG. However, this hypothesis is not supported, as no relation is found.

This study also examines the impact of Machiavellianism on fraud reporting intentions in the MTG context. Machiavellianism refers to one's tendency to use manipulation and deception to achieve self-seeking goals (Christie and Geis 1970). Measuring ethical disposition (e.g., Machiavellianism) is important, as the whistleblowing decision generally includes a moral or ethical component (e.g., Arnold and Ponemon 1991; Miceli, Near, and Schwenk 1991). After measuring respondents' Machiavellianism using a 10-item measure, results indicate that the impact of MTG on fraud reporting intentions is not contingent on the individual's Machiavellianism score. However, it should be noted that no internal auditor participants qualified as high-Machs on the Machiavellianism scale.

Supplemental analysis reveals that having a MTG feature reduces the perceived urgency to report a fraudulent act. Moreover, the reporting urgency associated with large frauds is reduced to levels statistically equivalent to small frauds. Stated differently, having a MTG feature appears to cause internal auditors to view a large fraud (30 percent of net income) with a reduced sense of urgency to report, as though it were a small fraud (one percent of net income).

This study offers several contributions to the literature. First, this is the first study to experimentally examine the impact of using the internal audit function as a MTG on fraud reporting intentions. While this study examines only one incentive (training ground), the results

could provide insight into a broader research area: how incentives influence the objectivity of internal auditors with regard to fraud reporting. This is an important area about which little is known. Second, this study reveals an interesting lack of effect associated with fraud magnitude. Specifically, internal auditors in the current setting were no more likely to report a large fraud (30 percent of net income) than a small fraud (one percent of net income). This is an unexpected finding, as a positive association between fraud magnitude and reporting intentions was anticipated. Third, this is the first study to examine Machiavellianism in internal auditors and is among the first to examine the effects of Machiavellianism on fraud reporting intentions. Fourth, through post-experimental questionnaire items, this study attempts to partially disentangle two theories that may be explaining the results: motivated reasoning theory and economic incentive theory. Based on the results of this study, it appears that internal auditors are fully aware of their responsibility to report all fraud, but may be less willing to report fraud in the presence of a MTG. This supports the economic incentive theory explanation. Finally, the results may provide further evidence to corroborate the IIA's concern about the ethical compass of internal auditors.

The results of this study should be important to several parties. First, audit committees should be interested in dysfunctional fraud reporting effects, since they are trusting internal auditors to be their "eyes and ears" in the organization (IIA 2013b). Second, the results should be important to Chief Audit Executives (CAEs). While CAEs are likely aware of objectivity threats associated with the use of the internal audit function as a MTG, they may be unaware that these threats could extend to internal auditors' fraud reporting decisions. Finally, the results should be of interest to the IIA, as they are the professional association responsible for internal audit standards and guidance in practice. While the advantages of using the internal audit function as a MTG may be substantial, it is vital for the IIA to fully understand the risks to objectivity

associated with the practice, particularly as they relate to something as consequential as fraud reporting.

The remainder of this study is organized as follows. The next section provides background information, theory, hypothesis development, and research questions. Section III describes the methodology, including details about the participants, design, experimental task, as well as the independent and dependent variables. The results and summary of the study are presented in Section IV. Section V concludes the study and offers implications, limitations, and suggestions for future research.

## **II. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

### **Accounting Whistleblowing Literature**

#### ***Whistleblowing Defined and Seminal Accounting Whistleblowing Literature***

Whistleblowing is commonly defined in academic literature as “the disclosure by organizational members (former or current) of illegal, immoral, or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action” (Near and Miceli 1985, 4). The literature on whistleblowing is vast and covers multiple disciplines including, but not limited to, business, psychology, and sociology.

Whistleblowing literature specific to accounting began in the early 1990s. This stream of research finds roots in a study by Arnold and Ponemon (1991). Using 106 internal auditors, the authors conduct an experiment in which a hypothetical fraud is discovered by an internal auditor. They find that whistleblowing intentions are positively associated with moral reasoning, and negatively associated with fear of retaliation. Similarly, Finn and Lampe (1992) experimentally examine the whistleblowing intentions of external auditors and find a significant relation

between auditor ethical judgments and their whistleblowing intentions. Further, they suggest that an auditor's ethical judgment is influenced by both issue-related factors and situational factors. Schultz et al. (1993) examine whistleblowing across cultures and develop a model (based on Graham 1986) of whistleblowing in which reporting likelihood is increasing in the perceived seriousness of the act and in the perceived personal responsibility to report, and decreasing in the expected personal costs of reporting.

Hooks, Kaplan, and Schultz (1994) provide a synthesis of the whistleblowing literature and document various organizational, situational, and personal factors that influence whistleblowing. Of interest to the current study, Hooks et al. (1994) note that whistleblowing increases when encouraged by job roles (Arnold and Ponemon 1991; Miceli and Near 1984; Miceli et al. 1991; Schultz et al. 1993). Ponemon (1994) expands on Hooks et al. (1994) with a continued synthesis of the whistleblowing literature. Like Hooks et al. (1994), Ponemon documents that organizational position can influence whistleblowing behavior. As noted by Ponemon, a study by Near and Miceli (1986) finds that internal auditors may be "...instructed to blow the whistle as part of their jobs—that is, their behavior is role-prescribed..." (137). However, Near and Miceli (1988) suggest a possible ethical tension, given that internal auditors are prescribed to report wrongdoing, but the disclosure of wrongdoing can be detrimental to the organization's profits and reputation.

### ***Empirical Research on Internal Auditors as Whistleblowers***

Various studies in accounting directly examine whistleblowing in an *external* audit setting (e.g., Kaplan 1995; Kaplan and Whitecotton 2001; Patel 2003). In addition, numerous studies examine the internal auditor as a *recipient* of whistleblower information (e.g., Kaplan and Schultz 2007; Kaplan, Pope, and Samuels 2010; Miceli, Near, Rehg, and Van Scotter 2012).



However, a smaller body of research examines the internal auditor as a whistleblower. Some researchers argue that internal auditors cannot be whistleblowers, since internal auditor reporting is role-prescribed and occurs internally (Courtemanche 1988; Jubb 1999, 2000). To this point, when referring to internal auditor whistleblowing, Jubb (2000) prefers the terms “reporting” and “informing” rather than whistleblowing. Nonetheless, most of the extant literature supports the notion of internal auditors as whistleblowers (e.g., Arnold and Ponemon 1991; Dozier and Miceli 1985; Miceli et al. 1991; Near et al. 1993; Xu and Ziegenfuss 2008). Furthermore, internal auditor reporting satisfies the requirements of the definition of whistleblowing, which was noted previously (Near and Miceli 1985).

Arnold and Ponemon (1991) experimentally examine the reporting intentions of internal auditors. Specifically, the internal auditor participants were asked to evaluate the likelihood of another individual disclosing a hypothetical wrongdoing. They find reduced reporting likelihood for internal auditors with lower levels of moral reasoning, particularly for those who fear retaliation from management. Interestingly, internal auditor participants evaluated external auditors as being more likely (than internal auditors) to blow the whistle.

Miceli et al. (1991) survey 653 directors of internal auditing to examine the impact of various individual and situational variables on internal auditor reporting of wrongdoing. The authors examine 14 possible wrongdoings faced by participants, ranging from public safety violations to financial fraud. They find that internal auditors are *less* likely to report wrongdoing when they are poor performers, when they view their organization as bureaucratic, and when they feel they are not prescribed or morally obligated to report the wrongdoing. Moreover, internal auditors are *more* likely to report *externally* when the wrongdoing is theft-related, when the wrongdoing involves low-level employees, and when there are few other observers.

Using 185 internal auditors, Xu and Ziegenfuss (2008) experimentally examine the impact of reward systems on internal auditor fraud reporting intentions. They find an increased likelihood of internal auditor fraud reporting when cash rewards or long-term employment contracts are offered to whistleblowers, particularly for those with lower levels of moral reasoning. Seifert, Sweeney, Joireman, and Thornton (2010) conduct an experiment with 232 internal auditors and 215 management accountants to examine the impact of perceived fairness on whistleblowing. They find that reporting intentions of both internal auditors and management accountants are positively influenced by perceptions of organizational justice in the whistleblowing system.

Finally, using a sample including some internal auditors, Robinson et al. (2012) experimentally examine the impact of contextual and wrongdoing attributes on the fraud reporting decision. They find that reporting likelihood is lower for: financial statement fraud (compared to theft), immaterial fraud (compared to material fraud), frauds in which the wrongdoer is aware that the potential whistleblower has knowledge of the fraud, and frauds in which bystanders are not aware.

In sum, extant whistleblowing research involving internal auditors reveals that whistleblowing is promoted by factors including cash rewards, employment-related incentives, and perceived organizational justice. Conversely, whistleblowing is reduced by fear of retaliation, poor job performance of the whistleblower, and whistleblower perceptions that their organization is highly bureaucratic. However, the most consistent finding in this stream of research relates to the importance of moral/ethical reasoning in the internal auditor's reporting decision.

## **Internal Audit**

### ***The Role of the Internal Auditor***

The role of external auditors is prescribed by the PCAOB. However, the role of internal auditors is not determined by legislation or regulatory bodies. Role guidance for internal auditors is limited to authoritative guidance from the IIA (Deloitte 2013). The IIA defines internal auditing as “an independent, objective assurance and consulting activity designed to add value and improve an organization's operations . . . by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes” (IIA 2013a). Notwithstanding this widely-used definition, the role of the internal auditor varies significantly among companies. Some internal audit departments focus primarily on compliance functions, while others are essentially business consultants (Nagy and Cenker 2002; Stewart and Subramaniam 2010; Ahlawat and Lowe 2004).

While each internal audit function differs in its prescribed role within the organization, Deloitte (2013) provides a summary of the major roles and responsibilities of internal auditors. These responsibilities include evaluating control, risk management, and governance systems; reporting risk and control deficiencies; recommending ways to improve operating efficiency and effectiveness; evaluating information security, regulatory compliance, and preparedness for business interruptions, and providing anti-fraud support to the company. Similarly, Prawitt, Smith, and Wood (2009) note wide variation across organizations with regard to internal auditor duties, which include “among other tasks, financial, operational, fraud, control, compliance, or systems audits as well as internal consulting projects for management” (1261).

Since the Sarbanes-Oxley Act of 2002 (SOX), the internal audit function is seen as one of the four essential cornerstones of corporate governance, complementing executive management, external audit, and the board of directors (Adamec, Leinicke, Ostrosky, Rexroad 2005; Gramling

Maletta, Schneider, and Church 2004). Internal audit departments have been recruited to assist both management and external auditors in analyzing and testing internal controls, pursuant to PCAOB Auditing Standard No. 5 (Adamec et al. 2005; Cohn 2011). As noted by Adamec et al. (2005), internal auditors often consult with management regarding a firm's enterprise risk management and compliance with regulations and laws. In addition, internal auditors are presumed to be the "eyes and ears" of the audit committee often assisting the audit committee in duties such as the selection of external auditors, negotiating audit fees, and assessing the external auditor's work quality (Adamec et al. 2005; Saint 2013). Currently, the internal audit function appears to have more direct access to the audit committee than ever before (Kaplan and Schultz 2006; IIA 2013b).

Internal auditors also have a duty to assess a company's compliance with its code of ethics. According to IIA Standard 2110.A1, the internal audit function must "evaluate the design, implementation, and effectiveness of the organization's ethics-related objectives, programs, and activities" (Jackson 2012, 39). As Jackson (2012) notes, internal auditors have an obligation to blow the whistle on ethical violations, and this may be especially problematic when the perpetrators are high-level employees concerned with the "financial bottom line" (41).

### ***The Roles and Responsibilities of the Internal Auditor in the Whistleblowing Process***

The role of the internal audit function in fraud detection varies widely among companies. A 2012 IIA survey and related 2013 roundtable discussion finds that some "audit committee representatives had no expectation that internal or external auditors would detect fraud, while others defined their roles in fraud detection as essential" (IIA 2013b, 7). Nonetheless, 31 percent of IIA survey respondents indicated that internal audit has the primary role in detecting financial reporting fraud.

### ***Internal Auditors as Recipients of Information***

Internal auditors are often recipients of information from whistleblowers (e.g., Kaplan and Schultz 2007; Kaplan et al. 2010; Miceli et al. 2012; Wells 2001). Read and Rama (2003, 354) note that internal auditors are “natural outlets for whistle-blowers” and report that 71 percent of chief internal auditors they surveyed had received a recent whistleblowing complaint, with 43 percent reporting a complaint related to financial fraud. Some companies explicitly present internal auditors as outlets for employee reporting. For example, EngenderHealth’s whistleblowing policy specifically instructs employees to report suspected fraudulent activity to the employee’s direct supervisor, or when the supervisor is involved, to the internal auditor (2013).

SOX Section 301 mandates audit committees to establish procedures for employees to voice complaints regarding accounting, internal controls, or auditing matters, and to confidentially and anonymously report concerns over questionable accounting or auditing. Audit committees have flexibility in the implementation of this mandate, and frequently establish internally or externally administered reporting hotlines (Kaplan, Pany, Samuels, and Zhang 2009). In some cases, the internal audit function is the recipient of these hotline reports (Peterson 2006; Curtis 2006b). For example, a survey of 119 CAEs whose companies were subject to SOX provisions finds that the internal audit function is the most common party assigned (71 percent) the duty to follow up on anonymous reports of fraud (Kaplan and Schultz 2006). In addition, the survey finds that the internal audit function generally includes the responsibility to investigate, document, and resolve reports of wrongdoing.

### ***Internal Auditors as Identifiers of Information***

In addition to being recipients of reported information, internal auditors are often the identifiers of original information regarding fraud or unethical behavior. According to the Association of Certified Fraud Examiners (ACFE) 2012 Report to the Nations, internal audit was the third most common method of fraud detection, with 14.4 percent of frauds in the study being initially detected by the internal audit function. The question arises as to how internal auditors are expected to report original information indicating a possible fraud. In Kaplan and Schultz (2006), CAEs were asked “Are there circumstances in which Internal Auditors are expected to report using the whistleblowing process?” A majority of respondents (73 percent) indicated “No, All Issues Should Be Reported to the CAE for Either Immediate Reporting or for Planning Future Audits” (15). Thus, it appears that the internal audit function maintains autonomy, and any internal audit findings typically flow through the CAE.

The Kaplan and Schultz (2006) survey also investigated the role of the internal audit function once a fraud is uncovered or suspected. Fifty-nine percent of respondents indicated that they would further investigate to determine the extent of the fraud, while eleven percent indicated they would immediately report their findings to the audit committee; fifteen percent stated they would report to the CEO/CFO. Other parties the internal audit function may report to include general legal counsel and fraud investigation units. In addition, many internal audit departments are involved with the follow-up to see a discovered fraud through to an appropriate resolution. Interestingly, the authors also find that when the internal audit function is comprised of rotating staff, the likelihood of the internal audit function being involved in the fraud follow-up is reduced (Kaplan and Schultz 2006).

### ***Internal Auditor Independence and Objectivity***

A substantial body of research examines the independence and objectivity of internal auditors. Stewart and Subramaniam (2010) provide a thorough review of this literature, and they begin by noting the necessary distinction between the IIA definitions of independence and objectivity. Independence refers to the “freedom from conditions that threaten objectivity or the appearance of objectivity” while objectivity refers to an “unbiased mental attitude that allows internal auditors to perform engagements in such a manner that they have an honest belief in their work product and that no significant quality compromises are made” (Stewart and Subramaniam 2010, 330). As noted previously, internal auditors are mandated to be objective and independent (IIA 2013a; IIA 2009). More specifically, the IIA Code of Ethics (2009) provides three rules of conduct related to objectivity. Internal auditors:

- shall not participate in any activity or relationship that may impair or be presumed to impair their unbiased assessment. This participation includes those activities or relationships that may be in conflict with the interests of the organization.
- shall not accept anything that may impair or be presumed to impair their professional judgment; and
- shall disclose all material facts known to them that, if not disclosed, may distort the reporting of activities under review.

The IIA clearly values independence and objectivity as essential characteristics for the internal audit function. However, as noted by Arnold and Ponemon (1991), “there are no other roles within the internal control system that have such obviously split obligations to management and to outside stakeholders” (2).

### ***Threats to Objectivity Related to Organizational Status***

Extant literature uncovers various threats to internal auditor objectivity. One such threat is the status of the internal audit function within organizations. Most of the literature in this area focuses on the relationship between the internal audit function and the audit committee, as the

audit committee is typically charged with providing the internal auditors with the environment and support needed to carry out their activities (Gramling et al. 2004). Using survey methods, Raghunandan, Rama, and Read (2001) find evidence that audit committees with independent directors and at least one financial expert have a better and more thorough working relationship with the internal audit function. Similarly, Goodwin and Yeo (2001) find a greater level of interaction between the audit committee and the internal audit function when audit committee members are independent, while Goodwin (2003) finds that both independence and financial experience are important factors in cultivating an appropriate relationship between the internal audit function and the audit committee. Carcello, Hermanson, and Neal (2002) examine proxy statement disclosures and find that audit committees offer relatively few disclosures relating to the internal audit function, which the authors conclude reflects a lack of audit committee oversight.

In a survey of bank loan officers, James (2003) finds that bankers perceive less protection against fraudulent reporting when in-house internal audit departments report to management, compared to when they report solely to the audit committee. Similarly, Christopher, Sarens, and Leung (2009) find evidence of various threats to independence, including reporting structures in which the internal auditor does not report to the audit committee. Among other things, Leung, Cooper, and Robertson (2004) find wide variability in reporting procedures, with some internal audit functions reporting solely to management and others to the audit committee. A survey by Paape, Scheffe, and Snoep (2003) finds similar results in European companies, with less than half of CAE participants indicating they report to the audit committee. In a survey of Australian internal auditors, O'Leary and Stewart (2007) find that governance mechanisms are related to internal auditors' ethical decision making. Specifically, they find a positive association between



external audit quality and internal auditors' ethical decision making. More recently, Sarens, Abdolmohammadi, and Lenz (2012) find that active governance roles for internal audit functions are positively associated with risk-based audit plans, the presence of quality assurance and improvement programs, and active audit committee input to the audit plan.

This body of literature also includes case studies and qualitative projects. In a study of six New Zealand companies, van Peurseem (2005) concludes that a close relationship with management can put internal auditor independence at risk. Among other things, Sarens and De Beelde (2006) find that when internal audit functions primarily to support management, perceived objectivity and the relationship with the audit committee are both weakened. Turley and Zaman (2007) examine audit committee effectiveness in one U.K. company and conclude that the audit committee appeared to be most effective via informal processes. Finally, Mat Zain and Subramaniam (2007) interview Malaysian CAEs and note a need for better reporting lines between the audit committee and the internal audit function. In sum, audit committee structure, oversight, and internal auditor communication channels play an important role in objectivity. This body of literature generally finds that objectivity is enhanced when audit committee members are independent, and when reporting procedures require that internal auditors report to the audit committee rather than management.

### ***Threats to Objectivity Due to Internal Auditors' Dual Roles***

Another threat to internal auditor objectivity relates to the internal auditor's dual role of providing both assurance and consulting services. Consulting activities foster a partnership between internal audit and management that could reduce internal auditor objectivity (Christopher et al. 2009). Several studies examine the prevalence of consulting activities in the internal audit function. For example, Hass, Abdolmohammadi, and Burnaby (2006) find that

prior to SOX, internal auditors in the U.S. became increasingly involved in consulting activities, but post-SOX, their roles have largely shifted back to assurance-related duties. Similarly, through interviews with internal audit directors, Nagy and Cenker (2002) determine that the role of the internal audit function had shifted toward consulting and value-added activities during the 1990s.

Various studies examine the dual roles of internal auditors. Brody and Lowe (2000) find experimental evidence that acting as a consultant can impede internal auditor objectivity, as it may lead auditors to take positions that align with the best interest of their employer. Melville (2003) uses a survey to investigate the role of internal auditors in the strategic management of organizations. He finds that internal auditors are aware of, involved in, and positively contribute to strategic management in their organizations. Selim, Woodward, and Allegrini (2009) survey internal auditors in the U.K./Ireland and Italy and find mixed views with regard to whether or not consulting duties compromise internal auditor objectivity.

According to Schneider (2003), the [pre-SOX] shift toward internal audit consultancy led to an increase in incentive-based compensation for internal auditors, and this has been confirmed empirically (DeZoort et al. 2000; Dickens and O'Reilly 2009). It also appears that incentive-based compensation remains prevalent post-SOX. For example, Dickens and O'Reilly (2009) report that 89 percent of respondent CAEs have compensation arrangements that involve stock-based compensation or bonuses that are calculated based on operating results. Schneider (2003) experimentally examines whether incentive compensation and stock ownership impact internal auditor objectivity. He finds that while stock ownership had no effect on objectivity, incentive compensation tied to stock price did have an effect. Specifically, incentive compensation tied to stock price led to a significantly higher percentage of internal auditors choosing to not report a

GAAP violation compared to fixed compensation or compensation tied to earnings. In the same vein, Ahlawat and Lowe (2004) experimentally examine whether the consulting role of internal auditors and outsourcing versus in-house auditing influence auditor objectivity. They find that internal auditors are susceptible to client advocacy, but the advocacy is less severe with outsourced internal auditors. Finally, Ahmad and Taylor (2009) survey Malaysian internal auditors and find evidence that, unlike auditors from the U.S., Malaysian internal auditors perceive no conflict between assurance and consulting roles. Thus, while the evidence is mixed, the general findings from this literature stream suggest that internal auditors' dual roles of providing both assurance and consulting services negatively impact objectivity and perceived objectivity.

#### ***Threats to Objectivity due to ERM***

Internal audit involvement with Enterprise Risk Management (ERM) also poses a threat to objectivity and independence. ERM refers to “a process . . . designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite . . .” (COSO 2004, 2). Independence and objectivity threats are due in part to the fact that internal audit functions may be involved with both the development and assurance of the ERM systems (see Stewart and Subramaniam 2010).

Descriptive surveys and interviews reveal the growing prevalence and acceptance of internal auditor involvement in ERM (e.g., Allegrini and D’Onza 2003; Gramling and Myers 2006; Fraser and Henry 2007). However, in an experimental survey of Australian internal auditors, de Zwaan, Stewart, and Subramaniam (2011) find that internal auditor participation in ERM reduces perceived objectivity, as it decreases auditors’ inclination to report risk breakdowns to the audit committee.

### ***Threats to Objectivity from Outsourcing and Co-sourcing***

Finally, extant research examines the impact of internal auditor outsourcing and co-sourcing on objectivity. Outsourcing of internal audit activities to public accounting or specialist firms has become rather common in recent years (Caplan and Kirschenheiter 2000; Subramaniam, Ng, and Carey 2004; Dickens and O'Reilly 2009) and is expected to increase in prevalence (Burnaby et al. 2007).

Several studies examine the effect of outsourcing on independence and objectivity with mixed results. James (2003) finds that loan officers perceive outsourced internal auditors (acquired from Big 5 firms) to be more objective than in-house internal auditors. Conversely, Dickens and O'Reilly (2009) find a positive association between material weakness frequency and the proportion of outsourced internal audit work. Similarly, respondents in a U.K. survey indicate a perception that outsourced internal auditors are not more objective than in-house internal auditors (Selim and Yiannakas 2000).

Two experimental studies examine the effect of outsourcing on internal auditor objectivity. As noted previously, Ahlawat and Lowe (2004) conduct an experiment with U.S. internal auditors and find that outsourcing mitigates client advocacy, thus increasing objectivity. Lastly, Gramling and Vandervelde (2006) conduct an experiment with both internal and external auditors and find that external auditors perceive higher objectivity when internal audit duties are outsourced, while internal auditors perceive higher objectivity when internal audit duties are conducted in-house.

In summary, internal auditor independence and objectivity are mandated by IIA guidelines but are difficult to achieve due to situational factors faced by internal auditors. Roussy (2013) provides a striking depiction of internal auditor objectivity and independence. Through

insight gained from 42 interviews with Canadian internal auditors, Roussy (2013) develops the term “grey independence” to describe the conflicting roles internal auditors face. As expressed by one of the interviewees, “the implication is that you’re either ‘dependent’ or ‘independent’ – that it’s black or white. But it doesn’t work like that! Yes, perhaps it’s important but, in any case, if something can help to improve the organization, we’ll stick our neck out and that’s it; too bad for independence!” (Roussy 2013, 561).

### **Internal Audit as a Training Ground for Management**

The specific objectivity threat of interest to the current study is the threat stemming from using the internal audit function as a management training ground (MTG), a procedure in which individuals are hired into or transferred into internal audit for a short term before being promoted to a management position. Using the internal audit function as a MTG has become quite common. Goodwin and Yeo (2001) surveyed 65 internal auditors in Singapore and found extensive use of the internal audit function as a MTG. Kaplan and Schultz (2006) note that 23 percent of survey respondents indicate that internal audit staff rotate through internal audit to other positions. However, the practice could be even more prevalent than Kaplan and Schultz (2006) indicate. By some estimates, nearly 50 percent or more of publicly traded companies use the internal audit function as a MTG (Oxner and Oxner 2006; Christopher et al. 2009). Abbott et al. (2010) note that 65 percent of their internal auditor respondents from *Fortune* 1000 firms report that they use the internal audit function as a MTG.

The extensive use of the internal audit function as a MTG stems from the benefits of the practice. Goodwin and Yeo (2001) provide a thorough discussion of the benefits. First, internal audit performs work for various departments within an organization, so future managers can learn how the different departments function (Reeve 1990). Second, time spent in internal audit

teaches future managers to better understand internal controls (Ridley 2001; Stewart and Subramaniam 2010). Third, a rotation in internal audit allows management to evaluate potential talent (Galloway 1995).

Selim, Sudarsanam, and Lavine (2003) note that several U.S. and European companies “thought IA was such an excellent training program, that organisational policy pushed many or all internal auditors to seek other opportunities in the organisation after an initial rotation or ‘tour of duty’ in internal audit” (240). In practice, at least two variations of MTG occur. In some cases, individuals are hired and initially assigned to internal audit with the promise for promotion to a management position after a stint in internal audit (Goodwin and Yeo 2001). Alternatively, some companies assign operations managers to internal audit (and often to senior internal audit positions) for a three to five year period, after which the individuals return to a higher management position (Chadwick 1995). Even the CAE position is subject to use as a MTG (Messier, Reynolds, Simon, and Wood 2011; PricewaterhouseCoopers 2000). Companies implement this procedure in order to “train versatile, well-rounded senior managers” (Chadwick 1995, 63). Arena, Arnaboldi, and Azzone (2006) find evidence of training ground use in two of six companies in their case study, proposing that using the internal audit function as a MTG can improve the manager’s understanding of a company’s business activities. Recent research uncovers another benefit of MTG that is associated with recruiting. Burton, Starliper, Summers, and Wood (2013) find experimental evidence that having a MTG makes the internal audit position more attractive to experienced job candidates.

Notwithstanding the benefits of using the internal audit function as a MTG, there are also potential hazards associated with this practice. The chief concern associated with using the internal audit function as a MTG appears to be related to its impact on auditor objectivity.

Internal auditors who are planning to transition to a management position may feel little or no incentive to improve the internal audit function long-term and thus may be less willing to take strong positions on matters that arise (Chadwick 1995; Goodwin and Yeo 2001). Various studies have suggested that the practice could reduce internal auditor objectivity (e.g., Goodwin and Yeo 2001; Arena et al. 2006; Oxner and Oxner 2006; Christopher et al. 2009; Abbott et al. 2010; Stewart and Subramaniam 2010). A recent study (Rose et al. 2013) explicitly tests this assumption and finds experimental evidence indicating that internal auditors are less objective when being groomed for a management position. Specifically, they find that internal auditors are more likely to agree with an aggressive accounting policy promoted by management when the internal auditors are expecting to move into a senior management position. Hoos et al. (2013) also experimentally examine the training ground effect on internal auditor objectivity. Using 88 internal auditors from the gaming industry, they find that when the internal audit function is used as a MTG, internal auditors provide lower risk assessments when reporting to management (versus the audit committee) and more favorable investment recommendations. Thus, both Rose et al. (2013) and Hoos et al. (2013) find evidence of impaired objectivity stemming from the use of internal audit as a MTG.

Extant research also demonstrates other negative consequences stemming from the use of internal audit as a MTG. Using both archival and experimental methods, Messier et al. (2011) examine external auditor perceptions associated with the use of a MTG. They find that external auditor fees are higher when clients use the internal audit function as a MTG. This is due to the fact that external auditors perceive internal auditors to be less objective when being groomed for management positions. After controlling for other variables, Anderson, Christ, Johnstone, and Rittenberg (2012) find that internal audit functions that are used as a MTG are larger than those

not used as a MTG, which suggests they may be less efficient. Furthermore, Christ, Sharp, Masli, and Wood (2013) find that the use of the internal audit function as a MTG is associated with lower financial reporting quality.

Internal auditors who are being groomed for a management position face conflicting incentives, particularly when the internal audit function involves compliance roles. On one hand, the internal auditor is charged with conducting an objective audit and reporting all relevant findings. On the other hand, when being groomed for a management position, the auditor has a competing incentive to protect his future position. As noted by Stewart and Subramaniam (2010), the IIA has partially responded to the threat of a loss in objectivity from internal audit staff rotation by disallowing new internal audit staff to audit activities they previously performed until after at least one year. However, the threats associated with MTG remain. While recent research (Rose et al. 2013; Hoos et al. 2013) finds evidence that the practice can negatively impact internal auditor objectivity, extant research has not examined any potential training ground effects on fraud reporting, commonly referred to as whistleblowing.

According to motivated reasoning theory, a decision maker's judgment can be both knowingly and unknowingly biased when the decision maker is incentivized by personal benefit or avoidance of harm (Kunda 1990). As concisely stated by Kunda (1990) "People are more likely to arrive at those conclusions that they want to arrive at" (495). As it relates to unethical behavior, evidence in psychology on motivated reasoning generally finds that unconscious bias toward corruption is the rule, while intentional dishonesty is the exception (Moore, Tetlock, Tanlu, and Bazerman 2006).



When an internal auditor is being groomed for a management position, extant research shows that his objectivity can be reduced, and this effect is attributed to motivated reasoning<sup>2</sup> (Rose et al. 2013; Hoos et al. 2013). In addition, according to Moore et al. (2006) most auditors and accountants likely do not intentionally disregard their professional duties but instead do not realize that incentives are shaping their judgments and actions. It is plausible, therefore, that due to motivated reasoning, a loss of internal auditor objectivity can lead to something as egregious as a reduced tendency to report a fraud for which there is fairly strong evidence. In reporting the fraud, internal auditors will be potentially exposing the company to reputational and monetary damages.

As noted previously, internal auditors face a variety of objectivity threats as well as incentives to protect their company from harm (e.g., stock-based compensation). The current study is concerned with the incremental effect of MTG use on fraud reporting intentions. It may seem unlikely that an internal auditor would shift from a position of definitely reporting a fraud to definitely not reporting due to career incentives. Nonetheless, this notion is supported by Perry and Bryan (1997) who suggest that “internal auditors may be concerned about their own career implications of fraud detection and therefore not report cases of fraud” (42). Therefore, extant research findings suggest that internal auditors’ reporting likelihood may decrease due to MTG.

This leads to the following hypothesis:

**H1: Internal auditors will be less likely to report a fraudulent act when the internal audit function is used as a management training ground relative to when the internal audit function is not used as a management training ground.**

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<sup>2</sup> In a review of Rose et al. (2013), Koonce (2013) argues that economic incentive theory, in addition to (or rather than) motivated reasoning theory may be at work. According to economic incentive theory, the internal auditor will rationally and objectively process the situation and conclude that less objectivity is preferable. Conversely, according to motivated reasoning theory the internal auditor will not rationally or objectively process the situation, yet the incentives will create preferences which will unknowingly influence the auditor’s decision. Thus, as Koonce (2013) notes, economic incentive theory suggests the same results as motivated reasoning theory. Further, these two forces are often naturally confounded and are not easily disentangled. The current study attempts to partially disentangle the theories via debriefing questions.

## **Fraud Magnitude, Perceived Seriousness and Reporting Likelihood**

In accounting, perceived seriousness of fraud is generally viewed as a function of materiality (Schultz et al. 1993; Robinson et al. 2012). However, a fraud of any magnitude perpetrated by management in an attempt to misrepresent the financial position or operating results of an entity is considered material under SOX Section 303(a) (Vorhies 2005). As noted by Vorhies (2005), the intent, not the amount, makes an act fraudulent. Furthermore, a fraud that is perceived as immaterial could be the only visible portion of a much larger fraud (Wells 2003). Wells (2003) remarks, “When it comes to upper management, there is no such thing as an immaterial fraud.”

In an archival study examining U.S. corporate frauds from 1996 to 2004, Dyck, Morse, and Zingales (2010) find a positive association between fraud detection and fraud size. Larger frauds may be viewed as more serious and potentially more consequential to the organization. To this point, Miceli et al. (1991) note that “reporting wrongdoing of some types of activity (serious fraud, for example) may be viewed as part of one’s job, whereas reporting other types of activity...may not” (117). As noted previously, internal auditors are expected to report discovered fraudulent acts of any magnitude, as this is generally prescribed by their position (e.g., Jackson 2012; Near and Miceli 1986; Near et al. 1993; Rezaee 2005). However, evidence from Robinson et al. (2012) suggests that individuals may be less likely to report immaterial financial statement frauds relative to material financial statement frauds. Specifically, using a sample that included 17 percent internal auditors, they find that participants are significantly less likely to report an immaterial fraud compared to a material fraud.

Conversely, other evidence suggests that for internal auditors, reporting likelihood may be greater for small frauds than large frauds. Disclosures of small fraudulent acts can actually benefit the internal audit function. Sarens and de Beelde (2006) describe a case in which the discovery of two small frauds contributed to the approval of the internal audit function. As noted by the company CFO "...it is good to have such [small fraud] cases, that shake people awake and prove the benefit of having an internal audit function" (Sarens and de Beelde 2006, 233). It has been documented that large corporate scandals in other companies helps draw attention to and increase appreciation for internal audit in one's own company (e.g., Carcello, Hermanson, and Raghunandan 2005), and Sarens and de Beelde (2006) suggest that small frauds within a company can have the same outcome. According to the Association of Certified Fraud Examiners (ACFE) 2012 Report to the Nations, out of 14 detection sources, internal audit ranks as the third most common method of fraud detection at 14.4 percent. However, internal audit ranks last in median loss by detection method. In other words, while internal auditors are detecting fraudulent activities, they are detecting the smallest frauds. This finding could be due to the types of frauds internal auditors are investigating. It could also be the case that internal auditors are catching small frauds that would have become large frauds. However, this pattern could also suggest that internal auditors are incentivized to find smaller, less damaging frauds.

In summary, while the predicted direction of the relation between internal auditors' reporting likelihood and fraud magnitude seems unclear, the most likely outcome based on extant academic research is greater reporting likelihood for larger frauds. IIA guidelines indicate that fraud magnitude should not impact the reporting intentions of internal auditors. However, prior literature clearly shows a tendency for fraud magnitude to positively impact individuals' reporting intentions. While it possibly exists that fraud size may be negatively associated with

*internal auditor* reporting intentions, based on prior research a positive association is expected.

This leads to the following hypothesis:

**H2: Reporting likelihood will be greater when fraud magnitude is large relative to when fraud magnitude is small**

Robinson et al. (2012) note that various whistleblowing studies find that reporting likelihood increases as perceived seriousness of the act increases (Hooks et al. 1994; Miceli and Near 1985; Taylor and Curtis 2010). In addition, a recent study by Cassematis and Wortley (2013) examines prediction of whistleblowing and non-reporting observation and finds that whistleblowers perceive greater levels of seriousness than those who do not report wrongdoing. Given that perceived seriousness of fraud is generally viewed as a function of materiality (Schultz et al. 1993; Robinson et al. 2012), it is expected that perceived seriousness will be positively associated with fraud magnitude.

**H3: Perceived seriousness will be greater when fraud magnitude is large relative to when fraud magnitude is small**

### **Personal Responsibility to Report**

In addition to perceived seriousness, an individual's personal responsibility to report has been shown to influence reporting intentions (Schultz et al. 1993). Prior research consistently finds that personal responsibility positively impacts reporting intentions. Kaplan and Whitecotton (2001) find that perceived personal responsibility influenced auditors' intentions to report that a colleague was considering an ethical violation. Similarly, Ayers and Kaplan (2005) find that along with perceived seriousness and personal costs, perceived personal responsibility impacts reporting intentions for IT professionals to report a wrongdoing committed by consultants. Further, Curtis (2006a) examines the effect of mood (manipulated via poor exam

scores) on audit students' reporting intentions and finds that perceived seriousness and perceived personal responsibility mediate the relationship between mood and reporting intentions.

Personal responsibility to report refers to an individual's perceived duty or obligation to report an issue and can arise from an individual's job description (Dalton and Radtke 2013). As discussed previously, internal auditors are generally role-prescribed to report discovered wrongdoings (e.g., Miceli and Near 2002; Near and Miceli 1986; Near and Miceli 1988; Rezaee 2005) and this obligation exists regardless of fraud magnitude or training ground utilization. Therefore, the impact of fraud magnitude and MTG on perceived responsibility is unclear. However, results of this study may assist in determining which of two theories explains the reporting decision (see footnote 1).

If motivated reasoning theory is at work, then the internal auditor will not rationally and objectively process the situation, even when he attempts to be rational and objective (Kunda 1990). It is plausible for this biased reasoning to lead the internal auditor to irrationally feel less personal responsibility to report even when the situation clearly demonstrates that the auditor has full responsibility to report.

Conversely, if economic incentive theory is at work, the internal auditor should rationally and objectively evaluate the situation and choose the course of action that benefits him the most (e.g., Hales 2007; Koonce 2013). Koonce (2013) suggests that economic incentive theory, in addition to (or rather than) motivated reasoning theory may explain internal auditors' reduced objectivity and resulting decisions. According to economic incentive theory, the internal auditor will rationally and objectively process the situation and conclude that less objectivity is preferable. In this setting, it is likely that the internal auditor would recognize his responsibility

to report the fraud but would rationally decide not to report in order to maximize his benefits. Since it is unknown which result will hold, the following research question is proposed:

**RQ1: How will fraud magnitude and the use of internal audit as a management training ground impact the perceived responsibility to report the fraudulent act?**

### **Personal Costs**

As noted previously, Schultz et al. (1993) finds that the perceived personal cost of reporting a wrongdoing is an antecedent to reporting intentions, and various studies support this notion (e.g., Kaplan and Whitecotton 2001; Ayers and Kaplan 2005).<sup>3</sup> Perceived personal costs “refer to the perceived harm or discomfort that could result from reporting wrongdoing” (Dalton and Radtke 2013, 156). Whistleblowing research largely focuses on personal costs in the form of retaliation (e.g., Arnold and Ponemon 1991; Near and Miceli 1985, 1986) and generally finds that retaliation (or threats of retaliation) impedes reporting likelihood (e.g., Bedard, Deis, Curtis, and Jenkins 2008; Ponemon 1994).

While the threat of retaliation by management exists for internal auditors who blow the whistle on wrongdoing (Miceli et al. 1991), there are two arguments that suggest that retaliation is unlikely for internal auditors in a fraud reporting situation. First, due to legislation including SOX and the Dodd-Frank Act (U.S. House of Representatives 2010), whistleblower protection is currently strong. For instance, as noted by Xu and Ziegenfuss (2008), the primary focus of the whistleblowing portion of SOX is on protecting whistleblowers from retaliation. Furthermore,

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<sup>3</sup> The Schultz et al. (1993) model does not include perceived benefits (promotions, harm prevention, etc.). However, prior research notes that the reporting decision is a function of a cost-benefit analysis (Dozier and Miceli 1985). Furthermore, Dalton and Radtke (2013) provide evidence that perceived benefits can act as an antecedent to the reporting decision. As noted previously, internal auditors who are being groomed for a management position may receive praise for uncovering a small fraud before it reaches detrimental levels. In addition, the discovery of a small fraud could favorably impact management’s assessment of the internal auditor being groomed and confirm their choice in talent. Following Dalton and Radtke (2013) the current experimental survey includes an item to assess the perceived benefits of reporting.

upon discovery of a fraud, the perpetrator (arguably the most likely retaliator) would certainly be terminated from the organization.

Second, internal auditors are role-prescribed to prevent, detect, and report fraud, so any potential retaliators remaining with the organization after the fraud reporting would have a difficult time wielding power over an internal auditor who is simply carrying out his prescribed duties. To this point, Near and Miceli (1986) note that powerful whistleblowers are expected to face low levels of retaliation. As noted by Arnold and Ponemon (1991), internal auditors maintain a relatively high level of power in an organization “because of their role, professional status, and ability to communicate with the highest echelons of management” (13). In addition, Near et al. (1993) document very low levels of retaliation against internal auditor directors they surveyed.

The personal cost of interest to this study is the incremental perceived personal cost associated with MTG. When an internal auditor is being groomed for a management position and discovers a large fraud, he may perceive the fraud discovery as a threat to the future management position for which he has been training, as the company could face downsizing or bankruptcy. However, if the fraud is small this particular threat will likely not exist. This leads to the following hypothesis:

**H4: When internal audit is used as a management training ground, perceived personal costs associated with a *large* fraud will *increase* relative to when internal audit is not used as a management training ground.**

### **Machiavellianism and Fraud Reporting**

Extant research shows that an individual’s ethical ideology is an important factor in the whistleblowing decision (e.g., Arnold and Ponemon 1991; Keenan 2000; Xu and Ziegenfuss 2008). This stream of research largely relies on either the Defining Issues Test (DIT) (Rest 1979)

or the Ethics Position Questionnaire (EPQ) (Forsyth 1980) to measure ethical position. Research using the DIT generally finds that individuals with lower levels of moral reasoning are less likely to report wrongdoing (Arnold and Ponemon 1991) and are more sensitive to reporting-based incentives (Xu and Ziegenfuss 2008). Research using the EPQ generally finds that individuals with high relativism scores are less likely to report wrongdoing, while individuals with high idealism scores are more likely to report wrongdoing (e.g., Barnett, Bass, and Brown 1996). A third measure of ethical disposition is the Mach-IV scale, which measures Machiavellianism (Christie and Geis 1970).

Machiavellianism refers to the tendency to use manipulation and deception to achieve self-seeking goals (Christie and Geis 1970). The term “Machiavellian” references the sixteenth century political thinker Niccolo Machiavelli, who promoted cunning and scheming behavior in order to achieve political gain. He is credited with the adage “the end justifies the means” (Wakefield 2008). Individuals who score high on the Mach-IV (high-Machs) tend to be able to disconnect themselves from moral obligations to engage in self-serving behaviors. Furthermore, high-Machs ignore ethical norms when facing moral issues (Christie and Geis 1970)

Machiavellianism has been widely studied in multiple disciplines, including accounting (Ghosh 2000; Ghosh and Crain 1996; Hartmann and Maas 2010; Wakefield 2008; Murphy 2012). Ghosh and Crain (1996) conduct an experiment with undergraduate business students and find that lower-Mach (more ethical) students exhibit less tax noncompliance. Ghosh (2000) finds that manipulative negotiators (as measured by the Mach-IV) achieve better outcomes in transfer pricing negotiations when organizational designs are perceived as unfair. Hartmann and Mass (2010) find experimental evidence that Machiavellianism plays a part in budgetary slack creation behavior. Wakefield (2008) examines the prevalence of Machiavellianism among accountants



and its association to several demographic variables. Among other things, she finds that accountants appear to be less Machiavellian than other vocational groups, and that higher-Mach accountants seem to be less satisfied with accounting as a career. Among other things, Murphy (2012) finds experimental evidence indicating that high-Machs are more likely to misreport financial information, and after misreporting high-Machs feel significantly lower levels of guilt.

Of interest to this study are the whistleblowing implications of Machiavellianism. A recent study by Dalton and Radtke (2013) utilizes an experiment with 116 MBA students to examine the effect of Machiavellianism on whistleblowing. The scenario involved a purchasing agent who finds that his colleague violated corporate policy by accepting a gift from a supplier. They find that high-Machs are less likely to blow the whistle, and that Machiavellianism impacts whistleblowing indirectly through perceived responsibility and perceived benefits. They also find that a strong ethical environment mitigates the dampening effect of Machiavellianism on whistleblowing intentions.

Extant research has not examined Machiavellianism with respect to internal auditors.<sup>4</sup> Therefore, it is unknown how internal auditors will rank with regard to Machiavellianism. Further, as noted previously, internal auditors have a unique position and role in the organization. Internal auditors are role-prescribed to report wrongdoing but may be incentivized to protect the company and not report. Stated differently, internal auditors are mandated to be objective, but their circumstances often make that impossible (e.g., Roussy 2013). Therefore, it is also unknown how the level of Machiavellianism will affect fraud reporting intentions for internal auditors. It seems likely that high-Mach internal auditors will be less likely to report fraud as they would be more inclined to detach from moral or ethical obligations for self-serving purposes. Thus, the following research question is proposed:

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<sup>4</sup> Wakefield (2008) surveys accountants but only four percent of her sample is internal auditors.

**RQ 2: Will the effects of management training ground on reporting intentions be exacerbated for participants who score high on Machiavellianism?**

**III. METHOD**

**Design and Participants**

This study employs a 2x2 between-subjects design manipulating use of the internal audit function as a MTG (used as a training ground vs. not used as a training ground) and magnitude of the fraudulent act (large vs. small). The primary dependent variable is the participant's evaluation of the likelihood that the fraud discoverer will report his findings to the CAE. Internal auditors were recruited as voluntary participants in the study. Participants received an information email describing the experiment and informed consent, along with a link to the experimental survey administered via SurveyMonkey. A total of 3,373 emails were sent to internal auditor contacts obtained from a database at [www.jigsaw.com](http://www.jigsaw.com). After the initial mailing 529 emails were returned as not valid, resulting in 2,844 valid email addresses. A total of 157 responses were obtained, resulting in a response rate of 5.5 percent. Participants were randomly assigned to one of the four treatment conditions.

**Task and Procedures**

Participants read a hypothetical case scenario about an internal auditor who discovers evidence of fraudulent financial reporting. The case was patterned after features from several studies, including Arnold and Ponemon (1991), Brink, Lowe, and Victoravich (2013), and Rose et al. (2013). After reading the case, participants were asked to provide responses to dependent variable items, manipulation check questions, debriefing questions, and demographic questions. On average, the experimental task required approximately 10-12 minutes to complete. The complete experimental survey is provided in Appendix A.

The experimental case provides background information on a hypothetical plastic manufacturing company, Action Manufacturing Inc. (AMI). Payton Landry is a senior internal auditor at AMI, and he discovers that the CFO, Nathan Martin, likely engaged in fraudulent financial reporting through improper journal entries.<sup>5</sup> Specifically, it appears that Martin reclassified certain expenses to long-term assets which had the effect of increasing net income. Furthermore, this suspected fraudulent behavior has escaped both internal and external auditor detection for three years, so Landry feels certain he is the only person aware of the fraudulent behavior. Per AMI protocol, Landry is to report his findings to his CAE.

The experimental case was pilot tested with 55 undergraduate accounting students. Slight revisions were made to the case, and then it was pilot tested with 5 internal auditors. Final adjustments were made to reduce the time required for the case, and to clarify some of the survey items.

### **Independent Variables**

The first independent variable is usage of the internal audit function as a MTG. This variable is manipulated at two levels (used as a training ground vs. not used as a training ground). Participants assigned to the training ground condition are informed that Landry is preparing to transfer into a senior management position in the next few months, as he has worked in internal audit as part of a management training program. Alternatively, participants assigned to the no training ground condition are informed that Landry is planning to remain in internal audit indefinitely, as he plans to be a career internal auditor.

The second independent variable, fraud magnitude, is also manipulated at two levels (large vs. small). Participants assigned to the large magnitude condition are informed that the

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<sup>5</sup> Following prior whistleblowing studies, the case is presented in third-person to minimize self-report bias (e.g., Arnold and Ponemon 1991; Seifert et al. 2010; Xu and Ziegenfuss 2008).

fraud perpetrated by the CFO had the effect of increasing net income by thirty percent, while participants in the small magnitude condition are informed that the fraud had the effect of increasing net income by one percent<sup>6</sup>.

### **Dependent Variables**

The primary dependent variable in this study is the participant's assessed likelihood that Landry will report the fraud to his CAE. Participants responded on a scale from 0 percent (no likelihood, definitely would not report) to 100 percent (high likelihood, definitely would report). Other dependent variable items capture hypothesized antecedents to the reporting decision (Schultz et al. 1993). Respondents were asked to indicate the perceived seriousness of the act, to assess the level of personal responsibility of Landry to report his findings to the CAE, and to assess the likelihood of negative repercussions and personal costs to Landry if he reports. These three items were assessed on a 7-point Likert-type scale (see Appendix A).

### **Post-Experimental Questionnaire**

Following the dependent variable items, the questionnaire included manipulation check questions, debriefing items, and demographic questions. Manipulation check questions were included to validate the effectiveness of the manipulations. Debriefing items were included to provide insight into the psychological determinants of participants' reporting decisions. Finally, demographic variables were included to examine as covariates and to confirm randomization. Demographic variables include age, years of experience, gender, professional certifications held, attained education, and several job-specific perceptual variables.

## **IV. RESULTS**

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<sup>6</sup> Specific fraud magnitude levels (one percent and thirty percent) were selected based on pilot test results and discussions with internal auditors.

## Demographics and Covariates

As noted previously, a total of 157 internal auditors completed the experimental survey with a response rate of 5.5 percent. This response rate is not surprising and is consistent with expectations associated with email-solicited survey participation (e.g., Bryant, Hunton, and Stone 2004). Participants' demographic information is summarized in Table 1. As shown in Panel A, the average participant age was 46.09 years, and the average work experience was 14.58 years. As shown in Panel B, 68.9 percent of respondents were male. The most common professional designation is Certified Public Accountant (63.1 percent). The majority of respondents hold either a Bachelor's degree (46.4 percent) or Master's degree or higher (45.0 percent). Almost half of respondents held the position of Chief Audit Executive (48.7 percent), with manager-level and senior-level respondents comprising 37.7 and 13.3 percent, respectively. Almost all respondents (92.7 percent) are employed by publicly traded companies, and a similar percentage of respondents (89.7 percent) engage in both compliance and consulting duties. A majority of respondents (78.0 percent) indicated that at their organizations, internal auditors had moved into management positions. Respondents indicated that, on average, 28 percent of internal auditors within their departments were currently being groomed for management positions. When included as covariates, none of the demographic variables were significant. Therefore, demographic variables are not included as covariates in subsequent analyses.

To determine whether randomization had been achieved, MTG and fraud size were included as independent variables in a MANOVA model, with the aforementioned demographic variables included as dependent variables. A lack of significance for all demographic variables was found, which provides some assurance that randomization was achieved.

**TABLE 1**  
**Participant Demographics**

**Panel A: Means and Standard Deviations**

<u>Variable</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>
Age	138	46.09	9.64
Work Experience	146	14.58	8.97

**Panel B: Frequencies and Percentages**

<u>Variable</u>	<u>Response</u>	<u>n</u>	<u>Percent</u>
Gender	Male	91	68.9%
	Female	56	38.1%
Designation	CPA	99	63.1%
	CIA	72	45.9%
	CMA	4	2.5%
	CISA	31	19.7%
Education	Associates	1	0.7%
	Bachelors	70	46.4%
	Some Graduate	12	7.9%
	Masters or Higher	68	45.0%
Job Level	Entry-level	1	0.7%
	Senior-level	20	13.3%
	Manager-level	56	37.3%
	CAE	73	48.7%
Type of Organization	Publicly-traded	140	92.7%
	Privately-held	9	6.0%
	Other	2	1.3%
Type of Duties	Compliance only	15	10.3%
	Consulting only	0	0.0%
	Both compliance and consulting	131	89.7%

Internal Auditors ever moved to management positions at your organization?	Yes	117	78.0%
	No	31	20.7%
	Don't know	2	1.3%
Percentage of Internal Auditors in your department currently being groomed for management position?			28.0% (mean)

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### Manipulation Checks

Two manipulation check questions were included in the post-experimental questionnaire in order to verify the effectiveness of the manipulations. The first manipulation check question asked participants to indicate which statement best characterizes Payton Landry's career plans. Two choices were provided: 1.) Landry is preparing to transfer into a senior management position in the next few months, and 2.) Landry is planning to remain in internal audit indefinitely. This question was included to ensure that participants are aware of the presence or absence of the practice of using internal audit as a MTG. All 157 participants answered this manipulation check question correctly. The second manipulation check question asked participants to indicate the magnitude of the fraud committed by CFO Nathan Martin, and answer choices are one percent and thirty percent. One participant (0.6 percent) answered this manipulation check question incorrectly and was dropped from further analyses. The remaining results reflect the 156 participants who passed both manipulation checks.<sup>7</sup>

### Dependent Variables

The primary dependent variable of interest is the participant's assessed likelihood that Landry will report the fraud to his CAE. Participants respond on a scale from 0 percent (no likelihood, definitely would not report) to 100 percent (high likelihood, definitely would report). Descriptive statistics are summarized in Table 2. The highest mean reporting likelihood (91.35)

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<sup>7</sup> Results are unchanged when including the participant who failed the manipulation check.

occurs when there is no management training ground and a large fraud. Conversely, the lowest mean reporting likelihood (76.17) occurs when there is a MTG and a large fraud. In comparing the means for the levels of fraud magnitude, there is little separation in reporting likelihood between large and small frauds (83.89 for small fraud, and 82.86 for large fraud,  $p = 0.726$ ). However, in comparing the means for MTG, there is a notable difference between reporting likelihood in the training ground condition (77.76) and the no training ground condition (90.00,  $p < 0.001$ ). Thus, based on the descriptive statistics, management training ground appears to have an effect on reporting likelihood while fraud magnitude does not.

**TABLE 2**

Means (Std. Deviation) for Reporting Likelihood<sup>a</sup>

Fraud Magnitude <sup>c</sup>	Management Training Ground <sup>b</sup>		Total
	Training Ground Absent	Training Ground Present	
Small Fraud	88.53 (13.736) n = 34	79.74 (22.116) n = 38	83.89 (19.030) n = 72
Large Fraud	91.35 (10.843) n = 37	76.17 (18.830) n = 47	82.86 (17.464) n = 84
Total	90.00 (12.306) n = 71	77.76 (20.318) n = 85	

<sup>a</sup> The third-person likelihood of reporting the questionable act to CAE (ranging from 0 = “No Likelihood, definitely would not report” to 100 = “High Likelihood, definitely would report”).

<sup>b</sup> Management Training Ground = 1 if training ground present, 0 if training ground absent.

<sup>c</sup> Fraud Magnitude = 1 if large fraud (30 percent of net income), 0 if small fraud (1 percent of net income).

## Tests of Hypotheses and Research Questions

Hypothesis 1 examines the main effect of MTG on fraud reporting intentions.

Specifically, it predicts that internal auditors will be less likely to report a fraudulent act when



the internal audit function is used as a MTG relative to when internal audit is not used as a MTG. Hypothesis 2 examines the main effect of fraud magnitude on fraud reporting intentions. Specifically, it predicts that reporting likelihood will be greater when fraud magnitude is large relative to when fraud magnitude is small.

Hypothesis 1 and 2 are tested using univariate analysis of variance (general linear model). The independent variables are MTG and fraud magnitude. The results are presented in Table 3. As shown in Table 3, the main effect for MTG is significant, providing support for H1. This finding suggests that internal auditors are significantly less likely to report a fraudulent act when being groomed for a management position than when not being groomed for such a position. The main effect for fraud magnitude is not significant, failing to support H2. Fraud magnitude appears to have no significant effect on internal auditor reporting intentions in the current context. This could be due to the competing motivations internal auditors have with regard to reporting frauds of different magnitudes. As discussed previously, while fraud size is expected to be positively associated with reporting intentions, as employees of the company internal auditors may be incentivized to find and report smaller, less damaging frauds rather than larger, more damaging frauds.

Hypothesis 3 predicts that perceived seriousness of the act will be greater when fraud magnitude is large relative to when fraud magnitude is small. H3 was examined using an independent samples t-test. Participants were asked to assess the level of seriousness of the act on a 7-point Likert-type scale ranging from 1 (“very low”) to 7 (“very high”). Results (untabulated) indicate that participants perceived large frauds (mean = 6.92) to be more serious than small frauds (mean = 6.49,  $t = 3.881$ ,  $p < 0.001$ ), thus supporting H3.

Research Question 1 inquires how fraud magnitude and the use of internal audit as a MTG impact internal auditors' perceived responsibility to report the fraudulent act. Participants were asked to assess the personal responsibility of Landry to report his findings to the CAE on a 7-point Likert-type scale ranging from 1 ("very low") to 7 ("very high"). RQ1 was examined using univariate analysis of variance (general linear model). The independent variables are MTG and fraud magnitude. Results (untabulated) reveal a non-significant ANOVA model ( $p = 0.582$ ). Participants across all conditions rated the responsibility to report as very high. On the 7-point scale, cell means ranged from 6.91 (small fraud, no training ground) to 6.97 (large fraud, no training ground and small fraud, training ground present). Thus, participants indicated a very strong belief that Landry has a personal responsibility to report the fraud to his CAE, regardless of fraud size or use of the internal audit function as a MTG. When considered with the finding for H1, this finding supports the economic incentive theory explanation of internal auditor reporting behavior by suggesting that while internal auditors recognize their responsibility to report the fraud in all conditions, they may display a reduced likelihood of reporting when being groomed for a management position.

**TABLE 3**

Univariate Analysis of Variance (ANOVA) Effects of Fraud Magnitude and Management Training Ground on the Reporting Likelihood<sup>a</sup>

Source	SS	Df	MS	F	p-value <sup>d</sup>
Mgt. Training Ground <sup>b</sup>	5524.677	1	5524.677	18.716	<0.001
Fraud Magnitude <sup>c</sup>	5.331	1	5.331	0.018	0.893
Mgt. Training Ground *					
Fraud Magnitude	392.323	1	392.323	1.329	0.251
Error	44866.910	152	295.177		

n = 156;  $R^2 = 0.121$ ; Adj.  $R^2 = 0.104$ ; corrected model significance < .001

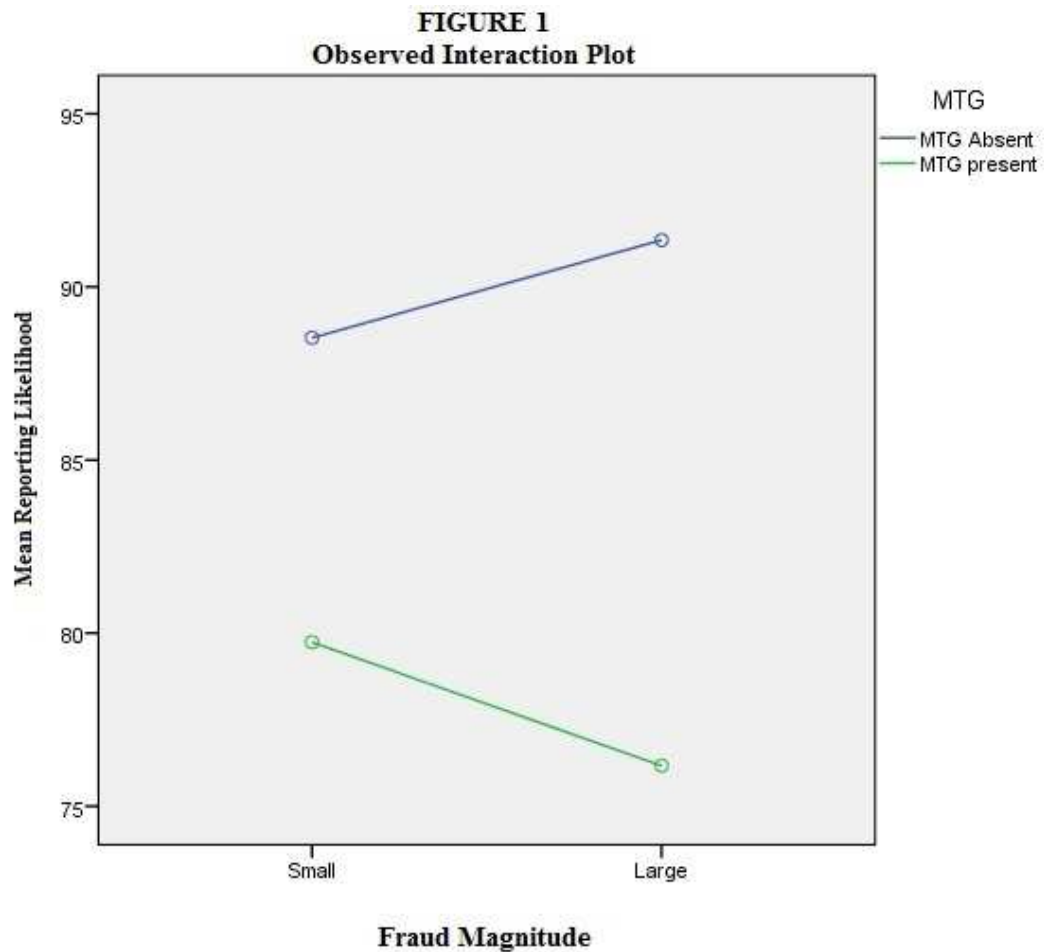
<sup>a</sup> The dependent variable is the third-person likelihood of reporting the questionable act to CAE (ranging from 0 = “No Likelihood, definitely would not report” to 100 = “High Likelihood, definitely would report”).

<sup>b</sup> Management Training Ground = 1 if training ground present, 0 if training ground absent

<sup>c</sup> Fraud Magnitude = 1 if large fraud (30 percent of net income), 0 if small fraud (1 percent of net income).

<sup>d</sup> All p-values are two-tailed.

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Hypothesis 4 predicts that when the internal audit function is used as a MTG, the perceived personal costs associated with reporting a large fraud will be higher than when internal audit is not used as a MTG. Participants were asked to assess the likelihood that Landry would

face personal costs if he reported the fraud to his CAE. Responses were on a 7-point Likert-type scale ranging from 1 (“very unlikely”) to 7 (“very likely”). H4 was tested by examining the effect of MTG on perceived personal costs for the “large fraud” subset of data. Results of the one-way ANOVA model are presented in Table 4. While the means are in the hypothesized direction (MTG absent = 3.08, MTG present = 3.34) the mean difference is not statistically significant ( $p = 0.57$ ). Thus, H4 is not supported. This could be due to the fact that internal auditors, whether being groomed for a management position or not, face similar costs if a large fraud is discovered. Specifically, a large and potentially damaging fraud could jeopardize the positions of all internal auditors, not just those being groomed for a management position.

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**TABLE 4**

One-way Analysis of Variance (ANOVA) Effect of Management Training Ground on Perceived Personal Costs<sup>a</sup> in the Large Fraud Condition

Source	SS	Df	MS	F	p-value
Between Groups <sup>b</sup>	1.392	1	1.392	0.320	0.573
Within Groups	357.310	82	4.357		
Total	358.702	83			

n = 84

<sup>a</sup> The dependent variable is the perceived likelihood that Landry will face personal costs if he reports the fraud (ranging from 1 = “Very Unlikely” to 7 = “Very Likely”).

<sup>b</sup> Management Training Ground = 1 if training ground present, 0 if training ground absent

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Research Question 2 inquires whether the effect of MTG on reporting intentions is exacerbated for individuals who score high on Machiavellianism. Machiavellianism was measured using a 10-item scale developed by Allsopp et al. (1991) and validated by Mudrack and Mason (1995). Reliability of the scale was sufficient and comparable to extant literature

(Cronbach's alpha = .712). Each of the 10 items was measured on a 7-point scale, providing a maximum score of 70 with higher scores indicating higher levels of Machiavellianism.

A total of 145 internal auditors completed the 10-item Machiavellianism scale. Scores ranged from 10 to 36, with a mean score of 16.21. Christie and Geis (1970) define high-Machs as those who score higher than 100 on the Mach-IV scale, which is measured using 20 items, each with a 7-point scale. In applying this standard to the 10-item Allsopp et al. (1991) scale, high-Machs would be defined as those scoring higher than 50. In the current study, none of the participants scored higher than 50, and only two scored higher than the mid-point of 35.

Therefore, Research Question 2 is examined by splitting the sample into two groups based on the median Machiavellianism score. The median Machiavellianism score is 15. Splitting the sample based on scores below 15 and scores of 15 and above resulted in almost equivalent groups.

RQ2 was examined using univariate analysis of variance (general linear model). The independent variables are MTG and an indicator variable capturing Machiavellianism (1 = score at median or above; 0 = below median). As shown in Table 5, results indicate no significant main effect for Machiavellianism and no significant interaction ( $p = 0.81$  and  $p = 0.38$ , respectively). This implies that the impact of MTG on fraud reporting intentions is not contingent on the individual's Machiavellianism score.<sup>8</sup> This result is not surprising considering that none of the internal auditor respondents qualified as high-Machs.

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<sup>8</sup> The impact of Machiavellianism score was also evaluated using OLS Regression. When Machiavellianism is included as the sole independent variable, results reveal no significant effect on reporting intentions ( $p = 0.277$ ). Similarly, when Machiavellianism score is included as an independent variable with MTG and fraud magnitude, results reveal no significant effect on reporting intentions ( $p = 0.220$ ). Further, when Machiavellianism score was added as a continuous covariate to an ANCOVA model with third-person reporting intentions as the dependent variable and with MTG and fraud magnitude as the independent variables, results are unchanged from the primary analysis. Specifically, MTG remains significant while Machiavellianism and fraud magnitude do not.

**TABLE 5**

Univariate Analysis of Variance (ANOVA) Effects of Machiavellianism and Management Training Ground on the Reporting Likelihood<sup>a</sup>

Source	SS	Df	MS	F	p-value <sup>d</sup>
Mgt. Training Ground <sup>b</sup>	5632.969	1	5632.969	18.972	0.000
Machiavellianism <sup>c</sup>	17.074	1	17.074	0.058	0.811
Mgt. Training Ground * Machiavellianism	228.231	1	228.231	0.769	0.382
Error	41864.265	141	296.910		

n = 145; R<sup>2</sup> = 0.123; Adj. R<sup>2</sup> = 0.105

<sup>a</sup> The dependent variable is the third-person likelihood of reporting the questionable act to CAE (ranging from 0 = “No Likelihood, definitely would not report” to 100 = “High Likelihood, definitely would report”).

<sup>b</sup> Management Training Ground = 1 if training ground present, 0 if training ground absent

<sup>c</sup> Machiavellianism = 1 if at median score (15) or above, 0 if below median score.

<sup>d</sup> All p-values are two-tailed.

## Supplemental Analyses

### *Social Desirability Bias*

While the primary dependent variable of interest is the third-person reporting intentions, first-person reporting intentions were also captured in order to measure social desirability bias. Social desirability bias refers to the tendency for participants to represent themselves favorably on a survey instrument by underestimating (overestimating) the probability they would engage in an undesirable (desirable) action (e.g., Chung and Monroe 2003). The most direct test of social desirability bias is to reproduce the primary analyses using first-person rather than third-person responses and noting any differences in the results. As shown in Tables 6 and 7, results using first-person responses reflect clear evidence of social desirability bias, as well as a ceiling effect. All means are near the scale maximum of 100, with the lowest mean at 97.35 (see Table 6). In other words, nearly all participants indicated they would self-report the fraud, regardless of fraud size or MTG. As shown in Table 7 and in contrast to the results in Table 3, the ANOVA model

was not significant ( $p = 0.246$ ). In summary, the results using first-person responses indicate evidence of social desirability bias.

**TABLE 6**

Means (Std. Deviation) for Reporting Likelihood- first-person<sup>a</sup>

Fraud Magnitude <sup>c</sup>	Management Training Ground <sup>b</sup>		Total
	Training Ground Absent	Training Ground Present	
Small Fraud	97.35 (6.656) n = 34	99.47 (2.263) n = 38	98.47 (4.939) n = 72
Large Fraud	98.65 (4.191) n = 37	97.87 (5.080) n = 47	98.21 (4.698) n = 84
Total	98.03 (5.508) n = 71	98.59 (4.127) n = 85	

<sup>a</sup>The first-person likelihood of reporting the questionable act to CAE (ranging from 0 = “No Likelihood, definitely would not report” to 100 = “High Likelihood, definitely would report”).

<sup>b</sup>Management Training Ground = 1 if training ground present, 0 if training ground absent.

<sup>c</sup>Fraud Magnitude = 1 if large fraud (30 percent of net income), 0 if small fraud (1 percent of net income).

**TABLE 7**

Univariate Analysis of Variance (ANOVA) Effects of Fraud Magnitude and Management Training Ground on the Reporting Likelihood- first-person<sup>a</sup>

Source	SS	df	MS	F	p-value <sup>d</sup>
Mgt. Training Ground <sup>b</sup>	17.375	1	17.375	0.761	0.384
Fraud Magnitude <sup>c</sup>	0.898	1	0.898	0.039	0.843
Mgt. Training Ground * Fraud Magnitude	80.677	1	80.677	3.533	0.062
Error	3470.905	152	22.835		

n = 156;  $R^2 = 0.027$ ; Adj.  $R^2 = 0.008$ ; corrected model significance = .246

<sup>a</sup>The dependent variable is the first-person likelihood of reporting the questionable act to CAE (ranging from 0 = “No Likelihood, definitely would not report” to 100 = “High Likelihood, definitely would report”).

<sup>b</sup> Management Training Ground = 1 if training ground present, 0 if training ground absent

<sup>c</sup> Fraud Magnitude = 1 if large fraud (30 percent of net income), 0 if small fraud (1 percent of net income).

<sup>d</sup> All p-values are two-tailed.

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### ***Urgency to Report***

Participants were also asked to indicate the perceived level of urgency Landry feels to report his findings. This question was included as a supplement to the primary dependent variable in order to assess the strength of the compulsion to report. As shown in Table 8 and Figure 2, results reveal significant main effects for MTG ( $p = 0.011$ ) and fraud magnitude ( $p = 0.014$ ) and a marginally significant interaction ( $p = 0.081$ ). Specifically, as the interaction reveals, respondents indicated higher levels of urgency to report when the fraud was large and when the internal audit function was not used as a MTG.

Two additional analyses were conducted to examine the marginally significant interaction. First, a contrast test was conducted to determine whether the mean urgency to report a large fraud in the absence of a MTG is statistically different from the other three conditions. Results (untabulated) reveal a significant contrast ( $F_{3, 149} = 5.291$ ,  $p = 0.002$ ) and also reveal that this mean is statistically different from the other three conditions. Since urgency to report was not a hypothesized variable and thus the contrast was not planned *a priori*, a more conservative Tukey's post-hoc test was also conducted. As in the contrast test, results (untabulated) reveal that mean urgency to report for the no MTG, large fraud condition is statistically different from the other three conditions at the .05 level.

Therefore, as shown in Figure 2 and supported by a contrast test and Tukey's post-hoc test, having a MTG reduces the reporting urgency associated with large frauds to levels statistically equivalent (at .05 level) to small frauds. Stated differently, in terms of urgency to



report, having a MTG feature appears to cause internal auditors to view a large fraud (30 percent of net income) as though it were a small fraud (one percent of net income). Conversely, when no MTG was present, internal auditors indicated a relatively strong sense of urgency to report a large fraud. These results suggest that using the internal audit function as a MTG inhibits the sense of urgency internal auditors feel to report fraudulent acts. Most concerning, the interaction suggests that the MTG feature particularly reduces the perceived urgency to report large frauds.

**TABLE 8**

Univariate Analysis of Variance (ANOVA) Effects of Fraud Magnitude and Management Training Ground on the Perceived Urgency to Report<sup>a</sup>

Source	SS	Df	MS	F	p-value <sup>d</sup>
Mgt. Training Ground <sup>b</sup>	13.096	1	13.096	6.655	0.011
Fraud Magnitude <sup>c</sup>	12.255	1	12.255	6.228	0.014
Mgt. Training Ground *					
Fraud Magnitude	6.076	1	6.076	3.088	0.081
Error	293.208	149	1.968		

n = 153; R<sup>2</sup> = 0.096; Adj. R<sup>2</sup> = 0.078; corrected model significance = .002

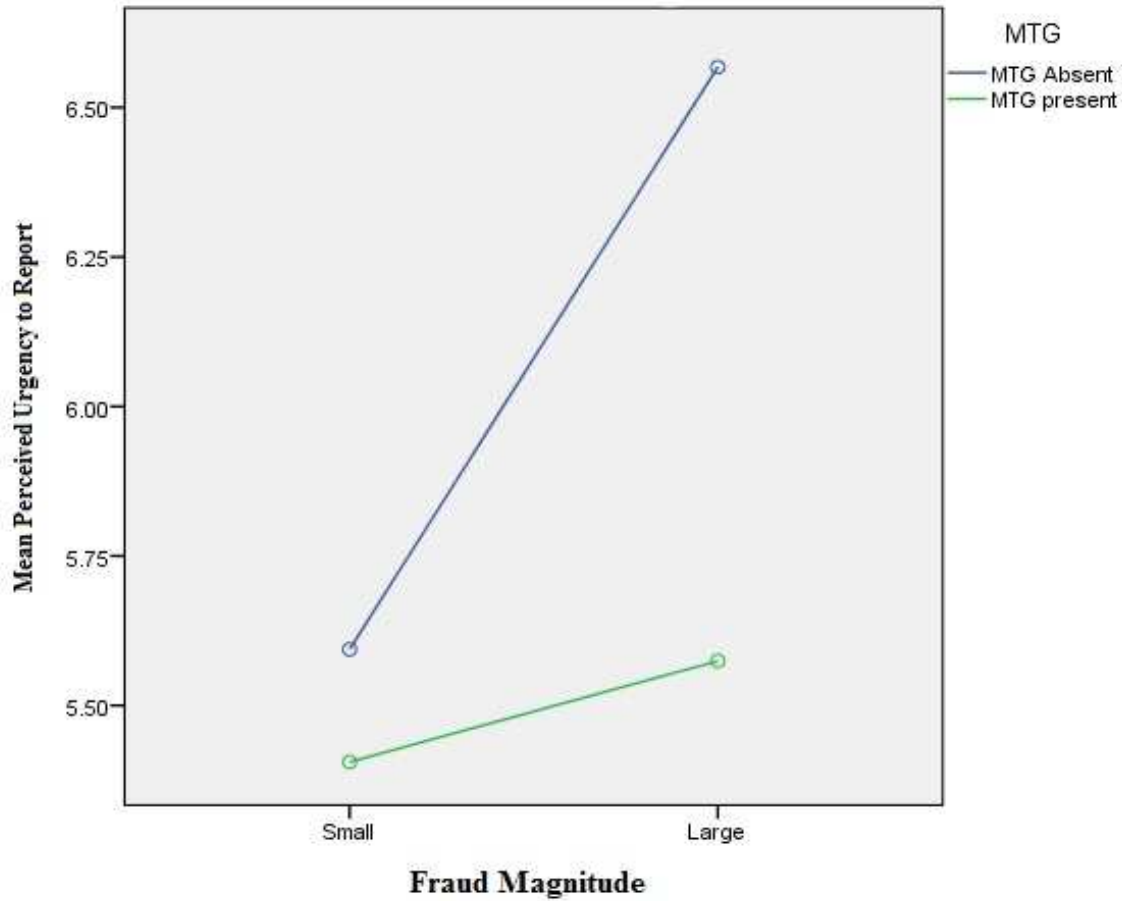
<sup>a</sup> The dependent variable is the perceived urgency that Landry will feel to report the fraud (ranging from 1 = “No Urgency” to 7 = “Substantial Urgency”).

<sup>b</sup> Management Training Ground = 1 if training ground present, 0 if training ground absent

<sup>c</sup> Fraud Magnitude = 1 if large fraud (30 percent of net income), 0 if small fraud (1 percent of net income).

<sup>d</sup> All p-values are two-tailed.

**FIGURE 2**  
**Observed Interaction Plot**



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## **V. SUMMARY, LIMITATIONS, AND FUTURE RESEARCH**

The primary purpose of this dissertation is to examine the effects of MTG and fraud magnitude on internal auditor fraud reporting intentions. Prior research documents negative repercussions due to the reduced internal auditor objectivity associated with using the internal audit function as a training ground for management (e.g., Rose et al. 2013; Hoos et al. 2013;

Messier et al. 2011). This study investigates whether the objectivity threats can extend to the internal auditor's fraud reporting decision.

Using a 2x2 experiment that manipulates the use of the internal audit functions as a MTG (used as a training ground vs. not used as a training ground) and fraud magnitude (large fraud, defined as 30 percent of net income vs. small fraud, defined as one percent of net income), this study finds that respondents indicate a lower likelihood that a discovered fraud will be reported when the internal auditor is being groomed for a management position. No effect is found for fraud magnitude, as internal auditors appear equally likely to report large and small frauds in this context. However, supplemental analysis suggests that having a MTG feature reduces the urgency internal auditors feel to report fraudulent acts. Most concerning, these results indicate that using the internal audit function as a MTG reduces internal auditors' perceived urgency to report a large fraud so severely that urgency levels become statistically equivalent to those observed in the small fraud condition. In the absence of a MTG, internal auditors indicate a much greater sense of perceived urgency to report a large fraud. Together, these results suggest that using the internal audit function as a MTG can obstruct internal auditors from completing one of their major duties: reporting fraud in a timely manner.

This dissertation also examines factors underlying the fraud reporting decision as modeled by Schultz et al. (1993). Not surprisingly, participants perceived large frauds to be more serious than small frauds. In addition, participants indicated a strong belief that the internal auditor has a personal responsibility to report fraud, regardless of fraud magnitude or use of the internal audit function as a MTG. Finally, no relation is found between MTG use and perceived personal costs.

Finally, this dissertation examines the impact of Machiavellianism on internal auditor fraud reporting intentions. Results reveal no high-Mach internal auditors in the sample and suggest that the impact of MTG on fraud reporting intentions is not contingent on the individual's Machiavellianism score.

This study leverages the benefits of the experimental method to isolate the effects of MTG and fraud magnitude on reporting intentions. The research question would have been difficult to address using archival methods. An experiment allows for the control of confounding effects, which increases internal validity. However, a limitation of this study and all experimental studies is external validity. For this reason, extensive care was taken to make sure the experimental scenario was realistic. Specifically, meetings with internal auditors and pilot tests using internal auditors helped to ensure the realism of the hypothetical case. A related limitation of this study is experimental realism. While the case was designed to be realistic, the experimental setting is far more simplified than the real-world context internal auditors face. Thus, responses to the experimental scenario may not reflect what internal auditors would do in a more complex, real-world environment. For this reason, and due to evidence of social desirability bias, third-person responses are used as the primary dependent variable.

Notwithstanding these limitations, this study offers several contributions to the literature. First, while this study examines the impact of using internal audit as a MTG on fraud reporting intentions, it provides insight into the more general area of how incentives impact internal auditor objectivity with regard to fraud reporting. This study is the first to experimentally document that internal auditor objectivity threats associated with the use of a MTG can extend to the fraud reporting decision. Second, this study reveals an interesting and counterintuitive finding associated with fraud magnitude. In this setting, internal auditors were no more likely to

report a large fraud (30 percent of net income) than a small fraud (one percent of net income). This result was unexpected and solicits future research. Third, this study examines the impact of Machiavellianism on internal auditor fraud reporting intentions. While no relation is found between Machiavellianism and fraud reporting intentions, it is informative to note the simple descriptive finding that no internal auditors in the sample were high-Machs. Fourth, this study provides insight into which of two theories may be at work in the relation between MTG and fraud reporting intentions. Specifically, it appears that internal auditors are fully aware of their responsibility to report all fraud, but may be less willing to report fraud in the presence of a MTG. This supports the economic incentive theory explanation and corroborates the proposition in Koonce (2013). Finally, the results provide experimental evidence to corroborate the IIA's concern about the ethical compass of internal auditors.

Future research could extend the results of this study in several ways. This study tested two rather extreme levels of fraud (one percent of net income and thirty percent of net income) and found no significant effect of fraud magnitude on reporting intentions. Future research could examine different, perhaps more moderate fraud magnitudes to see if there is an association between fraud magnitude and internal auditor reporting intentions. Also, future research could continue to investigate the extent to which internal auditor behavior is explained by motivated reasoning theory vs. economic incentive theory. Both theories are credited for explaining the behavior of internal auditors in the face of objectivity threats. Future research could examine which theory has greater explanatory power. Finally, future research could examine the reporting intentions of those internal auditors who have *not* been chosen for a potential management position. It would be interesting to examine how internal auditors respond to knowledge that their peers have been chosen to participate in a MTG but they have not. Considering the

prevalence of MTG usage, it is important to understand how a MTG impacts those internal auditors who are not being groomed for management positions.

## Appendix A

Thank you for participating in this study. On the next screen you will read a brief scenario and then answer a few questions about your reactions to the scenario.

### Associated Materials Inc. Overview

Action Manufacturing Inc. (AMI) is a manufacturer of industrial grade plastics. Formed in 1982, AMI employs approximately 3,200 people in its plants and trades on the New York Stock Exchange. Since AMI is a publicly traded company, it is required to file quarterly reports (10Q) and an annual report (10K) with the Securities and Exchange Commission (SEC). The financial results for the past several years indicate that AMI has produced steady profits, but beginning three years ago AMI's revenues fell to levels below that of key industry competitors.

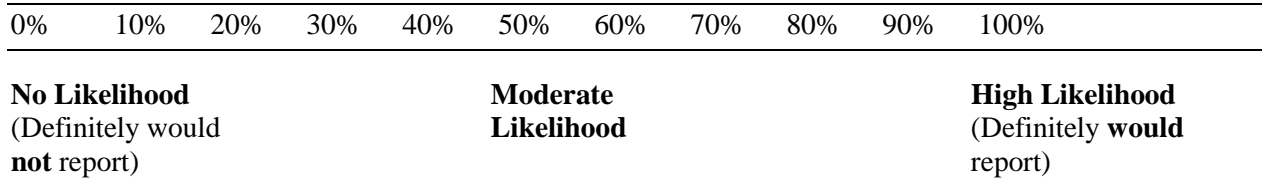
Payton Landry is a senior internal auditor at AMI. Landry has worked as an internal auditor at AMI for two years, and is **planning to remain in internal audit indefinitely. Landry plans to be a career internal auditor [preparing to transfer into a senior management position in the next few months. Landry has worked in internal audit as part of a management training program]**. His responsibilities as senior internal auditor include evaluating internal controls, operating efficiency, regulatory compliance, and testing various financial statement accounts.

One evening Landry was working late and happened to uncover what appeared to be improper journal entries hidden deep in a chain of erroneously referenced subsidiary ledgers. The entries classified certain items as assets rather than expenses. Landry noted that the same items had been expensed historically until three years ago when the company's revenue began falling behind industry competitors. After thoroughly investigating the entries, Landry was fairly confident that the CFO, Nathan Martin, had engaged in an unethical act of misreporting financial information. These entries had the effect of increasing net income by **30%. Landry knows that a fraud of this magnitude could lead to significantly negative reputational and financial effects for AMI [1%. Landry knows that a fraud of this magnitude would likely not lead to significantly negative reputational and financial effects for AMI]**.

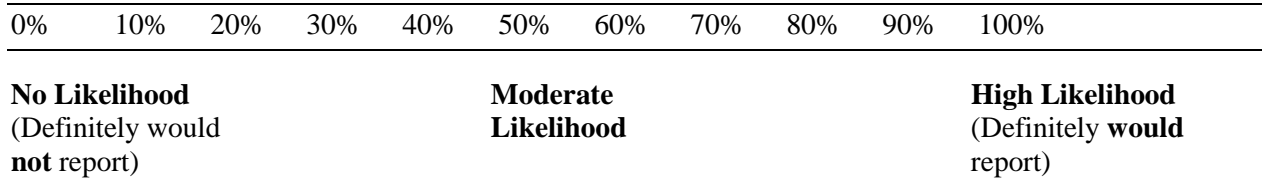
Landry is fairly certain that Martin intentionally and inappropriately changed the expense classification. Landry is also confident that neither the internal nor the external auditors will find the misstatement, as the entries were buried in subsidiary journals and were in amounts that would fall below the materiality threshold. Furthermore, the internal and external auditors had not discovered the inappropriate entries during the last three years. Landry feels certain that he is the only person aware of Martin's possible fraudulent activities over this three-year period.

Under AMI's internal audit department protocol, Landry is to report these findings to his supervisor, the Chief Audit Executive (CAE). As Landry ponders the situation, he considers the implications of reporting and the potential impact on both AMI and his career.

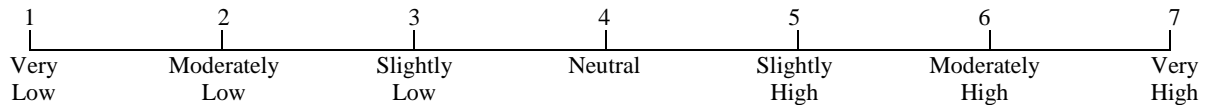
1. How likely do you think it is that Landry will report this instance of questionable behavior to the CAE?



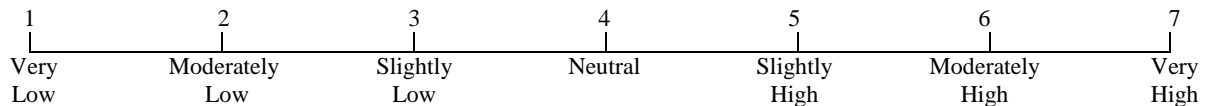
2. If you were in Landry's position, how likely is it that *you* would report this instance of questionable behavior to the CAE?



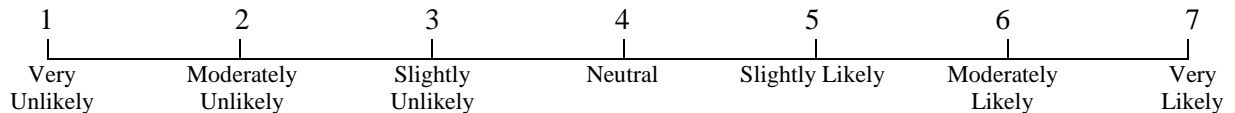
3. Please indicate the seriousness (i.e., the amount of harm done) of the questionable act described in the case:



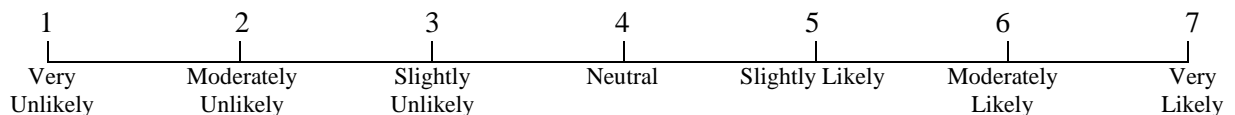
4. Please assess the personal responsibility (duty or obligation) of Landry to report his findings to the internal audit CAE:



5. How likely do you think it is that there would be personal costs (i.e., demotion, job loss) for Landry if he reports his findings to the CAE?

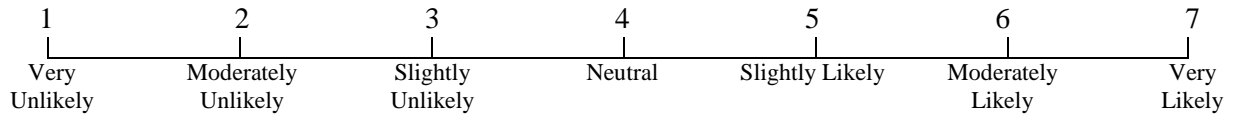


6. How likely do you think it is that Landry would face retaliation if he reports his findings to the CAE?





7. How likely do you think it is that there would be personal benefits for Landry if he reports his findings to the CAE?



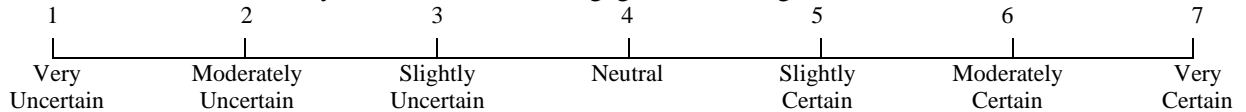
8. According to the case, which of the following characterizes Landry’s career plans?

- Landry is preparing to transfer into a senior management position in the next few months
- Landry is planning to remain in internal audit indefinitely

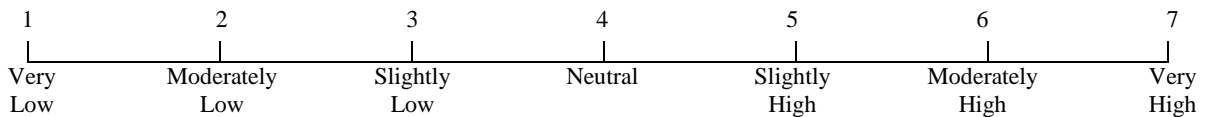
9. According to the case, what size was the suspected fraud committed by CFO Nathan Martin?

- 1% of net income
- 30% of net income

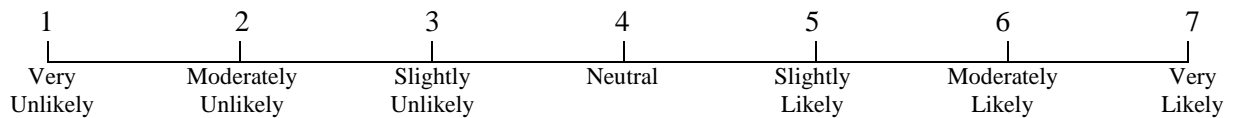
10. Please indicate how certain you feel that Martin engaged in a wrongful act.



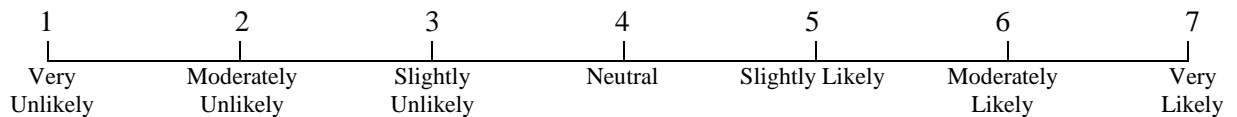
11. Please indicate the extent to which you believe the questionable act described in the case is morally wrong:



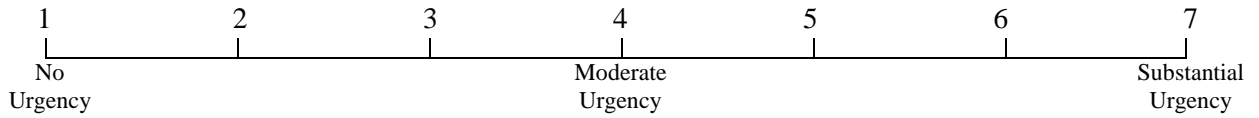
12. How likely do you think it is that there would be negative repercussions for AMI if the fraud is reported?



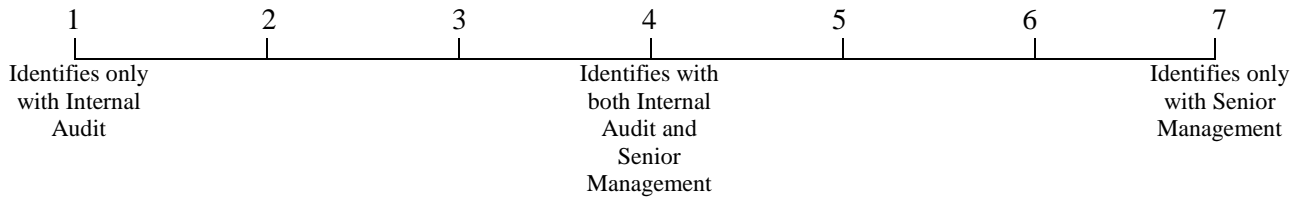
13. How likely do you think it is that there would be negative repercussions for Landry if he chooses **not** to report the fraud?



14. How much urgency do you think Landry feels to report his findings?

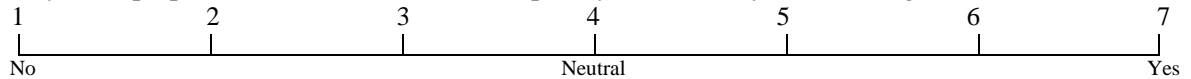


15. Based on the information provided in the case, do you think Landry identifies more with the internal audit department or senior management?

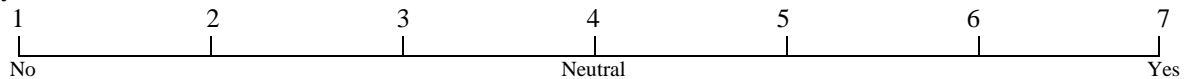


**Please read and answer each question below:**

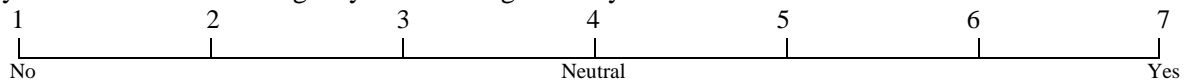
16. Would you be prepared to deceive someone completely if it was to your advantage to do so?



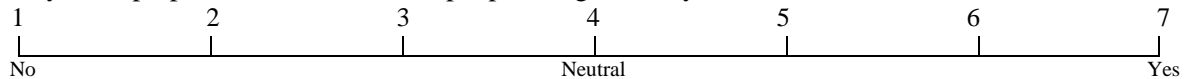
17. Would you be prepared to do a bad turn to someone in order to get something you particularly wanted for yourself?



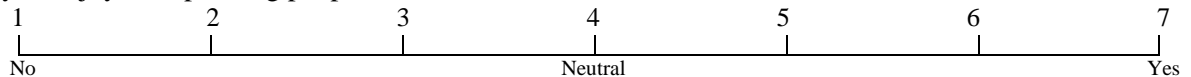
18. Do you often act in a cunning way in order to get what you want?



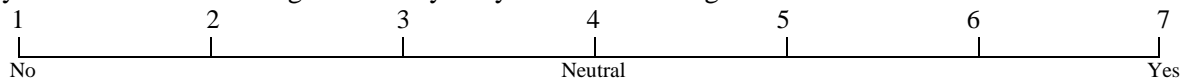
19. Would you be prepared to “walk all over people” to get what you want?



20. Do you enjoy manipulating people?



21. Do you tend to do most things with an eye to your own advantage?







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## VITA

Christopher Kevin Eller was born in Boone, NC on May 13, 1982. He graduated from Watauga High School in 2000. In 2004, Kevin graduated from Appalachian State University with a BSBA in Accounting. He then received a Masters in Accounting from Appalachian State University in December 2005.

After completing an internship in Asheville, NC in 2004, Kevin began working full-time as an accountant for Dixon-Hughes, PLLC in Boone, NC upon graduation. In August 2008, Kevin accepted a full-time position as a lecturer in the Accounting Department at Appalachian State. In 2011, Kevin began doctoral studies at Virginia Commonwealth University in Richmond, VA. Kevin is a Certified Public Accountant (inactive) in North Carolina.

Broadly speaking, Kevin's research interests include business ethics, behavioral accounting and tax issues, and accounting education. His specific areas of interest are whistleblowing/fraud reporting, behavioral facets of earnings management, internal auditor objectivity, and corporate social responsibility.

Kevin accepted a full-time position as an Assistant Professor in Accounting at Appalachian State University in Boone, NC in August 2014. He plans to continue pursuing behavioral and experimental research while teaching undergraduate and graduate-level accounting courses.