THE IMPACT OF CONTEXTUAL VARIABLES ON INTERNAL
AUDITORS' PROPENSITY TO COMMUNICATE UPWARDLY

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

By

Thomas D. Tolleson, B.S., M.B.A.
Denton, Texas
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The internal auditor plays a key role in the internal control structure of many organizations by assisting operating managers and concurrently serving as a watchdog to prevent corporate wrongdoing. The dual nature of this role may result in moral conflict when an internal auditor is called upon to whistleblow.

Accounting ethics researchers have used cognitive-developmental models of moral reasoning to examine the relationship between accountants’ moral development level and various judgments, including whistleblowing. These models may be deficient because they fail to consider the impact that contextual variables have on individual decision making.

I examined whether contextual variables impact internal auditors’ self-assessed likelihood of whistleblowing. I synthesized a theoretical framework and developed research hypotheses that predict relationships between the self-assessed likelihood of whistleblowing and (1) magnitude of the consequences (2) channels of communication and (3) type of wrongdoing. To test these hypotheses, I provided
internal auditors (n=123) with a scenario and asked them to self-assess the likelihood of reporting evidence of a malfacation to their internal audit director even though their audit manager told them to ignore the wrongdoing. I conducted the experiment as a 2 x 2 x 2 between-subjects design and controlled for level of cognitive moral development, gender and socially desirable response bias.

My results suggest that the likelihood of whistleblowing is greater when magnitude of the consequences is high. Also, internal auditors’ stated whistleblowing intentions are higher when channels of communication are negative. I found no evidence of a relationship between the likelihood of whistleblowing and type of wrongdoing. As covariates, level of cognitive moral development, gender, and a measure of socially desirable response bias were found to be insignificant.

The results of the study imply that internal auditors are more sensitive to the materiality of an internal control violation than they are to the occurrence of an internal control violation. The findings also suggest that the upward communication of sensitive issues is more complex than that suggested by the Committee of Sponsoring Organizations of the Treadway Commission.
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CHAPTER I

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

INTRODUCTION

This study was motivated by two observations. First, in its publication entitled *Internal Control-Integrated Framework* (1992), the committee of sponsoring organizations of the Treadway Commission (hereafter COSO) asserts that whistleblowing is a viable form of upward communication within an entity’s internal control system.\(^1\) As part of an internal control evaluation, COSO advocates assessment of an entity’s upward communication channels (COSO 1992). The Auditing Standards Board (hereafter ASB) has recently expressed a preference for COSO’s integrated framework over Statement of Auditing Standard 55 (hereafter SAS 55) in those attestation engagements reporting on internal control (AICPA 1993). Thus, COSO’s integrated framework could provide significant field guidance to auditors who render an opinion.

\(^1\) COSO acknowledges that communication channels may be downward, upward, or horizontal. This proposal examines upward communication within an organization, i.e., the communication of a lower-level employee to an upper-level employee. Within the COSO framework, upward communication not only includes communication from one level of an organization’s hierarchy to the next level, but it also includes communication outside the normal chain of command. This latter type of upward communication can be viewed within the COSO framework as whistle-blowing. COSO also defines communication to include both written and oral communication.
on an entity's internal control system. COSO acknowledges, however, that some of the assertions in its integrated framework need further research. Before auditors can assess the efficacy of communication within an organization and use their assessments to classify an organization's whistleblowing environment, Hooks et al (1994) suggest that research more directly grounded in theory is needed to determine those factors that impact whistleblowing, particularly within an entity's internal control system. In this study, I attempted to use a relevant theoretical framework to identify some of the factors that may impact an internal auditor's propensity to whistleblow.

Second, in recent years several accounting researchers have examined the ethical reasoning and judgments of professional accountants and accounting students. Most of these studies have used Kohlberg's model of cognitive moral development as a theoretical framework. Accounting researchers have examined the relationship between cognitive moral development and education (Armstrong 1987; Ponemon and Glazer 1990), cognitive moral development and auditor independence judgments (Ponemon and Gabhart 1989), cognitive

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2 Near and Miceli's (1985, p. 4) definition of whistle-blowing is used in the current proposal. They define whistle-blowing as "the disclosure by organization members of illegal, immoral or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action." This definition includes both internal and external whistle-blowing; however, the focus of the current proposal is on internal whistle-blowing.
moral development and auditors' ethical decision processes (Ponemon 1990; Lampe and Finn 1992), cognitive moral development and whistleblowing (Arnold and Ponemon 1991; Finn and Lampe 1992), and cognitive moral development and selection-socialization within an accounting firm (Ponemon 1992). These researchers have concluded that an accountant's level of moral reasoning influences her behavior, since many professional judgments are dependent on and conditioned by the individual accountant's personal values and beliefs. They also have used the results of these studies to prescribe a course of action for accounting education at both the professional and the university level: use those educational interventions that foster the highest levels of moral reasoning as defined by the Kohlberg model. However, before the accounting profession commits to a prescribed course of action, further research is needed to determine the relationship between cognitive moral development and contextually embedded judgments.

My research question is: Do contextual variables influence internal auditors' propensity to communicate sensitive issues upwardly? To address this question, I synthesized a theoretical framework from the whistleblowing literature, particularly Graham's (1989) model of principled organizational dissent and Miceli and Near's (1992) model of whistleblowing. I also integrated the issue-contingent model of Jones (1991) into my theoretical framework. In
addition, I included the moral psychology literature and the stream of accounting ethics research based on the Kohlberg model. I used this integrated framework as a basis for my research question and to develop my hypotheses.

In the current study, I conducted an experiment to examine the effect of three contextual factors on internal auditors' propensity to whistleblow. The three contextual factors were: Magnitude of the consequences, low or high; channels of communication, negative or positive; and type of wrongdoing, organizational or individual. Using Rest's (1979) Defining Issues Test, I also obtained a measure of each internal auditor's level of moral reasoning. I included this measure of cognitive moral development, the internal auditor's gender and a socially desirable response bias metric from each subject as covariates in my model.

I found evidence that an internal auditor's self-assessed likelihood of whistleblowing is greater when the magnitude of the consequences is high. I also found evidence that when channels of communication are negative, an internal auditor's self-assessed likelihood of whistleblowing is lower than when the channels of communication are positive. My hypothesis that the type of wrongdoing is related to an internal auditor's self-assessed likelihood of whistleblowing was not supported. The three covariates that I used in my study, level of cognitive moral development, gender, and socially desirable response bias,
did not have a significant partialling or suppressing effect.

The rest of this dissertation is divided into five sections. In the first section, I review the relevant literature and develop my theoretical framework. The second section presents testable hypotheses that are derived from this framework. In the third section, I explain my methodology for testing the proposed research hypotheses and describe the experiment I conducted. The fourth section presents the results of my hypothesis testing and a discussion of my results. In the last section, I discuss the limitations of my study and present ideas for extensions of this research.

Background of COSO

Over the past twenty-five years, the American public has witnessed a near crisis in the ethical and legal behavior of American business. Cavanagh (1984) notes that during the decade of the 1970s eleven percent of the largest firms in the U.S. were convicted of illegal activities such as bribery, tax evasion, criminal fraud, price fixing and campaign contributions that violated federal regulations.³

During this time period, the American press highly publicized the audit failures associated with the bankruptcies of several large, publicly traded companies. These illegal activities and audit failures raised questions about the role and adequacy of American corporations' internal control structures. The public's concern with these events led to Congressional and professional investigations that strengthened U.S. laws and professional guidance related to the internal control systems of American corporations. The COSO internal control framework is, in essence, the culmination of government and private-sector efforts of the past twenty-five years to ensure that American companies have strong, reliable internal control structures.

The first of the Congressional investigations resulted in the Moss Report, which was issued in 1976 by the U.S. House of Representatives' Subcommittee on Oversight and Investigations. Although the Moss Report primarily focused on the need for regulatory reform, it also addressed the issue of internal control. Among other suggestions, the report called for auditors to attest to the quality of a firm's internal control system and the enforcement of those

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4 Equity Funding, Penn Central, Four Seasons Nursing Homes and National Student Marketing were among those bankruptcies associated with "audit failure."

5 The House of Representatives' Subcommittee on Oversight and Investigations was chaired by John E. Moss (D-California), hence the title, "Moss Report."
controls (Journal of Accountancy October 1976). Soon after the Moss Report was issued, Congress passed The Foreign Corrupt Practices Act of 1977 (hereafter FCPA), which required companies to design and maintain an internal control system that deters the occurrence of fraud, the use of slush funds and the bribery of foreign officials.

In 1978 the Cohen Commission, which was viewed by some as the AICPA's reaction to the congressional staff reports issued in 1976 and 1977, published a report that resulted in structural changes within the accounting profession. The Commission suggested that, in addition to the financial statements, management present a report that summarized the condition of the firm's internal control system; the

6 In January of 1977, the staff of the Senate Subcommittee on Reports, Accounting, and Management chaired by Senator Lee Metcalf (D-Montana) issued a preliminary report that suggested the largest public accounting firms neither serve the public nor are independent of their clients' interests. The final report was not as harsh in its view of the accounting profession; nevertheless, the Subcommittee report represented a call for sweeping changes in the accounting profession.

7 The Cohen Commission began its work in 1974. The Commission, funded by the AICPA, was headed by Manual Cohen, former chairman of the SEC. The main focus of the Commission was to determine if an "expectations gap" existed between what the public expects of an auditor and what an auditor can realistically be expected to accomplish. The Cohen Commission focused on many of the same factors that brought about the 1976 Congressional hearings related to the accounting profession. The recommendations of the Commission influenced those in Congress who wanted to pass reform measures to defer to the Commission and allow the profession time to get its house in order (Armstrong 1993). In 1988, the Auditing Standards Board adopted nine auditing standards that became known as the Expectations Gap Auditing Standards.
commission also called for auditors to evaluate the reasonableness of management's assertions.

The SEC issued a proposal in 1979 which stated that maintaining an effective internal control system had always been one of management's most important responsibilities. The SEC proposal also cited the need for a report on the effectiveness of a firm's internal control. Although the SEC later withdrew the proposal, the agency indicated that it would revisit the issue of reporting on internal control systems. In 1979 the AICPA, partly in response to the FCPA and the proposals by the Cohen Commission and the SEC, formed the Minahan Committee to develop professional guidance that would assist managers in conforming to their internal control responsibilities (COSO Appendix A 1992).

The underlying theme of the above legislative initiatives, regulatory proposals and professional commissions was the need to improve the internal control systems of U.S. firms. During the early 1980s, the AICPA and the Institute of Internal Auditors (hereafter IIA), in response to the call for increased emphasis on internal control systems, established new standards and provided additional guidance for the evaluation of a firm's internal control systems.

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* One could interpret the professional commissions as an attempt by the profession to deter more federal regulation rather than as an attempt to improve internal control systems.
control system. However, these reforms proved inadequate; by 1985, Congress had begun a new round of hearings. These hearings focused on the role that internal control systems (or lack thereof) played in the numerous bankruptcies and near bankruptcies in the financial industry.

The accounting profession, in a highly visible response to the legislative investigations and proposals of the 1980s, formed The National Commission on Fraudulent Financial Reporting, which became known as the Treadway Commission.

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9 In 1980, the AICPA issued SAS No. 30 (hereafter SAS 30). SAS 30 addressed issues related to an independent auditor's evaluation of a firm's internal control system and the accompanying report on its effectiveness. The AICPA (1982) published a statement that contained revised guidance on the evaluations of internal control systems. The IIA (1983) issued Statement on Internal Auditing Standards No. 1, which provided guidance to internal auditors on the nature of internal control.

10 These hearings were conducted from 1985 until 1988 and were chaired by Representative John D. Dingell (D-Michigan), who served as chairman of both the House Committee on Energy and Commerce and its Subcommittee on Oversight and Investigations. These hearings were first characterized by Congressman Dingell as an investigation into the regulatory process. He later noted that as the investigation continued the committee members realized that auditors and accountants were not serving well the needs of the regulatory process (Management Accounting April 1985).
Commission. After examining the results of several research projects, the Treadway Commission members concluded that the majority of fraudulent cases occur when a firm's internal control system is either weak or suffers a breakdown.

The Treadway Commission (1987) made numerous recommendations to public companies, independent public accountants, and the SEC. One of these recommendations was that all public companies should establish and maintain an adequate internal audit staff. The Commission suggested that to ensure the internal audit function’s effectiveness and objectivity, companies should establish an open communication environment to facilitate internal complaints, particularly those related to allegations of fraud or other misconduct. Schultz et al (1994) note that the Treadway Report was the first professional pronouncement to advocate viewing a firm’s internal control system through a holistic,

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11 The National Commission on Fraudulent Financial Reporting was chaired by James C. Treadway, former commissioner of the SEC; hence, this commission became known as the Treadway Commission. It was financed by the following organizations: the AICPA, the FPI, the NAA, the IIA and the AAA. These sponsoring organizations became known as the Committee of Sponsoring Organizations, henceforth referred to as COSO. The work of the Treadway Commission and the profession’s actions to implement many of the Commission’s recommendations may have helped to diminish the call for new federal laws and regulations to govern the accounting profession. Armstrong (1993) notes that in May of 1988 Congressman Dingell commended the accounting profession for its timely and decisive action to incorporate many of the Treadway Commission’s recommendations into the profession’s auditing standards.
rather than a mechanistic, perspective of internal control. This holistic approach recommended that auditors consider the "softer" components of a firm's internal control system when evaluating the effectiveness of the system in deterring fraudulent financial reporting or illegal acts.\(^{12}\)

Shortly after the Treadway Commission issued its report, the ASB adopted SAS 55, *Consideration of the Internal Control Structure in a Financial Statement Audit*.\(^{13}\) SAS 55 (AICPA 1988) uses the term "internal control environment" to represent this broader, holistic perspective. SAS 55 suggests that auditors should consider management's "attitudes and actions toward financial reporting" and "entity policy regarding such matters as acceptable business practices, conflicts of interest, and codes of conduct" in any evaluation of a firm's internal control system (SAS 55 1988, 25, 26). Although SAS 55 incorporates these "softer" elements, Hooks et al (1994) note that it provides little guidance with respect to implementation. They conclude that auditors may still be relying on their assessment of a company's internal control environment to reduce testing of control procedures and may

\(^{12}\) These "softer" elements included the tone set by top management, corporate codes of conduct and open communication channels.

\(^{13}\) In 1988 the AICPA's Auditing Standards Board issued nine new Statements on Auditing Standards (SASs), one of which was SAS No. 55. These nine SASs were referred to as the "expectations gap" standards.
be placing much credence on management’s representations, a potentially unreliable source on which to base an internal control environment assessment.

In early 1988, the Committee of Sponsoring Organizations of the Treadway Commission (hereafter COSO) appointed a five member committee whose purpose was to monitor and report periodically the progress being made in the implementation of the Treadway Commission’s recommendations.\(^\text{14}\) In 1992, COSO published a document entitled Internal Control-Integrated Framework. This framework calls for internal control systems to play increasingly significant roles in the audit process. COSO (1992) advocates external auditor assessment of and reliance

\(^{14}\) Congressman Dingell had let it be known that if necessary he would introduce legislation requiring the profession to implement the Treadway Commission’s recommendations. Thus, the formation of a committee by COSO to oversee and report on progress in implementing the Commission’s recommendations may be an attempt by the profession to preserve its "self-regulatory" status rather than an attempt to affirm auditing’s obligation to detect fraud and material errors.
on the components of a firm’s internal control environment.\textsuperscript{15} Better guidance in the evaluation of the internal control environment is crucial because, as Hooks et al (1994) note, mounting evidence suggests that a correct assessment of a firm’s internal control environment is useful in assessing the occurrence of fraud or other sensitive issues.

As envisaged by COSO (1992), information and communication comprise an additional component of a firm’s internal control system. Information pertaining to running and controlling the firm must be identified, captured, and communicated in a timely fashion. Communication, however, is more than the operational, financial, and compliance-related reports generated by the information system.\textsuperscript{16}

\textsuperscript{15} COSO views the internal control environment as one of five interrelated components which comprise an internal control system. These five components are: control environment, risk assessment, control activities, information and communication channels and monitoring. According to COSO (1992), the internal control environment establishes the tone of an organization and supports the control consciousness of its employees. The internal control environment is the cornerstone for the other four components of a firm’s internal control system. Some of the elements of the control environment include the "integrity, ethical values and competence of employees, management’s philosophy and operating style; the way management assigns authority and responsibility, and organizes and develops its people." (COSO 1992, 19) The COSO framework was written not only for external auditors but also for any individual or group interested in evaluating an organization’s internal control structure.

\textsuperscript{16} Communication is defined by COSO to include not only written and oral communication but also tone of voice, body language and actions.
Management must ensure that all personnel understand the nature and importance of control responsibilities and how individual activities relate to one another. COSO suggests that unless communication flows down, across and up the organization, a firm's communication system is ineffective. COSO stresses open communication channels and explicitly refers to whistleblowing as one means of enhancing a firm's internal communication system, especially with respect to upward communication.

COSO appears to suggest that whistleblowing may be beneficial to both internal and external auditors. Hooks et al (1994) posit that internal auditors may rely on whistleblowing as a preventive and detective control, while external auditors may use their knowledge of the whistleblowing phenomenon to aid in the detection of fraud. COSO provides few details as to how interested parties can ascertain if upward communication of sensitive issues is occurring within a firm. The Commission called for theoretical-based research that examines the assumptions of its framework. Hooks et al (1994) concur with COSO and note that professional accountants need a better understanding of the characteristics of an effective internal control system.

The need to understand better how the internal control environment and the presence of upward communication channels impacts the effectiveness of an internal control system was given added impetus with the adoption of SAS 78
by the ASB. The purpose of SAS 78, as stated on page one, is to incorporate the internal control framework advocated by COSO. SAS 78 is effective for audits of financial audits beginning on or after January 1, 1997.

The Role of the Internal Auditor

The above discussion emphasizes the increasingly important role that legislative and professional bodies have placed on the internal control structure of American corporations. A key component of an organization's internal control structure is the internal auditor. Wood and Wilson (1989) note that internal auditors are sometimes placed in conflicting roles because of their occupational role within an organization. Internal auditors are expected to assist operating managers in solving an organization's problems and, at the same, to serve as watchdogs to prevent corporate wrongdoing.

Because of her unique role within an organization, an internal auditor is more likely to become cognizant of sensitive issues or questionable actions than is another employee.17 The Treadway Commission (1987) and the IIA (1985) prescribe guidelines to internal auditors for reporting perceived wrongdoing. The conflict between an internal auditor's professional responsibilities and

17 In addition, many companies often designate the internal auditing department as the department to which suspected wrongdoing should be reported.
organizational role may result in moral conflict when the internal auditor is called upon to whistleblow. After finding evidence of individual or corporate wrongdoing, the internal auditor may choose one of several options. The internal auditor may choose not to report evidence of wrongdoing to her immediate supervisor. Or the internal auditor may choose to report evidence of wrongdoing to her immediate supervisor and not take any further action. Another possibility is that the internal auditor may choose to report evidence of wrongdoing to her immediate supervisor and then follow up on the resolution of the issue. If the internal auditor believes that issue was resolved satisfactorily and if the internal auditor believes that the suspected wrongdoing should be brought to the attention of an upper-level organizational member (or members), the internal auditor may disclose the issue outside the normal chain of command within the organization.18

Near and Miceli (1988, 5) define whistleblowing as "the disclosure by organization members (former or current) of illegal, immoral, or illegitimate practices under the control of their employers, to persons or organizations that

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18 An internal auditor also has the following options: to exit and remain silent, to exit and then whistle-blow or to remain and whistle-blow to an external source. These options, however, are not the focus of the current proposal.
may be able to effect action." Near and Miceli (1988) label both internal and external reporting of wrongdoing as whistleblowing. The current study was concerned with internal whistleblowing and used Near and Miceli's definition with one major modification: internal auditors are considered to be whistleblowers when they go outside the normal chain of command within the organization.

In performing her duties, I assumed that an internal auditor will document all material weaknesses as part of the normal course of her duties. Thus, documentation, in and of itself, is not considered in the proposed study to be whistleblowing. The need to whistleblow occurs only when the internal auditor's supervisor refuses to report the alleged weakness to the appropriate person(s). If the internal auditor reports such an abuse by going "outside of

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19 Miceli, Near and Schwenk (1991) suggest that an internal auditor is also whistle-blowing when she reports suspected wrongdoing to her immediate superiors. Miceli, Near and Schwenk (1991) state that internal auditors are not the only employees who are formally required to report sensitive issues. Pottmyer (1987) notes that the Code of Ethics for Government Service prescribes all government employees to report corruption in a government agency whenever it is discovered. Matthews (1987) finds that over half of the private sector entities require all employees, not just internal auditors, to disclose suspected illegal or unethical conduct, according to suspected wrongdoing. Miceli, Near and Schwenk (1991) also posit that in some firms managers may formally encourage internal auditors to report suspected wrongdoing, but management's actions and reward systems may actually discourage internal auditors from reporting suspected wrongdoing. Miceli, Near and Schwenk (1991) also suggest that reporting on all types of wrongdoing is rarely, if ever, role-prescribed for any employee.
normal channels," then whistleblowing occurs; if she does not, then no whistleblowing has occurred.

The whistleblowing phenomenon has taken on added significance with COSO's (1992) expanded role for internal control structures and its suggestion that an organizational environment conducive to whistleblowing is a viable means of strengthening a firm's internal control structure. Few studies have examined the organizational factors that increase an employee's propensity to whistleblow. Accounting researchers in this area assume an individual's cognitive moral development affects his/her propensity to whistleblow (Arnold and Ponemon 1991). They conclude that internal auditors who are characterized by low levels of moral reasoning as measured by Rest's Defining Issues Test (1979) are less likely to whistleblow than are internal auditors characterized by high levels of moral reasoning. Accounting researchers also have found that as a professional group accountants are characterized by lower levels of moral reasoning, as measured by Rest's DIT, than are other professional groups such as doctors and lawyers. In addition, they have concluded that as a professional group accountants are characterized by lower levels of moral reasoning than are college graduates.

The COSO framework implies that an environment conducive to whistleblowing also needs to be considered. If an individual's level of moral reasoning is dominant, as
suggested by prior research, then the COSO framework that assumes creating an open environment can be a significant factor in deterring wrongdoing may be flawed. One purpose of this study was to examine whether or not individual moral reasoning is invariant with respect to organizational environmental factors, such as the communication channels espoused by COSO.

The Psychology of Moral Development

Jean Piaget's studies examining the cognitive and moral development of children provide the underlying rationale for the psychology of moral development. Piaget (1952, 1954) argues that the mental development of individuals has its incipience with birth and its cessation with adulthood and occurs in the following stages: sensorimotor, pre-operational, concrete operational and formal operational. These stages are the result of a continuous developmental process and represent successive qualitative changes in an individual's cognitive structures. Although children may progress through the various stages at differential rates, progress is not automatic; however, succession through the stages of cognitive development is invariant, i.e., the progressive order of the stages is the same for each child.

After observing children's games to examine the moral and social development of adolescent children, Piaget (1932) concludes that moral development, just like cognitive
development, also occurs in a stage-sequence order. He reasons that while playing games children not only learn to respect rules but also comprehend how rules can be made and changed. He argues that a respect for the rules can be equated with a rudimentary concept of morality.

Piaget (1932) formed his Law of Conscious Realization from his work on the cognitive and moral development of male children. This law holds that actions precede cognition and provide the experience necessary for a cognitive base. In Piagetean terms, the early logic-mathematical stages of cognitive development are preceded by a sequence of actions; however, once an individual is capable of performing formal operations (i.e., the point at which an individual becomes able to apply logical reasoning to all classes of problems), thought is no longer constrained by concrete situations, rather actions are often shaped by thought. Piaget’s work in the area of cognitive development became the foundation for Kohlberg’s model of cognitive-moral development.

The Kohlbergian Model

The Kohlberg model consists of three levels of moral development: the pre-conventional, conventional, and post-conventional levels. Each level of moral reasoning consists of two stages. Kohlberg (1971) agrees with Piaget that moral reasoning follows an invariant developmental sequence of moral stages; however, he argues that his cognitive-developmental model of morality is broader in scope than
Piaget's. K. Kohlberg envisages his cognitive-developmental model as an interactive model in which human actors do not simply reflect on either external facts and/or internal emotions, rather the moral judgments of these actors are the products of social interaction. Kohlberg (1969) posits that the general quality and extent of an individual's cognitive and social stimulation define the environmental influences in moral development, not specific individual actions that are rewarded or punished.

Assumptions of the Kohlberg Model

Kohlberg began his study of moral development under the assumption that moral development follows universal ontogenetic trends as espoused by Western philosophers. In addition, Kohlberg (1971) stresses that the process resulting in a rational or mature morality is fundamentally different from the learning process associated with acquiring the rules and values of a given culture. He rejects the notion of ethical relativity and the idea that moral learning and development are the result of irrational and emotional processes.

Kohlberg (1971) notes several common assumptions underlying his theory and other cognitive-developmental moral theories. He postulates that individuals progress

21 The moral theories of Baldwin (1906), Dewey and Tufts (1932), Mead (1934), and Piaget (1932) are also considered to be cognitive-developmental theories of moralization.
through stages of moral development that represent cognitive-structural reorganizations of the self and society. Each stage represents "taking the role of others" in social situations; therefore, social fabric and environmental influences impact an individual's opportunities for role-taking. He also assumes that individuals are active agents who structure their perceived environments. Thus, moral stages and their reorganizations are representations of the interaction between an individual's structuring tendencies and the environment's structural features. The interaction process leads to successive states of equilibrium which represent forms of justice. Each succeeding stage is defined as a more adequate moral structure, representing increased differentiation and integration of formal criteria.

Kohlberg (1971) states that principled morality represents the highest level of differentiation and integration. This level of moral reasoning should equip an individual not only to handle more moral problems but also to resolve moral problems in a more consistent manner.

The Stages of Moral Development

Kohlberg (1971, 1981, 1984) posits that the six invariant stages of his model represent more than an attitude in a particular situation, rather each stage defines a structured whole, i.e., a total way of thinking about a moral conflict. According to Kohlberg, the moral
judgment of an individual has a characteristic form for a given stage. He argues that the form of a moral judgment is isomorphic to the form of a corresponding intellectual judgment. Kohlberg reasons, however, that moral judgments require more than the application of a level of intelligence to moral conflicts. He postulates that moral development is not simply a reflection of cognitive development applied to a moral dilemma. Because logical stages are more general, they must exist prior to moral stages. Therefore, an individual can be reasoning at a given logical stage but not the parallel moral stage; an individual can not demonstrate the moral reasoning of a given moral stage without the requisite logic stage. (Kohlberg and Devries 1969; Kuhn, Langer and Kohlberg 1971)

Kohlberg (1969) suggests that each successive stage in his model represents a more adequate form of moral reasoning than the previous stage. He posits that a successive stage is more adequate than the previous stage because stages are hierarchical integrations; a higher stage incorporates the components of the lower stages and reintegrates these components at the higher level. Although lower stages are available for use by individuals (i.e., individuals can use a lower stage to reason about a moral dilemma), individuals prefer higher stages above lower stages of moral reasoning. (Rest, Turiel and Kohlberg 1969; Turiel 1969; Blatt and Kohlberg 1971; Rest 1971)
Application of the Kohlberg Model to Internal Auditing

The following case will be used to illustrate the Kohlberg model within an internal auditing context. Mr. Jones is an internal auditor for a local municipal government agency. The local government agency administers and partially funds an alcohol safety program (the program is mandated and partially funded by the state government.) During a recent internal audit of the alcohol program, Mr. Jones found evidence that accurate records of accounts receivable were not being kept, resulting in large write-offs. Mr. Jones communicated his findings to his immediate superior, the director of internal auditing for the local municipality. Mr. Jones' supervisor advised him to "just forget about the matter" because correcting the problem would involve a fight with the city commissioner and possibly create a poor image of city governance.

Within the framework of the Kohlberg model, Level 1, or the preconventional level, represents a focus on the self. At this level, right and wrong are framed as how an action will impact the decision maker. Stage 1 reasoning occurs at this level and represents obedience. A person chooses to do right at this stage so as to avoid punishment or because those in authority have superior power. If Mr. Jones reasons at stage 1, he will keep silent so as to avoid any reprisal from his immediate supervisor. At stage 2, Mr. Jones will consider the costs and benefits of going outside
the normal chain of command. If he perceives the cost to himself of reporting the large write-offs to be greater than the costs of not reporting the large write-offs, then he will remain silent. For example, Mr. Jones might consider what the cost would be if the state auditors discover the problem and conclude that he had or should have had knowledge of the write-offs. If this is his reasoning, he may decide that the cost of remaining silent is too great. Mr. Jones might also consider if disclosing the wrongdoing to an upper-level manager at city hall would bring him a promotion or personal recognition. Once again, if the benefits of the promotion outweigh possible reprisals from his supervisor, Mr. Jones may whistleblow. However, Mr. Jones may reason that the cost of going over his supervisor’s head is greater than any potential benefits from a promotion or personal recognition. Therefore, he will remain silent. At either stage 1 or stage 2, Mr. Jones can be seen as protecting or acting in his own self-interest.

If Mr. Jones is at stage 3 or stage 4, the focus of his reasoning is on maintaining relationships. At stage 3, Mr. Jones contemplates what his significant others expect him to do in the current situation. For example, what does his spouse or other family members expect from him? Do they believe that he should report the write-offs to the city commissioner? What do his fellow employees expect from him?
Do they believe that he should report the write-offs to the city commissioner? In the latter case, if Mr. Jones reasons that his co-workers would discourage him from whistleblowing he may decide not to whistleblow out of loyalty to his department. If he believes that his family and/or co-workers expect him to disclose the suspected wrongdoing, then he may decide to whistleblow.

At stage 4, Mr. Jones continues to look to external sources for determining right from wrong. The external sources are expanded to include society as a whole. Society's laws emerge as the focal point for Mr. Jones, if he reasons at stage 4. At this level, Mr. Jones views codified law as a mechanism which allows societies to function smoothly. Mr. Jones may also prioritize sets of laws (or rules and regulations). For example, if Mr. Jones believes that the Ten Commandments represents a higher law than that of a society, he may give preference to the higher law. Mr. Jones may also give preference to the code of ethics promulgated by a professional group. If Mr. Jones belongs to the IIA, he may decide that the reporting guidelines issued by the Institute take precedent over departmental or municipal regulations. For example, the IIA (1978) suggests that once an internal auditor has reported a malfacation to the appropriate organizational authority, the internal auditor should ascertain if corrective action was taken on the audit findings. Mr. Jones may believe that by
not reporting the write-offs to an upper-level municipal employee he is tainting the image of professional internal auditors. He reasons, "What if all internal auditors simply forgot about wrongdoing that they had found when instructed by their supervisors to do so? What trust could society place in the internal audit function?" Thus, Mr. Jones may view the IIA's guidelines as positive rules and report the write-offs to an upper-level municipal employee.

At stages 5 and 6, Mr. Jones follows self-chosen moral principles. He acknowledges that moral and legal perspectives may conflict. Stage 5 is characterized by reasoning which attempts to determine where social contracts cease and individual rights dominate. Mr. Jones may reason that he has two contracts. As a professional internal auditor, he may believe that he has a contract with society to be impartial, independent and objective in reporting his audit findings. Mr. Jones may decide that fulfillment of his contract with society will result in some type of personal loss to himself but that such risks are part of the role of an internal auditor. Mr. Jones may feel that he has a second contract with his immediate supervisor. However, if Mr. Jones perceives that his immediate supervisor only gives lip service to the role of the professional auditor, then he may reason that the expectations of his supervisor to forget about his audit findings are unjust. In such a case, Mr. Jones may decide to whistleblow.
If Mr. Jones reasons at stage 6, he uses self-chosen ethical principles to determine what is right or moral. At this stage, Mr. Jones puts himself into his supervisor's position and attempts to consider the claims that the supervisor could make. Assuming his supervisor's role, Mr. Jones may see his supervisor's claim as "I have a right to not allow this audit report to make waves for my department." Such a claim is one of self-interest. Mr. Jones also puts his supervisor into his (Mr. Jones') shoes. He (the supervisor) then sees that Mr. Jones is attempting to act on the internal auditing principle that malfeasions should be reported to those who can effectively correct the malfeasion. Of the two positions, Mr. Jones' position is the more believable, and Mr. Jones should act accordingly.

Kohlberg's Moral Judgment Issues Test

To obtain a measure of a subject's level of moral reasoning, Kohlberg and his associates developed The Moral Judgment Issues Test (hereafter referred to as MJI). The MJI (Colby and Kohlberg 1987) is actually an interview instrument and is officially labeled The Standard Issue Moral Judgment Interview. The MJI consists of a series of moral dilemmas and has acceptable reliability and validity measures. After a subject reads one of the moral dilemmas, the interviewer asks a series of probing questions. The process is repeated until all of the moral dilemmas have been read. Kohlberg believes that the derived stage score
from the MJI represents a subject's underlying structure of moral thought. Thus, if a subject is scored at stage 3 on the Heinz dilemma, then the subject is at stage 3 generally. This latter conclusion discounts the possibility that a subject may be characterized by multiple moral thought structures or that a subject may manifest different moral thought structures for different situations (Rest 1986b). Although the proposed research will not utilize the MJI, some of the citations herein reference the MJI, thus the short description.

Rest's Model and Defining Issues Test

Rest (1986a) uses Kohlberg's stage-sequence rationale as the theoretical framework for his own model of ethical decision making. Rest notes that Kohlberg's critics and supporters have, at times, treated moral judgment as if it comprised the whole of moral psychology. In his model, Rest proposes that an individual's ethical action is composed of four components: recognizing an issue as a moral issue, making a moral judgment, establishing moral intent and following through with moral behavior. Rest (1986a) argues that moral judgment scores represent a specific process, not moral psychology in general. He defines moral judgment as "...that aspect of the psychology of morality dealing with how a person judges which course of action in a social situation is morally right..." (Rest 1986b, 455). Rest views moral development as understanding and applying the
principles of fair judging with increasing sophistication. His Defining Issues Test (DIT) is an objective test consisting of multiple series of statements; the test subject is required to indicate which statements in a given series are needed to make a decision related to a hypothetical moral dilemma. Based on the results of numerous studies that have used the DIT, Rest posits that moral judgment increases with age and education and that it is related to but distinct from general cognitive capacity.

Rest’s model and test of moral development differs from Kohlberg’s in that Kohlberg posits that individuals either perform at a given stage level or at some transitory point between stages. Rest, however, argues that while it is possible to define logically the stages of moral development, an individual may operate on multi-stages at the same time. Moral development, as viewed by Rest, is preferring one stage of moral reasoning above another. Critics suggest Rest’s approach overcomes Kohlberg’s philosophy of equating the "stage" of reasoning with the individual—Rest defines "stage" as an attribute of reasoning. However, because of this shift, the DIT cannot be used to determine an individual’s stage of moral reasoning. The most common used score from the DIT is the P score, the percentage of time subjects prefer principled reasoning.

The DIT is designed to examine the four issues from the
moral-dilemma stories of Kohlberg that are considered to be most important. Kohlberg's stages 2, 3, 4, 5a, 5b, and 6 plus two global indexes comprise the eight DIT scores that can be derived from the four moral dilemmas. As mentioned previously, the P score (the Principled Morality Score) is the most frequently used score; however, this score involves only the moral issues found at Kohlberg's stages 5a, 5b, and 6. The test is available in both long and short form and has acceptable validity and reliability levels. When interpreting the DIT, Rest suggests the creation of profiles for individuals and groups (McCrae, Moreland 1985).  

The Kohlbergian Framework and Accounting Research

Several accounting studies have used the Kohlbergian framework to measure accountants' level of moral reasoning. The majority of these studies have used Rest's DIT test to measure moral reasoning capacities. In 1987, Armstrong conducted a mail survey of a random sample of practicing CPAs selected from across the United States. Part of the questionnaire consisted of Rest's DIT, along with a request for certain demographic data. Armstrong finds that the mean Principle Moral Reasoning Score (the P score) for her sample

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of practicing CPAs was significantly lower than the mean P score for a sample of college students. She notes that the results are consistent with an earlier project in which she administered Rest’s DIT to a sample of practicing CPAs.

The significant difference between these practicing CPAs and college students is contrary to the tenants of the cognitive-developmental model. Rest (1979) posits that additional years of education significantly impact an individual’s moral reasoning capacity. The P scores of CPAs suggest that public accountants reach a moral maturation level equivalent to adults in general. Thus, CPAs are not only below the moral maturation of college graduates, but they also are below the moral maturation of college students. Armstrong concludes that formal educational programs for CPAs may not nurture the continued moral development of accountants (Armstrong 1987).

Ponemon (1990) examines the ethical judgments of CPA practitioners and concludes that a relationship exists between auditors’ resolution of audit role conflict and their position in the audit firm’s hierarchy. He also suggests that an association exists between an auditor’s capacity for ethical reasoning and the auditor’s hierarchical level in the firm. Ethical reasoning capacity increases in the staff and supervisory levels and decreases in the manager and partner levels. In his study, Ponemon uses Kohlberg’s Moral Judgment Interview (MJI) and measures
the subjects' responses with the Issue Scoring System. To test the relevance between the MJI and the role conflicts often experienced in public accounting, Ponemon adapts a real-life case study that involved an accounting firm and two of its clients. His auditing dilemma is designed to deduce a subject's stage level in the Kohlberg model. Ponemon argues that the stage consistency achieved between the two measures supports his hypothesis that the Kohlberg model applies not only to abstract hypothetical dilemmas but also to auditing role conflicts (Ponemon 1990).

Ponemon and Gabhart (1990) conducted an experimental study involving audit managers and partners to examine the implicit reasoning characteristic of auditor independence judgements. They required each auditor to complete a hypothetical auditing case based on an auditor-independence dilemma and then used Rest's DIT to obtain a measure of each subject's ethical cognition. Their experimental manipulations involve the explicit penalties if the auditor is caught and the attributes of auditor affiliation. Ponemon and Gabhart concluded that a systematic relationship exists between an auditor's level of ethical cognition and the auditor's resolution of an auditor-independence conflict.

Ponemon and Glazer (1990) performed a cross-sectional analysis of the moral reasoning capacities of both accounting students and alumni representing private and
public educational institutions. They concluded that students at both types of institutions experience an increase in their moral reasoning capacities during the college years. They found that the rate of increase in moral reasoning was greater for those accounting students attending the liberal arts college; the "P" scores of the liberal arts college alumni also were significantly higher than the state university alumni.

Ponemon (1992) extends his prior work and explores the influence of the socialization process within the accounting firm upon the ethical reasoning level of individual CPAs. He employs cross-sectional, longitudinal and experimental methods and utilizes Rest's DIT to measure the subjects' ethical capacities, concluding that the accounting firm socialization process tends to stymie the ethical development of individuals entering and remaining in the profession. He posits that managers and partners are more likely to promote those seniors who exhibit an ethical reasoning level commensurate with their own. Thus, the capacity for ethical reasoning appears to become more restricted within the upper levels of an accounting firm's hierarchy.

Moral Intensity

Jones (1991) proposes that the moral decision making process is impacted by the characteristics of the moral
issue or the type of moral issue. He argues that cognitive-developmental models of decision making such as the Kohlberg model and the Rest model are deficient because they fail to consider the issue's characteristics as either an independent variable or a moderating variable. Thus, contrary to the Kohlberg model, Jones (1991) posits that an individual's moral decision making and reasoning processes are not identical for all moral issues. According to Jones (1991), the level of moral reasoning and behavior associated with the theft of a few paper clips and several sheets of copying paper is not expected to be the same as that associated with the release of a life-threatening drug to the market. Jones (1991) refers to the characteristics of the moral issue as moral intensity. He posits that moral intensity is a multidimensional concept represented by an issue's magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect. I am using two of these dimensions: magnitude of consequences and proximity.

Jones (1991) acknowledges that the concept of moral intensity is not discussed in the extant literature of cognitive-developmental models of moral decision making. However, he proposes that his issue-contingent model has
intuitive, observational and empirical support. Jones (1991) states that, intuitively, moral issues that affect individuals with whom we have close contact are of more concern to us than the moral issues that affect those with whom we have little or no contact. Jones reasons that proximity, defined by him as physical, psychological, cultural, or social distance, impacts an individual's reaction(s) to a moral issue. Observational evidence appears to substantiate his reasoning. Kaplan (1989) proposes that even though the American people recognized the invasion of Afghanistan by the Soviet Union and the resulting war as horrible, the events in that distant country barely registered in our consciousness. During the factional fighting in Beirut, a militiaman of one of the factions stated that when he expected to engage in a tough, bloody battle he took other fighters, not his friends. By doing so, he said that he avoided a guilty conscience in case the mission failed (Newsweek July 1989).

Jones (1991) notes that magnitude of consequences is usually measured in terms of magnitude of economic harm (i.e., in terms of monetary units). He suggests, however, that other measures can be used. For example, acts of wrongdoing may result in physical harm. The magnitude of consequences associated with an act resulting in major physical harm is greater than if the act results in minor physical harm. As noted by Jones (1991), empirical evidence
also lends credence to the notion of moral intensity. Fritzsche and Becker (1983) examine marketing managers’ ethical behavior across a series of ethical dilemmas and find that as the consequences of the decision became more serious marketing managers tended to choose responses that are more ethical. Fritzsche (1988) expands on this empirical work by taking specific dilemmas and varying each dilemma’s magnitude of consequences over several levels. He notes that differences by magnitude of consequence were found in situations involving bribery and conflict of interest issues. Weber (1990) posits that corporate managers show variability in their level of moral reasoning when confronted with different moral issues.

Jones (1991) also suggests that the idea of moral intensity is derived, at least in part, from moral philosophers, who, in their normative arguments, differentiate among levels of moral responsibility based on the concept of proportionality. Garret (1966) notes that proportionality, as espoused by moral philosophers, entails the nature of the goodness or evil in a situation, as well as the situation’s urgency. Certainty of effects, the moral agent’s degree of influence on the situation, and the existence and availability of alternate choices are also related to proportionality.

The concept of moral intensity also finds support in the area of law. Packer (1968) argues that retribution is
an idea firmly established in criminal law; in essence, the degree of retribution is often dependent on the nature of the perpetrated evil. Thus, the range of sentences associated with the crime of murder is more severe than the criminal punishment associated with petty larceny. Indeed, our jury system is based on the belief that jurors can delineate the seriousness of the crime and punish accordingly.

Although Levine (1975) does not use the term moral intensity in his criticism of the Kohlberg model, he suggests that variation in the moral dilemmas used by researchers also may result in statistically significant variation in their subjects' moral reasoning. Haan (1986) proposes that moral capacity alone does not determine the quality of moral action; she argues that moral action is context dependent, as well as cognitively informed. Haan (1986) does not use the term moral intensity, but her research supports the proposition that the quality of moral action varies from situation (or moral dilemma) to situation.24

Moral Intensity and Accounting Research

Lampe and Finn (1992) propose and test a five-element

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24 Haan (1986) posits an interactional theory of morality. According to Haan, the quality of moral action depends on several factors such as the objective features and contents of moral dilemmas, prior history, motivation, opportunity, emotional stress, etc.
model of ethical decision making. They integrate three models of ethical decision making: the Rest model (1986), the Trevino model (1986) and the Jones model (1991). Lampe and Finn use the Rest model as the primary model for their five-element model and argue that their model is an alternative to the implied AICPA Code-based model of ethical reasoning. They test their model using Rest’s DIT (three-story version), a series of seven ethical vignettes and a ranking of eight potential reasons for the yes/no responses from subjects on each vignette.

From the statistical analyses of the data, Lampe and Finn (1992) posit that their five-element model of auditor ethical decision making is superior to the more conservative, Code-based model. They argue that the five-element model captures the decisions made and the reasons for the decisions better than the AICPA model. Because the Code-based model does not recognize personal utility for other-than-moral values, differences in auditors' cognitive moral development, and auditor consideration of the impact that alternative actions have on other people, Lampe and Finn fault the Code-based model as being too simplistic.

Whistleblowing

Although a comprehensive theory of whistleblowing has

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25 Lampe and Finn (1992) posit that the rules and principles stated in AICPA Code of Professional Conduct, along with applicable laws, comprise a Code-implied model of ethical decision making.
not been developed, researchers in this area draw on behavioral theories that appear similar in some respects to the phenomenon of whistleblowing (Near and Miceli 1987). Prosocial behavior, a stream of research in social psychology, defines positive social behavior as behavior undertaken to benefit other people, although the prosocial actor may also be motivated by personal gain (Miceli and Near 1988). Graham (1986) suggests that social psychologists' study of interpersonal helping (i.e., prosocial behavior) is a suitable paradigm for examining prosocial behavior within organizations.\(^{26}\) According to Graham (1986), prosocial behavior within an organization entails the reporting of wrongdoing through organizational channels; she posits that communication mechanisms such as an open door policy and hotlines, along with employee knowledge of their existence, impact principled organizational dissent (i.e., whistleblowing). She proposes that several variables are important to researchers in the area of principled organizational dissent.\(^{27}\) One of these

\(^{26}\) For a review of the prosocial literature, see Latane and Darley (1968).

\(^{27}\) Graham (1986) defines principled organizational dissent as an effort by employees in the workplace to protest and/or bring about change in the organization's status quo because they conscientiously object to current organizational practice or policy. Although Graham refers to her model as a model of principled organizational dissent, researchers have used her model as a model of whistleblowing. For an example of Graham's model used within an accounting context, see Schultz et al (1994).
variables is the perceived issue seriousness. Other researchers in the whistleblowing paradigm also suggest that the seriousness of the wrongdoing (i.e., the issue seriousness) impacts the decision to whistleblow (e.g., Near and Miceli 1985; Miceli and Near 1985; Miceli and Near 1992).

Graham (1986) posits that an objective measure of issue seriousness is dependent upon the nature of the issue. She notes that if an issue is quantifiable in monetary terms, then the greater an issue’s monetary impact, the more serious the issue. If an issue threatens physical harm, then the seriousness of an issue increases both when more people are harmed rather than a few and when the inflicted harm is major rather than minor. Graham (1986) proposes that a positive relationship exists between an issues’s seriousness and the magnitude of the likely impact. She also posits that a positive relationship exists between an observer’s perception of issue seriousness and the observer’s decision to report the issue (i.e., whistleblow).

In their model of whistleblowing, Miceli and Near (1992) also include issue seriousness as one of an issue’s characteristics that impact an observer’s decision to whistleblow. Miceli and Near (1992) state that an issue’s seriousness is determined by examining the consequences or possible consequences associated with the issue. They note that one way to view issue seriousness is to measure its
consequences in financial terms. They suggest that seriousness of consequences may be measured in other terms, such as the amount of environmental damage or type of personal injury. Miceli and Near (1992) also espouse that a positive relationship exists between the seriousness of the consequences associated with an issue and whistleblowing behavior.

Miceli, Near and Schwenk (1991) reason that the nature or type of wrongdoing also may influence an observer's reactions to the wrongdoing. In their whistleblowing model, Miceli and Near (1992) include the nature or type of wrongdoing as one of an issue's characteristics that impacts an observer's propensity to whistleblow.

Whistleblowing and Accounting Research

Using a sample of internal auditors representing both the public and private sectors, Arnold and Ponemon (1991) investigate the influence of moral reasoning on internal auditors' perceptions of whistleblowing. They use Rest's DIT to measure the moral reasoning capacity of their subjects. The experimental treatments consist of three different occupations of the whistleblower (external auditor, internal auditor and marketing analyst) and two forms of retaliation to the whistleblower (penalty and affiliation).

Nonparametric techniques indicated that internal
auditors perceived external auditors as the most likely group of professionals to whistleblow, followed by internal auditors and marketing analysts. Job termination impacted subjects' perceptions of whistleblowing more than plant closure and employee layoffs. Arnold and Ponemon note that internal auditors with higher P scores are less sensitive to threats of job termination than are internal auditors with lower DIT P scores. They conclude that an individual's perceptions of whistleblowing are related to the individual's level of moral reasoning.

Finn and Lampe (1992) also study whistleblowing among auditors. They propose that the whistleblowing process is an extension of the moral judgment related to the questionable activity. Finn and Lampe propose a comprehensive whistleblowing model that is, in essence, a synthesis of three ethical decision-making models: Rest's (1986) four-component model, Trevino's (1986) situation-interactionist model and Jones' (1991) issue-contingent model. They conclude that their subjects' ethical judgments and decisions to whistleblow were impacted by the moral intensity variables used in the study.

Schultz et al (1994) adapt Graham's (1986) model of principled organization dissent to examine the propensity to report questionable acts in an international setting. The subjects are managers and professional staff of publicly owned companies in the U.S. and Norway and wholly-owned
French subsidiaries of public U.S. companies. Each subject responds to six cases involving professional dissent; three address traditional accounting issues (e.g., reimbursement requests for selling expenses of a dubious nature) and three address nonaccounting issues (e.g., building code requirements). Among other results, Schultz et al (1994) note a significant main effect for case. The propensity to report a questionable act is related, in their experiment, to a case's specific facts. The case variable impacted subjects' perceptions of their responsibility to report, the seriousness of the questionable act and the personal cost of reporting.

Both Arnold and Ponemon (1991) and Schultz et al (1993) fail to systematically manipulate the consequences associated with the various issues examined in their research.\(^28\) For example, in the scenario used by Arnold and Ponemon, the reader is told that an internal auditor discovers a series of bogus invoices to customers that have previously been paid. A dollar amount associated with the bogus billings is not specified. Schultz et al (1993) present their subjects six different cases, with three of the cases involving monetary measures. In two of these three cases the monetary amounts significantly impact the

\(^{28}\) As noted previously, Arnold and Ponemon (1991) manipulate the consequences to the whistle-blower. If the internal auditor whistle-blow, he will either be fired or one of his best friends will lose his job.
company's financial statements (e.g., a plant manager attempts to treat a consignment as sales revenue for a reporting period before an actual sale has occurred). Two of the cases involve possible physical harm, but the magnitude of the harm is not disclosed; however, the reader could imply that the consequences may be disastrous. Subjects in both of these studies may be responding to the nature of the issue (i.e., the type of wrongdoing), or they may be responding to the possible consequences associated with the issues (e.g., a significant impact on a company's financial statements). The experimental design used in these previous accounting whistleblowing studies does not allow the researchers to address these concerns. The current study attempted to address these concerns by examining subjects' responses to the type of issue and by providing a systematic manipulation of the magnitude of consequences associated with an issue (or wrongdoing).
CHAPTER II

RESEARCH HYPOTHESES

The overall model I tested is represented as follows:

\[ \ln \text{Like} = a + b_1 \text{PScore} + b_2 \text{Gen} + b_3 \text{SDR} + b_4 \text{Mag} + b_5 \text{Chan} + b_6 \text{Type} + e \]

where

- $\ln \text{Like}$ = natural log of the odds ratio of a subject’s likelihood of whistleblowing;
- $\text{PScore}$ = the surrogate measure of a subject’s level of moral reasoning, used as a covariate;
- $\text{Gen}$ = a class variable, with 0 representing females and 1 representing males, used as a covariate;
- $\text{SDR}$ = the surrogate measure of the degree to which a subject presented herself in the most positive social image, used as a covariate;
- $\text{Mag}$ = a class variable, with 0 representing low consequences and 1 representing high consequences, used to test hypothesis 1;
- $\text{Chan}$ = a class variable, with 0 representing negative communication channels and 1 representing positive communication channels, used to test hypothesis 2;
- $\text{Type}$ = a class variable, with 0 representing organizational wrongdoing and 1 representing individual wrongdoing, used to test hypothesis 3.

Magnitude of Consequences

Near and Miceli (1995) state that seriousness of wrongdoing and magnitude of consequences, one of the
dimensions of Jones' (1991) moral intensity construct, are one and the same. Both concepts are related to the consequences associated with the wrongdoing or the issue, and both may be expressed in monetary units or in another measure, such as the amount of physical harm or environmental damage. Both concepts also incorporate the idea that an observer of wrongdoing is more likely to take a different course of action when the consequences of the wrongdoing are perceived to be serious or to increase in magnitude.

From their survey of directors of internal auditing, Near and Miceli (1988) conclude that directors of internal auditing are more likely to report serious wrongdoing than wrongdoing of a minor nature. Near and Miceli note that some directors of internal auditing did not report what they considered to be minor wrongdoing because the internal audit’s credibility might be questioned if minor infractions were constantly reported. Their respondents also stated that suspected minor wrongdoing may go unreported because the internal audit function may be too busy to address such issues. Within Jones’ moral intensity framework, this finding could be interpreted as follows: the minor wrongdoing was perceived as an issue of low moral intensity. In such a case, Jones (1991) suggests that an individual is less likely to establish intent or take action on such an issue. In the context of the current study, less
whistleblowing would be associated with an issue of low moral intensity.

As noted previously, Jones (1991) views magnitude of consequences as one of the dimensions of moral intensity. He defines magnitude of consequences as the summation of the harms accruing to the victim(s) of the wrongdoing. Thus, as this summation increases, the magnitude of consequences increases. For example, an act of wrongdoing that results in 1,000 people loosing $10,000 in a mutual investment fund is of greater magnitude of consequence than 10 people loosing $10,000 in the same mutual investment fund. Jones (1991) concludes that when an issue within an organization falls short of an individual's threshold of magnitude of consequences, the individual perceives the moral issue to be of low moral intensity and is less likely to establish moral intent. However, once an individual's threshold of magnitude of consequences is exceeded, that individual is more likely to establish moral intent and to act on those

\[\text{As noted previously, Jones (1991) overlays his ideas of moral intensity onto the Rest model (1979). Rest contends that moral judgment and moral intent are two separate components of the moral decision process. Kohlberg (1976) and Rest (1986b) both argue that moral judgment is dependent on an individual's cognitive moral development. Rest (1979, 1986b), however, posits that a moral judgment decision is not the same as the decision to act on that judgment, i.e., the establishment of moral intent. Intent and intentions are functionally equivalent terms. The term intentions is found in the social psychology literature. Fishbein and Ajzen (1975) argue that the best predictor of an individual's behavior is her intention to engage in the behavior, particularly a single-act criterion.}\]
intentions. Thus, Jones (1991) posits that an individual will be more likely to establish (moral) intent when confronted with an issue of high moral intensity than when confronted with an issue of low moral intensity.

Within an internal auditing context, the magnitude of the consequences associated with an issue may impact an internal auditor’s propensity to whistleblow. For example, as a firm’s environmental pollution increases, the magnitude of the consequences associated with the pollution may also increase. An internal auditor cognizant of the firm’s pollution and its environmental impact may decide to whistleblow because of the increasing magnitude of consequences associated with increased pollution. Increasing magnitude of consequences may also impact an internal auditor’s propensity to whistleblow when an individual’s wrongdoing negatively impacts the organization, such as when an individual pads her expense account. This reasoning leads to the first hypothesis in alternate form:

HA₁: An internal auditor’s propensity to whistleblow is greater when magnitude of the consequences is high.

Communication and Communication Channels

Graham (1986) suggests that the feasibility of an individual’s response to an issue is impacted by several issues. Two of these issues are if and how a person’s ideas are communicated within an organizational context. These two issues are directly related to the COSO (1992) framework
and its suggested use of whistleblowing to strengthen an entity’s internal control structure.

As noted previously, Graham (1986) suggests that one factor impacting communication within an organization is the existence of channels of communication. Kolarska and Aldrich (1980) note that if an individual is not aware of a channel for making an internal complaint, that individual is less likely to blow the whistle. Westin (1982) posits that the existence of a formal dissent mechanism (e.g., an Ombudsman, a hot-line procedure or an open-door policy) encourages employee reporting of suspected wrongdoing. As noted previously, the COSO (1992) framework espouses that, among other factors, the existence and communication of an employee code of conduct, the establishment of mechanisms (i.e., communication channels) that encourage the reporting of suspected wrongdoing and employee penalties for violating the code of conduct, are factors that influence the upward communication of suspected wrongdoing.

Within the internal auditing context, internal auditors who work for an organization that has an employee code of conduct, establishes formal dissent mechanisms and penalizes employees for code of conduct violations may have a greater propensity to whistleblow.\(^\text{30}\) This leads to the following

\(^{30}\) Although the creation of a communication channel does not guarantee knowledge of its existence, the current proposal assumes that the scenario establishes the presence of a communication channel and knowledge of its existence.
hypothesis in the alternate form:

\[ H_{A_2} : \text{An internal auditor's propensity to whistleblow is greater when an organization's channels of communication are positive.} \]

The Nature or Type of Wrongdoing

Chiasson et al (1995) conducted a survey of CPAs and management accountants in private industry to elicit their propensity to whistleblow. The respondents indicated that they were most likely to report internally those employees stealing the organization's resources. Near and Miceli (1988) surveyed a sample of directors of internal audit and found that most of the wrongdoing reported by the directors involved selfish behavior which benefitted a particular individual within an organization. Near and Miceli (1988) surmise that such wrongdoing is more likely to be reported than organizational wrongdoing because few, if any, negative consequences would accrue to an observer from reporting wrongdoing that benefits an individual at the expense of the organization. It may be possible that, within an internal control context, an internal auditor will have a greater propensity to report wrongdoing that benefits an individual at the expense of the organization than wrongdoing that benefits the organization at the expense of society.

Jones (1991) posits that the proximity, or the feelings of nearness, between a moral agent (i.e., a decision maker) and the victim(s) of wrongdoing may intensify the issue. As noted previously, this distance may be social, cultural,
psychological or physical. This concept may also be applied to an internal auditing context, particularly to the nature or type of wrongdoing. Because of the role that an internal auditor fills within an organization, she may form social and/or psychological feelings of nearness for the organization. Thus, an action that benefits an individual at the expense of the organization may become an issue of high moral intensity for an internal auditor because of her social and/or psychological nearness to the organization.

For example, an internal auditor may report the padding of an expense account not only because management expects her to look for employee theft and report it, but also because she has formed social and/or psychological feelings of nearness for the company. In such a scenario, the internal auditor may believe an individual who selfishly pads his expense account harms the organization.

An internal auditor may have a different perspective of organizational wrongdoing. For instance, if an organization is violating environmental standards to reduce costs and increase profits, the internal auditor may believe that these types of issues are either not her concern or beyond the scope of her influence. In terms of proximity, she may not have the same degree of social and/or psychological nearness for such an issue because the victim(s) of the wrongdoing may be an unknown public to the internal auditor, particularly if the environmental harm is distant from her
local community or if the victim(s) is (are) not clearly identified. Because the internal auditor may not have a strong degree of social and/or psychological nearness for an unknown public, the internal auditor may perceive such an issue to be of low moral intensity. Jones posits that issues of low moral intensity are less likely to result in the decision maker forming an intent and acting out her intentions. This reasoning leads to the following hypothesis in the alternate form:

$$H_A:$$ An internal auditor's propensity to whistleblow is greater when the type of wrongdoing benefits an individual.

Control Variables

Within the context of the current study, it is important for me to determine if magnitude of the consequences, channels of communication and type of wrongdoing are significantly related to internal auditors' self-reported propensity to whistleblow when controlling for level of moral development as measured by Rest's DIT. Using Rest's DIT, I obtained a measure of each internal auditor's level of moral development and used this measure as a covariate.

Researchers have posited that whistleblowing behavior is impacted by an individual's level of moral development as espoused by Kohlberg. Graham (1986) explicitly refers to the Kohlberg model of cognitive moral development and implies that individuals characterized by post-conventional
stages of moral reasoning are more likely to question the morality of an organization's authority figures. Miceli and Near (1992) also cite Kohlberg and posit that higher levels of moral development may influence an individual's decision to whistleblower. Research results in this area are mixed. Brabeck (1984) uses Rest's (1979) DIT to measure level of moral reasoning and finds evidence that individuals possessing the highest levels of moral reasoning are more likely to be whistleblowers. However, Miceli, Dozier and Near (1991) use Rest's DIT to measure level of moral reasoning and conclude that where moral conflict exists, individuals characterized by the highest levels of moral reasoning are less likely to blow the whistle. Neither of these studies, however, were conducted within an internal auditing context.

As noted previously, Arnold and Ponemon (1991) conducted an experiment with a sample of internal auditors to investigate the relationship between internal auditors' level of moral development and their whistleblowing behavior. Using Rest's (1979) DIT to obtain each subject's P score, they concluded that internal auditors reasoning at the post-conventional level are more likely to whistleblower.

Jones (1991) reasons that the Kohlberg (1968) model and the Rest (1979) model are deficient because the two models fail to consider explicitly the impact that the issues's characteristics (e.g., the issue's magnitude of consequences
and proximity) may have on an individual's moral sensitivity, judgments, intentions and behavior. As stated previously, Jones posits that an issue's magnitude of consequences and/or proximity may increase or decrease its level of moral intensity. Jones (1991) implies that as an issue increases in moral intensity an individual's moral judgments and intentions are impacted, independent of the individual's level of moral reasoning as measured by Rest's DIT P score. Jones reasons that as moral intensity increases, individuals are more likely to have similar judgments, intentions and behavior. Fritzsche and Becker (1983) and Fritzsche (1988) appear to find empirical evidence for Jones' proposal that a moral dilemma's consequences impact ethical behavior. These researchers conclude that serious consequences are more likely to be associated with ethical behavior than are minor or more modest consequences.

In the current study, gender was another control variable. The results of several studies suggest that men are more likely to whistleblow than women (see Gelfand et al. 1973; Miceli, Dozier and Near 1991; Miceli and Near 1988). Fritzsche (1988), however, finds no difference between male and female marketing managers' intentions to whistleblow when they are given hypothetical moral dilemmas.

Mainiero (1986) posits that early socialization and structural segregation (i.e., women occupying less powerful
positions in an organization) differentially shapes men’s and women’s behavior. Men are rewarded for direct, aggressive behavior, whereas women are, by and large, expected to remain powerless. Such a perspective suggests that women may perceive themselves as being less capable of bringing about change in male-dominated organizations. Using both the socialization and the structural perspective, Mainiero (1986) finds that women are more likely to acquiesce in a power imbalance situation and do nothing. Using gender as a covariate allowed me to control for possible socialization and structural effects that influence the self-reported propensity to whistleblow within an internal auditing context.

The third control variable was a measure of socially desirable response bias. Weber (1992) noted that one weakness of business ethics research is that most researchers in this area fail to control for response bias. In an attempt to overcome this criticism, I obtained a measure of response bias and used this measure as a covariate.

In summary, the whistleblowing literature suggests that whistleblowing may be impacted by, among other factors, an individual’s gender and level of cognitive moral development, the nature of the malfeasance, supportive communication channels, and issue seriousness. Recently, COSO has also stated that supportive communication channels
should increase employees’ propensity to communicate sensitive issues upwardly. I developed testable hypotheses to determine if internal auditors’ self-assessed whistleblowing intentions were sensitive to magnitude of the consequences, channels of communication and type of wrongdoing when controlling for an individual’s level of moral development, gender, and socially desirable response bias.
CHAPTER III

METHODOLOGY

In this section, I describe the experiment I developed and implemented to test my research hypotheses. I employed a 2 X 2 X 2 between-subjects research design to examine how magnitude of the consequences, channels of communication and type of wrongdoing impact the self-assessed likelihood that an internal auditor will whistleblow (i.e., go outside the normal chain of command to report an incident of wrongdoing) after discovering evidence of wrongdoing. First, I discuss the operationalization of my independent variables followed by a description of the dependent variable. Then I present how each hypothesis was tested and the rationale for the covariates that I used in my model. Next, I present a description of my subjects and their task. Last, I discuss the development of the experimental instrument. A diagram of the experiment is provided in Figure 1 on the following page.
Figure 1
Diagram of the Experiment

Step One
The experimenter randomly assigns the subjects to one of the eight experimental conditions.

Step Two
The experimenter briefly expresses appreciation for the subjects' participation, then requests that the subjects carefully review the instructions for each section, particularly Part IV (Rest's DIT).

Step Three
Each subject reads and completes the following in sequence:
1. General Overview
2. Experimental Instrument
3. Manipulation checks
4. Paulhus' BIDR (IM Scale)
5. Rest's DIT, Short Form

Step Four
Each subject supplies demographic data and completes additional manipulation checks.

Operationalization of the Independent Variables
I hypothesized the impact of three contextual variables on internal auditors' self-assessed propensity to whistleblow. The three contextual variables were magnitude of the consequences, channels of communication and type of
wrongdoing. Magnitude of the consequences was a class variable, with 0 representing low consequences and 1 representing high consequences. In the experimental instrument, I operationalized low consequences and high consequences, respectively, by providing subjects with a narrative describing a wrongdoing involving a monetary value of either $70 or $10,330. I hypothesized that when magnitude of the consequences was high the self-assessed likelihood of whistleblowing would be greater.

Channels of communication was a class variable, with 0 representing negative communication channels and 1 representing positive communication channels. I operationalized the channels of communication variable by the wording changes shown below.

Negative Channels of Communication:

AgriLife’s management has developed a written corporate code of conduct but does not require employees to acknowledge or sign it on an annual basis. The company does not maintain an open-door policy, and AgriLife’s managers are unresponsive to employee concerns or suggestions. There is little communication from the organization’s lower-level employees to its upper-level employees. Employees are unsure of what corrective actions, if any, are taken by management when an employee reports a departure from approved policies and procedures.

AgriLife’s internal auditing department performs operational audits in the company’s three divisions. AgriLife’s director of internal auditing reports directly to the company’s CEO...

Positive Channels of Communication:

About three years ago, management developed a corporate code of conduct that addresses a variety of issues such as employee duty and integrity, conflicts of interest
and illegal or otherwise improper behavior. AgriLife management believes that the code helps obtain more consistent behavior throughout the various divisions. Employees are annually required to read and sign the corporate code of conduct. Top management visibly supports the code. AgriLife management maintains an open-door policy to encourage employee suggestions and communication from lower-level employees to upper-level employees. In the past, the company has enforced various penalties on anyone who did not follow the corporate code of conduct.

AgriLife’s internal auditing department performs operational audits in the company’s three divisions. AgriLife’s director of internal auditing reports directly to the company’s audit committee...

I hypothesized that when the channels of communication were positive the self-assessed likelihood of whistleblowing would be greater.

Type of wrongdoing was a class variable, with 0 representing organizational wrongdoing and 1 representing individual wrongdoing. The organizational wrongdoing benefits the organization as a whole at the expense of society and involves several members of upper-level management. The individual wrongdoing benefits a single individual at the expense of the organization. I operationalized type of wrongdoing by the following wording.

Organizational Wrongdoing:

In examining research and development’s canceled checks related to divisional expenses, you find a check that does not have proper supporting documentation. You notice that the check was endorsed by an individual and stamped by a bank in Washington, D. C. After referencing the list of firms that AgriLife does business with, you conclude that no such individual or firm name appears on the list. In addition, you find that the company does not incur expenses with any firm on the East coast. In examining the memos related to this check, you find that the Vice President of
Research and Development approved this as a product development expenditure. An additional memo indicates that AgriLife’s CEO, along with the other executive officers, was aware of the undocumented corporate expense. The memo also notes that the undocumented corporate expense should result in quicker government approval of the new fat-free margarine. (Bold added)

Individual Wrongdoing:

In looking over the reimbursement checks made out to the Vice President of Marketing, you do not find proper supporting documentation. After calling the accounts payable department for additional details, you conclude that certain checks related to the reimbursed expenses claimed by the Vice President of Marketing lack supporting documentation. However, the Vice President of Administration has signed off on all of the claim forms. In addition, the accounts payable department has not questioned the Vice President of Administration’s approval of those claim forms that lacked proper documentation. It appears that the Vice President of Administration is extremely busy and not given to examining details. What little documentation that you have found shows that the expenses are for personal travel and clothing items.

You decide to expand your sample of the Vice President of Marketing’s travel expense vouchers. The expanded sample does not yield any additional reimbursement checks that lack proper supporting documentation. After another conversation with the head of accounts payable, you conclude that the Vice President of Marketing’s undocumented expenses are not the result of the airline losing or misdirecting the VP’s luggage. (Bold added)

I hypothesized that the self-assessed likelihood of whistleblowing would be greater in the case of individual wrongdoing.

I also included in the experiment a series of manipulation checks for the independent variables. I interpreted the results of the statistical tests related to the manipulation checks as evidence that I successfully manipulated the independent variables. Although the
statistical tests related to the manipulation checks for the channels of communication indicated that my subjects perceived a significant difference between the positive and negative channels of communication, I believe that on a practical level I obtained a weak manipulation of the positive channels of communication manipulation and a strong manipulation of the negative channels of communication manipulation. For a complete discussion of the manipulation checks, please see Appendix A.

Dependent Variable

The dependent variable used to test my hypotheses was the subjects’ responses to the following statement:

Please use an x to mark a number from 0 to 100 on the scale below to indicate the LIKELIHOOD that you would report the ($70) ($10,330) of (undocumented expenses) (an undocumented corporate expense) directly to the director of internal auditing for AgriLife, your audit manager’s immediate supervisor.

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<td>70</td>
<td>80</td>
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</tr>
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</table>

The observed values for the dependent variable were limited to the range between 0 and 100 percent (0 to 1). To avoid model predictions outside this range, Cohen and Cohen (1983) suggest that a logistic transformation of the dependent variable be used. Neter et al (1983) state that a logistic transformation of the odds ratios linearizes the response function. I accomplished this transformation by converting subjects’ self-assessed likelihoods into odds
ratios and then taking the natural log of the odds ratios.\textsuperscript{31} This transformation constrained the dependent variable to a value between zero and one while linearizing the relationship between the dependent variable and the predictor variables. The resulting model is a linear probability model.

Tests of Hypotheses

All of my hypotheses predict that magnitude of the consequences, channels of communication and type of wrongdoing impact an internal auditor's self-assessed likelihood to whistle blow. To test my hypotheses, I used the logit transformation of the internal auditors' self-assessed likelihood of whistleblowing as the dependent variable in an Ordinary Least Squares Regression.

In his issue-contingent model of ethical decision making, Jones (1991) suggests that individuals are more likely to establish moral intentions when they perceive an issue's magnitude of consequences to be high rather than low. To test hypothesis one, the dependent variable was the logit transformation of the subjects' self-assessed likelihood of whistleblowing. The independent variable was magnitude of the consequences, a class variable with 0

\textsuperscript{31} The transformation is represented as

\[ P^* = \ln \frac{P}{1 - P}, \]

* where P is the observed probability.
representing low magnitude of consequences and 1 representing high magnitude of consequences. A significant F test and a positive and significant coefficient for magnitude of the consequences provide support for hypothesis 1.

COSO (1992), Miceli and Near (1992) and Graham (1986) suggest that an organization’s communication environment, particularly its communication channels, impacts employees’ propensity to communicate sensitive issues to upper-level management. COSO (1992) advocates open communication channels as a means of increasing communication from lower-level employees to upper-level employees. To test hypothesis 2, the dependent variable was the logit transformation of the subjects’ self-assessed likelihood of whistleblowing. The independent variable was channels of communication, a class variable with 0 representing negative channels of communication and 1 representing positive channels of communication. A significant F test and a positive and significant coefficient for magnitude of the consequences provide support for hypothesis 2.

Near and Miceli (1988) and Miceli, Near and Schwenk (1991) suggest that whistleblowing may be impacted by the nature or type of the wrongdoing. Both Near and Miceli (1988) and Miceli, Near and Schwenk (1991) imply that internal auditors are more likely to blow the whistle on someone who is enriching or attempting to enrich himself at
the expense of the organization than they are on someone whose actions benefit the organization as a whole. To test hypothesis 3, the dependent variable was the logit transformation of the subjects' self-assessed likelihood of whistleblowing. The independent variable was type of wrongdoing, a class variable with 0 representing organizational wrongdoing and 1 representing individual wrongdoing. A significant F test and a positive and significant coefficient for type of wrongdoing provide support for hypothesis 3.

Covariates

I included three covariates in my model. The covariates were the P score from the short form of Rest's (1979) DIT, gender and a measure of impression management from Paulhus' (1988) Balanced Inventory of Desirable Responding. Miceli and Near (1992) refer to Kohlberg's stages of moral development and state that an individual's moral development judgment (i.e., level of moral reasoning) could impact the whistleblowing process. Arnold and Ponemon (1991) found that an internal auditor's propensity to whistleblow is affected by her level of moral reasoning as measured by Rest's (1979) DIT. Jones (1991), however, posits that cognitive developmental models of moral reasoning such as Kohlberg's are deficient because such models ignore the influence of contextual factors on the decision maker. Jones (1991) suggests that as the magnitude
of the consequences associated with an event or action increase, individuals at both low and high levels of moral reasoning are more likely to make similar decisions. I used the P score from Rest’s (1986b) DIT to partial out the effects of level of moral reasoning on the self-assessed likelihood of whistleblowing.

Miceli, Dozier and Near (1991) found that males were more likely to whistleblow than women. Mainiero (1986) postulates that women may be less likely to whistleblow than men for two reasons. First, early socialization processes may differentially shape men’s and women’s behaviors. Men are usually perceived as being more aggressive and are rewarded for such behavior, whereas women are expected to remain more passive. Second, the great majority of women occupy less powerful positions within most organizations.

This power segregation may impact women’s propensity to communicate information related to suspected wrongdoing. Miceli and Near (1992) recommend that future research consider the impact of gender on whistleblowing. I used gender as a covariate to partial out its effects on the self-assessed likelihood of whistleblowing. Insignificant t-test values associated with the P score and gender imply that the P score and gender were not relevant to the self-assessed likelihood of whistleblowing, at least within the context of the current study.

Weber (1992) states that researchers in the area of
business ethics should attempt to control for the effects of social desirability response bias. Nederhof (1985) suggests obtaining a measure of social desirability response bias and partialling out its effect from the independent and dependent variables. I used the impression management scale from Paulhus' (1988) Balance Inventory of Social Responding to obtain a measure of subjects' social response bias. By including a measure of social response bias as a covariate, I am responding to the criticism that business ethics researchers have failed to obtain such measures and disclose the results in their studies.

Subjects

A total of 123 internal auditors from four firms served as subjects. Of the 123 subjects, 79% were staff auditors, 16% were audit managers and 5% were audit directors; females comprised 42% of the subject pool and males comprised 58%. Approximately 36% of the subjects held professional certifications (CPA, CIA and CISA). The average length of internal audit experience was 4.3 years, with an average age of 30.4 years.

I chose firms for the study based on their willingness to allow their internal auditors to participate. All of the firms that participated in the study are publicly-owned companies, representing the banking, retailing, transportation and semi-conductor industries. All of the
firms are relatively large. Each firm has at least 30,000 employees. Large firms have characteristics that I believe may be more pertinent to the COSO framework. For example, large firms are more likely to have formal reporting channels and strong internal control systems. Also, large firms are more likely to have a code of conduct that requires employees to report code violations.

**Task**

I assigned the subjects to one of eight between-subjects groups and gave them a packet of written materials. Each packet consisted of the following: (1) an introductory letter, (2) a general overview of the written materials, (3) the experimental instrument, (4) a set of manipulation checks related to the experimental instrument, (5) the impression management scale from Paulhus' (1988) Balanced Inventory of Desired Responding,³² (6) Rest's (1986b) DIT, short form,³³ and (7) a set of demographic questions and additional manipulation checks. An example of the written materials, except for Paulhus' (1988) Balanced Inventory of Desired Responding and Rest's (1986b) DIT short form, is

³² Please see Measures of Personality and Social Psychological Attitudes, Volume I, page 40 and 41 for the impression management scale from Paulhus' (1988) Balanced Inventory of Desired Responding.

presented in Appendix B.

I posed the experimental instrument in the second person rather than in the third person. I believe that the use of the second person allowed me to obtain a better measure of a subject’s intentions. I wrote the experimental instrument without the use of any gender reference, such as he or she. I also purposefully avoided the use of first names. Subjects could possibly associate the spelling of first names with an individual’s gender. This genderless approach was used in an attempt to mitigate possible confounding gender influence in the experimental instrument. This approach would not, however, prevent a subject from assigning an actor a gender role in the experimental materials.

I provided subjects descriptive information about a consumer food products company. In the experimental scenario, I told them that they had been assigned to work on the operational audit of the consumer food company’s research and development and sales divisions. In the scenario, I also informed the subjects that during the course of the operational audit they discover evidence of wrongdoing and that they discuss this evidence with their audit manager. I then disclosed in the scenario that the subjects’ audit manager asked them to forget about the suspected wrongdoing. After the subjects read the experimental instrument, I asked them to provide the self-
assessed likelihood that they would report the evidence of wrongdoing directly to the company's director of internal auditing, their audit manager's immediate supervisor.

Subjects then completed the impression management scale from Paulhus' (1988) Balanced Inventory of Desirable Responding. I also interspersed statements from a life satisfaction scale with the Balanced Inventory of Desirable Responding. I included these additional statements to help reduce demand effects. Next, subjects completed the short form of Rest's (1986b) Defining Issues Test (DIT). Finally, subjects supplied demographic information and responded to a series of statements, some of which served as manipulation checks while others served as data for future research.

Case Development and Field Testing

Developing the case materials involved several phases. First, I read numerous accounts of sundry types of individual and corporate wrongdoing. The incidents were actual occurrences of wrongdoing and were recorded in either the popular press or in academic/professional publications dedicated to enhancing ethical decision making or investigating fraudulent activities. After considering the internal auditor's role within an organization, the issue of realism for the subjects, and the objective of the experimental materials, I chose two separate incidents of wrongdoing, one individual and one corporate.

The incident representing individual wrongdoing was an
executive using a company expense account for personal benefit. The incident representing corporate wrongdoing was an illegal corporate payment to gain more rapid approval from a government agency for a new product. I based the episode of individual wrongdoing on a self-disclosed case of expense account abuse presented in The Internal Auditor's Ultimate Responsibility: The Reporting of Sensitive Issues (Near and Miceli 1988). I developed the idea for the corporate wrongdoing from an article appearing in The Wall Street Journal (August 9, 1994, Sec A, p 4) that reported an investigation of a corporate gift to an individual at the Department of Agriculture.

After developing the proposed experimental instrument, I conducted face-to-face interviews with an internal audit director and an internal audit senior project manager of two major corporations to discuss the cases for realism and clarity. I also asked them to make any recommendations to improve the cases from an internal audit perspective. These internal auditors were employed by two of the firms that participated in the study. From their comments, I revised the proposed experimental case materials. I then conducted a pilot test of the experimental instrument. From the results of this pilot test, I made revisions to the experimental instrument and to the proposed manipulation checks. Next, I conducted a second pilot test and made final revisions to the experimental instrument and the
related manipulation checks. The interviews and the resulting revisions are presented in Appendix C. The first pilot test is discussed in Appendix D. The second pilot test is discussed in Appendix E.

In summary, after developing the experimental instrument through a series of interviews and pilot tests, I conducted a $2 \times 2 \times 2$ between-subjects experiment with 123 internal auditors from four companies. The statistical analysis of the manipulation checks indicates that I successfully manipulated the experimental variables: magnitude of the consequences, channels of communication and type of wrongdoing. Although the manipulation of the channels of communication was weak, it was still in the desired direction, and subjects perceived a significant difference between the negative and positive channels of communication environment.
Chapter IV

RESULTS AND ANALYSIS

In this section, I describe the administration of the experiment. I also present the results of my hypothesis tests and explain how I analyzed the data. I then relate these findings to my theoretical framework. In Table 1, I provide a summary of the regression results. Table 2 presents the means of the untransformed data for the self-assessed likelihood of whistleblowing.

Validity Checks

A researcher administered the experimental materials for all subjects and was present during the entire experiment. We observed the internal auditors while they read and responded to the written materials. All subjects completed the materials without any interruptions and without speaking to other subjects. Thus, effects from subject interactions are highly unlikely. The subjects appeared to be focused and diligent throughout the experiment.

In all but one of the firms, the experiment was administered only once. In those firms, there was virtually no opportunity to discuss the task with peers beforehand; therefore, history effects are highly unlikely. In one of
the firms, subjects did not complete the materials as a group. In this firm, I conducted the study over a two hour period. Because of employee work schedule conflicts, this firm's internal audit employees completed the materials in groups of three or four. As these subjects completed the experiment, I asked each one to respond to a written question to indicate whether or not they had talked to another employee of the firm about any aspect of the experiment. All of this firm's employees who participated in the study indicated that they had not discussed any aspect of the experiment with another employee. From their responses and also from the fact that one of the firm's internal audit project managers helped oversee the experiment, I believe that any history effects in this firm are also highly unlikely.

Results

Each subject completed Rest's DIT, the short form. I used Rest's (1986b) internal checks on subject reliability to determine which subject questionnaires to discard from the sample. Using the standard scoring procedure described by Rest (1986b), I wrote a series of computer macros to perform the reliability checks and calculate each subject's P score. From the results of the reliability checks, a total of 27 subjects were eliminated from the sample. After
I eliminated those subjects who did not pass the consistency checks related to the DIT, the sample consisted of 96 subjects. The mean P score was 37.98, which is comparable to other accounting studies that have used the P score as a measure of level of moral development.

Paulhus (1988) also suggests a scoring procedure to use for the impression management scale from the Balanced Inventory of Desirable Responding. Using this recommended scoring procedure, I wrote a computer macro to calculate each subject's score on the impression management scale. The range of possible scores on the impression management scale is 0 to 20. A subject earns one point each time he answers in the extreme. Thus, a subject attains a high score only when he gives exaggeratedly socially desirable responses. The mean impression management score for the truncated sample was 6.04.\textsuperscript{34} I interpreted the impression management score to indicate that, overall, subjects in the truncated sample were not purposefully answering so as to create a positive social image for the researcher.

\textsuperscript{34} In a sample of 433 college students, Paulhus (1988) reported a mean of 7.5 for males and 6.8 for females. In another study aimed at a public disclosure issue, Paulhus (1984) reported a mean of 11.9 for a sample of 100 college students. Compared to the means of the previous studies, the impression management score obtained for the truncated sample appears to be lower than the mean of the first sample of college students and significantly lower than the second sample of college students.
Using the truncated sample, n = 96, I ran the model:

\[ \text{LnLike} = a + b_1 \text{PScore} + b_2 \text{Gen} + b_3 \text{SDR} + b_4 \text{Mag} \\
+ b_5 \text{Chan} + b_6 \text{Type} + e \]

where

\[
\begin{align*}
\text{LnLike} &= \text{natural log of the odds ratio of a subject's self-assessed likelihood of whistleblowing;} \\
\text{PScore} &= \text{the surrogate measure of a subject's level of moral reasoning, used as a covariate;} \\
\text{Gen} &= \text{a class variable, with 0 representing females and 1 representing males, used as a covariate;} \\
\text{SDR} &= \text{the surrogate measure of the degree to which a subject presented herself in the most positive social image, used as a covariate;} \\
\text{Mag} &= \text{a class variable, with 0 representing low consequences and 1 representing high consequences, used to test hypothesis 1;} \\
\text{Chan} &= \text{a class variable, with 0 representing negative communication channels and 1 representing positive communication channels, used to test hypothesis 2;} \\
\text{Type} &= \text{a class variable, with 0 representing organizational wrongdoing and 1 representing individual wrongdoing, used to test hypothesis 3.}
\end{align*}
\]

As Table 1 on the following page shows, the regression results, controlling for the effects of the covariates, indicated that the F-value for the model was 1.87 and was significant at the .10 level. Magnitude of the consequences was in the predicted direction. The p-value associated with the t-test for the magnitude of consequences variable was
significant at the 0.02 level. Channels of communication and type of wrongdoing were insignificant at the .10 level, as were the covariates. The covariates appeared to have no partialling or suppressing effect.

### Table 1

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<th>Model</th>
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<th>SDR</th>
<th>MAG (H1:+)</th>
<th>CHAN (H2:+)</th>
<th>TYPE (H3:+)</th>
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</tr>
<tr>
<td>Reduced (n=123)</td>
<td>1.172</td>
<td></td>
<td></td>
<td></td>
<td>0.850</td>
<td>-0.791</td>
<td>-0.280</td>
<td>5.298</td>
</tr>
<tr>
<td></td>
<td>(3.775)</td>
<td></td>
<td></td>
<td></td>
<td>(2.757)</td>
<td>(-2.565)</td>
<td>(-0.910)</td>
<td></td>
</tr>
</tbody>
</table>

Coefficients for the Ordinary Least Squares Models, with T-test values shown in parentheses

Full Model:
- Significant at the .01 level (1-tailed test)
- Significant at the .10 level (F-test)

Reduced Model:
- Significant at the .00 level (2-tailed test)
- Significant at the .01 level (1-tailed test), also significant at the .01 level (F-test)

Legend: PSCORE = Level of Cognitive Moral Development Measure, used as a covariate; GEN = Gender, used as a covariate; SDR = Socially Desirable Response Bias Measure, used as a covariate; MAG = Magnitude of the Consequences, CHAN = Channels of Communication, TYPE = Type of Wrongdoing

Note: The hypothesis and predicted effect appear in parentheses under each variable name in the top row of the table.

Because the covariates were insignificant and appeared to have no partialling or suppressing effect, I eliminated the covariates from the model and used the full sample of 123 subjects to reestimate the model (reduced model) as
follows:  \( \text{LnLike} = a + b_1 \text{Mag} + b_1 \text{Chan} + b_1 \text{Type} + e \). As Table 1 shows, the reduced model was significant at the .01 level, with magnitude of the consequences and channels of communication also significant at the .01 level. The results of the hypothesis testing and the analysis of the results is based on this reduced model and the complete sample of 123 internal auditors.\(^{35}\)

On the following page, Table 2 presents the cell means for the untransformed self-assessed likelihood of whistleblowing rather than the logistic transformation of the likelihood. The untransformed data means indicate that when the magnitude of the consequences is high an internal auditor is more likely to whistleblow. The means of the untransformed data means also show that an internal auditor is more likely to whistleblow when the channels of communication are negative. The untransformed data means clearly imply that there are differences in subjects' self-assessed likelihood of whistleblowing due to magnitude of the consequences and channels of communication. Nevertheless, the transformed data must be used to interpret the regression coefficients, as explained in footnote 36.

\(^{35}\) I also ran the manipulation checks for both samples and obtained no significant differences between the samples. In addition, summary statistics for the variables did not differ between the samples. Last, interactions were insignificant when run with both samples.
Table 2
Means for the Untransformed Self-Assessed Likelihood of Whistleblowing--Means (Std. Dev.)

<table>
<thead>
<tr>
<th>Magnitude-Low</th>
<th>Magnitude-High</th>
<th>Channels-Neg</th>
<th>Channels-Pos</th>
<th>Type-Org</th>
<th>Type-Ind</th>
</tr>
</thead>
<tbody>
<tr>
<td>58.96</td>
<td>72.54</td>
<td>71.13</td>
<td>59.92</td>
<td>67.16</td>
<td>64.05</td>
</tr>
<tr>
<td>(27.06)</td>
<td>(24.52)</td>
<td>(25.68)</td>
<td>(26.61)</td>
<td>(26.26)</td>
<td>(27.11)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Magnitude-Low</th>
<th>Magnitude-High</th>
<th>Channels-Neg</th>
<th>Channels-Pos</th>
<th>Type-Org</th>
<th>Type-Ind</th>
</tr>
</thead>
<tbody>
<tr>
<td>60.37</td>
<td>57.67</td>
<td>81.55</td>
<td>62.57</td>
<td>62.57</td>
<td>62.57</td>
</tr>
<tr>
<td>(27.50)</td>
<td>(27.00)</td>
<td>(18.96)</td>
<td>(26.39)</td>
<td>(26.39)</td>
<td>(26.39)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Magnitude-Low</th>
<th>Magnitude-High</th>
<th>Channels-Neg</th>
<th>Channels-Pos</th>
<th>Type-Org</th>
<th>Type-Ind</th>
</tr>
</thead>
<tbody>
<tr>
<td>63.60</td>
<td>64.72</td>
<td>70.97</td>
<td>73.97</td>
<td>73.97</td>
<td>73.97</td>
</tr>
<tr>
<td>(26.15)</td>
<td>(27.57)</td>
<td>(26.31)</td>
<td>(23.13)</td>
<td>(23.13)</td>
<td>(23.13)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Channels-Neg</th>
<th>Channels-Neg</th>
<th>Channels-Pos</th>
<th>Channels-Pos</th>
</tr>
</thead>
<tbody>
<tr>
<td>74.80</td>
<td>67.58</td>
<td>58.97</td>
<td>60.73</td>
</tr>
<tr>
<td>(23.16)</td>
<td>(27.81)</td>
<td>(27.30)</td>
<td>(26.42)</td>
</tr>
</tbody>
</table>

Hypothesis One

If magnitude of the consequences affects internal auditors’ propensity to whistleblow, then internal auditors’ self-assessed likelihood of whistleblowing should increase as magnitude of the consequences increases. As Table 1 shows, the F-value associated with the reduced model was 5.298 and was significant at the 0.01 level. The p-value for the t-test related to the magnitude of consequences coefficient was also significant at the 0.01 level.

The coefficient estimate for the magnitude of the
consequences variable was 0.885. In terms of probabilities, the following interpretation can be applied to this coefficient. Holding channels of communication and type of wrongdoing constant, the self-assessed likelihood of whistleblowing was 65 percent when the magnitude of the consequences was low. When the magnitude of the consequences was high, the self-assessed likelihood of whistleblowing was 81 percent. Thus, the self-assessed likelihood of whistleblowing increased by 16 percent when the magnitude of consequences was high.\footnote{To interpret the coefficients within the framework of a logistic transformation, I first took the antilog of the logistic regression estimate, i.e., \( \hat{y} \), for low and high magnitude of the consequences while holding the other variables constant. Next, I took the antilog of the regression estimate, which yields an odds ratio. I then converted the odds ratio into a probability. Last, I took the difference between the probability associated with high and low magnitude of the consequences.} I interpreted these results as providing support for hypothesis one: when magnitude of the consequences is high, internal auditors are more likely to whistleblow.

Hypothesis Two

Internal auditors may also have a greater propensity to whistleblow when the communication channels of an organization encourage upward communication from the organization's lower-level employees to its upper-level employees, i.e., when the channels of communication are
positive. The p-value for the t-test related to the channels of communication coefficient was significant at the 0.01 level. The coefficient estimate for the channels of communication variable was -0.791. In terms of probabilities, the coefficient can be interpreted as follows: holding magnitude of consequences and type of wrongdoing constant, the self-assessed likelihood of whistleblowing was 80 percent when the channels of communication were negative. When the channels of communication were positive, the self-assessed likelihood of whistleblowing was 65 percent. Thus, the self-assessed likelihood of whistleblowing decreased by 15 percent in the presence of positive channels of communication.

Although the regression coefficient for channels of communication is significant, the sign of the regression coefficient for channels of communication is in the opposite direction as to what was hypothesized. Thus, hypothesis two was not supported. The ramifications of this evidence is presented in the Discussion and Implications of the Findings section.

Hypothesis Three

If internal auditors are more likely to whistleblow on individual wrongdoing (i.e., when an individual benefits at the expense of the organization), then I should see the
self-assessed likelihood of whistleblowing increase when an individual commits the wrongdoing versus when the organization commits the wrongdoing. However, the one-tail t-test associated with the type of wrongdoing variable is insignificant at the 0.18 level. From the regression results, I concluded that, within the context of the current study, internal auditors' propensity to whistleblow was not affected by the type of wrongdoing. Hypothesis three was
Discussion and Implications of the Findings

The empirical evidence that I have presented suggests that magnitude of the consequences and channels of communication affect an internal auditor's self-assessed

37 I also considered violations of the assumptions underlying the ordinary least squares regression model and related tests. I calculated variance inflation factors (VIFs) to determine if the results were impacted by multicollinearity. The VIFs for magnitude of the consequences, channels of communication and type of wrongdoing equal 1, which is well below 10. Ten is the critical VIF value for determining if multicollinearity is severe (Neter et al 1989). Thus, the variables appear to be orthogonal, with severe multicollinearity not present in the model.

In addition, I performed a Wilk-Shapiro / Rankit Plots test to determine if the standardized residuals of the regression conformed to a normal distribution. If the assumptions of the classical linear regression model are met, then the standardized residuals should be approximately normally distributed with a mean of 0 and variance of 1. A small value for the Wilk-Shapiro statistic indicates non-normality. I obtained a Wilk-Shapiro statistic of .987. Based upon these results, I fail to reject the null hypothesis that the residuals were normally distributed, uncorrelated and homoscedastic.

I conducted White’s test for heteroscedasticity as a second test of heteroscedasticity. This test involves regressing the dependent variable on the independent variables, saving the residuals and then normalizing the residuals. The normalized residuals are then regressed on the independent variables. The $R^2$ associated with the regression of the normalized residuals is then multiplied by the number of observations. This test statistic follows a chi-square distribution with 1 degree of freedom for each independent variable (Pindyk and Rubinfeld 1991). My sample yielded an $R^2$ of 0.0000 for the regression of the normalized residuals on the independent variables. Thus, I fail to reject the null hypothesis of homoscedasticity. This test provides further evidence of no heteroscedasticity.
likelihood of whistleblowing. I found no significant relationship between the type of wrongdoing and the self-assessed likelihood of whistleblowing.

The evidence from the current study appears to support Jones' (1991) hypothesis that when individuals perceive an issue's magnitude of consequences to be high they are more likely to establish intent. Because the P Score from Rest's (1986b) DIT test was insignificant when used as a covariate, I also suggest that the findings indicate that an internal auditor's level of moral development is not related to the internal auditor's self-assessed likelihood of whistleblowing, at least within the context of the current study. The insignificance of the P score covariate also lends additional credence to Jones' (1991) issue-contingent model. He argued that the Kohlberg model is deficient because it fails to consider the impact that an issue's characteristics, such as magnitude of the consequences, have on the moral reasoning of the decision maker. Using magnitude of the consequences as one of the dimensions of his moral intensity construct, he proposed that an individual's perceptions of the moral intensity of an issue was more important than the individual's level of cognitive moral development in establishing moral intentions. The empirical evidence gathered in this study also appears to support this latter proposition.
The empirical evidence that magnitude of the consequences significantly impacts internal auditors' intentions to whistleblow also has implications for accounting ethics education, particularly within an internal control context. Rather than focusing our efforts on increasing internal auditors' level of moral reasoning to the post-conventional level of moral reasoning as defined by the Kohlberg model, we should concentrate on increasing internal auditors' sensitivity to the infractions of the internal control structure committed by individuals within a company. Pactual evidence that a violation or possible violation of a company's internal control structure has occurred may be more important than the dollar amount. This latter circumstance has practical implications for both internal and external auditors. If the findings or concerns of internal auditors can be suppressed by their immediate supervisors, the internal auditor cannot properly perform her job. In addition, external auditors may not be able to rely upon the work performed by the internal audit function. If this is the case, then the external auditors would need to expand the scope of the external audit, which increases the audit's cost. These issues take on added significance because of the AICPA's (1991) standard that suggests an expanded internal audit role in the external audit and COSO's (1992) statement that auditors should evaluate the
propensity of an organization's lower-level employees to communicate upwardly sensitive issues to its upper-level employees. In addition, SAS 78 (1996) incorporates the COSO framework into the second field standard that guides auditors in their evaluation of an organization's internal controls.

I hypothesized that the self-assessed likelihood of whistleblowing would be greater when the channels of communication were positive rather than negative. I interpret the evidence to suggest that the self-assessed likelihood of whistleblowing is greater when the channels of communication are negative rather than positive. This finding is also contrary to COSO's (1992) suggestion that open, conducive communication channels within an organization increase the propensity of lower-level employees to communicate sensitive issues to upper level employees.

This finding could be the result of the weak manipulation of the positive channels of communication. However, this appears to be unlikely because the negative channels of communication manipulation appeared to be strong. Subjects in these two treatment levels perceived a significant difference between the manipulations. Even with a weak manipulation of the positive channels of communication, the negative channels of communication should
not have produced a significantly greater likelihood of whistleblowing than the positive channels of communication.

Demand effects may also be an explanation for this finding. Subjects may have reasoned that I wanted them to indicate that they would be likely to whistleblow when the channels of communication were negative. This seems unlikely for two reasons. First, the measure of socially desirable response bias indicates that the subjects were, on average, not trying to manage my impression of them. Second, the between-subjects experimental design used in the study should have mitigated the demand effects present in the dependent measure.

An additional explanation for this finding may be found in the literature on organizational climate, trust and whistleblowing. Blackburn (1988) states that when an organizational climate is supportive employees believe that management can be counted on to do what they said. Schultz and Hooks (1995) report that the strength of the relationship, i.e., the trust, between the observer and the report recipient significantly impacted the likelihood of reporting. They state that trust increases the likelihood of whistleblowing. Their proposition is aimed at the relationship between the external auditor and a firm's employees. They reason that if an employee trusts the external auditor then he is more likely to blow the whistle
to the external auditor in the event of wrongdoing. Thus, trust, from the perspective of Schultz and Hooks (1995), may increase whistleblowing.

If the subjects in the current study, perceived the open, conducive channels of communication as a supportive organizational climate that created expectations of trustworthiness, then these subjects may have believed that management could be counted on to do what they said. Thus, subjects in the positive channels of communication may have believed their immediate supervisor in the scenario when the supervisor told them that the circumstances had been discussed with the individual suspected of the wrongdoing, and it would be best to forget about the undocumented expenses. If the subjects in the closed, nonconducive channels of communication perceived the organizational climate to be untrustworthy, then these subjects may have not believed their immediate supervisor when the supervisor told them that the circumstances had been discussed with the individual suspected of the wrongdoing, and it would be best to forget about the undocumented expenses. Their possible disbelief in their immediate supervisor may have prompted them to report the suspected wrongdoing even though the official channels of communication were negative.

If an organization's communication climate impacts employees' perceptions of management trustworthiness, which
in turn impacts the propensity to communicate sensitive issues upwardly, these findings have important practical implications. The communication of wrongdoing from lower-level employees to upper-level employees may be more complex than that suggested by COSO (1992) and Hooks et al (1993). The trustworthiness created by supportive organizational climates may cause an employee not to question the judgment or advice of his immediate superior. It may be possible that supportive communication climates, in some instances, decrease the propensity to communicate upwardly. I am not suggesting that the open, conducive communication environment espoused by COSO (1992) necessarily impedes the reporting process, rather I am stating that the upward communication of sensitive issues is a complex process that needs additional research, particularly as it relates to the communication of sensitive issues by the internal auditor. Indeed, COSO (1992) acknowledged that its proposals need further research grounded in theory.
CHAPTER V

LIMITATIONS AND EXTENSIONS

Certain limitations apply to the current study. As noted previously, the channels of communication manipulation for the positive channels of communication environment was weak. This study also used a nonrandom sample of internal auditors from companies located within a large metropolitan area in the southwestern part of the United States. Although the four companies in the study represented diverse industry groups, not all industry groups or economic sectors were represented in the study. For example, no internal auditors from the not-for-profit sector participated in the study. Thus, the findings in the current study can not be extended to the population of all internal auditors.

In addition, the internal auditors in the firms were volunteer participants. Not all of the internal auditors within a firm participated in the study. I could not evaluate the degree, if any, to which participants in a firm differed from those internal auditors who chose not to participate. I might have obtained different results if all of the internal auditors employed by the firms in the study had participated in the experiment.

The current study utilized the DIT P score as a surrogate measure of each subject’s level of cognitive moral
development. The underlying theoretical framework of the DIT is based on Rest's (1979) adaptation of the Kohlberg model of cognitive moral development (1968). The DIT is based on the premise that an individual's cognitive moral development is capable of being measured. A discussion of the degree to which the DIT fails to measure an individual's ethical cognition is presented by Rest (1986b, 89-94). If I had used an alternate measure of cognitive moral development as a covariate, the alternative measure might have had a significant partialling or suppressing effect in the regression.

The experimental instrument was designed for the current study. I attempted to create a realistic scenario. Using a 9-point Likert-type scale, with 1 representing realistic and 9 unrealistic, I asked the participants to indicate the degree to which they perceived the internal audit scenario to be realistic. For this scale, I obtained a mean of 3.86 (standard deviation of 2.37). I interpreted this measure as an indication that the internal audit scenario possessed a reasonable degree of realism. Although care was taken to make the experimental instrument realistic, it is possible that wording or measurement artifacts in the instrument generated some degree of unmeasured subject response bias. Of course an internal auditor's predictions of what she would do in a given scenario does not always represent her actual beliefs. In
addition, an individual’s beliefs (i.e., intentions) do not always translate into behavior.

In the current study, I classified magnitude of the consequences as high ($10,330) and low ($70). The subjects indicated a significant difference in their whistleblowing intentions when confronted with wrongdoing involving these dollar amounts. The threshold that impacts whistleblowing behavior may be less than the $10,330 but greater than the $70. The existence of such a range and the impact that a differential magnitude of the consequences has on internal auditors’ whistleblowing intentions are topics for future research.

Although this study uses internal auditors as subjects, the COSO integrated framework implies that the upward communication of sensitive issues applies to all employees of an entity. The theoretical framework of the current study could be used to investigate if an employee’s position in an organization’s hierarchy impacts whistleblowing intentions. The current framework could also be extended to examine if an employee’s functional role impacts whistleblowing intentions. For instance, is an internal audit department employee more likely to whistleblow than a marketing department employee? The theoretical framework could also be used to examine if internal auditors within the public sector differ from internal auditors within the private sector with respect to the impact that magnitude of
the consequences has on their whistleblowing intentions.

In today's competitive environment, many companies are emphasizing the use of work teams as a means of improving total quality management. The use of work teams usually involves empowerment and decentralization. Future researchers could examine the extent to which a work team environment influences the use of internal communication channels and employees' whistleblowing intentions. The impact that various communication channels have on whistleblowing intentions is also a possibility for future research. Within an accounting context, future researchers could determine if employees view internal and external auditors as a means of communicating observed wrongdoing. The impact that the outsourcing of the internal audit function may have on the communication of wrongdoing is an additional research possibility.

Future researchers also might explore the impact that alternative educational interventions have on accounting students' ethical judgments and their intentions to report sensitive issues. For example, does the care perspective advocated by Gilligan impact accountants' ethical judgments and their whistleblowing intentions? Further research is needed before the accounting profession uses a single ethical framework, i.e., the Kohlberg model, as a foundation for accounting moral education.

The current proposal is not designed to examine the
relationship between an individual's sensitivity to issues and her whistleblowing intentions. This relationship should also be explored in future research. Future researchers could examine which factors increase/decrease an individual's sensitivity to wrongdoing. Accounting education researchers could investigate if alternative ethical frameworks have a differential impact on accounting students' sensitivity to questionable acts.

In conclusion, despite the limitations of the current study, the results indicate that internal auditors whistleblowing intentions were impacted by the magnitude of the consequences associated with an issue and by an organization's channels of communication. Within the context of the current study, internal auditors' level of moral reasoning and gender did not appear to impact their sensitivity to whistleblowing. The results of this study imply a future direction for accounting educators. Rather than focusing on the rights and justice morality of the Kohlberg model, we, as accounting educators, should help our students become more sensitive to the occurrence of wrongdoing and to the implications that wrongdoing, whether on an individual or organizational level, has for society.
APPENDIX A

MANIPULATION CHECKS
After answering the self-assessed likelihood question at the end of the experimental case, each subject responded to a series of statements that served as manipulation checks for the independent variables. I used two manipulation checks for magnitude of consequences. First, I requested the subjects to indicate on the scale below the seriousness, i.e., the amount of harm done, of the ($70) ($10,330) undocumented (expenses) (corporate expense).

\[ \text{LOW} \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad \text{HIGH} \]

Using the data obtained from the responses to this scale, I performed a one-way ANOVA. As shown in Table 3 below, subjects perceived a significant difference between the seriousness of the low and high magnitude of consequences.

### Table 3

**Manipulation Check for Magnitude of the Consequences**

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-Way Anova</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-Value: 28.49</td>
<td>4.1250</td>
<td>6.3728</td>
</tr>
<tr>
<td>Pr &gt; F: 0.0001</td>
<td>(2.4527)</td>
<td>(2.1963)</td>
</tr>
<tr>
<td>n=64</td>
<td>n=59</td>
<td></td>
</tr>
</tbody>
</table>

I interpreted the results to suggest that subjects' responses to the seriousness of the wrongdoing were significantly impacted by the level of magnitude of the consequences within the context of the experimental instrument.

In a latter section of the written materials, I presented the second manipulation check related to magnitude of the consequences. I asked subjects to indicate on

---

I also performed the same type of statistical analyses on the manipulation checks for the truncated sample data. None of these analyses differed significantly from the statistical tests performed on the full sample.
Likert-type scales of 1 to 9 the seriousness of two events. These two events were:

A $10,000 cash shortage for the year

Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

A $70 cash shortage for the year

Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

These dollar amounts basically represented the high and low magnitude of the consequences in the experimental materials. I performed a paired t-test on the data to determine if the subjects perceived the seriousness of these two cash shortages differentially. The mean of the difference between the two scales was 4.0737 (Standard Error of 0.2248). The t-score was 18.1176, with a p-value of 0.0001. I interpreted the test results as evidence that my subjects perceived these two events to represent significantly different degrees of seriousness. Based on the results of these two manipulation checks, I believe that I successfully manipulated magnitude of the consequences.

I used two manipulation checks to examine the success of the manipulation of the channels of communication variable. As shown below, I asked the subjects to use two bipolar scales to describe the communication channels in the experimental instrument.

Please **circle a number** in each of the scales below to describe AgriLife's communication channels with respect to upward communication (that is, communication from someone at a lower level of the organization to someone at or near the top of the organization).

OPEN 1 2 3 4 5 6 7 8 9 CLOSED

CONDUCTIVE 1 2 3 4 5 6 7 8 9 NONCONDUCTIVE

I performed a one-way ANOVA on the data obtained from the subjects' responses to both of these scales. The results, shown in Table 4 on the following page, indicate that subjects' perceptions of the openness and conduciveness of the communication channels in the experimental instrument were significantly affected by the manipulation of the

---

39 One of the subjects failed to respond to these two scales. Thus, the sample size for the manipulation checks related to the channels of communication is 122.
firms upward communication environment. Although I obtained a statistically significant difference between subjects' measures of the negative and positive channels of communication, I believe that the positive channels of communication manipulation was weak from a practical perspective.

I also examined the correlation between these two variables, openness and conduciveness. The Pearson Correlation Coefficient and related p-value were 0.84744 and 0.0001, respectively. I interpreted the correlation results to mean that I obtained a significant, positive correlation between these two variables and that subjects tended to view the positive channels of communication as being open and conducive to communication from lower-level to upper-level employees and that they tended to view negative channels of communication as being closed and nonconducive to communication from lower-level to upper-level employees. I included two manipulation checks for the type of wrongdoing variable. For the first manipulation check of this variable, I asked the subjects to describe the nature of the wrongdoing in the experimental instrument as follows:

<table>
<thead>
<tr>
<th>Table 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manipulation Check for Channels of Communication</td>
</tr>
<tr>
<td>ANOVA Test Results</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>One-Way Anova</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>F-Value: 77.52</td>
</tr>
<tr>
<td>Pr &gt; F: 0.0001</td>
</tr>
<tr>
<td>One-Way Anova</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>F-Value: 61.10</td>
</tr>
<tr>
<td>Pr &gt; F: 0.0001</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>
Please circle a number from 1 to 9 on the scale below which you believe best describes the nature of the ([$70] [$10,330] undocumented expenses) ([$70] [$10,330] undocumented corporate expense) in the scenario:

PERSONAL WRONGDOING 1 2 3 4 5 6 7 8 9 CORPORATE WRONGDOING

I performed a one-way ANOVA on the data obtained from this scale. The results shown in Table 5 imply that a subject's view of the nature of the wrongdoing in the experimental instrument was significantly influenced by the type of wrongdoing that occurred in the context of the experimental instrument.

<table>
<thead>
<tr>
<th>Table 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manipulation Check for Type of Wrongdoing</td>
</tr>
<tr>
<td>ANOVA Test Results</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>One-Way Anova</th>
<th>Dependent Variable: Nature of the Wrongdoing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>F-Value: 61.91</td>
<td>Organization</td>
</tr>
<tr>
<td>Pr &gt; F: 0.0001</td>
<td>Individual</td>
</tr>
<tr>
<td>6.7966</td>
<td>n=59</td>
</tr>
<tr>
<td>(1.9008)</td>
<td>n=64</td>
</tr>
<tr>
<td>3.7968</td>
<td>(2.2899)</td>
</tr>
</tbody>
</table>

I presented the second manipulation check for this variable in the last section of the written materials.

Please use an "x" to mark which statement below you believe best describes the following actions.

Employees misreporting reimbursable expenses

_____ personal wrongdoing

_____ organizational wrongdoing

Corporate gifts or contributions to regulators or politicians to influence an outcome in favor of the firm

_____ personal wrongdoing

_____ organizational wrongdoing
These statements represented the two manipulations of the type of wrongdoing variable presented to the subjects in the experimental instrument. Eighty percent of the subjects who classified the personal wrongdoing statement as personal wrongdoing also classified the organizational wrongdoing statement as organizational wrongdoing.

The realism and clarity of the scenarios could impact the subjects' responses to the likelihood question. To measure subjects' perceptions of the experimental instrument's realism and clarity, I asked them to respond as follows:

Please circle a number from 1 to 9 on the scales below to describe the AgriLife scenario:

**REALISTIC** (that is, the degree to which you believe the scenario is representative of the internal audit function)

**REALISTIC** 1 2 3 4 5 6 7 8 9 **UNREALISTIC**

**CLEAR** (that is, the degree to which you can tell what is taking place in the scenario)

**CLEAR** 1 2 3 4 5 6 7 8 9 **UNCLEAR**

The means for these scales are reported in Table 6.

<table>
<thead>
<tr>
<th>Table 6</th>
</tr>
</thead>
</table>
| **Means for Realism and Clarity**  
(Standard Deviations in Parentheses) | |
| **Realism**  
n = 123  
3.8699  
(2.3780) | **Clarity**  
n = 123  
3.3252  
(2.1096) |
| Hypothesized mean = 5 | Hypothesized mean = 5 |
| One-tailed t-test = 4.5364  
p-value = (0.00000) | One-tailed t-test = 7.4667  
p-value = (0.00000) |

I interpreted the means for realism and clarity as evidence that I obtained a reasonable degree of realism and clarity in the experimental instrument. If I hypothesize that a mean of 5 for both the realism and clarity variables represents a neutral perspective, a one tail t-test indicates that the means for clear and real are
significantly different from 5.

In summary, my observations while the experiment was being performed combined with the subjects' responses to the realism and clarity measures provided no evidence threatening the validity of the case materials. Furthermore, I interpreted the tests performed on the manipulation checks to indicate that the experimental variables were successfully manipulated, although the positive channels of communication manipulation was weak.
APPENDIX B

THE EXPERIMENTAL INSTRUMENT
Dear Participant:

Thank you for participating in this study. I am performing this study to examine your beliefs about reporting issues within an internal auditing context. The presented materials request that you respond to several statements and/or questions. There are no "right" answers in the way that we think about "right" answers to a series of math problems. Complete anonymity is guaranteed. Please note that your name is not required to be placed on any of the materials. If you do decide to answer the questions or respond to the statements, please be sure to complete each statement and/or question and try to give me your true belief or intent. Your participation in this study is voluntary. If you wish to withdraw from this study at any time, you may do so. Again, thank you for your participation!

Sincerely,

Tom Tolleson
University of North Texas

This project has been reviewed by the University of North Texas Committee for the Protection of Human Subjects.
General Overview

**Part I** -- In Part I, you will read an operational auditing scenario. Following the scenario, you will be given a statement and asked to indicate the likelihood of your taking a particular course of action. Please express your true intent or belief. Once you have responded to a statement and gone on to the next page, please do not go back and change your answer.

**Part II** -- In Part II, you will be asked to evaluate aspects of the operational auditing scenario.

**Part III** -- In Part III, you will be given several statements and asked to indicate the degree to which you agree or disagree with those statements.

**Part IV** -- In Part IV, you will be asked to give your opinion about various social issues. After you give your opinion about a particular social issue, you will be asked to classify several statements as to their importance on your decision. You will then be asked to indicate which statement was most important, second most important, third most important and fourth most important to your decision.

**Part V** -- In Part V, you will be asked to respond to several questions and/or statements related to your personal experience as an internal auditor.

**PLEASE READ THE INSTRUCTIONS FOR EACH PART VERY CAREFULLY.** If you are unsure of what to do in a particular part, please feel free to ask me for an additional explanation.
General Instructions for Part I (The Experimental Materials)

After reading the scenario in this part, you will be asked to make a judgment about the likelihood of taking a course of action. After the question, you will be asked to record the likelihood of your action on a scale such as the one below.

For example, assume that you were asked: What is the likelihood that Ross Perot will be a third party presidential nominee for the 1996 presidential election? If you believe that it is fairly likely that he will be a third party nominee, you might place an "x" on the scale as shown below:

|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
0 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

By placing the "x" as indicated on the above scale, you would be indicating that there is about a 65% chance that Ross Perot will be a third party presidential nominee for the 1996 presidential election.

If you have any questions related to using the scale or about anything else that comes up during your completion of the rest of the materials, please do not hesitate to ask me.

After reading the general instructions, please go on to the next page.
Individual Wrongdoing

AgriLife is a large consumer food products corporation with three divisions: production, research and development and sales. AgriLife's corporate headquarters also houses its research and development and sales divisions. The organizational structure of the company is hierarchical, with a lower level of management reporting to the level of management immediately above it. (Negative Channels of Communication: AgriLife's management has developed a written corporate code of conduct but does not require employees to acknowledge or sign it on an annual basis. The company does not maintain an open-door policy, and AgriLife's managers are unreceptive to employee concerns or suggestions. There is little communication from the organization's lower-level employees to its upper-level employees. Employees are unsure of what corrective actions, if any, are taken by management when an employee reports a departure from approved policies and procedures.) (Positive Channels of Communication: About three years ago, management developed a corporate code of conduct that addresses a variety of issues such as employee duty and integrity, conflicts of interest and illegal or otherwise improper behavior. AgriLife management believes that the code helps obtain more consistent behavior throughout the various divisions. Employees are annually required to read and sign the corporate code of conduct. Top management visibly supports the code. AgriLife management maintains an open-door policy to encourage employee suggestions and communication from lower-level employees to upper-level employees. In the past, the company has enforced various penalties on anyone who did not follow the corporate code of conduct.)

AgriLife's internal auditing department performs operational audits in the company's three divisions. (Negative Channels of Communication: AgriLife's director of internal auditing reports directly to the company's CEO. Bold added) (Positive Channels of Communication: AgriLife's director of internal auditing reports directly to the company's audit committee. Bold added) Recently, you have been assigned to work on the annual operational audit of the company's research and development and sales divisions. Today, you are ready to complete your preliminary review of the sales division and to begin your preliminary review of the research and development division.

In looking over the reimbursement checks made out to the Vice President of Marketing, you do not find proper supporting documentation. After calling the accounts payable department for additional details, you conclude that certain checks related to the reimbursed expenses claimed by
the Vice President of Marketing lack supporting documentation. However, the Vice President of Administration has signed off on all of the claim forms. In addition, the accounts payable department has not questioned the Vice President of Administration's approval of those claim forms that lacked proper documentation. It appears that the Vice President of Administration is extremely busy and not given to examining details. What little documentation that you have found shows that the expenses are for personal travel and clothing items. The amount of questionable checks issued to the Vice President of Marketing during the past fiscal year totals approximately ($70, Low Magnitude of the Consequences) ($10,330, High Magnitude of the Consequences).

You decide to expand your sample of the Vice President of Marketing's travel expense vouchers. The expanded sample does not yield any additional reimbursement checks that lack proper supporting documentation. After another conversation with the head of accounts payable, you conclude that the Vice President of Marketing's undocumented expenses are not the result of the airline losing or misdirecting the VP's luggage. You decide to call the Vice President of Marketing to discuss this matter but find that the VP has appointments scheduled for all afternoon. You make a note in the working papers about the undocumented expenses.

After completing your assignment for the preliminary review of the sales division, you decide to take a quick coffee break before beginning your part of the preliminary review of the research and development division. After your coffee break, you walk over to the research and development division offices and begin your review. Shortly after one o'clock, you decide to break for lunch. At the restaurant, you happen to meet your internal audit manager. Over lunch, the two of you discuss how the audit is progressing. After relating your concerns about the Vice President of Marketing's lack of documentation for the reimbursed expenses, your audit manager says, "I know the Vice President of Marketing personally. We have an appointment scheduled for this afternoon, so I can discuss this matter then." After bringing your supervisor up to date on your progress with the audit in the research and development division, the lunch hour is over, and you go back to work.

A few days later, the final report from the operational audit is ready, and you request to review it. After reviewing the final report, you decide to walk down to your audit manager's office and inquire about why the final report does not address your concerns related to the lack of proper documentation for the VP's reimbursed expenses. The audit manager says, "I talked with the Vice President of
Marketing about this matter, and I think the best thing for us to do is to forget about the undocumented expenses."

From the tone of your audit manager’s voice, you decide it would not be useful to discuss this issue further and you return to your office.

Please note: the question below appeared on a separate page following the experimental scenario.

Please mark a number from 0 to 100 on the scale below to indicate the LIKELIHOOD that you would report the Vice President of Marketing’s ($70) ($10,330) of undocumented expenses directly to the director of internal auditing for AgriLife, your audit manager’s immediate supervisor.

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AgriLife is a large consumer food products corporation with three divisions: production, research and development and sales. AgriLife’s corporate headquarters also houses its research and development and sales divisions. The organizational structure of the company is hierarchical, with a lower level of management reporting to the level of management immediately above it. (Negative Channels of Communication: AgriLife’s management has developed a written corporate code of conduct but does not require employees to acknowledge or sign it on an annual basis. The company does not maintain an open-door policy, and AgriLife’s managers have not been receptive to employee concerns or suggestions. There is little communication from the organization’s lower-level employees to its upper-level employees. Employees are unsure of what corrective actions, if any, are taken by management when an employee reports a departure from approved policies and procedures.) (Positive Channels of Communication: About three years ago, management developed a corporate code of conduct that addresses a variety of issues such as employee duty and integrity, conflicts of interest and illegal or otherwise improper behavior. AgriLife management believes that the code helps obtain more consistent behavior throughout the various divisions. Employees are annually required to read and sign the corporate code of conduct. Top management visibly supports the code. AgriLife management maintains an open-door policy to encourage employee suggestions and communication from lower-level employees to upper-level employees. In the past, the company has enforced various penalties on anyone who did not follow the corporate code of conduct.)

AgriLife’s internal auditing department performs operational audits in the company’s three divisions. (Negative Channels of Communication: AgriLife’s director of internal auditing reports directly to the company’s CEO.) (Positive Channels of Communication: AgriLife’s director of internal auditing reports directly to the company’s audit committee.) Recently, you have been assigned to work on the annual operational audit of the company’s research and development and sales divisions. Yesterday, you completed your preliminary review of the sales division. Today, you are ready to begin the preliminary review of the research and development division.

AgriLife’s research and development division has developed a solid reputation as a leader in the development of consumer food products. The company is currently in the process of developing a fat-free margarine that can be used for baking. If successfully developed, the product will be
a major breakthrough because the fat-free margarine
currently on the market can not be used for baking.
Commercial bakeries are some of Agrilife's largest-volume
customers. The fat-free margarine will be a hit with such
customers because it will allow these bakeries to advertise
to the consumer fat-free baked goods equivalent in taste and
texture to their regular baked goods.

In examining research and development's canceled checks
related to divisional expenses, you find a check that does
not have proper supporting documentation. You notice that
the check was endorsed by an individual and stamped by a
bank in Washington, D. C. After referencing the list of
firms that Agrilife does business with, you conclude that no
such individual or firm name appears on the list. In
addition, you find that the company does not incur expenses
with any firm on the East coast. In examining the memos
related to this check, you find that the Vice President of
Research and Development approved this as a product
development expenditure. An additional memo indicates that
Agrilife's CEO, along with the other executive officers, was
aware of the undocumented corporate expense. The memo also
notes that the undocumented corporate expense should result
in quicker government approval of the new fat-free
margarine. The amount of the check issued is ($70, Low
Magnitude of the Consequences) ($10,330, High Magnitude of
the Consequences). You decide to call the Vice President of
Research to discuss this matter but find that the VP has
appointments scheduled for all afternoon. You make a note
in the working papers about the undocumented corporate
expense.

You decide to take a quick coffee break before
continuing your part of the preliminary review of the
research and development division. After your coffee break,
you continue your review. Shortly after one o'clock, you
decide to break for lunch. At the restaurant, you happen to
meet your internal audit manager. Over lunch, the two of
you discuss how the audit is progressing. After relating
your concerns about the undocumented corporate expense made
in the research and development division, your audit manager
says, "I know the Vice President of Research personally. We
have an appointment scheduled for this afternoon, so I can
discuss this matter then." After bringing your supervisor
up to date on your progress with the audit in the research
and development division, the lunch hour is over, and you go
back to work.

A few days later, a draft of the final report from the
operational audit is ready, and you are asked to proof read
it. After proof reading the final report, you decide to
walk down to your audit manager's office and inquire about
why the final report does not address your concerns related to the undocumented corporate expense. In response to your question, your audit manager says, "I talked with the Vice President of Research about this matter, and I think the best thing for us to do is to forget about the undocumented corporate expense."

From the tone of your audit manager's voice, you decide it would not be useful to discuss this issue further and you return to your office.

Please note: the question below appeared on a separate page following the experimental scenario.

Please use an "x" to mark a number from 0 to 100 on the scale below to indicate the likelihood that you would report the ($70) ($10,330) of an undocumented corporate expense directly to the director of internal auditing for AgriLife, your audit manager's immediate supervisor.

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Manipulation Checks
Individual Wrongdoing

Please circle a number from 1 to 9 on the scales below to indicate the following within the context of AgriLife’s operational audit:

SERIOUSNESS (that is, the amount of harm done) of the ($70) ($10,330) of undocumented expenses
LOW 1 2 3 4 5 6 7 8 9 HIGH

RESPONSIBILITY (your duty or obligation) for reporting the ($70) ($10,330) of undocumented expenses
LOW 1 2 3 4 5 6 7 8 9 HIGH

PERSONAL COST (trouble, risk or discomfort you face) to report the ($70) ($10,330) of undocumented expenses
LOW 1 2 3 4 5 6 7 8 9 HIGH

Please circle a number in each of the scales below to describe AgriLife’s communication channels with respect to upward communication (that is, communication from someone at a lower level of the organization to someone at or near the top of the organization).

OPEN 1 2 3 4 5 6 7 8 9 CLOSED

CONDUCTIVE 1 2 3 4 5 6 7 8 9 NONCONDUCTIVE

Please circle a number from 1 to 9 on the scale below which you believe best describes the nature of the ($70) ($10,330) of undocumented expenses in the scenario:

PERSONAL WRONGDOING 1 2 3 4 5 6 7 8 9 CORPORATE WRONGDOING
Please **circle a number** from 1 to 9 on the scales below to describe the AgriLife scenario:

REALISTIC (that is, the degree to which you believe the scenario is representative of the internal audit function)

REALISTIC 1 2 3 4 5 6 7 8 9 UNREALISTIC

CLEAR (that is, the degree to which you can tell what is taking place in the scenario)

CLEAR 1 2 3 4 5 6 7 8 9 UNCLEAR
Manipulation Checks
Organizational Wrongdoing

Please circle a number from 1 to 9 on the scales below to indicate the following within the context of AgriLife's operational audit:

SERIOUSNESS (that is, the amount of harm done) of the ($70) ($10,330) of undocumented corporate expense
LOW 1 2 3 4 5 6 7 8 9 HIGH

RESPONSIBILITY (your duty or obligation) for reporting the ($70) ($10,330) of undocumented corporate expense
LOW 1 2 3 4 5 6 7 8 9 HIGH

PERSONAL COST (trouble, risk or discomfort you face) to report the ($70) ($10,330) of undocumented corporate expense
LOW 1 2 3 4 5 6 7 8 9 HIGH

Please circle a number in each of the scales below to describe AgriLife's communication channels with respect to upward communication (that is, communication from someone at a lower level of the organization to someone at or near the top of the organization).
OPEN 1 2 3 4 5 6 7 8 9 CLOSED
CONDUCIVE 1 2 3 4 5 6 7 8 9 NONCONDUCIVE

Please circle a number from 1 to 9 on the scale below which you believe best describes the nature of the ($70) ($10,330) undocumented corporate expense in the scenario:
PERSONAL WRONGDOING 1 2 3 4 5 6 7 8 9 CORPORATE WRONGDOING
Please circle a number from 1 to 9 on the scales below to describe the AgriLife scenario:

REALISTIC (that is, the degree to which you believe the scenario is representative of the internal audit function)

REALISTIC 1 2 3 4 5 6 7 8 9 UNREALISTIC

CLEAR (that is, the degree to which you can tell what is taking place in the scenario)

CLEAR 1 2 3 4 5 6 7 8 9 UNCLEAR
Demographics and Additional Manipulation Checks

Please help me complete my study of reporting issues by providing the requested information about yourself and your company.

1. What is your age? ______

2. Please indicate your gender: _____ Female _____ Male

3. If you have a college degree, please indicate the type(s) of degree(s) that you have (For example, if you have a Bachelor of Science, list BS.)

4. When were you awarded your last degree (that is, the year you earned your last degree)? ______

5. Which of the following job classifications best describes your current position?
   _____ Audit Staff
   _____ Audit Manager
   _____ Audit Director

6. How long have you worked in this position? ______ yrs. (Please round your answer to the nearest whole year. For example, 1 year and 3 months would round to 1 year; 1 year and 6 months would round to 2 years.)

7. Are you a CPA? (check one) _____ Yes _____ No

8. Are you a CIA? (check one) _____ Yes _____ No

9. Other professional certification(s) (please list):

   ____________ ____________ ____________

10. Approximately how many employees work for your organization (i.e., the whole organization in all areas)? ______

11. In your company, does the internal audit director report directly to the Audit Committee? (check one) _____ Yes _____ No

---

Please note that statements number 18, 19, 27 and 28 served as manipulation checks. Subjects' responses to the other statements will serve as data for future research.
12. If the answer to number 11 is no, does the internal audit director in your company report directly to the Board of Directors? _____ Yes _____ No

13. Approximately how long have you worked as an internal auditor (that is, your total work experience as an internal auditor)? _____ yr(s). (Please round to the nearest whole year. For example, 1 year and 3 months would round to 1 year; 1 year and 6 months would round to 2 years.)

14. Have you worked for your current employer as an internal auditor less than 6 months?
   _____ Yes _____ No

15. Have you worked for your current employer as an internal auditor more than six months but less than a year?
   _____ Yes _____ No

16. From this point in time, how long do you expect to continue working in internal auditing
   _____ 1 year _____ 3 years _____ 5 years
   _____ 2 years _____ 4 years _____ more than 5 years

   Please circle a number on the scales below to indicate how serious the following circumstances would be for an internal auditor in a company such as AgriLife?

17. A $10,000 cash shortage for the year
   Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

18. Not reporting to government agencies minor violations of environmental regulations
   Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

19. A $70 cash shortage for the year
   Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious
20. Using company office equipment for limited personal use

Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

21. Making a personal copy of software licensed to the organization

Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

22. Management permitting development or production of unsafe products

Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

23. Management making overly optimistic and false projections of future performance

Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

24. Employees abusing their official position to obtain substantial personal services

Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

25. Management ignoring or discounting reports of sexual harassment in the workplace

Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

26. Employees not reporting incidents of sexual harassment on the job

Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

Please use an "x" to mark which statement below you believe best describes the following actions.

27. Employees misreporting reimbursable expenses

_____ personal wrongdoing

_____ organizational wrongdoing
28. Corporate gifts or contributions to regulators or politicians to influence an outcome in favor of the firm

_____ personal wrongdoing

_____ organizational wrongdoing

Please make any comments concerning this experiment in the space below.

This concludes the study. Thank you for your participation, and I wish you the best in your chosen career path.
APPENDIX C

TRANSCRIPTS OF CASE FIELD TESTING INTERVIEWS
INTERVIEW ONE

Internal Audit Director, Semiconductor/Defense Industry

The interviewee’s general comments immediately after reading the case materials.

Let me refer you back a minute to the Institute of Internal Auditors. In the fall of 1993, the Institute published a work entitled, Audit Committee Best Practices. This work is an assessment of audit committee best practices. One of the statements in the book is, "does the internal audit department audit expense statements?" Our answer here in our internal audit department is yes, we do it every year. And nothing like this goes unnoticed.

One of your questions here at the end of the scenario says, "please mark a number from 0 to 100 on the scale below to indicate the likelihood that you would note the vice-president of marketing’s undocumented expenses in the working papers." What we would do is make a note of this. It would be written and there would be a definite follow up with the vice-president of marketing to find out if we had overlooked the documentation. If there was no supporting documentation, we would go to his boss and on up and up. If it is not documented, he gives the money back to the company.

This is very clear, I mean, the audit committee is very adamant about this one; so, there is no question about what we would do. The junior auditor or staff auditor doing this would know exactly what to do. I can assure you there would be no "hanky panky" going on like this here.

The answer to the second question at the end of the scenario is 100%. It would be done.

From the perspective of the internal audit function and the role of an internal audit staff person, is the individual wrongdoing case realistic?

This scenario, as related to the person’s expense statement, is very key because you just cannot tolerate that kind of behavior. Now, the copy machine, we look for that kind of stuff, but we look for more important things, such as the person right here in the scenario who is not doing right as far as the policy is concerned. I'm not sure that I would do as much on the copy machine as you've done here. That is something you look for, but, mainly, when we do an annual expense statement audit, we randomly select the expense statements of the top officers and other officers. And we do not close the binder on that until we have everything answered. So, your deal here on the expense statement is key. I'm not sure I would go as heavy on the copier, but that is the kind of stuff that you definitely look for.

41 In both interviews, I replaced any reference to the interviewee’s company or to any employee(s) of that company with a series of dashes.
Do you think including the staff’s personal use of the copier trivializes the scenario?

I think it does. You have a very serious problem with the vice-president of marketing’s undocumented expenses. That is something that you will not tolerate. The copy machine is something you fight all the time. People will make personal copies, and you have to say that is for business use only. I don’t know if you have ever met Corey Thompson are not, but he gives presentations all the time on how to detect fraud. You watch the copy machine, you watch the supplies. But the main thing you want to watch is integrity. You get the integrity of the people who fill out these expense statements, they won’t watch the copy machine. If the guy in charge of administration does his expense statement right and he is indoctrinated on the proper use of company assets, you don’t worry about the use of the copy machine because it will flow down.

Would you suggest taking the part about the use of the copy machine out of the scenario?

Yes, because it takes away from the importance of the undocumented expenses in the first part of the scenario.

Is there anything that you would add to the scenario?

No, I think the scenario is key. What you’ve got in the first part, if the auditor is not properly trained and he doesn’t know that the audit manager and the director are there to back him all the way, he could be led by a person calling him and saying by the way I know him and the lunch is on me and all that kind of stuff. Auditing the expense statements is key, and that’s what we do here.

Would your auditors consider this scenario to be consistent with an operational audit or should I substitute the words expense statement audit?

I think you can leave the words operational audit.

So, using operational audit would not be misleading?

Right, right.

Would you expect a junior staff auditor from your company to document the $525 of undocumented expenses found here in the scenario?

$525 doesn’t mean anything.

What you are saying is that this type of audit is looking for exceptions rather than comparing the dollar amount of the undocumented travel expenses the billions of dollars of revenue generated in revenues by your company?

See, what you are saying is one of the biggest things that you have to get across to auditors that come in from the Big Six, for example—materiality. That is not our concern. Our concern is
internal controls. We do not leave something sitting or on the table and not put it in the report because it is not material. That's not the point; I mean, we are interested in internal controls. If this guy had got to us for $500—if he didn't have his $25 documented, which has now been raised by the government to $75, we would write him up for that. Because the policy is very clear, $25, and that is going to $75, like I said. If that was not documented but somebody in accounting had approved it, we would go back and say, "now look, here's the policy, here's the procedure." There's 58,000 people at our company. If 57,500 are going to follow that policy, the other 500 are also going to follow it, too. I mean they are going to follow the policy. So, why isn't that $75 dollars documented? So, the $525 doesn't mean anything.

Let's say you did have a junior internal audit staff member that has come in from one of the Big Six firms and has been schooled in the concept of materiality and what that means in relation to the billions of dollars of revenue at your company. By me making the $525 statement to one person and the $10,330 statement to another person, do you think that the difference between those two amounts is substantial or should the difference be greater, say make the $525 only $25?

I think the $525 is fine. The point here is that the auditor should not worry about the $525. I'm not sure that it would matter if you changed the dollar amount to $10,330. The key here is you've got a vp that can't document, he can't tell you what he spent $525 on [or] he can't tell you what he spent $10,000 on. He can't tell you, that's a serious concern. You can put a $100 on there. That's a $100 he can't document. Now, is your auditor suppose just to let that ride because you had lunch with another vp or the audit director or somebody that knows him and says, "forget it, I know what it is"? No, you're not going to let it ride. You let him by when you do that. In your audit binder, you've got a document for a receipt that was not there. That's not being nick picky, that's just to make sure that you have internal controls throughout the organization. That's the purpose of that. And you've got to have the same controls on these folks that you've got on these folks here. Because, as I told you earlier, we have a great internal control environment here because it comes from management down. When we did the expense statement audits last year, we had to go back and get some documentation because the people in accounting had let it slip. But we got all the documentation. We didn't have any write-ups at all—because it comes from the top-down. And it didn't matter if it was $525 or $10,000. In an organization if you've got a guy doing it here, it is going to permeate the organization. That's going to be a problem.

Do you think having the manipulations bolded (e.g., the description of the open channels of communication) helps or should that information be nonbolded?

No, I think that's fine. No, No, that really hi-lighted what it was leading me into. It does, it does.

Do you think I could obtain a greater contrast by creating
negative upward communication channels rather than the absence of upward communication channels? For example, on paper the communication channels look great, but the employees know that management does not really want to know what is going on. In a similar vein, the company has an open-door policy but employees are treated with disdain when they attempt to use it.

Well, let me tell you what, I've never experienced that. I've been in this job five years now, six years, and, as you well know, audit committee chairmen change. This is the third one. All of them are very, very adamant about the fact that they want to hear this kind of stuff. So, I've never experienced that. Tom, I don't know. You'd have to talk to someone who's experienced that. And management, management really, really is a firm believer in internal controls here. Like I said, we have E&Y (Ernest & Young) sign off on internal controls each year. I have to make a report to them (the audit committee). It's in their charter, it's in their charter on internal controls. In January of each year, I report to the audit committee on the status of internal controls based on the assessment that we did, and management, as you well know, signs a representation letter each year. Included in the representation letter is the effectiveness of internal controls. I don't know, I've just never experienced that. I can't answer that. And I hope that I never have to.

In the past your audit committee has been very supportive of you and the information that you have brought to them. You've have grown accustomed to this type of environment. If that environment changed, you would have to go somewhere else or adapt to the new environment.

Tom, this environment is not going to change. Let me tell you why it is not going to change. For 15 years, I was the operations controller here. I worked with people in internal controls and this kind of stuff. I moved to the audit department here. And the audit committee has always been, and not only the audit committee, but management has always been really concerned about internal controls. When the Foreign Corrupt Practices Act was passed, we had one of the Big Eight, the Big Six now, conduct a detailed study to make sure that we conformed to everything in the Foreign Corrupt Practices Act. And this was 1970 something. And that was done then and it's just been going on and on and on. Our CEO of this company is on other audit committees and he is very, very, very internal control conscious. And so, I don't think that's going to happen. An you've got management that believes strongly in internal controls, who pushes internal controls and you've got an audit committee. I don't think what you're describing is going to happen, and I don't want to speculate until I have to.

Let's take it away from your company.

I wouldn't go to work for that company. If there was a company like that offered me a job, I mean, twice what I am making now to come, and they didn't care anything about internal controls and all they wanted a guy just to come in there and not do anything, I wouldn't go. Does that answer your question?
Yes, but we know there are companies like that. It is not
unusual to open The Wall Street Journal and find a company
or companies that have engaged in unlawful or unethical
behavior.

I know, I know. And let me tell you something. We’ve got a
chairman of the audit committee. You saw the chart, I report to
him functionally. And I will get notes from him or calls from
him, ‘I saw this in the journal. How are we doing here?’ And,
brother, I better answer him and immediately. That’s the
environment here, Tom. I mean, you’ve seen the commercial, it
don’t get any better. That makes my job, that let’s me be much
more effective. When management looks at it that way and when the
audit committee does.

Is the type of wrongdoing in the scenario clear?

The type of wrongdoing is right. And I think it is very key to
what you’ve done. Again, I’m not sure that you need this about
the copies. I think it takes away from what you’re trying to
prove. I think it does. While people will look for that to make
sure that—let me you what, our audit reports, we have a policy
here that when you write something up in an audit report, if it’s
not fixed based on the agreed date, if it’s not fixed within 90
days, then it goes to the top management team. If they don’t fix
it, then it goes to the audit committee. That’s the only time the
audit committee wants to see an actual audit finding. And they
are death on repeat findings. They don’t want repeat findings in
an audit report. And so, we have never had a point go to the
audit committee. We have never had a point go the management
committee because the auditees know that that’s our philosophy.
And once they agree with us the point, they are going to fix it.
Now, if we found this copy machine like that, we have what we a
call a minor, a memo item. It would go in the memo item, and they
would be expected to fix that. But they’d be expected to fix it.
But it would not go in the main audit report. Cause what you’re
talking about here is somebody making personal copies on the copy
machine, is that right?

Yes.

And it would go in the memo item that you shouldn’t be using the
copy machine to make personal copies. So, you’re taking away from
your point here, in my opinion. But from here up and on back here
about this, that’s key. An auditor has got to know that they’re
not lead by the vp that’s got nothing to do with auditing, that
they go all the up to the director, till these things have got to be fixed. So, I would eliminate that copy stuff.

What are internal audit performance evaluations based on
here at your company?

Well, what we do, let me look at it this way, what we do, we have
annual audit reviews. We bring a person in and they will be
reviewed by the team leader and the (audit) manager. I think it
is the first three audits is what it is, to make sure that they
know what it is, that they understand the concept of what we are
trying to do. And then, we do a lot of feedback. The auditor
will feed back to the manager what they think they accomplished, what they think did. Then, the manager and the auditor, oral only not documented, will get back together and the manager will feed down or the team leader will feed down to the auditor what they think they accomplished. Then they will come to an agreement on how they're going to do it, that's based on the audit. Then we have the annual reviews here. And the annual reviews, the managers will review the auditor based on what they see. And then they will give it to me and I'll review it, and that's review. But also, you've got to remember we also have a feedback at the end of each audit. I showed you that chart. We have a feedback. And we get those, give them to the auditors and they see. And if there is anything really out of line, then I'll go and talk to the person that filled out the end of the audit questionnaire. But one thing that I don't want, the one thing I don't want is for these auditors to think that they've got to get good feedback because that's not what it's designed to do. It is designed to get effective feedback, constructive feedback. And we get some that tell us, you know, your auditor didn't communicate with me on this. My planning conference left something to be desired, so we'll go talk to them and find out what we could have done in that planning conference to make sure that that's it. And when Coke did their peer review on us, one of the things that some of the people pointed out that our auditors needed to be more flexible. Well, the CFO said, "I don't want a bunch of flexible auditors out there. If them being inflexible gets the job done, then fine, that's the way it's going to be." But I think that you see the environment is fairly good, Tom.

Are you involved in those evaluations?

I'm involved in the managers' evaluations. I go over each of the people's evaluations with the managers, not with the people.

Tom, we used to have something one time that I stopped. We had a written evaluation, it was not an upward evaluation but a downward evaluation, by the team leader at the end of each audit. Now, a team leader will change at the end of each audit. And you may be the team leader on this one, with a staff, I mean, a senior here, and next time, a senior may be here and the team leader here. These written reviews at the end of each audit just too glowing, they were too glowing for me because you didn't know who was going to be your next team leader, so you'd be nice to this guy. So, we stopped that. It was not effective. I mean everybody was great, and everybody is not great! Everybody can improve, and, so, we stopped that, but that was the reason. I belong to several organizations, and one of the ones that I belong to is called the Auto. We discussed this a lot, and none of these companies do it anymore. Included in that is Abbott Labs, Phillip Morris, American Airlines, TI, Heinz, Coca-Cola, but I think all of them have stopped that kind of stuff now because they're just not effective.

How would someone be evaluated that went above their immediate supervisor's head here in your audit department?

Tom, if I had a senior auditor out there that found something and went to his manager--and I've got four of those managers over there--I'll tell you the truth, I'm not kidding you a minute, if I had a senior auditor go to a manager and a manager swept it under the rug, the senior came to me and I found out that the manager
swept it under the rug, I would replace the manager, I'm just as serious as I can be. Because I've got an obligation to this audit committee, I mean, there's no surprises, they want to know. They want to know exactly what's going on. And we're not going to have any surprises; we're going to find this stuff. And if I had a senior who found something out here and he went to the manager and the manager swept it under the rug and the senior came to me, I'd replace the manager and I wouldn't bat an eye. Now, you can believe me on that because I mean it. And every manager out there knows it, too.

And, Tom, it works the same way. I report functionally to the audit committee, o.k. When I find something that I think the chairman should know about, if I find something, I feel obligated. I'm not required to do it, but I feel obligated, to call my boss, the CFO, and tell him--I don't guess it's ever happened, but I feel obligated to call him and tell him that I'm going to call the chairman. And I know what his answer will be, fine, fine. It did happen one time, but it was a minor item. It did happen. And I called him and I said, "I'm going to call the chairman and he needs to know this," and he said, "fine." I don't want him to get blindsided.

Another thing, let just tell you. I have a pre-meeting with the chairman--we have six audit committee meeting a year--and I have a pre-meeting with him [before] every one; they'll last between half an hour and an hour. And I will tell the CFO everything I'm going to him about, not that he'll change anything, but I don't want the chairman to talk to the CFO about something that I haven't told him or both of them. But he has never told me not to talk to anybody about that. But I'm just telling you that's the environment here.
INTERVIEW TWO

Internal Audit Senior Project Manager, Retail Industry

The interviewee’s general comments immediately after reading the case materials.

I think I would have a problem answering the second question at the end of the scenario because it doesn’t have a reference of time frame or steps that I would take before—if you’re saying would I ultimately report to the director of internal auditing without taking—would I go right to them, the answer would be no. Would I take other steps and if those didn’t work then go to them, the answer would be yes. So you could reference them, the time frame and action steps in the question.

So, you are suggesting a clarification saying that "after going through other steps you would go to the director of internal auditing"?

Perhaps, correct. Right now it would not be fair to anybody, in the scenario I read. It would be, clearly, just a misunderstanding. It could technically kill the poor auditor’s career.

From the perspective of the internal audit function and the role of an internal audit staff person, is the individual wrongdoing case realistic?

Most definitely. Sure. That’s the way it works. The scenario is pretty straightforward from what was going on. You don’t know the answer to—it’s still a huge unresolved question on whether there is any wrongdoing in the scenario. So, you can’t jump to any conclusions. It’s not like the staff auditor has identified a major defalcation and the audit manager is covering it up. You don’t know that from what has been discussed so far.

Is there something that you think I could add?

Well, it’s enough for me to know that it needs to researched further. As a staff auditor, you can’t drop it. You need to know what’s going on. If you want to make it—you do say in there about them using it for personal—but again you don’t know what some of the underlying, and there are some underlying causes; there might be a reason for them using some perceived personal use. You went over to Hong Kong on a foreign buying trip and your luggage didn’t come. You have to have clothes, so they’re going to buy personal clothes. And it could be approved for something like that. So, there’s rational reasons for some of it. Now, if they’re just going out buying personal clothes for no reason, then we have a problem that we have to resolve. So, that’s where I’m coming from in not being totally positive that—any interview you ever go into in a defalcation there’s always an unexpected twist. Unless it’s so black and white that somebody’s just got no doubt, I don’t question it. Materiality, I guess, and that’s—I know you want that for your scenario—would have a direct relationship here also.
So, you think that materiality would come into play?

Oh, definitely, materiality would come into play. If someone is buying a $10,000 wardrobe, the logical case for them having purchased that for business use is going to come into a lot more question than a $200 replacement wardrobe. $200 is not even a suit! You can easily get caught out there and the suit didn’t show up. And if you’re meeting with someone who is critical to the company’s success, with a major supplier--

But if you had truly used the funds for personal reasons not related to the company?

Then we’d have a problem. But I didn’t see that, I don’t know that from what I read in the scenario.

Let’s just say that we do have a problem. Would the materiality of the problem impact the decision?

Then it would be on principle.

In other words, it would matter that the exception took place, not the dollar amount of the money.

Correct, correct. But to the--correct.

Is there anything you would change about the scenario?

I don’t think so. It’s kind of interesting. Fun scenario, kind of challenging.

Do you think that by putting in the staff’s personal use of the copier that the scenario is trivialized?

Yes and no. I think that it is interesting because there’s lot of times a company policy and then a practice policy, and the copier is a prime example of it. Pencils, office supplies, that kind of—that’s a great example of one of those policies versus reality—officially. A lot of times how you set a policy as a general guideline for everybody, you have no intention of maybe ever trying to enforce it but letting people know where they stand on this and what the company expects out of them. Then if people are taking reams of paper home and boxes of paper home, you’re covered. You know it’s against company policy, and they have no excuse for it. Then it does become an item of materiality.

Let’s say your auditing people were reading this scenario. Do you think the copier takes away from the undocumented expenses?

Not as long as you treat it as a separate issue, which you do. It’s just something else that came up during the audit. It doesn’t—it pales in comparison to—there’s no relationship in magnitude, obviously, but it’s treated as a totally separate scenario in the way that your asking your questions after you read it.

Would finding the use of the copier be realistic in your
company?

Probably not, probably not. Finding that it’s used--let me revise that statement--Finding that people have used it, probably so. Materiality of it would probably not be huge. It would be more of a side comment to the manager over the area.

The question at the end where we were ask "what is the likelihood that you would document the use of the copies in your working papers" in all likelihood, would not find its way into the papers?

It could find its way into the papers, but it wouldn’t find its way into the report. It would be--we have like different levels of reporting to management, in the form of a written report, written suggestions to them and then verbal suggestions, and there is no way it would make it to the written report unless that led itself into more questions. I mean, if someone hears something like that, they’re going to ask a follow-up question to find out what the magnitude of it is. If they’re reproducing books, it would have a different magnitude.

So the magnitude of what’s going on might impact the actions of the auditor?

Definitely, definitely.

So you feel like leaving the copier in--

Is great. It’s challenging. It poses between what you theoretically think is a right answer versus what you believe you really do in practice. So it makes a good question.

That’s what I’m really trying to get at. Here’s what we do, but then here’s what we really do. Practice is not always verbatim with the manual. Here’s A, B, C, D. But over here is what we really do.

Right. If I have somebody that’s wasting millions of dollars in inefficiencies in their process and I’m trying to get them to correct that and at the same time I bring up that they have a person who made a, one copy of a joke book, I am going to lose credibility in trying to sell the million dollar process. And that would minimize my perspective to the manager that I’m trying to sell to. Now, it’s not a right or wrong issue. Wasting a million dollars is wrong but it’s not an ethical problem. It’s a management problem.

Is there anything you would add to this scenario?

Depending on what you want. I mean, the only thing that I would consider would be like what we talked about with the personal use, §525. If you want to leave it like it is, it’s great. But if you want to make no doubt that this is truly, was not for any kind of business personal item purchased purely for personal use, then that’s be the only thing I would consider.

Perhaps add a statement about the auditor trying to check to
determine if luggage had been lost and it hadn't. That would tend to rule out the argument that the airline had lost the luggage or it had got there late?

Correct.

I use the terminology at the beginning of the scenario that the auditor is conducting an operational audit. From your knowledge of internal audit and its function and the words "operational" audit, would the scenario be consistent with the terminology "operational audit" or should I use another term?

That would work for me.

So, from ----'s perspective and their internal audit function, when we use the term "operational audit", the actions going on are consistent with that term?

Yes, yes.

The use of the words "operational audit" would not be misleading?

It would not be misleading.

Would you expect a junior staff auditor here, in other words, the person who is very new on the job, to document what is found in this scenario, particularly the $525 of undocumented expenses?

Yes, point blank. It would be documented before they ever went to the audit manager.

In other words, they would document it before the auditor ever said, over lunch, "here's what I found"?

Correct.

So, it would be audit procedure at your company as you go through the audit to document what you find on the spot?

Right, right. Especially taking samples. Otherwise you have no audit trails to go back and show what you looked at to substantiate your conclusion.

That brings up another issue. Would the conversation between the junior person and the audit manager in the scenario be unrealistic? Because in this scenario it appears that the junior auditor hasn't really documented it yet and is running this by the auditor manager saying, "I haven't documented this yet but when I get back I will."

It would not be unrealistic. A lot of things depend upon the individual. I mean, you should be documenting as you go along,
otherwise, documenting becomes a nightmare. But that’s not to say everybody does it the way they should.

So it’s possible that--

Most definitely.

Because I don’t want to get the scenario out of the realm of reality--

Right.

Within the operational audit at your company, would any shortage of cash or any undocumented expense versus the statement that the vp turned in be documented or, in reality, would it be influenced by the dollar amount?

It would be documented in the working papers if that was part of the sample that they were looking at.

Two dollars?

Would be documented. Now, what action was taken on it would vary I’m sure.

In other words, if $10 is undocumented and the person said I’d rather you take that out of the working papers--

Oh, it wouldn’t come out of the working papers. It would be a discretion on what action and how it was reported.

It would always go in the working papers, but the action taken after that might vary?

Correct.

And particularly the action of going above the manager’s head?

Correct.

Let’s just say that you had exhausted all of those alternate avenues. For example, you had said, “I might do this immediately; I would like to know if some alternate means of communication with other people had taken place.”

Let’s make sure we are talking about the same thing here. If you are talking about $10 that’s undocumented that we don’t know what it’s for, versus $525 that here you’ve said we know what’s going on. So, we’re talking about two different things.

What if the $525 had been $10?

And we don’t know what it was used for? It’s undocumented?

Right. But we have strong suspicions that someone bought
$10 worth of candy bars or whatever. It’s documented in the working papers. We make a decision on what to do with it, but when it came back to the internal auditor to say, "Well, I really feel something is going on and I’m going above this person’s head and report it to that person’s immediate supervisor?"

They could do that. Are you asking me could they do that?

Yes.

They could do that, but I just don’t think they probably would.

In other words, you feel that as the dollar amount increased, there would be a tendency for that person to go above?

Most definitely. To go above, most definitely.

If you had a junior internal auditor that came in from one of the Big Six firms. The idea in the Big Six firm is "is this material." But do you think that they look at it as $10 or $525 versus the idea that your company is a multi-billion dollar company? This goes back to the dollar amount impacting behavior.

We’re leaving out a step in between here.

Ok, what is it?

Expanding our sample to make sure that the $10 isn’t a $1,000, a $100 or $10,000. And that’s where the materiality comes into play.

You believe that materiality would come into play?

The tip of the iceberg issue.

Or would it just depend upon here’s an exception and we can’t explain the exception?

No, what I’m saying is the $10 would generate action. Now, you’re asking me what action it would generate. Would it generate the person to go to the director and skip over the audit manager and say, "I found $10 that was undocumented." I don’t believe so. Would it generate that person to look at additional expense books to find out if there’s a of undocumented expenses? I believe it would. So, if there’s $10 for a year, $10 for two years, materiality at a Big Six--internal, I don’t care what--would come into play. But there’s going to be an action taken to resolve within the person’s own mind on what materiality is. Does that make sense what I’m saying there? The $10 in and of itself is $10 in and of itself, without looking at the framework is that you’re dealing with.

So you believe that this $10 undocumented may lead the
internal auditor to enlarge the sample?

Correct.

What if the additional sample didn’t turn anything else up or maybe it found $20 more dollars. So, now you’re looking at $30. You’re still back to a separate decision. I put it in the papers and the manager told me to take it in out of the papers.

There would be a problem right there.

So, I have to make a decision. Do I leave it in the papers?

Right. And then they’d go up above a level.

The next decision, I put it in the papers now do I go above this person’s head with the $30?

Yes, yes.

This brings us back to an earlier issue. Does the dollar amount impact the actions taken?

The scenario has changed a little bit from what I was understanding before. If you’re telling me now that you have to take it out of the work papers, that changes it all. It puts a whole different spin on it. Because now I’m being asked to cover something up, essentially. That would necessitate a person to go a level above.

But the way the question is worded is that I don’t want you to put this in the working papers. We assume that the person has not put it in the working papers. So, at that point, the person says, "Ok, I do what the audit manager requests. I don’t put this in the working papers. I either put this in the working papers and go against what the audit manager told me, or I could put it in the working papers and not go above the audit manager’s head. Or I could put it in the working papers and go above the person’s head".

Do you want to know what I think would happen in reality? The person would talk to other people that they work with and say I don’t understand why I’m being asked not to put his in the work papers. The others would either know or help explain what’s going on here. Or they would say, "Yeah, I don’t understand either."

And then the person would go above and ask the director what was going on. But they wouldn’t act on their own. They would get the sounding board of other auditors to help explain what’s going on, or they would go back to the audit manager and say, "I just don’t understand why I can’t document; this doesn’t make sense to me."

Part of that might depend upon the relationship between the junior person and the audit manager.
Definitely.

If you have tremendous confidence in them--of course, I'm not getting at those issues. If you've worked with me four or five years, you shouldn't question my judgement. Therefore, there's got to be a good reason and they're just not telling me.

But even with four years, five years and you tell me something uncharacteristic, I'm going to question. So, I'm not sure that would matter. But I would still try to find out if anybody else had that scenario or bounce it off a sounding board that I worked with.

Do think if the person in charge said, "We ran into this last year, and everything was ok and I'm not worried about it. We had this little situation and when we got to the bottom of it everything was all right. It is probably the same thing. For some reason, it was not corrected. We are going to move on because over here we have a million dollar inefficiency."

Yes, I do. I think that would have a big impact on it.

If I had the description of the communication channels and the dollar amounts bolded, do you think that would be positive in within the scenario, or do you think it would draw undue attention to those items?

I think the dollar amount speaks for itself; you don't need to bold the dollar amount. I'm not sure I understand what you're talking about in the first paragraph about bolding it.

Ok. This is the part (physically pointed out to him) of the scenario that has positive communication channels. At some point I will ask the internal auditors to rate the communication channels at AgriLife to make sure that my manipulations were successful. I have three statements related to the communication channels that the auditors will be asked to evaluate. I can either leave the scenario as is or I can bold the part that describes the communication channels.

Bolding never hurts, but I understood that when I read through there. I was a little worried when you were talking about it that I had missed something. You were saying that they had some organizational wrongdoing by this statement, but that's not what you are saying.

Right, right.

I was a little concerned about my reading comprehension.

No, here I'm trying to get across that we want this information down here to come up. If anything is going on
down below--this goes back to COSO's argument that good communication channels will be positive for the internal control environment. In essence, they're saying that if you are an external auditor, you come in and you should evaluate those communication channels to see if, within the internal control environment, there is this clear communication or at least opportunity for communication.

It works.

Whereas if I contrast this with, well we have this in place but people know that they're met with disdain when they come in and that too would be bolded except it would be in the negative rather than the positive channels.

That would work.

Obviously, you have the communication channels. But if somebody has nothing there, in other words, it is not negative there's just no statement.

They would assume it is what their environment is.

So, you would just take your company's environment and fill that in and say--

Yes.

This gets you away from your company?

Right.

In one sense of the word, this might be similar to your company for the positive, but if it were negative it would let you know, well, I'm not working for my company.

Right.

Do you believe that the internal auditor is impacted by communication channels?

Most Definitely. Are you talking generically now or in this example?

Well, generically and in the context of the scenario. You work here at -------, you feel that ------- has a positive communication environment.

I do.

But if you worked at another company and the communication environment were not positive or negative, or at least that was your perception, do you think that would impact how you would answer and the actions that you would take?
Definitely, I believe it would. It's how you were brought up organizationally and that can unfortunately become what is right and wrong. So, I believe it would have a firm impact on how you perceive these, how you perceive any example.

I think you have already addressed this issue. Is the type of wrongdoing clear? I think you would feel more comfortable if there was a little more about whether the expenses had been incurred for a bona fide reason versus truly personal.

Correct.

How are the internal auditors at ------ evaluated? What are your performance evaluations based on?

Goals set at the beginning of the year. Goals set and management characteristics. That's a pre-set form for everybody in the company. Your goals are determined within your department and within your staff and then filtered to you directly, what your goals are for the year.

Do you have participative goal setting?

Right. And we have up-down, back up again setting where we determine what we feel the goals should be for the department, as they relate to the company's goals. That goes up, our senior audit management determines what are our goals are going to be from that list, and then those come back. And they are--each staff manager is responsible for customizing those goals into their goals and then adding any additional goals they feel should supplement it, or removing any goals that they feel do not pertain to that staff. And then the same action goals to staff, that they sit with the staff and staff looks at them and etc. The thing that you will probably hear from the staff is if something really doesn't apply to them. Otherwise, there's not that much concern.

Who does the evaluations?

Who does them at the end of the year or as you go along throughout the year? Actually, we have--at the end of every audit you are suppose to get some kind of feedback from your audit. Then at mid-year we get six month appraisals and annual appraisals. Everybody gets them because we're--the department is very--we're sticklers about making sure that we get these appraisals. And they're always done by the manager with input from a level above. The two managers that report to me would do the appraisals for their staff with my input into it. I would do the appraisals for the managers that report to me with ------ input into it. And then every appraisal would be signed off by not only the auditor, the supervisor, the manager and then the next level above that will sign off on it, too.

If you had someone beneath you go above you, in this case they would be going to ____

right--or _______ they could go to either--
How would that person be evaluated?

Now, we’re talking reality versus theory. In theory, I’ll tell you it wouldn’t impact them whatsoever. In reality, it would depend. That’s a judgment issue. If they were going up there on something they were uncomfortable with something I did, that would have no impact—as a matter or [it] maybe favorable. If they were going up there with a bone to pick without having explored it or without having tried to resolve it—let me put it into an example that is a little less personal. Let’s say that they were having a problem with staff interaction with them, and they didn’t come to me and say I’m having a problem with staff interaction and to let me try to help them try to resolve it. Instead, they just went straight up to the top. Judgment might be lacking there, you know, let’s try to resolve this first. It would not really have an impact on their goals, I’d still rate their—look at their goals the same. Like I said, there’s also management characteristics in the appraisal process, and judgment is one of those characteristics.

And that probably would suffer?

It would have a spin on it in my mind. I’m not saying it would suffer; I’m not saying they would be rated down on it. It—one time, two times, ten times, we talked they still want to go up. It’s magnitude again.

How do you feel about the internal control environment at your company?

Very good, very controlled—to the length of sometimes over control, which has become a spot for auditing to come into play to help reduce some of the controls, actually, that are not cost beneficial. Because over the years we have built up a very controlled environment. I’m not saying every area is over controlled, I mean, there’s obviously low-lying fruit that you can find that needs additional controls, where the controls are there but they’re just not being monitored.

If we had a controls continuum, would you say that within the retail industry perhaps your company is one of the companies that would be placed on the tight controls end of our continuum versus some of its competitors?

I would say yes. If you’re looking at—do you know, retail is a big turf, so you’re not talking about four or five companies here. I would say yes. We are one of the more—definitely at the end of control, high controls.

After reviewing the interviews, I made several changes to the proposed experimental instrument.

1) I changed the low magnitude of the consequences manipulation from $525 to $70. I made this change because the federal government requires all federal contractors to note any undocumented expenditure that exceeds $75. Thus, if subjects were employed by a firm that performed
government contracts, the subjects might be more likely to answer that they would whistleblow because of the government requirement to report any undocumented expense over $75 rather than because of the perceived magnitude of the consequences.

2) I put the channels of communication manipulation in bold print so that the subjects would be more likely to perceive the manipulation.

3) Rather than manipulating the channels of communication variable by using the presence and absence of communication channels, I manipulated channels of communication by creating a positive and negative communication environment.

4) I expanded the scope of the operational audit for the individual wrongdoing manipulation.

5) I deleted the office workers' use of the office copier to make personal copies.
APPENDIX D

DISCUSSION OF PILOT TEST I
I pilot tested the first revision of the case materials with a total of 74 students: 21 from a senior-level internal auditing class, 15 students from a master’s level accounting theory class, and 38 students from two MBA classes. Only the students from the accounting theory class completed all of the written materials: the experimental case, the manipulation checks, Rest’s (1979) DIT, Paulhus’ (1988) impression management scale from the BIDR and the demographic information. The other pilot test subjects completed just two parts of the experimental materials: the experimental case and the manipulation checks. I eventually dropped two of the pilot test subjects that completed Rest’s (1979) DIT because they failed to pass the consistency checks related to the DIT. While 75% of the pilot test subject pool had full-time work experience in business or accounting, only 3% indicated full-time work experience as an internal auditor.

After asking the pilot test subjects to read the experimental case and respond to the likelihood question, I requested that they respond to a series of statements or questions that served as manipulation checks. I then ran a series of statistical tests to determine if I had successfully manipulated the independent variables.42

To check the manipulation of magnitude of the consequences, I utilized two manipulation checks. I used two manipulation checks for magnitude of consequences.43

42 The variables used in the pilot test and in the experiment are the same but for one exception. Channels friendly, a manipulation check variable representing communication friendliness, was used in the pilot test but dropped from the manipulation checks before the actual experiment. Channels friendly was an integer provided by subjects in response to: "Please circle a number from 1 to 9 to describe AgriLife’s communication channels with respect to upward communication (i.e., communication from someone at a lower level of the organization to someone at or near the top of the organization)." 1 represented friendly communication channels, 9 represented unfriendly communication channels. The variables used in the second pilot test were the same as the variables used in the experiment.

43 I also performed the same type of statistical analyses on the manipulation checks for the truncated sample data. None of these analyses differed significantly from the statistical tests performed on the full sample.
First, I requested the subjects to indicate on the scale below the seriousness, i.e., the amount of harm done, of the ($70) ($10,330) undocumented (expenses) (corporate expense).

LOW 1 2 3 4 5 6 7 8 9 HIGH

Using the data obtained from the responses to this scale, I performed a one-way ANOVA. As shown in Table 7 below, the pilot subjects perceived a significant difference between the seriousness of the low and high magnitude of consequences.

| Table 7 |
| Pilot Test I |
| Manipulation Check for Magnitude of the Consequences ANOVA Test Results |

<table>
<thead>
<tr>
<th>One-Way Anova</th>
<th>Dependent Variable: Seriousness Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-Value: 10.36</td>
<td>Low n=35 4.9729 (2.6613)</td>
</tr>
<tr>
<td>Pr &gt; F: 0.0020</td>
<td>High n=37 6.6857 (1.7281)</td>
</tr>
</tbody>
</table>

I interpreted the results to suggest that subjects’ responses to the seriousness of the wrongdoing were significantly impacted by the level of magnitude of the consequences within the context of the experimental instrument.

In a latter section of the written materials, I presented the second manipulation check related to magnitude of the consequences. I asked subjects to indicate on Likert-type scales of 1 to 9 the seriousness of the following two events:

A $10,000 cash shortage for the year
Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

A $70 cash shortage for the year
Not Very Serious 1 2 3 4 5 6 7 8 9 Very Serious

These dollar amounts basically represented the high and low magnitude of the consequences in the experimental materials. I performed a paired t-test on the data to
determine if the subjects perceived the seriousness of these two cash shortages differentially. The mean of the difference between the two scales was 4.0986 (Standard Error of 0.2880). The t-score was 14.2299, with a p-value of 0.0001. I interpreted the test results as evidence that my subjects perceived these two events to represent significantly different degrees of seriousness.

In the first Pilot Test I used three manipulation checks to examine the success of the manipulation of the channels of communication variable. As shown below, I asked the subjects to use three bipolar scales to describe the communication channels in the experimental instrument.

Please circle a number in each of the scales below to describe AgriLife's communication channels with respect to upward communication (that is, communication from someone at a lower level of the organization to someone at or near the top of the organization).

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CLOSED</td>
</tr>
<tr>
<td>CONDUCTIVE</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>NONCONDUCTIVE</td>
</tr>
<tr>
<td>FRIENDLY</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>UNFRIENDLY</td>
</tr>
</tbody>
</table>

I performed a one-way ANOVA on the data obtained from the subjects' responses to both of these scales. The results, shown in Table 8 on the following page, indicated that subjects' perceptions of the openness and conduciveness of the communication channels in the scenarios were significantly affected by the manipulation of the firm's upward communication environment. Although the perceptions of the friendliness and unfriendliness of the channels of communication were significantly different at the .10 level, at a practical level the manipulation appeared to be weak for the friendly/unfriendly scale.

---

44 One of the subjects failed to respond to these two scales. Thus, the sample size for the manipulation checks related to the channels of communication is 122.
Table 8
Pilot Test I
Manipulation Check for Channels of Communication
ANOVA Test Results

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>One-Way Anova</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F-Value: 9.18</td>
<td>Negative</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Pr &gt; F: 0.0034</td>
<td>n=36</td>
<td>n=36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.0000</td>
<td>5.6673</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.5766)</td>
<td>(1.9712)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>One-Way Anova</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F-Value: 7.98</td>
<td>Negative</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Pr &gt; F: 0.0062</td>
<td>n=36</td>
<td>n=36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.8333</td>
<td>5.6667</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.5213)</td>
<td>(1.9567)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>One-Way Anova</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F-Value: 2.79</td>
<td>Negative</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>Pr &gt; F: 0.0992</td>
<td>n=36</td>
<td>n=36</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.9444</td>
<td>4.0833</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.2797)</td>
<td>(2.0891)</td>
</tr>
</tbody>
</table>

I also examined the correlation between the three variables, openness, conduciveness and friendliness. The Pearson Correlation Coefficient and related p-value, shown in Table 9 on the following page, indicated a relatively high and significant degree of correlation between openness and conduciveness. While the correlations between openness and friendliness and conduciveness and friendliness were significant at the .00 and the .10 levels, respectively, the correlations between these variables were not high.

I interpreted the correlation results to mean that subjects tended to view the positive channels of communication as being open and conducive to communication from lower-level to upper-level employees and that they tended to view negative channels of communication as being closed and nonconducive to communication from lower-level to upper-level employees. I also interpreted the results as evidence that the friendly/unfriendly scale was not measuring the same construct as the open/closed and
conducive/nonconducive scales, at least not within the context of the experimental instrument used in the first pilot test.

Table 9
Pilot Test 1
Pearson Correlation Coefficients
(P-Values, N = 72)

<table>
<thead>
<tr>
<th></th>
<th>Open</th>
<th>Open</th>
<th>Conducive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducive</td>
<td>0.5989</td>
<td>(.0001)</td>
<td>0.2208</td>
</tr>
<tr>
<td>Friendly</td>
<td>0.4732</td>
<td>(.0001)</td>
<td>0.4732</td>
</tr>
</tbody>
</table>

Although I obtained a statistically significant difference between subjects' measures of the negative and positive channels of communication, I believe that the positive channels of communication manipulation was weak in the first pilot test.

I included two manipulation checks for the type of wrongdoing variable. For the first manipulation check of this variable, I asked the subjects to describe the nature of the wrongdoing in the experimental instrument as follows:

Please circle a number from 1 to 9 on the scale below which you believe best describes the nature of the ([$70$] [$10,330$] undocumented expenses) ([$70$] [$10,330$] undocumented corporate expense) in the scenario:

PERSONAL WRONGDOING 1 2 3 4 5 6 7 8 9 CORPORATE WRONGDOING

I performed a one-way ANOVA on the data obtained from this scale. The results, shown in Table 10 on the following page, imply that a subject's view of the nature of the wrongdoing in the experimental instrument was significantly influenced by the type of wrongdoing that occurred in the context of the experimental instrument.
I presented the second manipulation check for the type of wrongdoing variable in the last section of the written materials. This manipulation check read as follows:

Please use an "x" to mark which statement below you believe best describes the following actions.

Employees misreporting reimbursable expenses

_____ personal wrongdoing

_____ organizational wrongdoing

Corporate gifts or contributions to regulators or politicians to influence an outcome in favor of the firm

_____ personal wrongdoing

_____ organizational wrongdoing

Seventy-four percent of the subjects in the first pilot test classified the personal wrongdoing statement as personal wrongdoing and organizational wrongdoing statement as organizational wrongdoing.

The realism and clarity of the scenarios could impact the subjects’ responses to the likelihood question. To measure subjects’ perceptions of the experimental instrument’s realism and clarity, I asked them to respond as follows:

Please circle a number from 1 to 9 on the scales below to describe the Agrilife scenario:
REALISTIC (that is, the degree to which you believe the scenario is representative of the internal audit function)

REALISTIC 1 2 3 4 5 6 7 8 9
UNREALISTIC

CLEAR (that is, the degree to which you can tell what is taking place in the scenario)

CLEAR 1 2 3 4 5 6 7 8 9
UNCLEAR

The means for these scales are reported in Table 11.

<table>
<thead>
<tr>
<th>Table 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot Test I</td>
</tr>
<tr>
<td>Means for Realism and Clarity (Standard Deviations)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Realism</th>
<th>Clarity</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=72</td>
<td>n=72</td>
</tr>
<tr>
<td>3.1351</td>
<td>2.6891</td>
</tr>
<tr>
<td>(2.0226)</td>
<td>(2.1256)</td>
</tr>
</tbody>
</table>

Seventy-three percent of the subjects rated the realism of the scenario at a level of 3 or below. Eighty percent of the subjects rated the clarity of the scenario at a level of 3 or below.

I used the data obtained from subjects in the master’s level accounting course to perform a regression on my model:

\[ \text{LnLike} = \text{PScore} + \text{Gen} + \text{SDScore} + \text{Mag} + \text{Chan} + \text{Type}. \]

As noted previously, this group of pilot test subjects was the only pilot test group on which I obtained measures for both the independent variables and the covariates. The F test for this regression indicated no relationship between the dependent measure and the independent variables. The results also suggested that the covariate measures were insignificant, having neither a partialling nor suppressing effect. I also ran a regression without the three covariates, using the complete pilot test subject pool. The results for the reduced model were significant at the .10 level, with magnitude of the consequences (Mag) and channels of communication both significant at the .10 level. The regression results for the full model and the reduced model are summarized in Table 12 on the following page.
### Table 12

Pilot Test I
Statistical Models and Hypothesis Tests  
(*T-test Values*)

<table>
<thead>
<tr>
<th>Model</th>
<th>Intercept</th>
<th>PSCORE</th>
<th>GEN</th>
<th>SDR</th>
<th>MAG</th>
<th>CHAN</th>
<th>TYPE</th>
<th>Model F-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full (n=12)</td>
<td>-2.0444</td>
<td>-0.0046</td>
<td>1.2250</td>
<td>0.0250</td>
<td>-0.0584*</td>
<td>1.3540</td>
<td>1.0175</td>
<td>1.870b</td>
</tr>
<tr>
<td></td>
<td>(-1.230)</td>
<td>(+0.170)</td>
<td>(0.202)</td>
<td>(1.836)</td>
<td>(+0.082)</td>
<td>(1.964)</td>
<td>(1.422)</td>
<td></td>
</tr>
<tr>
<td>Reduced (n=74)</td>
<td>1.1668c</td>
<td></td>
<td></td>
<td></td>
<td>0.7407d</td>
<td>-0.7363d</td>
<td>0.237</td>
<td>2.180d</td>
</tr>
<tr>
<td></td>
<td>(2.883)</td>
<td></td>
<td></td>
<td></td>
<td>(2.883)</td>
<td>(-1.810)</td>
<td>(0.582)</td>
<td></td>
</tr>
</tbody>
</table>

Coefficients for the Ordinary Least Squares Models, with *T*-test values shown in parentheses

- Reduced Model:
  - * Significant at the .00 level (2-tailed test)
  - * Significant at the .10 level (1-tailed test), also significant at the .10 level (F-test)

Legend: PSCORE = Level of Cognitive Moral Development Measure, used as a covariate; GEN = Gender, used as a covariate; SDR = Socially Desirable Response Bias Measure, used as a covariate; MAG = Magnitude of the Consequences, CHAN = Channels of Communication, Type = Type of Wrongdoing

Note: the hypothesis and predicted effect appear in parentheses under each variable name in the top row of the table.

After examining the results of the manipulation checks, I decided to reword the following paragraphs in the experimental instrument:

About mid-morning, one of the research assistants brings in hot doughnuts. The assistant invites you to have coffee and doughnuts. After your coffee and doughnuts, you continue your review of the research and development division. Shortly before 1 o'clock, your internal audit manager comes by where you are working and says "You must be starving! Let's go to lunch." Over lunch, the two of you discuss how the audit is progressing. After you relate your concerns about the check made out to an individual at the Food and Drug Administration, your audit manager says, "Let me check out this situation with the Vice President of
Administration. We have a tennis game scheduled for this afternoon, so I can discuss this matter then. For right now, just proceed with the audit, and I’ll get back with you later. I guess we better get back to work. Today’s lunch is my treat. I’m just happy to have great employees like yourself working in the internal audit department.

The next morning, your audit manager calls you at the research and development office and says, "I talked with our Vice President of Administration yesterday afternoon, and I think the best thing that we can do is just to forget about the check. With some luck, we should be able to complete the audit tomorrow. If you don’t already have plans, I’ll come by about noon and we can go to lunch. I can brag about my tennis game over pizza!"

These sections were rewritten because I reasoned that subjects interpreted these actions as being characteristics of an environment that was friendly to upward communication. The friendly nature of these actions appeared to bias subjects’ responses to the channels of communication manipulation checks, particularly the negative channels of communication. The bias was more pronounced in the negative channels of communication case, especially when subjects’ responses to the openness and conduciveness measures were compared with the friendliness measure. I also decided to eliminate the bipolar adjective scale related to the friendliness of the channels of communication.

The revised paragraphs read as follows:

After completing your assignment for the preliminary review of the sales division, you decide to take a quick coffee break before beginning your part of the preliminary review of the research and development division. After your coffee break, you walk over to the research and development division offices and begin your review. Shortly after one o’clock, you decide to break for lunch. At the restaurant, you happen to meet your internal audit manager. Over lunch, the two of you discuss how the audit is progressing. After relating your concerns about the Vice President of Marketing’s lack of documentation for the reimbursed expenses, your audit manager says, "I know the Vice President of Marketing personally. We have an appointment scheduled for this afternoon, so I can discuss this matter then.” After bringing your supervisor up to date on your progress with the audit in the research and development division, the lunch hour is over, and you go back to work.
In addition, I attempted to strengthen the organizational wrongdoing manipulation by rewording the following:

... In examining the memos related to this check, you find that the Vice President of Research and Development approved this as a product development expenditure. An additional memo indicates that AgriLife’s CEO, along with the Vice President of Administration, was aware of the check made payable to the individual at the Food and Drug Administration. The memo also notes that the payment should result in quicker government approval of the new fat-free margarine...

The revised wording read as follows:

In examining the memos related to this check, you find that the Vice President of Research and Development approved this as a product development expenditure. An additional memo indicates that AgriLife’s CEO, along with the other executive officers, was aware of the undocumented corporate expense. The memo also notes that the undocumented corporate expense should result in quicker government approval of the new fat-free margarine.
APPENDIX E

DISCUSSION OF PILOT TEST II
After making revisions to the experimental materials used in the first pilot test, I conducted a second pilot test using as my subjects 12 community college accounting instructors enrolled in a continuing education class. From the results of statistical tests performed on this data, I believe that the channels of communication and type of wrongdoing manipulations were strengthened.

I conducted the same manipulation checks on the data obtained during the second pilot test as I did on the data obtained from the first pilot test. The results from the two manipulation checks for magnitude of the consequences did not differ significantly from the results obtained in the first pilot test.

For the channels of communication manipulation check, I used the following two bipolar scales:

Please circle a number in each of the scales below to describe AgriLife’s communication channels with respect to upward communication (that is, communication from someone at a lower level of the organization to someone at or near the top of the organization).

OPEN 1 2 3 4 5 6 7 8 9 CLOSED

CONDUCIVE 1 2 3 4 5 6 7 8 9 NONCONDUCIVE

The results for these two measures do not differ significantly from those obtained for the first pilot test. I also examined the Pearson Product Moment correlation coefficient for openness and conduciveness. The correlation between the measure of communication channel openness and the measure of communication channel conduciveness was .763. This compares to a correlation of .598 for these two measures on the first pilot test. I interpreted the increase in the correlation between these two measures as evidence supporting the changes in the channels of communication manipulation that I had made.

I also included the same two manipulation checks for the type of wrongdoing in the second pilot test as I included in the first pilot test. The results from the statistical tests for the first manipulation check related to type of wrongdoing indicated that the subjects did not perceive a significant difference in the nature of the wrongdoing, which is contrary to the results obtained from the first pilot test, at least at the .05 level. In the second manipulation check related to the type of wrongdoing variable, eleven of the twelve subjects classified the individual wrongdoing statement as individual wrongdoing and the organizational wrongdoing statement as organizational wrongdoing.

In the second pilot test, I also asked the subjects to rate the realism and clarity of the scenarios on separate
Likert-type scales of 1 to 9. The means for these measures did not differ significantly from the means obtained during the first pilot test.

I add the following caveats to the results obtained from the second pilot test. First, the subjects in the two pilot test samples represented diverse subject pools. Second, the sample size of the second pilot test (n = 12) was much smaller than that of the first (n = 74). The smaller sample size impacted the interpretation of any statistical tests. After reviewing the results of the second pilot test, I made final revisions to the experimental instrument to further strengthen the channels of communication manipulation. The final versions of the experimental instrument are found in Appendix B.
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---------. 1985. Deterrence, detection, investigation, and reporting of fraud. Statement on Internal Auditing Standards No. 3. Altamonte Springs, FL: IIA.


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