



VCU

Virginia Commonwealth University
VCU Scholars Compass

Theses and Dissertations

Graduate School

2017

Review of Whistleblowing Studies in Accounting Research Examining Corporate Internal Whistleblowing Policy

Lei Gao

Virginia Commonwealth University

Follow this and additional works at: <https://scholarscompass.vcu.edu/etd>



Part of the [Accounting Commons](#)

© The Author

Downloaded from

<https://scholarscompass.vcu.edu/etd/4762>

This Dissertation is brought to you for free and open access by the Graduate School at VCU Scholars Compass. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of VCU Scholars Compass. For more information, please contact libcompass@vcu.edu.

© Lei Gao 2017

All Rights Reserved

**Review of Whistleblowing Studies in Accounting Research
Examining Corporate Internal Whistleblowing Policy**

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

by

Lei Gao

Virginia Commonwealth University

M.A., Virginia Tech – Blacksburg, 2012

B.B.A. Tianjin University of Commerce, Tianjin, 2009

Director: Alisa G. Brink, Ph.D., Associate Professor of Accounting, School of Business
Virginia Commonwealth University

Virginia Commonwealth University

Richmond, Virginia

April, 2017

ACKNOWLEDGEMENT

I would like to thank my dissertation committee, Dr. Alisa Brink (Chair), Dr. Benson Wier, Dr. Fengchun Tang, Dr. Kevin Eller, and Dr. Mayoor Mohan, for their valuable time in guiding me through the dissertation process. Their support and encouragement were important during my doctoral study and critical to my successful defense.

I am grateful to have Edward Lynch and Thomas Lewis as my cohort. Their support and friendship made my PhD journal more memorable. I would also like to express my appreciation to Dr. Karen Green, Dr. Huiqi Gan, and Dr. Melloney Simerly, for providing valuable advices during the first two years of my doctoral studies.

I want to thank my parents, Yinxiu Jia and Shouchen Gao, for their unconditional support. Their valuation on my education is important during the whole process. I want to thank my wife, Zhengai Li, for her unwavering emotional and intellectual support. Without her by my side, I wouldn't be able to make it this far. Finally, to my daughter, April, you are my sunshine and my angel. Thank you for your sweet smile and your hugs every time I come home.

TABLE OF CONTENTS

List of Tables	iv
List of Figures	v
Abstract	vi
Part One: Whistleblowing Studies in Accounting Research: A Review of Experimental Studies on Determinants of Whistleblowing.....	1
Introduction	1
Whistleblowing Model	3
Determinants of Whistleblowing	5
Conclusion	25
Part Two: A Content Analysis of Organizations' Internal Whistleblowing Policies.....	26
Introduction.....	26
Background and Literature Review.....	29
Research Questions Development	36
Sample Selection and Methodology.....	39
Results.....	42
Summary, Limitations, and Future Research.....	50
Part Three: Using Pronouns Effectively in an Organization's Internal Whistleblowing Policy...	55
Introduction	55
Literature Review and Hypotheses Development	58
Results	71
Conclusion.....	75
References	77
Appendix A	90
Appendix B	100
Appendix C	118
Vita	127

LIST OF TABLES

Table 1.1. Summary of studies on characteristics of the whistleblower.....	91
Table 1.2. Summary of studies on characteristics of the report recipient.....	93
Table 1.3. Summary of studies on characteristics of the wrongdoer.....	95
Table 1.4. Summary of studies on characteristics of the wrongdoing.....	96
Table 1.5. Summary of studies on characteristics of the organization.....	98
Table 2.1. Content characteristics.....	102
Table 2.2. Content characteristics percent out of the total sample.....	104
Table 2.3. Content characteristics in companies' internal whistleblowing policy.....	108
Table 2.4. Linguistic characteristics in companies' internal whistleblowing policy.....	112
Table 2.5. The content characteristics in executives' opening letter.....	113
Table 2.6. The content characteristics in q/a comprehension aid.....	113
Table 2.7. Percentage of linguistic characteristics in each content characteristic.....	114
Table 2.8. The usage of fictitious third-person and generic third-person in Q/A.....	117
Table 3.1. Participant demographic information.....	118
Table 3.2. Descriptive statistics for exit questions.....	119
Table 3.3. Language vividness and risk aversion.....	120
Table 3.4. ANOVA analysis.....	121

LIST OF FIGURES

Figure 1. Model of whistleblowing.....	90
Figure 2.1. The overlaps between types of pronouns and content characteristics.....	116
Figure 2.2. The overlaps between content characteristics and uncertainty words and linguistic tone	116
Figure 3. Language vividness mediation.....	122

ABSTRACT

REVIEW OF WHISTLEBLOWING STUDIES IN ACCOUNTING RESEARCH EXAMINING CORPORATE INTERNAL WHISTLEBLOWING POLICIES

By Lei Gao, Ph.D.

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

Virginia Commonwealth University, 2017

Director: Alisa Brink, Ph.D., Associate Professor of Accounting, School
of Business, Department of Accounting

This dissertation consists of three studies. The first study provides a review and synthesis of past accounting research regarding factors that influence whistleblowing. Building upon the model by Near and Miceli (1995), I summarize experimental accounting studies based on five determinants of whistleblowing intentions: characteristics of the whistleblower, characteristics of the report recipient, characteristics of the wrongdoer, characteristics of the wrongdoing, and characteristics of the organization. Suggested directions for future research of each determinant are discussed in this paper.

The second study is a content analysis to examine the variation of organizations' internal whistleblowing policy, including both the content characteristics of the policy and the linguistic characteristics of the policy. In terms of the content characteristics of the whistleblowing policy,

this study focuses on who is covered in the policy, where to report, employees' responsibility, corporate investigation procedures, disciplinary action against the wrongdoer, and anti-retaliation policy. In terms of the linguistic characteristics of the internal whistleblowing policy, this study focuses on the types of pronouns, the language uncertainty of the policy, and the tone of the policy (positive or negative). Furthermore, the overlaps between the content characteristics and the linguistic characteristics are also identified.

The third study is a 2 by 2 between-subjects experiment to investigate the best design of companies' internal whistleblowing policy. By breaking the internal whistleblowing policy into the reporting policy (responsibility to report and reporting channel) and the anti-retaliation policy (protection against retaliation), the experiment manipulates the type of pronouns for the reporting policy (first-person pronoun reporting policy or third-person pronoun reporting policy) and type of pronouns for the anti-retaliation policy (first-person pronoun anti-retaliation policy or third-person pronoun anti-retaliation policy). This study predicts that compared to third-person pronouns, first-person pronouns encourage whistleblowing in the reporting policy, but discourage whistleblowing in the anti-retaliation policy. The highest reporting intention can be achieved when the reporting policy is worded in first-person and the anti-retaliation policy is worded in third-person.

Part One: Whistleblowing Studies in Accounting Research: A Review of Experimental Studies on Determinants of Whistleblowing

I. INTRODUCTION

The term whistleblowing is derived from a sporting event where the referee blows the whistle to stop an illegal or foul play (Qusqas and Kleiner 2001). Researchers from different disciplines define whistleblowing in various ways (Erkmen et al. 2012). As discussed by Brennan and Kelly (2007), the more widely-accepted and most frequently used definition of whistleblowing in accounting research is by Near and Miceli (1985). They 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 may be able to effect action” (Near and Miceli 1985, 4). This definition has been adopted by numerous whistleblowing studies (e.g., Keenan 2002; King 1997; Miceli and Near 1994, 1997; Miceli et al. 1999; Near et al. 2004; Ayers and Kaplan 2005).

Starting in the 1980s, a number of researchers from many disciplines began to investigate ways to promote whistleblowing (Keil et al. 2010). Employee tips are considered the most common method of detecting fraud (ACFE 2014; Dyck et al. 2010). However, numerous surveys show that not all observed fraud is reported (Hudson Employment Index 2005; Miceli et al. 2008; Ethics Resource Center 2012; Ethics Resource Center 2013). The Ethics Resource Center (2013) found that 41 percent of employees observed misconduct in their workplace, but out of the 41 percent of employees who observed misconduct, around 33 percent remained silent. There have

been many accounting researchers investigating ways to promote reporting fraudulent accounting behavior or auditing misconduct. Providing a systematic review of the extant whistleblowing literature in accounting research could help identify gaps in the research investigating the obstacles that stop witnesses from blowing the whistle. In this study, I review and summarize accounting literature that examines whistleblowing. I first describe the whistleblowing model used in this study in Section II. Section III reviews and synthesizes the literature on each determinant of whistleblowing. I present overall conclusions in Section IV.

II. WHISTLEBLOWING MODEL

Near and Miceli (1995) propose a model of effective whistleblowing by focusing on terminating the wrongdoing. They propose that there are five primary factors that influence whistleblowing effectiveness: characteristics of the whistleblower, characteristics of the report recipient, characteristics of the wrongdoer, characteristics of the wrongdoing, and characteristics of the organization.

Near and Miceli (1995) define effectiveness of whistleblowing as “the extent to which the questionable or wrongful practice is terminated at least partly because of whistleblowing and within a reasonable time frame” (681). Whistleblowers report the wrongdoing with the purpose of terminating the wrongdoing. Their intention to blow the whistle is closely related to whether they believe the wrongdoing will be stopped (Near et al. 2004). The model by Near and Miceli (1995) was developed from the perspective of terminating the wrongdoing and it is broader and covers most of the relevant parties involved in a whistleblowing scenario in accounting. This model has been used extensively to explain witnesses’ reporting intentions. For example, based on the model proposed by the Near and Miceli (1995), Mesmer-Magnus and Viswesvaran (2005) explore the correlation of whistleblowing intentions, actions, and retaliation. Curtis and Taylor (2009) classify the five components of effective whistleblowing into personal characteristics and organizational variables and investigate the influence of identity disclosure, situational context, and personal characteristics on witnesses’ whistleblowing intentions.

As shown in Figure 1, building upon the Near and Miceli (1995) model, I review and summarize whistleblowing accounting literature based on the five determinants of effective whistleblowing, namely characteristics of the whistleblower; characteristics of the report recipient, characteristics of the wrongdoer, characteristics of the wrongdoing, and characteristics of the organization.¹

[Insert Figure 1 here]

¹ Researchers have also provided other models investigating whistleblowing intentions. For example, Hooks et al. (1994) develop a whistleblowing model in the context of the internal control and external audit functions of fraud detection. They illustrate the roles of internal control and external audit in encouraging unethical behavior reporting. Schultz et al. (1993) propose and test a model illustrating that a person's willingness to report unethical behavior is determined by the perceived seriousness of the act, personal responsibility for reporting, and personal cost of reporting. Extending this model, Kaplan and Whitecotton (2001) show that auditors' reporting intentions are influenced by their perceptions of the seriousness of the act, personal responsibility of reporting, personal cost of reporting and commitment to the accounting profession. Gundlach et al. (2003) develop a social information processing framework by integrating the power, justice, and prosocial literature on whistleblowing, and they argue that individuals' attributions and responsibility judgments for wrongdoing, as well as their cost-benefit analyses of acting, influence their emotions and decisions to report the wrongdoing.

III. DETERMINANTS OF WHISTLEBLOWING

Characteristics of the Whistleblower

The first determinant of effective whistleblowing is characteristics of the whistleblower. Miceli et al. (2008) classified personal predictors of whistleblowing into personality characteristics, moral judgment, and demographic characteristics. Personality characteristics or dispositional characteristics are internal factors that cause an event or behavior. Moral judgment refers to the ability to judge one's own and others' behavior as right or wrong (Li et al. 2014). Demographic characteristics involve factors such as age, race, sex, working experience and so on.

Whistleblowers are individuals who witness certain unethical behavior and speak up to an appropriate person with the purpose of correcting the wrongdoing. Apart from external situational factors, individuals' decision-making processes are heavily influenced by their personality characteristics, moral judgement, and their demographic characteristics (Miceli et al. 2008; Bartels et al. 2015). Thus, it is important to understand how these characteristics contribute to the likelihood of reporting unethical conduct.

Prior Literature

Personality Characteristics. Prior literature has examined some elements of characteristics of whistleblowers that impact reporting in accounting setting. In terms of personality characteristics and moral judgement, Curtis and Taylor (2009) look at the witness'

whistleblowing in public accounting firms from the perspectives of individuals' locus of control and ethical style. Locus of control refers to how one person attributes events to either internal factors (e.g., internal hard work) or external factors (e.g., luck). Ethical style describes an individual's approach of evaluating ethical dilemmas, and White (2007) classifies ethical styles as either caring or judging. Curtis and Taylor (2009) employ a within-subjects scenario-based survey method and find that auditors with an internal locus of control and auditors who exhibit a judging ethical style are more likely to report unethical conduct.

Dalton and Radtke (2013) examine the joint effect of Machiavellianism and ethical environment on whistleblowing. By conducting a between-subjects experiment with MBA students, they find that Machiavellianism is negatively related to whistle-blowing. Machiavellianism refers to a term that some social and personality psychologists use to describe a person's tendency to deceive others to achieve personal goals (Christie and Geis 1970).

Brink et al. (2015a) investigate whether the witnesses' personality traits and ethical position are associated with their whistleblowing intention. They use the Big Five Factors (extroversion, openness to experience, conscientiousness, neuroticism, and agreeableness) developed by John et al. (1991) and updated by John et al. (2008) to measure personality. By conducting a between-subjects experiment with upper level accounting students, they find a positive relation between the presence of higher levels of the alpha and beta meta-traits and whistle-blowing behaviors. The alpha trait consists of agreeableness, conscientiousness, and emotional stability (neuroticism). Beta traits are traits that indicates self-development and preservation. Building on the Forsyth (1992) model of ethical orientation, which states that individuals with higher levels of idealism will have a defined set of behaviors whereas more relativistic individuals would not have a defined set of behaviors, they predict and find that

individuals with idealistic ethical position are more likely to report than individuals with relativistic ethical position.

Demographic Characteristics. Most experimental studies collect participants' demographic information, such as age, gender and work experience. In general, the results show that years of work experience, gender, and type of organization are not significantly associated with their reporting intention (e.g., Kaplan et al. 2011; Seifert et al. 2010; Brink et al. 2013).

Some studies use demographic variables as the variables of interest and test how demographic variables interact with other variables (e.g., Kaplan et al. 2009; Liyanarachchi and Adler 2011; Erkmen et al. 2014). Kaplan et al. (2009) examine the interaction between witness' gender and anonymousness of reporting channel on individuals' intentions to report fraudulent financial reporting. They conduct an experiment with evening MBA students and find that female participants' reporting intentions are higher than male participants only under the anonymous reporting channel condition.

Liyanarachchi and Adler (2011) recruit Australian accountants to participate in a quasi-experimental survey investigating the effect of accountants' age, gender and retaliation on their whistleblowing intentions. In their study they vary the degree of retaliation through manipulation and find a significant three-way interaction among participants' gender, age and retaliation. They find that among early career accountants, male accountants are more likely than female accountants to blow the whistle. When accountants are 45 years old and above, they respond to retaliation differently depending on their gender. Specifically, female accountants' reporting intention in this age group tends to decline as the retaliation threat increases. In contrast, the change in retaliation threat has little impact on male accountants' reporting intentions.

Erkmen et al. (2014) conduct a survey with accounting professionals in Turkey to examine the effect of witness' age, gender and types of wrongdoing on whistleblowing intentions. They find female accounting professionals are more likely to blow the whistle than male accounting professionals when the fraud involves fake invoices, and older accounting professionals are more likely to blow the whistle than younger professionals when the fraud involves misclassification of sales and profits.

In summary, accounting researchers investigating characteristics of whistleblowers often collect witnesses' demographic information such as gender, age, working experience, etc. These demographic variables can sometimes interact with other variables, such as degree of retaliation or reporting channel, to influence reporting intentions. Accounting studies also measure whistleblowers' personality characteristics, such as locus of control. Personality characteristics play an important role a person's decision making process. Personality traits, such as locus of control and Machiavellianism, influence individuals' decisions to report unethical behavior (see summary in Table 1.1).

[Insert Table 1.1 Here]

Directions for Future Research

Studies indicate that apprenticeship training (work-based secondary education) can alter some aspects of personality. For example, Bolli and Hof (2014) find that apprenticeship training can reduce neuroticism and increase agreeableness and conscientiousness. Prior research indicates that certain personality traits are associated with a lower likelihood of reporting unethical conduct. Thus, it would be interesting to explore what external factors, such as training, would effectively alter the personality traits that are associated with low whistleblowing intentions.

Characteristics of the Report Recipient

Characteristics of the report recipient involves two categories. First, it involves the characteristics of the actual person who receives the report, such as the report recipient's power status and credibility (Near and Miceli 1995). Second, it involves the characteristics of the reporting channel, such as the administration of the reporting channel.

The Sarbanes-Oxley Act of 2002 requires that public companies maintain an anonymous reporting channel for whistleblowers. There is no specific guideline as to how the reporting channel should be administered (SEC 2003, 20). Some firms have the reporting hotline administered by internal auditors while others choose to have it administered by external auditors. The characteristics of the report recipient is an important factor that influences whether the witnesses believe that the report will handled properly and thus will subsequently influence their reporting intentions.

Prior Literature

Characteristics of the Report Recipient. In terms of the studies investigating the characteristics of the actual person who receives the report, Kaplan et al. (2010) conduct an experiment by manipulating whether the report recipient is the supervisor's supervisor or an internal auditor, and whether there is existence of an unsuccessful social confrontation when meeting with the transgressor to discuss the fraud. Using a 2 by 2 between-subjects experiment with MBA students, they find that the witnesses' reporting intentions to the supervisor's supervisor are stronger than to an internal auditor when there is an unsuccessful social confrontation with the supervisor. However, reporting intentions to the supervisor's supervisor are not stronger than to an internal auditor when there is no social confrontation.

Kaplan et al. (2011) take a step further to investigate whether the potential information recipient's inquiry enhances reporting intentions or not, and they vary the source of inquiry as

either internal auditor or external auditor. The results show that participants' whistleblowing intentions to an inquiring auditor are stronger than their whistleblowing intentions to a non-inquiring auditor, and their whistleblowing intention to an internal auditor are stronger than their intentions to an external auditor.

Characteristics of the Reporting Channel. In terms of the characteristics of the reporting channel, some researchers look at whether the reporting channel is anonymous or not, and others investigate whether the reporting hotline is administered internally or externally. With an internally administered hotline, the report recipient is an employee of the company, whereas with an externally administered hotline the report recipient belongs to an independent organization outside the company.

Several studies investigate the effect of anonymous reporting channel. Kaplan and Schultz (2007) conduct an experiment and find that the existence of an anonymous channel reduces the likelihood of reporting to non-anonymous channels. Curtis and Taylor (2009) conduct a survey with auditors to examine their whistleblowing intentions under three forms of identity disclosure, namely disclosed identity format, anonymous format, and protected identity format. Protected identity means the witnesses' identity is known to those who must investigate, but not to the perpetrator. They find that reporting intentions are significantly lower under a disclosed identity format, and there was no significant difference in reporting intention between anonymous and protected identity formats. Kaplan et al. (2012) further investigate witnesses' preference of reporting channels with an experiment. They find witnesses' reporting intentions to an anonymous channel is higher than to a non-anonymous channel only when a previous whistleblowing outcome is negative.

Several additional studies investigate the effect of whether the reporting channel is administered internally or externally. Kaplan et al. (2009) examine intentions to report a fraudulent act to an anonymous reporting hotline that is administered either internally by company personnel or externally by a third-party provider. They find that the reporting intentions to the internal hotline are significantly higher than to the external hotline. Zhang et al. (2013) argue that an internal reporting channel might not be always better than an external reporting channel at encouraging whistleblowing. By conducting an experiment with M.B.A students, they find that participants' reporting intentions to an external hotline are higher when the organization has a history of poor responsiveness to whistleblowing and when participants are low on the proactivity scale. Proactive behavior is defined by Grant (2000,436) as 'taking initiative in improving current circumstances'.

In summary, prior studies investigating the characteristics of the report recipient focus on the following categories: the characteristics of the actual person who receives the report and the characteristics of the reporting channel (see summary in Table 1.2). Studies show that report recipients' power influences witnesses' reporting intentions under certain conditions, such as when there was unsuccessful social confrontation with the supervisor. Certain report recipients' behavioral characteristics also influence witnesses' reporting intention, such as recipients' inquiry of unethical behaviors. In terms of the reporting channel, witnesses prefer an anonymous reporting channel over a non-anonymous reporting channel, especially when a previous reporting outcome was negative. Witnesses in general prefer to report internally first before reporting externally. However internal reporting is not always preferred, and witnesses' reporting intentions to an external hotline are higher when organizational response is poor and when witnesses are low on the proactivity scale.

[Insert Table 1.2 Here]

Direction for Future Research

Corporations prefer witnesses to report unethical behavior internally, as external reporting brings reputation damage and high litigation risk (Berry 2004; Davidson and Worrell 1988; Laczniaak and Murphy 1991). As documented above, whether an internally administered channel is preferred or not depends on environmental conditions (Zhang et al. 2013). For example, an internally administered reporting channel might not be viewed as a good place to report if the wrongdoing is unethical pro-organizational behaviors, because the report recipient might be less likely to correct an unethical behavior that is beneficial to the company. Future research could further explore under what conditions one reporting channel is better than others by examining the reporting channel's interactive effect with the primary beneficiary of the wrongdoing. For example, when the fraud is for the wrongdoer's personal benefits, witness' reporting intention to the internally administered hotline might be higher than to the externally administered hotline because such wrongdoing provides no benefits to the company and the company may be more likely to take corrective action. On the other hand, if the wrongdoing is unethical pro-organizational behavior, the witness might be more likely to report to an external channel because the pro-organizational wrongdoing provides certain benefits to the company and the company might not take corrective action after receiving the report.

Under SOX, the reporting channels are established by audit committees (SEC 2003, 20). It is also important to explore the effects of audit committee quality on encouraging reporting unethical behaviors. Stronger audit committees, which have more external members and meet more regularly, may indicate that there is higher possibility of terminating the wrongdoing when it is reported. There are a number of studies in the auditing literature investigating the relation

between the audit committee qualities and earnings manipulation. Accounting literature can be extended by bridging the audit committee literature and whistleblowing literature.

Characteristics of the Wrongdoer

Prior Literature

In terms of the characteristics of the wrongdoer, Near and Miceli (1995) focus on the wrongdoers' power and credibility. As illustrated in their model, the characteristics influencing wrongdoers' power include their position in hierarchy, pay grade, professional status, education level, etc. Characteristics influencing wrongdoers' credibility include perceived motives, performance, etc. As stated by Near and Miceli (1995), the wrongdoers' power and credibility influence whether the company will take corrective actions against the wrongdoer and wrongdoing. With the purpose of terminating the wrongdoing, the witnesses assess the wrongdoers' power and credibility before reporting the wrongdoing. Thus, the wrongdoers' characteristics are important factors that influence the witnesses' whistleblowing intentions.

The Wrongdoers' Power. Taylor and Curtis (2013) investigate the auditors' likelihood of reporting observations of colleagues' unethical behavior by varying whether the wrongdoer is a co-worker or supervisor and whether the previous organizational response is strong or not. They find that auditors are more likely to blow the whistle when the wrongdoer is a co-worker than when he is the supervisor only when there is no previous organizational response to unethical behaviors. If the prior organizational response is strong, auditors are more likely to report the supervisor than the co-worker.

The Wrongdoers' Credibility. Kaplan (1995) investigates the effect of the wrongdoer's work performance on auditor reporting intentions upon discovery of unethical conduct. In his study, the unethical conduct is premature sign-off of an audit procedure, and the wrongdoer's work

history is manipulated as either good or poor. He finds that the witnesses' reporting intention are significantly stronger when the wrongdoer has poor work history. Robertson et al. (2011) extend Kaplan (1995) by examining the effects of a wrongdoer-auditor's performance and likeability reputation on fellow auditors' intentions to report. Through an experiment with auditors, they find that reporting intentions are lower when the wrongdoer has a good performance reputation and when the wrongdoer is more likeable. They find that the reporting intention is the lowest when the wrongdoer is both likeable and has good performance reputation.

In summary, empirical studies examining the effect of wrongdoers' characteristics on whistleblowing are limited. In general these studies find that the witnesses' reporting intention is lower when the wrongdoer is credible with good work performance and high power in the organization. Furthermore, strong prior organizational responses help increase the reporting intentions when the wrongdoer has high power (see summary in Table 1.3).

[Insert Table 1.3 Here]

Directions for future research

First, companies want their employees to have credibility and good work performance. However, when such employees also engage in unethical behaviors, the witnesses' reporting intentions are low. Future research could investigate variables that interact with wrongdoers' credibility and work performance to encourage reporting on employees who commit unethical conduct but have good work performance.

Second, extant whistleblowing literature investigating wrongdoer characteristics have been focusing on single wrongdoer committing the unethical activity alone. In reality, most of the major organizational frauds over the past decade, such as Enron, WorldCom, Tyco and HealthSouth, have been committed through the collusion of multiple employees involving the CEO, CFO and

others (Free and Murphy 2014). Free and Murphy (2016, 19) state that “in major accounting frauds (see, e.g., COSO 2010) or complex identity frauds, for example, it is unlikely that any one individual has the resources, access and capacity to construct a sophisticated fraud without the assistance of others.” Scholars suggest that more research should be done on fraudulent acts involving multiple employees. (e.g., Hochstetler 2001; van Mastrigt and Farrington 2011). Free (2016) reviews popular frameworks used to examine fraud and suggests three areas where there is considerable scope for academic research. One of the areas he suggests for further exploration is the nature of collusion in fraud. Future accounting research on whistleblowing can incorporate co-offending situations and investigate how multiple wrongdoers interact with other variables influencing witnesses’ whistleblowing intentions.

Third, whistleblowing research investigating wrongdoer’s characteristics focuses on a wrongdoer who is in the same organization as the witness. It is getting more and more common for companies to outsource part of the organizational functions to other companies. As discussed by Ayers and Kaplan (2005), the impact on reporting intentions is not clear when the wrongdoer is a non-employee. In such a situation, reporting intentions might be higher since witnesses may feel that retaliation possibility will be minimal when reporting on consultants. However, organizational employees may believe that it is not their responsibility to report the wrongdoing of consultants, making reporting less likely. Ayers and Kaplan (2005) test a whistleblowing model under the setting that the wrongdoer is a consultant of the company. In their study, the wrongdoer is a non-employee across treatments, thus wrongdoer is not a between-subjects variable. As a result, their study doesn’t answer the question of whether there is a significant reporting difference between an employee wrongdoer and non-employee wrongdoer. Future research can

experimentally manipulate whether the wrongdoer is an employee or non-employee to examine how this impacts witnesses' reporting intentions.

Characteristics of the Wrongdoing

Near and Miceli (1995) separate the characteristics of the wrongdoing into three dimensions: the organization's dependence on the wrongdoing, the credibility of the whistleblower's evidence, and the legality of the alleged wrongdoing. Each of the three dimension influences witnesses' perception of whether the report will be handled properly or not. As proposed by Near and Miceli (1995), the greater the dependence of the organization on the wrongdoing, the less likely the company will take corrective actions; the more convincing that wrongdoing has occurred, the more effective the whistleblowing will be; and the less ambiguous that the wrongdoing is illegal, the more effective the whistleblowing will be.

Prior literature

Organization's Dependence on the Wrongdoing. In terms of the organization's dependence on the wrongdoing, Kaplan and Schultz (2007) vary the primary beneficiary of the wrongdoing within-subjects and examine witnesses' decisions to report and choice of reporting channel. They ask participants to indicate their reporting intention under three case scenarios: financial statement fraud, theft, and a non-fraudulent case. Financial statement fraud is considered benefiting both the company and the perpetrator; while the theft case benefits only the perpetrator and harms the company. The third non-fraudulent case involves a case of an employee's poor work quality being discovered by another employee. These three cases represent a variety of questionable acts that exist in companies. They find that reporting intentions are lower under financial statement fraud than under the theft case condition. Also, using a within-subjects design, Robinson et al. (2012) investigate the effect of the type of fraudulent act on whistleblowing

intention by looking at whether the fraud is theft or financial statement fraud. They find lower whistleblowing intentions for financial statement fraud than theft, and whistleblowing intentions are lower for immaterial than material financial statement fraud.

Kaplan et al. (2009) examine whether witnesses' reporting intentions are influenced by the following two types of wrongdoing: fraudulent financial reporting and misappropriation of assets. They find that there are higher reporting intentions for misappropriation of assets compared to fraudulent financial reporting, but only when the reporting channel is anonymous. Kaplan et al. (2011) further examine the interactive relation among types of fraudulent acts, auditor inquiry, and reporting recipient. They do not find a systematic difference between misappropriation of assets and fraudulent financial reporting, nor does the type of fraudulent act interact with whether the auditor engages in inquiry or the report recipient (e.g., internal versus external auditor).

Credibility of the Whistleblower's Evidence. Brink et al. (2013) conduct a 2 by 2 between-subjects experiment with MBA students. They investigate evidence strength and internal rewards on witnesses' reporting choice between internal reporting and external reporting to the SEC. They find that the likelihood of reporting internally is greater than to the SEC. When evidence is strong, internal rewards increase reporting to SEC; when evidence is weak the presence of an internal incentive decreases SEC reporting intentions. Brink et al. (2015b) investigate the interaction between evidence strength and the bystander effect. They find that when the evidence is strong, individuals with sole knowledge are more likely to report than when others are aware of the fraudulent act (the bystander effect). However, results indicate no bystander effect when evidence of fraud is weak.

Legality of the Alleged Wrongdoing. The only study related to this concept is Brink et al. (2015a). They conduct an experiment by manipulating different materiality levels of the

wrongdoing and examine the subsequent effects on respondents. In the high materiality scenario, the inappropriate revenues represent ten percent of the annual revenues of the firm. In the low materiality scenario, revenues represent one percent of the annual revenues. The results show that the reporting intentions are lower when the fraud is low in materiality.

In summary, accounting studies investigating the organization's dependence on the wrongdoing have mixed results (see summary in Table 1.4). Studies from Kaplan and Schultz (2007) and Robinson et al. (2012) examine the primary beneficiary of frauds using within-subjects design. They find that witnesses are less likely to report financial statement fraud than theft. Other studies vary the fraudulent acts as either financial statement fraud or misappropriation of assets between subjects and they do not find a significant reporting difference between the two. It is important to note that the actual wrongdoing behavior and the organization's dependence on the wrongdoing are different concepts. In these studies, it is difficult to conclude whether the results are due to the difference of the actual wrongdoing behavior (manipulating financial statement vs. stealing from the company) or difference in whether the organization benefits from the wrongdoing. In terms the credibility of evidence and the legality of the unethical act, there are limited experimental studies investigating these two concepts. Within the limited studies, results show that stronger evidence strength and high materiality level increase the witnesses' reporting intentions.

[Insert Table 1.4 Here]

Direction for future research

Free (2015) reviews popular frameworks used to examine fraud and suggests three areas where there is considerable scope for academic research. One of the areas is rationalization of fraudulent behaviors by offenders. Wrongdoings that are conducted in the name of benefiting the

organization are often used as rationalization for committing fraud. Future studies can examine the effect of rationalization on witnesses' reporting intentions by varying the purpose of the fraudulent act.

Many corporations' whistleblowing standards require reporting the misconduct in "good faith," a term that every employee is apt to understand differently (Heard and Miller 2006). Some companies state that the whistleblower is subject to disciplinary actions if not reporting in good faith (Heard and Miller 2006). Reporting a misconduct that lacks convincing evidence may lead to questions regarding whether the reporting is in good faith or not. This may discourage the witnesses from reporting the questionable act. Future research can investigate whether a lack of evidence is related to questions of acting in good faith, and how such questions might influence reporting intentions.

Characteristics of the organization

From the perspective of encouraging whistleblowing, characteristics of the organization can be classified into the following categories: appropriateness of whistleblowing, organizational climate, and organizational structure (Near and Miceli 1995). Appropriateness of whistleblowing refers to the degree to which whistleblowing is considered part of one's regular responsibility. Organizational climate refers to the ethical climate, which can encourage whistleblowing or discourage whistleblowing. In terms of organizational structure, one key variable is the level of bureaucracy.

As discussed by Near and Miceli (1995), the organization's structure and climate can reflect and influence its employees' resistance to change. The witnesses' whistleblowing intentions are influenced by their perception of organizational support and whether the company is willing

to change the wrongful acts. Thus it is important to investigate how the characteristics of the organization can improve whistleblowing.

Prior literature

Appropriateness of Whistleblowing. In terms of the appropriateness of whistleblowing, one key factor is the company's whistleblowing policy. A whistleblowing policy may include the witnesses' responsibility of reporting, reporting channels and protection against retaliation (Hassink et al. 2007). Wainberg and Perreault (2016) conduct an experiment with graduate students by varying the existence of an explicit whistleblower anti-retaliation policy. They find that a vivid anti-retaliation policy may actually have the opposite of the intended effect and lower whistleblower' reporting intentions because it increases the salience of retaliatory threats.

Organizational Climate. Organizational climate on whistleblowing can be influenced by many factors, such as the organization's response to prior whistleblowing incidents, ethical environment, and internal rewards for whistleblowing. Zhang et al. (2013) investigate the interactive effects of previous whistleblowing outcomes, reporting channel, and personal proactivity scale. They vary the outcome for the previous whistleblower as either positive or negative. They find that when organizations have a history of negative outcomes for previous whistleblowers and when witnesses are low on the proactivity scale, the witnesses are less likely to report to internal hotlines and more likely to report via external hotline.

Taylor and Curtis (2013) conduct an experiment in an audit environment by manipulating whether the organization takes responsive actions against ethics violations and whether the wrongdoer is a supervisor or a peer of the witness. They find that when organizational response is strong, the witnesses are more likely to report to supervisors than peers. Without strong organizational response, they are more likely to report to peers than supervisors.

Dalton and Radtke (2013) examine the joint effect of Machiavellianism and ethical environment on whistleblowing. They manipulate the organization's ethical environment by varying whether the company's ethical standards are emphasized or not. They find that emphasis on ethical environment increases witnesses' reporting, especially when the witnesses are high in Machiavellianism. Xu and Ziegenfuss (2008) conduct a survey with internal auditors to examine whether a cash reward or employment contracts have an impact on auditors' whistleblowing intentions. The results indicate that internal auditors are more likely to report wrongdoing when a cash reward or employment contract reward is provided.

Brink et al. (2013) further investigate how internal rewards influence witnesses' choice of reporting channel. They find a greater likelihood of reporting internally than to the SEC. Their results show that when evidence is strong, internal rewards increase reporting to SEC; and when evidence is weak the presence of an internal incentive decreases SEC reporting intention. Seifert et al. (2010) apply the theory of organizational justice to the design of whistleblowing policies and procedures. They manipulate the organizational procedural justice (e.g., consistency of procedures and freedom from bias in carrying out procedures), distributive justice (e.g., resolutions are perceived as fair), and interactional justice (e.g. individuals are treated with dignity and respect). They conduct an experiment with internal auditors and management accountants and find that organizational procedural justice, distributive justice, and interactional justice increase the likelihood that an organizational accountant would internally report financial statement fraud.

Organizational Structure. Brennan and Kelly (2007) examine the relation between audit firms' organizational structures and trainee auditors' whistleblowing intentions. They conduct a survey of a group of trainee accountants in the UK and measure the participants' response to their organization's formal structures, training, and whistleblowing policy. They find that having

formal structures is positively associated with employees' reporting intentions. Training offered by the organization increases employees' reporting confidence.

Lowe et al. (2013) investigate the effect of a financial sub-certification procedure in an organization on witnesses' reporting intentions. Financial sub-certification procedure means the witnesses' supervisors sign and certify that there is no fraud on the financial statements. Lowe et al. (2013) argue that the witnesses with knowledge of a superior who committed a fraudulent act and certified that there is no fraud have lower reporting intentions. Using an experimental approach with MBA students, they manipulate two between-participant variables: (1) the presence or absence of sub-certification by the transgressor and (2) the timing of fraud discovery, either before or after the reports have been filed with the SEC. They find that when sub-certification is present, witnesses' reporting intentions were diminished compared to when sub-certification is absent. Timing of the discovery of the fraudulent act has no effect on reporting intentions.

In summary, appropriateness of whistleblowing is closely related to responsibility of reporting. There are limited studies investigating what organizational characteristics improve the responsibility of reporting. Researchers find that prior organizational response, ethical environment, internal reward, and organizational justice all, to some extent, encourage whistleblowing. In terms of organizational structure, studies show that the formal structure is positively associated with employees' reporting intentions. Asking supervisors to certify the financial statements lowers the witnesses' reporting intentions when there is financial statement fraud (see summary in Table 1.5).

[Insert Table 1.5 Here]

Directions for future research

A company's internal whistleblowing policy provides detailed explanations and guidance for employees who witness unethical behaviors. Hassink et al. (2007) conduct a content analysis of whistleblowing policies of leading European countries and find that there is variation of content included in companies' whistleblowing policies. For example, firms have different reporting channels. Fifty percent of the sample provide detailed contact information of where to report, and 78 percent of the sample mentioned that the whistleblower's identity will be kept anonymous. Apart from variation of actual content, there is also language variation when firms describe their whistleblowing policy. The tone of language used in corporate communication with employees can provide different direction to the potential whistleblowers (Schwartz 2002). Use of negative tone language, such as "don't do x" seems to provide clearer direction than the use of positive tone (Schwartz 2002). Bethoux et al. (2007) and Logsdon and Wood (2005) document that employees can recognize the value assigned by the corporation to ethics and the reporting of wrongdoing through the language the company uses. Future research could conduct controlled experiments to investigate the effects of different language features in whistleblowing policies on the employees' perceived responsibility of reporting and their reporting intentions.

Another organizational characteristic worth exploring is the confidentiality agreement existing between employees and organizations. The U.S. Department of Justice and Securities and Exchange Commission have used whistleblower bounties to encourage employees to report corporate wrongdoing to the SEC. However, it is a common practice for firms to sign confidentiality agreements with employees to prevent employees from disclosing sensitive data to unauthorized parties. As discussed by Strassberg and Harrington (2015, 1), it was inevitable that "employers, employees and government lawyers would conflict on the use of confidentiality to protect sensitive corporate information." In April 2015, the SEC filed an enforcement action

against KBR, Inc. (KBR) and alleged that KBR required employees to sign a confidentiality statement containing “improperly restrictive language” that could discourage employees from reporting potential violations of the federal securities laws to the SEC (SEC 2015). It is important to note that the SEC acknowledged that it did not know of any efforts by KBR to enforce these confidentiality provisions nor was the Commission aware of any employees who had in fact been dissuaded from becoming whistleblowers. KBR settled the SEC’s allegations without admitting or denying liability. Thus it is still debatable whether there is any empirical evidence that a standard confidentiality agreement discourages employees from blowing the whistle to the SEC. As signing a confidentiality agreement is such a popular mechanism to protect sensitive information, future research can investigate whether a confidentiality agreement leads to lower whistleblowing reporting to the SEC. If this does discourage employees from reporting possible federal securities law violations to the SEC, it is worth exploring whether there are any methods that can protect corporate sensitive information without discouraging whistleblowing to the SEC.

IV. CONCLUSION

The purpose of this review is to provide a synthesis of past research in accounting regarding determinants of whistleblowing intentions and to identify promising avenues for future research. Building upon the whistleblowing model by Near and Miceli (1995), prior literature is summarized based on five determinants of effective whistleblowing: characteristics of the whistleblower; characteristics of the report recipient, characteristics of the wrongdoer, characteristics of the wrongdoing, and characteristics of the organization.

Overall, there has been extensive research in accounting literature investigating ways to encourage whistleblowing. Building upon the model of effective whistleblowing by Near and Miceli (1995), this review should help identify directions for future research to extend our understanding of the determinants effective whistleblowing.

Part Two: A Content Analysis of Organizations' Internal Whistleblowing Policies

I. INTRODUCTION

A series of accounting scandals that began with Enron's collapse in 2001 has brought unprecedented attention to the importance of deterring fraud. Prior researchers document that one of the most common method of detecting fraud is employee tips (ACFE 2014; Dyck et al. 2010). Corporations prefer employees to report unethical behavior internally, as external reporting brings reputation damage and high litigation risk (Barnett et al., 1993; Vandekerckhove and Commers, 2004; Van Es and Smit, 2003). Many organizations in both the public and private sectors have formal whistleblowing policies/procedures (Vandekerckhove and Lewis 2012). These policies guide employees through the ethical decision making process. Numerous firms spend an enormous amount of funds on the implementation of these policies, such as code of ethics trainings and courses (Robertson and Fadil 1998).

Emphasizing the importance of written standards to promote internal reporting of ethical standard violators, Section 406 of SOX requires public companies to disclose whether they have adopted a code of ethics that includes written standards of procedures to promote reporting unethical conduct (SEC 2003). The SEC does not provide specific guidance as to how the code of ethics should be addressed, what procedures the company should develop, and the types of

sanctions that the company should impose. Thus, little is known about the current administrative status of codes of ethics for U.S. firms.

This study performs a content analysis of U.S. listed companies' internal whistleblowing policy section in the code of ethics. Content analysis is "a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding" (Steve 2001, 17). This study focuses on both the content and the linguistic characteristics of the policy. Content characteristics refer to what information is included in the policy. Linguistic characteristics refer to the language used in the policy.

This study offers several contributions. First, the results provide useful insights to companies and regulators. Prior content analysis on corporate whistleblowing procedures and codes of ethics primarily focus on firms listed in European countries. The regulatory environment is different for U.S. firms than for international firms. This study examines the corporate whistleblowing procedures of firms that are listed on the U.S. stock market. As discussed earlier, although Section 406 of SOX requires public companies to disclose whether they have formal standards to promote reporting of unethical behaviors, it does not provide specific guidelines in terms of the administration of the policy. This study provides insight into companies' implementation and administration of Section 406 of SOX requirements.

Second, effective communication is considered one of the key components to a code of ethics' success (Stevens 2008), and language plays a critical role in effective communication. This study explores the words and language styles used in companies' whistleblowing policies. It helps to identify trends and patterns within whistleblowing policies. As such, this study answers calls for further investigation of the design and the implementation of effective internal whistleblowing policies/procedures (Vandekerckhove and Lewis 2012).

Third, through computerized content analysis, many variables that used to be difficult to measure can now be generated for future empirical studies. For example, a computerized content analysis of internal whistleblowing policies can measure linguistic variables, such as the voice (active versus passive), usage of proper nouns, and emotional tone. These variables are difficult to measure by hand but can be measured properly through computerized algorithms. Thus, this study answers calls for research that identifies operational measures of language characteristics in corporate codes of ethics (Logsdon and Wood 2005).

The remainder of this study is organized as follows: the next section includes background information and the literature review; section III provides the development of the research questions. Section IV describes the data selection, methodology, and the codification process. The results and summary of the study are displayed in Section V; and Section VI provides conclusion of the study, implications, limitations, and suggestions for future research.

II. BACKGROUND AND LITERATURE REVIEW

Internal Whistleblowing Policies

Accounting literature investigating employees' whistleblowing intentions focuses on the following determinants: characteristics of the whistleblower, characteristics of the report recipient, characteristics of the wrongdoer, characteristics of the wrongdoing, and characteristics of the organization. Of these, characteristics of the organization are some of the most important determinants in encouraging internal whistleblowing. As discussed by Near and Miceli (1995), the organization's structure and climate can influence employees' resistance to change. Witnesses' whistleblowing intentions are influenced by their perception of organizational support and whether the company is willing to change the wrongful acts. Prior research finds that prior organizational response, ethical environment, internal reward, and organizational justice can encourage whistleblowing (e.g., Seifert et al. 2010; Xu and Ziegenfuss 2008; Brink et al. 2013; Dalton and Radtke 2013; Taylor and Curtis 2013; Zhang et al. 2013).

Although there are a number of studies investigating the effect of characteristics of the organization on whistleblowing, one underexplored area of firm characteristics is the company's internal whistleblowing policies. Corporations prefer witnesses to report internally due to the potential for negative consequences of external reporting, such as reputation damage and litigation risk (Berry 2004; Davidson and Worrell 1988; Laczniak and Murphy 1991). To promote internal

whistleblowing, many organizations in both public and private sectors have formal whistleblowing policies/procedures (Vandekerckhove and Lewis 2012).

Limited prior research investigates corporate whistleblowing policies. However, Barnett et al. (1993) find that there is a significant increase in the number of internal disclosures and a significant decrease in the number of external disclosures after a company implements an internal whistleblowing policy. Vandekerckhove and Lewis (2012) identified and compared five internal whistleblowing guidelines from the following four categories: issues relating to who, about what, and how; issues relating to defining the responsibility to report; will there be retaliations; and issues relating to what constitutes the investigation procedure.² They find that there are contradictions and omissions among the five guidelines and most of the guidelines fail to pay enough attention to the process of handling concerns. They call for further investigation of corporations' formal internal whistleblowing policies and state that there is an urgent need to understand the design and implementation of effective internal whistleblowing policies/procedures.

Hassink et al. (2007) conducted a content analysis of whistleblowing policies and the related codes of ethics of 56 leading European companies. They find that there are significant variations in corporate internal whistleblowing procedures. For example, firms have different reporting channels. Fifty percent of the sample provided detailed contact information of where to report, and 78 percent of the sample mentioned that the whistleblower's identity will be kept anonymous.

Prior studies investigating the linguistic characteristics of firms' formal reporting procedures focus on the code of ethics. Farrell and Farrell (1998) investigated codes of ethics of

² The five internal whistleblowing guidelines are: The Council of Europe Resolution 1729; Recommended Principles for Whistleblowing Legislation; European Union Article 29 Data Protection Working Party Opinion; International Chamber of Commerce's Guidelines on Whistleblowing; and the British Standards Institute's Whistleblowing Arrangements Code of Practice 2008.

five large enterprises in Australia. They used functional linguistics as the instrument of analysis. Functional linguistics describes how language works to achieve a particular purpose, taking into account of the role of language and the parties involved in the communication (Collerson 1994; Eggins 1994). After investigating the number and frequency of relational clauses (e.g. X is Y, X must be Y) and passive words, they suggested that the language used in the code of ethics is intended to create and maintain a hierarchical relationship between employer and employees.

Schwartz (2004) conducted a series of interviews with employees, managers, and ethics officers from four large Canadian companies regarding the content and language of firms' codes of ethics. One of the important features in this study involves employees' perceptions of the tone of codes of ethics (i.e., negative language such as 'do not do x' versus positive or aspirational language such as 'do y' or 'try to do y'). The results indicate that employees prefer the use of a negative tone in the code of ethics. Interviewees indicated that a negative tone provides clearer expectations than a positive tone. In addition, there is a greater chance of misinterpretation by the reader when the code is written in positive or open-ended language (e.g., "not all gifts are unacceptable") versus when it is worded in negative or specific language (e.g., "do not accept cash gifts").

Logsdon and Wood (2005) explored the linguistic characteristics of corporate codes of ethics in six global petroleum companies. They identified words or sentences that can signal the company's orientation, implementation, and accountability to stakeholders and to employees. They suggest that employees can recognize the value assigned by the corporation to ethics and the company's attitude towards reporting of wrongdoing through the language the company uses. They call for more research on the language used in codes of ethics/policies to develop additional operational measures for language characteristics.

Erwin (2011) investigated the relation between the quality of the code of conduct and the corporate's ethical performance. The following components were identified to calculate an overall grade of the quality of the code of conduct: public availability, tone from the top, non-retaliation and reporting, commitment and values, risk topics (e.g., Does the Code address all of the appropriate and key risk areas?), comprehension aids (e.g., Does the Code prove any comprehension aids such as Q&As or FAQs?), and presentation and style (e.g., the layout, fonts, and pictures). Each category had a specific rating determined by a panel of experts from the Ethisphere Council, which is a membership group of the Ethisphere Institute that defines and measures corporate ethical standards. The sample's ethical performance was estimated by the presence of each company in the lists for sustainability (Dow Jones Sustainability Index), corporate citizenship (100 Best Corporate Citizens), ethical practices (World's Most Ethical Companies), and consumer perception (World's Most Respected Companies). They found that the quality of code of conduct is positively associated with a full range of ethical rankings.

In summary, prior research indicates that internal whistleblowing policies vary in terms of the content and language, and that language pattern and style can influence employees' perceptions of the value conveyed by the policy (Logsdon and Wood 2005; Hassink et al. 2007; Bethoux et al. 2007; George et al. 2014). While acknowledging the importance and impact of prior research, more research is needed to fully understand the current state of corporate internal whistleblowing policies. Prior empirical studies focus on either the actual content of the internal whistleblowing policy or the language of the policy. However, there is little research investigating both the content characteristics and linguistic characteristics simultaneously. Thus, little is known about whether

certain sections of the reporting policy are more likely to be associated with certain specific linguistic characteristics.

Second, to my knowledge, there has been no study investigating the characteristics of the internal whistleblowing policies of firms listed in the U.S. stock market. Prior studies focused on international firms such as European companies or Canadian companies (Schwartz 2004, Hassink et al. 2007). As the regulatory environment is different for U.S. firms, results from these studies may have limited implications for U.S. firms.

Third, there are very few linguistic variables in corporate internal whistleblowing policies that have been identified and operationalized. This may be due in part to the difficulty of coding policy content by hand and the amount of subjectivity involved in the coding process. As technology advances, there are many computerized tools developed to measure linguistic variables based on reliable natural language processing algorithms (e.g., DICTION 5.0, STYLE, ATLAS.ti™, and LIWC). DICTION 5.0 is a dictionary-based content analysis program (Hart 1984, Hart 2000) that is used extensively to analyze narrative discourse. STYLE is a computer program that analyzes the surface characteristics of a document such as sentence length and type, word usage, and other readability measures (Cherry and Vesterman 1991). ATLAS.ti™ is a computer-assisted qualitative data analysis software package. It can provide a systematic analysis of text-based documents. LIWC is described as:

A software program that contains a number of dictionaries associated with various constructs, such as negative emotions, positive emotions, causation, insight, inclusive, exclusive, and so on. The program searches a given text for the words contained in each dictionary and outputs the percentage of hits associated with the given dictionary. (Donohue et al. 2014, 283).

Many of these tools are used to generate linguistic variables in financial accounting research by analyzing the linguistic characteristics of annual reports.

Linguistic Characteristics in Financial Accounting

Goldberg (1964, 348) claimed “it is scarcely an exaggeration to say that the problem of communication is the axial problem in accounting.” Language is a critical component of effective communication. There is a growing body of research that uses computerized language processing tools to investigate the value of linguistic features in financial reporting.

Davis et al. (2008) used textual-analysis to measure the degree of optimistic and pessimistic language in a sample of approximately 24,000 earnings press releases issued between 1998 and 2003. They used DICTION 5.0 (Hart 2000a, 2001) to analyze narrative discourse, and to obtain systematic measures of the levels of optimistic and pessimistic language used in earnings press releases by counting the number of optimistic and pessimistic words (Hart 1984, 1987, 2000a, 2000b, 2001). They found that optimistic or pessimistic language usage is a predictor of future firm performance.

Sadique et al. (2008) investigated the relation between stock market reactions and the tone of the public by analyzing the tone of the media news articles and earnings press releases. They use DICTION 5.0 to generate a measure of positive and negative tone by calculating the percentage of negative words and positive words. Their results indicate that positive tone is associated with increases in a firm’s stock returns and decreases in stock volatility. A negative tone is associated with decreases in stock returns and increases in stock price volatility.

Goel et al. (2010) employ natural language processing (NLP) tools and linguistic features of annual reports to identify fraudulent annual reports. They create a methodology which employs machine-learning techniques to proactively detect fraud by building an automated fraud classifier.

The linguistic features were extracted by using DICTION 5.0 and STYLE. They found that linguistic features are an important tool that can be used to detect fraud. Their fraud detection model's accuracy rate increased from 56.75 percent to 89.51 percent after incorporating the annual reports' linguistic characteristics.

Goel and Gangolly (2012) investigated whether there is any systematic difference in terms of the language and presentation style used between fraudulent annual reports and non-fraudulent annual reports. They used DICTION 5.0, STYLE, and LIWC (Pennebaker et al. 2007) to extract linguistic markers. They found that fraudulent financial accounting is associated with the following linguistic cues: use of complex sentential structures; low readability; use of positive tone; use of passive voice; use of uncertainty markers; and use of adverbs.

In summary, prior studies employed several computerized tools to measure linguistic features in financial documents. Linguistic features, such as pronouns and language tone, play an important role in predicting firm performance and fraudulent reporting. As discussed in the previous section, there are calls for further research to investigate the characteristics of corporate internal reporting policies by incorporating analyses of content and linguistic features. This study takes an exploratory approach to investigate internal whistleblowing policies through a computerized content analysis. Specifically, this study analyzes the characteristics of organizations' internal whistleblowing policies' content and language. By incorporating computerized language processing tools to analyze the linguistic features of internal whistleblowing policies, this study measures many linguistic features that have not been identified in previous whistleblowing policy content analyses.

III. RESEARCH QUESTIONS DEVELOPMENT

The Content Characteristics of Internal Whistleblowing Policy

Consistent with Vandekerckhove and Lewis (2012), this study focuses on the following components in defining whistleblowing policy content. The first component is “general content, scope, and tone.” This includes the executives’ opening letter, the description of the importance of the policy, and any comprehension aids. The second component is “who, what, and where.” This includes who is covered by the policy, what is the responsibility of the employee, and where to report. The third component is “Investigation procedures, wrongdoer disciplinary action, and anti-retaliation policy.” It defines the investigation procedures, the disciplinary actions against wrongdoers, and the anti-retaliation policy. In summary, the first research question is:

RQ1: What are the content characteristics of companies’ internal whistleblowing policies?

The Linguistic Characteristics of Internal Whistleblowing Policy

In terms of the linguistic characteristics of the internal whistleblowing policy, this study focuses on the following characteristics: the types of pronouns, the uncertainty language, and the linguistic tones. First, the types of pronouns in the policy. This includes: first person pronouns (I, me, mine, and my), second person pronouns (you, your, and yours), and third person pronouns (he, she, him, her, his, and hers). Companies vary the use of pronouns in narrative disclosures (Goel et

al. 2010). For example, Walmart describes part of its whistleblowing policy in first person pronouns:

Q: My manager told me to markdown several items to zero but leave them on the shelves to sell because it will “help our inventory.” Is this acceptable? A: No. The manipulation of markdowns is not only dishonest, but it also could affect the store’s profitability. If you’re being instructed to do this, report it to Global Ethics immediately. (Walmart 2016, 23).

On the other hand, American Express’s whistleblowing policy uses third person pronouns:

Q: Katerina’s leader tells her to delay sending an invoice to Vendors Payable until next quarter. Katerina assumes her leader is trying to give their department some leeway to meet next quarter’s quota. Should she follow her leader’s request? A: No. All goods and services must be accounted for in the period incurred. Because Katerina’s leader is asking her to create an inaccurate record, she should report the situation immediately to her business unit’s Controller or Compliance Officer. (American Express 2016, 18).

As exemplified in the above two examples, the language used in organizations’ whistleblowing policies varies in the type of pronouns used. One thing to note is that in the American Express example, the third person is a fictitious person named “Katerina” rather than just a generic third person, such as “an employee”. Thus, this study separates third person pronouns into two sub categories: a generic third person and a fictitious third person.

The second linguistic feature is the level of uncertainty conveyed by language in the whistleblowing policy. Many studies use uncertainty markers to study style, expression, affect, and attitude in text (Lackoff 1973; Glover and Hirst 1996; Uzuner and Katz 2005; Rubin et al. 2006). If more uncertainty words are used in a whistleblowing policy, the employee may believe that management is not taking whistleblowing seriously, and they may feel uncertain about their responsibility to report a wrongdoing.

Finally, the third linguistic feature is the tone of the whistleblowing policy. The tone will be analyzed by classifying the text as positive or negative (Goel et al. 2010; Abrahamson and Amir 1996; Smith and Taffler 2000; Henry 2006). Prior studies show that negative words may trigger

stronger emotional reactions than similar positive words (Brink and Rankin 2013). Further, People may weigh a negative voice more heavily than a positive voice (Maxham and Netemeyer 2003; Mahajan et al. 1984). Negative words in an internal whistleblowing policy may trigger more attention from the employee than positive words, and the employee may have stronger emotional reactions to negative words than to positive words.

In summary, the second research question is summarized as:

RQ2: What are the linguistic characteristics of companies' internal whistleblowing policies?

The Relation between Content Characteristics and Linguistic Characteristics

The last part of the content analysis will focus on the relations among the various content and linguistic characteristics identified above. By investigating the content characteristics and linguistic characteristics at the same time, this study can identify the frequency of overlaps between the content and the language characteristics. This process can help answer questions such as: What is the tone normally used when describing employees' responsibility to report wrongdoing? Do the types of pronouns vary between sections of the whistleblowing policy? Thus, the third research question is summarized as follows:

RQ3: Do companies prefer to describe certain information content using certain linguistic features in their internal whistleblowing policies?

IV. SAMPLE SELECTION AND METHODOLOGY

Sample Selection

A sample of 50 companies' internal whistleblowing policies was collected for analysis. The companies selected are the 50 largest U.S. companies by stock market capitalization as of March 31, 2016. Prior research adopts a similar sample selection approach. For example, Hassink et al. (2007) conducted a content analysis of whistleblowing policies of European companies. The sample in their study is the Ftse Eurotop-100, which features the largest European listed companies.

The internal whistleblowing policies were extracted from the companies' code of ethics. Under section 406 of SOX, public companies should provide the code of ethics and make it publicly available. Companies without a code of ethics must explain the reasons in their annual reports. Under the SEC's definition, the code of ethics should include written standards and procedures for the promotion of reporting unethical or illegal behaviors. Starting in 2003, public companies listed on New York Stock Exchange (NYSE) and Nasdaq Stock Market (NASDAQ) are required to have code of business ethics and make it publicly available (NYSE 2009; NASDAQ 2016). Thus, public companies internal whistleblowing policies can be found from their code of ethics, which are publicly available on their websites.

Methodology

This study was conducted through a qualitative research method. Qualitative research is an exploratory approach. In qualitative research, hypotheses are not tested, and meanings and themes can emerge from data gathered through observations (Corbin and Strauss 1990). A qualitative content analysis is “a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding” (Steve 2001, 17).

The qualitative data analysis software for this study is ATLAS.ti™. As mentioned earlier, Atlas ti is a computer-assisted qualitative data analysis software package. It can provide a systematic analysis of text-based documents. Although this software has not been widely used in accounting research, it is a well-recognized qualitative data analysis software (QDAS). As reviewed by Woods et al. (2015), there is an increasing number researchers using ATLAS.ti™. Specifically, they document 349 studies using ATLAS.ti™ between 1994 and 2013. It is one of the two longest used QDAS tools (Muhr 1991; Richards and Richards 1991).

The Codification Process

As discussed earlier, the content analysis focuses on three areas of companies’ internal whistleblowing policies: the content characteristics of the internal whistleblowing policy; the linguistic characteristics of the policy, and the relation between the content characteristics and the linguistic characteristics of the policy.

Coding of the Content Characteristics

The content characteristics of companies’ internal whistleblowing policies are coded in the software by hand. The researchers read through all the fifty whistleblowing policies in the software and classify the content of the policies into different content characteristics codes following the coding index displayed in Table 2.1.

[Insert Table 2.1 Here]

Coding of the Linguistic Characteristics

This study investigates three linguistic characteristics: types of pronouns, language uncertainty, and linguistic tone. Coding the types of pronouns was conducted via the “auto-coding” feature in ATLAS.ti™ first, and then the generic third person and the fictitious third person pronouns were separated by hand. The other two linguistic characteristics were coded through the “auto-coding” feature in ATLAS.ti™. The “auto-coding” feature is a process of automatically searching for frequency counts of words based on a defined word list throughout the document and coding findings in the software.

The list of uncertainty words used in this study was taken from Loughran-McDonald dictionaries of uncertainty words (Loughran and McDonald 2011, Bodnaruk et al. 2015). The list of words indicating linguistic tones was derived based on prior studies by Abrahamson and Amir (1996), Smith and Taffler (2000), and Henry (2006). The words list for each of the three linguistic characteristics is included in the Appendix B. Through auto-coding, the frequency counts of these words exist in the whistleblowing policy can be identified and coded. The three linguistic variables and words list are listed below.

1. The types of pronouns	First person, Second person, Generic third person, Fictitious third person (See Appendix B)
2. The scale of uncertainty language	See Appendix B
3. The linguistic tone	See Appendix B

Through the “co-occurrence” tool in ATLAS.ti™, the overlapping occurrence of different characteristics can be identified. The “co-occurrence” tool provides a cross-tabulation of codes and the number within each cell is a frequency count of how often each pair of codes co-occurs. This process helps identify the frequency with which one code co-occurs with another code.

V. RESULTS

Coding Reliability

As discussed earlier, the linguistic characteristics are coded automatically by using the ATLAS.ti™ software and the content characteristics are coded by hand. To measure the reliability of the coding process, there is a second coder to manually code the linguistic characteristics and the content characteristics. The intra-class correlation coefficients (ICC) between the coders are 0.75 for the content characteristics and 0.89 for the linguistic characteristics. Prior studies suggested that values from 0.75 to 1.00 for continuous scales is considered good to excellent inter-rater reliability (Fleiss 1987; Streiner and Norman 1995; and Cicchetti 1994). Thus, the coding process in this study has good inter-rater reliability.³

The Content Characteristics of Internal Whistleblowing Policy

Table 2.2 summarizes the percentage of each content characteristic' existence out of 50 firms. Panel A of Table 2.2 reports the contents of general content, scope, and tone. It summarizes the percentage of the sample that have executive opening letters (39 of 50, 78%), the existence of executive's photo in the letter (29 of 50, 58%), specific requirement of employees to read and understand the policy (39 of 50, 78%), policy compliance affirmation with periodic certification

³ To manually code the linguistic characteristics and content characteristics for all the 50 firms is not practical, because it would involve manually identify thousands of codes. Thus, the authors randomly picked several firms for the second coder. The second coder only manually coded the linguistic characteristics for five firms and coded the content characteristics for three firms. I believe that if the inter-rater reliability is good for the randomly selected firms, it would suggest good coding reliability for the 50 firms.

(16 of 50, 32%), content related to policy training (30 of 50, 60%), and content specifically state that employee compliance with the policy is a condition of employment (4 of 50, 8%). Firms use several methods to help employees to interpret the policy, including Q/A, Frequently Asked Questions (FAQ), case scenario, and decision assistance tools. Companies provide decision trees or decision flow charts to help employees make better decisions. This study classified these features as decision assistance tools. Results show that 64% of the sample has a Q/A section (32 of 50), 62% have decision assistance tools (31 of 50), and only 10% have case scenarios to help interpret the policy (5 of 50).

Panel B of Table 2.2 reports the content related to who is covered by the policy, what is the responsibility, and where to report. In terms of who is covered by the policy, the results show that all of the 50 firms specifically mention that corporate employees are covered by the policy, 62% of the policies state that board of directors are also covered by the policy (31 of 50), 42% of the sample requires that the entire group needs to follow the policy (21 of 50), 28% state that their policies also apply to business partners (14 of 50), and 36% state their policies apply to temporary workers or contract workers (18 of 50). Only 8% of the sample specifically mentions that executives are also covered by the policy (4 of 50).

In regard to defining employees' responsibility to report, 86% of the sample requires employees to ask questions when they are not sure what to do (43 of 50), 98% of the sample requires employees to report concerns (49 of 50), 16% of the sample states that employees should report concerns even if no problem is found (8 of 50), and 50% of the sample requires employees to report concerns in good faith (25 of 50). When it comes to managers' responsibility in handling wrongdoing reports, 56% of the sample requires managers to create a reporting environment (28 of 50), 48% requires managers to lead by example (24 of 50), 46% mentions that managers should

respond to ethical reporting (23 of 50), and only 4% state that maintaining the non-retaliation policy is also the managers' responsibility (2 of 50).

In terms of where to report wrongdoing, the most common channel is reporting to supervisors (48 of 50, 96%). Out of the 50 firms, 22% of the firms explicitly state that employees should report to their supervisor first (11 of 50), 66% of the sample implicitly require supervisor reporting by listing supervisors ahead of other reporting channels (33 of 50), 80% have Human Resources (HR) as a reporting channel, 72% have the legal division as a reporting channel, 82% mention that employees can report to the compliance/ethics office, 6% mention the external auditor as a reporting channel, and only 4% mention that employees can report to their co-worker. Furthermore, 84% of the sample mention that there are anonymous reporting channels available.

Panel B of Table 2.2 also reports the reporting media frequencies among the 50 firms. Of the different types of reporting media, 82% of the sample mentions reporting concerns can be done via phone, 48% mention some type of online reporting portal, following which are email with 44%, traditional postal mail with 36%, and fax with 16%. Only 2% mention that employees can report by sending a text message.

Panel C of Table 2.2 reports the content related to investigation procedures, wrongdoer disciplinary action, and anti-retaliation policy. In terms of the investigation procedures, 66% of the sample has content mentioning the companies' investigation procedures (33 of 50), 62% state that witnesses should cooperate with investigations (31 of 50), 22% state that witnesses should not provide misleading information during the investigation (11 of 50), and 12% state that there will be punishment if witnesses provide misleading information (6 of 50). Only 12% of the sample mentions that there will be corrective actions after investigation (6 of 50), 18% provide information

related to an external investigation from government (9 of 50), and 52% of the sample states that the company will maintain witnesses' confidentiality during the investigation (26 of 50).

As to the content related to wrongdoers, 26% of the sample states that wrongdoers include those who detect unethical behaviors but fail to report (13 of 50), 8% mention that wrongdoing includes a manager's failure to detect unethical behaviors (4 of 50), and 20% state that wrongdoing includes managers' ignorance (10 of 50). Most of the sample provides some general statement relating to punishment of wrongdoers (45 of 50, 90%). In terms of the types of punishment, 84% specifically state that wrongdoers will be punished by termination of job (42 of 50), 34% mention some sort of legal punishment (17 of 50), and only 8% mention monetary punishment (4 of 50).

Another important section of the reporting policy is the anti-retaliation policy. Of the sample, 96% has some general statement stating that no retaliation is allowed (48 of 50), 82% require good faith reporting as a condition of a no retaliation policy (41 of 50), 18% have a detailed definition of what constitutes good faith (9 of 50), 8% state that the company will investigate the incident if there is retaliation against witnesses (4 of 50), 20% of the sample has a list of retaliation examples (10 of 50), 36% mention that there will be punishment against retaliation behaviors (18 of 50), 30% specifically mention that retaliation will be punished by termination (15 of 50), and only 8% mention that retaliation will be punished by legal action (4 of 50).

[Insert Table 2.2 Here]

Table 2.3 reports the number of words occurring in each content characteristic. As reported in Panel A of Table 2.3, the executive letter accounts for 9.8% of the policy content, the importance of the policy accounts for 4%, and comprehension aid takes 28.8% of the policy content. Of the total words, 3.4% describe who is covered by the policy, 12.8% describe the responsibility of the employee to report wrongdoing, 21.7% describe where to report, and 4.4% of the words are used

in describing the reporting media format. Investigation procedures take about 5.2% of the words, wrongdoer disciplinary action takes about 3.4%, and the anti-retaliation policy takes about 6.4%.

Panel B of Table 2.3 provides details of the percentage within each of the content categories. Within the importance of the policy category, 35.5% of the words are used to describe that employees should read and understand the policy, and 35.6% of the words are used to discuss the policy training information. Within the comprehensive aid category, Q/A accounts for 84% of the words, with Questions accounting for 30.1%, and Answers accounting for 53.9% of the words. Within who is covered by the policy, 32.3% of the words describe employees, 22.6% describe the board of directors, 16.8% describe the entire group, and 16.1% describe business partners. In terms of the content describing responsibilities, words used for the employees' responsibility account for 77.1%, and the words used for managers responsibility account for 22.9%. Within employees' responsibilities, most of the words are used in discussing the responsibility of asking questions (18.2%) and the responsibility of reporting concerns (49.7%). As to where to report, most of the words are used in describing the hotlines (25%), following that are compliance/ethics office (16.5%), supervisors (15.6%) and legal division (9.9%). The four most discussed reporting media formats are phone (34.4%), website (21.6%), mail (19.9%), and email (15.8%).

In terms of investigative procedures, the word usage focuses on discussing the general investigation procedures (32.1%), confidentiality and anonymity (25%), witness cooperation (16.9%), and external investigation (13.1%). As to the content related to wrongdoers, the mention of disciplinary action accounts for 36.6% of the words, termination of jobs accounts for 31.8%, and legal punishment accounts for 14.5%. As for the anti-retaliation policy content, 46.6% of the words are used in the general statement of no retaliation allowed, and 26.6% of the words are related to reporting with good faith.

[Insert Table 2.3 Here]

The Linguistic Characteristics of Internal Whistleblowing Policy

Table 2.4 presents the usage of different types of linguistic characteristics in companies' whistleblowing policies. As shown in Panel A, pronouns account for 4.8% of all the words in the policy, uncertainty words account for 0.7%, and linguistic tone accounts for 1.6%. Panel B provides the detailed linguistic features within pronouns and linguistic tone. As to pronouns, 46.8% of the pronouns are first-person pronouns, 42.7% are second-person pronouns, and 10.5% are third-person pronouns. Within the first-person pronouns, 29.1% are in singular format, and 17.8% are in plural format. Within the third-person pronouns, 3.4% are in singular format, and 7.1% are in plural format. In addition, 84.1% of the linguistic tone is positive tone, while 15.9% is negative tone.

[Insert Table 2.4 Here]

The Overlap within Content Characteristics

Table 2.5 presents the C-Coefficient between "executives' opening letter" and the rest of the content characteristics. This helps describe what executives discuss in their opening letters. The c-coefficient varies between 0 (codes do not co-occur) and 1 (two codes always occur together). It shows that "executives' opening letter" has a 0.41 C-Coefficient with "importance of the policy", a 0.41 C-Coefficient with "what is the responsibility", a 0.39 C-Coefficient with "Where to report", a 0.14 C-Coefficient with "Anti-retaliation policy", and a 0.13 C-Coefficient with "Who is covered by the policy". Executives opening letters have limited overlap with "Comprehension aid", "investigation procedures" and "wrongdoer disciplinary action". This suggests that companies use executives' opening letters mostly to emphasize the importance of the

policy, the responsibilities, and where to report. The opening letters have limited discussions of investigative procedures and disciplinary actions against wrongdoers.

[Insert Table 2.5 Here]

Table 2.6 summarizes the C-Coefficient between “Q/A” and the rest of the content characteristics. The C-Coefficient between “Q/A” and “what is the responsibility” is 0.39, and the C-Coefficient between “Q/A” and “who is covered by the policy” is 0.13. Additionally, C-Coefficient between “Q/A” and “Where to report” is 0.39. There is limited overlap between “Q/A” and other content characteristics.

[Insert Table 2.6 Here]

The Overlap between Content Characteristics and Linguistic Characteristics

Table 2.7 lists the overlap between content characteristics and linguistic characteristics. Panel A and Figure 2.1 list the overlap between types of pronouns and content characteristics. It suggests that there is great variation in terms of the percentage of different types of pronouns used in different content areas. Companies seem to use more first-person pronouns when describing the executive letter, importance of the policy, comprehension aid, and who is covered by the policy. Companies start to use more second-person pronouns and less first-person pronouns when they start to describe the responsibility, where to report, and what constitutes the report media. Third person pronoun usage is relatively consistent across different content.

Panel B and Figure 2.2 list the overlap between different content and uncertainty words and linguistic tone. It indicates that when companies are describing the wrongdoer’s disciplinary actions, the usage of uncertainty words is the highest. For most of the content, the company uses more positive tone than negative tone. As firms start to discuss the wrongdoers’ disciplinary actions, there is an increase in the negative tone and a decrease in the positive tone.

[Insert Table 2.7 Here]

[Insert Figure 2.1 Here]

[Insert Figure 2.2 Here]

Table 2.8 summarizes the usage of fictitious third person pronouns and generic third person pronouns in Q/A sections. It suggests that most of the third person pronouns used in companies' Q/A are in fictitious third person pronouns (86%), and only 14% of the total third person pronoun Q/A are in generic third person pronouns.

[Insert Table 2.8 Here]

VI: SUMMARY, LIMITATIONS, AND FUTURE RESEARCH

This study takes an exploratory approach to investigate the content and linguistic characteristics of companies' internal reporting policies with a sample of 50 firms. Results indicate that most firms specifically mention that employees need to read and understand the policy (78%), and some firms also state that employees need to periodically certify their compliance with the policy (32%). More than half of the firms have information related to policy training (30 of 50, 60%). Thus, the internal reporting policy is important to employees in terms of guiding them to make the correct ethical decisions.

In terms of where to report, first of all, firms prefer employees to report their supervisors. Results show that 66% of the firms implicitly mention that employees are encouraged to report to their supervisors first, and the most common reporting channel is reporting to supervisors (48 of 50, 96%). In regards to the reporting media, phone is the most common media used to report wrongdoing (41 of 50, 82%). As internet technology advances, reporting unethical behavior using the internet is also very common. Results indicate that 48% of the sample has an online reporting website, and 44% of the sample mentions that employees can report via Email.

Throughout companies' internal reporting policies, most of the words are used to describe the following content categories: where to report wrongdoing (21%) and employees'

responsibilities (12.8%). Companies use relatively less words in describing the investigation procedures (5.2%) and anti-retaliation policies (6.4%). This result is interesting because prior research documents that the primary reason why people do not want to report misconduct is the fear of reprisal (Wainberg and Perreault 2016). Providing such limited information on investigative procedures and anti-retaliation policies may increase employees' fear of reprisal.

Within companies' internal reporting policies, all firms in the sample state that the internal reporting policy applies to all employees, and only 8% of the sample specifically mention that executives are also covered by the policy. This small percentage is worth noting because many wrongful acts are committed by executive level employees. To promote ethical conduct and encourage witnesses' reporting of unethical behaviors, it is important that employees feel that executives are treated the same as everyone else in the company when it comes to unethical behaviors.

In regard to the content related to everyone's responsibility, most of the words are used to describe employees' responsibilities (77%), and a relatively small amount of words are used to discuss managers' responsibilities (23%). Several studies document that tone at the top is a crucial determinant of ethical practices within organizations (e.g., Bannon et al. 2010; Berson et al. 2008; Merchant 1990; Schaubroeck et al. 2012; Weber 2010). Limited discussion of managers' responsibilities in companies' internal reporting policies may influence employees' perception of the tone at the top.

The executive's opening letter is the first thing employees read in the policy, and 78% (39 of 50) of the firms have an executive's opening letter. Results show that most of the information discussed in the letter relates to the importance of the policy, the employees' responsibilities in regard to reporting, and where to report. Opening letters have limited discussion of investigative

procedures and disciplinary actions against wrongdoers. This is noteworthy as providing more detailed discussion on the investigative procedures and disciplinary actions against wrongdoers in the executive's opening letter section may indicate that the company takes unethical conduct seriously.

There is great variation in terms of the percentage of different types of pronouns used in different content. Overall, companies seem to use more first-person pronouns than second-person pronouns. Companies start to use more second-person pronouns and less first-person pronouns when they start to describe the employees' responsibility, where to report, and the reporting media. Third person pronoun usage is relatively consistent across different content. Overall, the greater usage of second-person pronouns in describing employees' reporting responsibility, where to report, and the reporting media may indicate that the policy is designed to give direct instructions about what employees should do in these sections.

This study also suggests that the usage of uncertainty words seems to be the highest when companies are describing the wrongdoer's disciplinary actions. This could potentially make employees doubt the seriousness of the company's attitude towards unethical behaviors, because employees may be uncertain about whether wrongdoers will actually be punished or not.

Throughout the policy, there is more positive linguistic tone usage than negative linguistic tone usage. However, as firms start to discuss the disciplinary actions against wrongdoers, there is an increase in negative tone and a decrease in positive tone. It is intuitive as more negative words may be used when the company is talking about the punishments for wrongdoers.

In summary, this exploratory content analysis identifies many interesting patterns of companies' internal whistleblowing policy. However, a limitation of this study, and all qualitative studies, is that results in this study are not tested empirically. Notwithstanding the limitation, this

study documents several trends that future studies could investigate. First, companies use a lot of words in the Q/A section. Also, there are variations in the usage of pronouns across reporting policies. Experimental research could investigate whether different types of pronouns used in the Q/A section might influence employees' reporting intentions.

Second, the content and linguistic characteristics identified in this study could also potentially provide an index to measure the quality of companies' internal reporting policies. By taking an archival approach, it would be instructive to investigate whether there are any correlations between the quality of companies' internal reporting policies and the quality of their financial statements.

Third, one additional limitation of this study is that it only explores the content of the policies of the 50 largest U.S. companies by stock market capitalization as of March 31, 2016. It is possible the variation in content may be limited by only selecting the top 50 firms. Future research could extend this study by investigating the bottom 50 firms, and compare whether there are systematic content and linguistic differences between the top 50 firms and the bottom 50 firms.

Fourth, this study only investigates three linguistic features: pronouns, uncertainty words, and linguistic tone. Other linguistic features (e.g., readability, passive or active voice) may also provide valuable insights for internal reporting policy effectiveness. Senay et al. (2015) documented that passive voice, as compared with active voice, may shift people's attention away from themselves and to the task they are assigned to (e.g., 'It will be done' vs. 'I will do it'). Thus, an effective internal reporting policy may involve strategically designing the use of passive voice and active voice. Future research could investigate such linguistic variables to explore firms' internal reporting policies.

Finally, it is likely that different industries may have unique content or linguistic features in their internal reporting policies. Additionally, the content and linguistic characteristics may have changed over time, perhaps before or after significant events (e.g., SOX). It would be interesting to explore the content and linguistic features of the internal reporting policy across different industries and over time.

Part Three: Using Pronouns Effectively in an Organization's Internal Whistleblowing Policy

I. INTRODUCTION

Public companies listed on the New York Stock Exchange (NYSE) and Nasdaq Stock Market (NASDAQ) must have a publicly available code of business ethics (NYSE 2009; NASDAQ 2016). Companies' codes of ethics should include procedures to promote internal reporting of unethical behaviors (SEC 2003). A survey conducted by KPMG finds that 85 percent of employees in the United States receive some form of communication and training specific to their companies' code of conduct, and around 86 percent of these communications are formal training (KPMG 2013). Although codes of ethics are widely used by public firms to communicate ethical issues with employees, there is no conclusive evidence of the effectiveness of codes of ethics in encouraging desired employee behaviors (Kaptein and Schwartz 2008).

One of the key issues for a code of ethics' success is effective communication (Stevens 2008). Language is a key component of effective communication. Employees can recognize the value assigned by the corporation to ethical issues through the language the company uses (Bethoux et al. 2007; Logsdon and Wood 2005). The current study examines one common, yet underexplored, factor: the use of pronouns in corporate internal whistleblowing policies. Different types of pronouns reflect different emotional states, personality, and other features of social relationships (Chung and Pennebaker 2007; Pennebaker et al. 2007). First person pronouns

include: I, me, mine, and my. Second person pronouns include: you, your, and yours. Third person pronouns include: he, she, him, her, his, and hers. This study investigates how the use and placement of first or third-person pronouns in the whistleblowing policy within a company's code of ethics affects employees' whistleblowing intentions.

This study breaks the internal whistleblowing policy into two parts: the Reporting Policy (the description of employees' responsibility to report and where to report) and the Anti-retaliation Policy (the description of protections against retaliation). It employs a 2 x 2 between-subjects design by manipulating the type of pronouns used in the Reporting Policy (first-person pronoun reporting policy or third-person pronoun reporting policy) and the type of pronouns used in the Anti-retaliation Policy (first-person pronoun anti-retaliation policy or third-person pronoun anti-retaliation policy). This study predicts that the effectiveness of first-person pronouns in encouraging whistleblowing is contingent upon policy content. Results show that using first-person pronouns encourages whistleblowing when they are used in the Reporting Policy. However, the type of pronouns used in the Anti-retaliation Policy has no significant influence on employees' reporting intentions. Additionally, employees' perceptions of the vividness of the policy fully mediates the first-person Reporting Policy's effect on employees' reporting intentions. In other words, the first-person pronoun is effective in influencing reporting behavior because it can change the vividness of the Reporting Policy's message. Employees' perceptions of the vividness of the policy include: how precise the policy is, how clear the policy is, how specific the policy is, and do they feel the policy is applicable to them.

This study offers several contributions to the literature. First, this is the first study investigating the effects of pronoun usage in firms' internal whistleblowing policies on employees' whistleblowing intentions. Thus, it extends the accounting literature by incorporating relevant

findings from the linguistic literature to improve our understanding of how companies can communicate more effectively with employees. Second, the results have implications for companies who have internal whistleblowing procedures intended to encourage internal reporting. Our results indicate that the language used in these whistleblowing policies, specifically the use of pronouns, may interact with policy content to influence employees' reporting intentions. This study provides evidence that can assist companies in identifying the whistleblowing policy language that is most effective in encouraging internal reporting. Third, the results of this study imply that even if companies have the same reporting procedures and policy content, variation in the type of language used can lead to differences in employees' reporting intentions. This highlights a potential issue in existing regulation that ignores the specific presentation of information. For example, Section 406 of SOX requires public companies to disclose whether they have adopted a corporate code of business ethics that should include procedures for reporting ethical violations. However, the SEC does not provide specific guidance as to how such procedures should be presented.

The remainder of this study is organized as follows. The next section includes background information, theory, and hypotheses development. Section III provides the methodology, participants, design, experimental task, independent variables, and dependent variables. Section IV provides the results and Section V provides a summary of the study, implications, limitations, and suggestions for future research.

II. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Internal Whistleblowing Policies and Corporate Codes of Ethics

Starting with the collapse of Enron in 2001, a series of accounting scandals significantly hurt investors' confidence in stock market. To restore investors' confidence in the wake of a number of well-publicized U.S. public company failures, a series of regulations was implemented. Among them, Section 406 of the Sarbanes-Oxley Act of 2002 requires public companies to disclose the existence of a code of ethics that provides guidance to employees when facing ethical issues (SEC 2003). Following SOX, NYSE and NASDAQ began to require companies listed on their exchanges to adopt a code of business conduct for all employees, make the code publicly available, and disclose it in their annual report (NYSE 2009; NASDAQ 2016). By definition, the code of ethics should include written standards to promote honest and ethical conduct and provide channels for employees to report wrongdoing to an appropriate person or persons (SEC 2003). In other words, public firms' codes of ethics should include a description of whistleblowing procedures.

Firms expend much effort in an attempt to communicate their codes of ethics with employees. A survey conducted by KPMG finds that 85 percent of employees in United States receive some form of communication and training on their companies' code of conduct, and around 86 percent of these communications are related to formal training (KPMG 2013). Many firms

specifically state in their code of ethics that reading and learning the code of ethics is the first thing new employees need to do. For example, American Express' code of ethics specifically states that employees need to confirm in writing or electronically that they have read and understand the company's code of ethics (American Express 2016). Although companies are increasingly paying attention to the promotion of codes of ethics, the effectiveness of these codes in promoting desired behaviors is not conclusive (Kaptein and Schwartz 2008). Vandekerckhove and Lewis (2012) document an urgent need to better understand the design and implementation of effective internal whistleblowing policies/procedures. Stevens (2008) argues that one of the key issues in the success of codes of ethics is effective communication.

Use of Pronouns in Internal Whistleblowing Policies

One common practice in companies' internal whistleblowing policies is the use of Frequently Asked Questions (FAQ) or Question and Answer (Q/A) formatting. These formats are used as comprehension aids in explaining key features of the policy (Erwin 2011). With these formats, companies list selected specific questions that employees may have when facing unethical conduct and provide answers for these questions. The use of pronouns in companies' whistleblowing FAQ or Q/A sections varies. Some firms describe their whistleblowing policy using first or second person pronouns (e.g., we, you, ours, or yours). For example, the following information is an excerpt from Walmart's whistleblowing policy, which uses first and second person pronouns (emphasis added):

Q: My manager told **me** to markdown several items to zero but leave them on the shelves to sell because it will "help **our** inventory." Is this acceptable?

A: No. The manipulation of markdowns is not only dishonest, but it also could affect the store's profitability. If **you're** being instructed to do this, report it to Global Ethics immediately. (Walmart 2016, 23).

Other companies use third-person pronouns (e.g., him, she, it, his, her or they) to describe their whistleblowing policies. For instance, the following is an excerpt from American Express's whistleblowing policy, which uses third-person pronouns (emphasis added):

Q: Katerina's leader tells **her** to delay sending an invoice to Vendors Payable until next quarter. Katerina assumes **her** leader is trying to give their department some leeway to meet next quarter's quota. Should **she** follow **her** leader's request?

A: No. All goods and services must be accounted for in the period incurred. Because Katerina's leader is asking **her** to create an inaccurate record, **she** should report the situation immediately to **her** business unit's Controller or Compliance Officer. (American Express 2016, 18).

As exemplified in the above two examples, firms vary in the type of pronouns used to describe the same topic. Prior linguistic studies indicate that pronouns are the most common category of function word used in the English language. Pronoun usage can reflect emotional states, personality, and other features of social relationships (Chung and Pennebaker 2007; Pennebaker et al. 2007). The use of different types of pronouns indicates to whom attention should be given. Specifically, use of third-person pronouns (e.g., he/she, they) indicates that attention is on others, while the use of first-person pronouns (e.g., I, we) highlights that attention is on ourselves as distinct entities (Zimmerman et al. 2013).

Considering the importance of effective communication to the success of codes of ethics and that language plays such a critical role in effective communication, it is important to explore how the use of different types of pronouns influences the effectiveness of internal whistleblowing policies.

Language Vividness and First-Person Pronouns

Vivid language refers to language that "excite[s] the imagination to the extent that it is (1) emotionally interesting, (2) concrete and imagery-provoking and (3) proximate in a sensory, temporal, or spatial way" (Nisbett and Ross 1980, 45). Based on this definition, using first-person

pronouns in the company's Q/A section to describe the employees' responsibility to report observed wrongdoing, where to report, and protection from retaliation is more vivid than using third-person pronouns. This is because first-person pronouns are more imagery-provoking and are more likely to cause emotional responses (Zimmerman et al. 2013).

One of the approaches that prior experimental studies use to manipulate language vividness is case-history information versus other forms of presentation (Taylor and Thompson 1982). This is done by presenting information either in the format of a single case study or in the format of base rate information (Hamill et al. 1980). A single case study is more vivid than base rate information because it is more concrete and emotionally stimulating (Nisbett and Ross 1980). Consistent with this approach, describing the internal whistleblowing policy using first-person pronouns lets the reader assume that he/she is the actual person experiencing the specific case scenario and consequently leads to greater emotional response. As documented by Seiha et al. (2011), when the information format is shifted from the first-person perspective to the third-person perspective, it reduces the vividness of spontaneous memories for the participants. Thus, describing the internal whistleblowing policy using first-person pronouns is more vivid than if third-person pronouns are used.

Language Vividness and Information Persuasion

Language vividness may also affect the persuasiveness of information. Nisbett and Ross (1980) argue that vividly presented information enhances memory and persuasion. However, empirical evidence provides conflicting evidence regarding vividness and information persuasiveness. Some studies show that vivid language increases the persuasiveness of information (e.g., Collins et al. 1988; Paivio 1969). Other studies do not find a relation between vividness and persuasion (e.g., Werner and Latane 1976). Frey and Eagly (1993) argue that vividness can also

undermine message processing if the vivid presentation involves elaborate imagery that is irrelevant to the message itself. Smith and Shaffer (2000) argue that vividness can undermine or enhance message processing depending on vividness congruency. Vividness congruency means “the extent to which the vivid elements of a message are congruent with the theme of the message itself” (Smith and Shaffer 2000, 769).

In the corporate internal whistleblowing policy context, the use of first-person pronouns increases language vividness and the readers’ emotional reaction. Whether this language vividness encourages employees’ reporting intentions or not may depend on the content of the policy. Specifically, as discussed earlier, corporate internal whistleblowing policies can consist of a Reporting Policy, which includes a description of employees’ reporting responsibility and describes reporting channels, and/or an Anti-retaliation Policy, which describes the company’s policy against retaliation against employees who report wrongdoing. For the Reporting Policy content, first-person pronouns may be more effective in encouraging employees to report than third-person pronouns, because first-person pronouns cause employees to have a stronger emotional reaction driven by feelings that he/she is the actual person asking the questions and receiving the answers.

For the Anti-retaliation Policy, the effectiveness of first-person pronouns in encouraging employees to report wrongdoing is less clear. First-person pronouns may encourage reporting intentions as the reader may feel that he/she is the person asking the question of whether he/she will be protected from retaliation and being told directly that the company doesn’t tolerate retaliation. In contrast, first-person pronouns may decrease reporting intentions because vivid descriptions of potential retaliation actions may activate implicit threats of reprisal causing the risk of retaliation to become more salient. This increased salience of risk may cause the reader feel

more strongly that they will face these potential retaliation threats than if less vivid language in the form of third-person pronouns is used. Feelings of increased retaliation risk are incongruent with the message that protection is being offered by the company (Wainberg and Perreault 2016). As discussed previously, vividness can undermine message processing if it is incongruent with the theme of the message. Thus, using first-person pronouns to describe the anti-retaliation policy could negatively affect employees' reporting intentions.

Consistent with the premise that increased vividness can lead to unanticipated negative effects, Wainberg and Perreault (2016) conduct an experiment where they vary the existence of an anti-retaliation policy. They find that the presence of an anti-retaliation policy increases the salience of retaliatory threats and lowers witnesses' reporting intentions. Their finding that presenting anti-retaliation policy information may adversely affect whistleblowing intentions is interesting. A logical follow-up question is what a company should do with its internal whistleblowing policy in regard to presenting anti-retaliation information in a way that doesn't impede the willingness of employees to report wrongdoing. This study addresses one potential factor that addresses this question. Specifically, it investigates the effect of pronoun type on employee responses to an anti-retaliation policy.

In summary, the effectiveness of the use of first-person pronouns in encouraging whistleblowing intentions is contingent upon the specific policy content. First-person pronouns should be effective in encouraging employee reporting when they are used in the Reporting Policy descriptions of employees' reporting responsibility and reporting channels. However, in the Anti-retaliation Policy, using first-person pronouns may decrease employees' reporting intentions due to the increased salience of the retaliation words. Based on the above discussion, the following hypotheses are generated:

H1: Employees' reporting intentions are higher when the Reporting Policy uses first-person pronouns than when it uses third-person pronouns.

H2: Employees' reporting intentions are lower when the Anti-retaliation Policy uses first-person pronouns than when it uses third-person pronouns.

Interaction between Reporting Policy Pronouns and Anti-Retaliation Policy Pronouns

Based on the previous discussion, pronoun type is expected to interact with the information content of the policy. As such, the use of first-person pronouns may either increase or decrease employees reporting intentions contingent upon the content of the policy where these pronouns are used. Another empirical question worth exploring is whether the types of pronouns in the Reporting Policy interact with the types of pronouns in the Anti-retaliation Policy. In other words, the question arises as to whether the predicted effectiveness of a first-person reporting policy is affected by the pronoun usage in the Anti-retaliation Policy.

In combination, Hypothesis 1 and Hypothesis 2 suggest that when both the Reporting Policy and the Anti-retaliation Policy are included in the internal whistleblowing policy, the most effective combination of pronoun use in encouraging reporting intentions will be achieved when the Reporting Policy is in first-person and the Anti-retaliation Policy is in third-person. Conversely, one would expect that the least effective combination of pronoun use would occur when the Reporting Policy is in third-person and the Anti-retaliation Policy is in first-person. This leads to my third hypothesis:

H3a: Employees' reporting intentions are the highest when the Reporting Policy uses first-person pronouns and the Anti-retaliation Policy uses third-person pronouns.

H3b: Employees' reporting intentions are the lowest when the Reporting Policy uses third-person pronouns and the Anti-retaliation Policy uses first-person pronouns.

However, it is less clear what will occur with other combinations of pronoun type and policy content. When first-person pronouns are used in both the Reporting Policy and the Anti-retaliation Policy, the language will be more vivid than if first-person pronouns are used in only one of the policies. This stronger language vividness may increase reporting intentions if the employee focuses on the Reporting Policy or decrease reporting intentions if the employee focuses on the Anti-retaliation Policy. When third-person pronouns are used in both the Reporting Policy and the Anti-retaliation Policy, the language will be less vivid than if third-person pronouns are used in one of the policies. This weaker language vividness may decrease reporting intentions if the employee focuses on the Reporting Policy or increase reporting intentions if the employee focuses on the Anti-retaliation Policy. Due to the lack of a clear directional prediction in these cases, I propose the following research questions:

RQ1: How will whistleblowing likelihood be affected if both the Reporting Policy and the Anti-retaliation Policy are in first person?

RQ2: How will whistleblowing likelihood be affected if both the Reporting Policy and the Anti-retaliation Policy are in third person?

Risk Aversion and Vividness of Anti-Retaliation Policy

People have different attitudes toward things involving risk and uncertainty. Risk aversion is defined as the tendency to avoid uncertainties and risks (Blais and Weber 2006), and it is considered the central theoretical concept in economics (Blais and Weber 2006). Reporting other employees' wrongdoing is considered risky, and the primary reason why people do not want to report misconduct is the fear of reprisal (Wainberg and Perreault 2016). People who are low in risk aversion are less likely to be influenced by the risk of retaliation than people who are high in risk aversion. Thus, the increased salience of potential retaliation threats due to the use of a first-

person anti-retaliation policy is less likely to influence risk seeking employees' reporting intentions. Based on the above discussion, I propose the following hypothesis:

H4: The effect of the first-person pronoun anti-retaliation policy is stronger for employees with high risk aversion than for employees with low risk aversion.

III. METHOD

Design and Participants

This study employs a 2 x 2 between-subjects design by manipulating the type of pronouns used in a corporate ethical violation Reporting Policy (first-person reporting policy or third-person reporting policy) and the type of pronouns used in the corporate Anti-retaliation Policy (first-person anti-retaliation policy or third-person anti-retaliation policy). This experimental design generates a total of four experimental treatments (see Table 6). Students from a major southeastern university were recruited as voluntary participants in the study and participants were randomly assigned to one of the four treatment conditions.⁴

Tasks and Procedures

Participants were presented with a short case involving a hypothetical manufacturing company called XOTLE, Inc. (XOTLE). Background information indicates that the company's operating results over the past few years are steady and below industry average. A fraudulent act related to revenue recognition was noticed by an employee named Rowan Geoffrey, who is in charge of preparing some accounting entries and related financial reports. Rowan finds that his boss, Gilbert Elias, (the CFO) engaged in fraudulent financial reporting. After reading the background information, participants were presented with XOTLE's internal whistleblowing policy. The policy is organized via "Q/A" format. The first part of the policy is the Reporting

⁴ Graduate students are used by many recent studies to examine reporting intentions for questionable acts (Ayers and Kaplan 2005; Kaplan and Schultz 2007; Kaplan, Pope, and Samuels 2010).

Policy. The Reporting Policy is in “Q/A” format. It describes the responsibility of XOTLE employees to report wrongdoing and the reporting channel. The reporting channel is an anonymous hotline administered by the internal auditors of XOTLE, Inc. The hotline is available 24 hours a day and 365 days a year. The second part of the policy is the anti-retaliation policy. The Anti-retaliation Policy is also in “Q/A” format. It describes the company’s anti-retaliation policy. The use of pronouns in each section of the company’s internal whistleblowing policy varies across treatments as described above.

After reading the company’s whistleblowing policy, participants were asked to indicate 1) Rowan’s likelihood of reporting the wrongdoing, and 2) their likelihood of reporting assuming they were in Rowan’s position. Participants then answer a series of follow-up and demographic questions (see Appendix C).

Independent Variables

Reporting Policy Pronoun Type

The first independent variable is the type of pronouns used in the company’s reporting policy of ethical violations. It is manipulated at two levels (first-person pronouns vs. third-person pronouns). Participants who are assigned to the first-person reporting policy group receive the following reporting policy:

Q: If I detect unethical/fraudulent acts, what is my responsibility to speak up? How should I raise the concern?

A: You must speak up promptly if there is any reason to suspect that anyone in the company has violated company policies or local laws. Your report will be taken seriously and investigated appropriately. It is better to report a suspicion that turns out not to be an issue than to ignore a possible violation of the law or Company policy.

To comply with the Sarbanes-Oxley Act, XOTLE, Inc. maintains an anonymous reporting hotline for whistle blowers. You are encouraged to call the hotline. The hotline is administered by the internal auditors of XOTLE, Inc. The hotline is available 24 hours a day and 365 days a year. The telephone calls made to the hotline are to be reported to

the audit committee for further investigation. The identity and any information about you will be kept strictly confidential.

Participants who are assigned to the third-person reporting policy group face the same reporting policy as presented above except that the first-person pronouns are replaced with third-person pronouns.

Q: If an employee detects unethical/fraudulent acts, what is his/her responsibility to speak up? How should he/she raise the concern?

A: He/she must speak up promptly if there is any reason to suspect that anyone in the company has violated company policies or local laws. His/Her report will be taken seriously and investigated appropriately. It is better to report a suspicion that turns out not to be an issue than to ignore a possible violation of the law or Company policy.

To comply with the Sarbanes-Oxley Act, XOTLE, Inc. maintains an anonymous reporting hotline for whistle blowers. He/She is encouraged to call the hotline. The hotline is administered by the internal auditors of XOTLE, Inc. The hotline is available 24 hours a day and 365 days a year. The telephone calls made to the hotline are to be reported to the audit committee for further investigation. The identity and any information about him/her will be kept strictly confidential.

Anti-Retaliation Policy Pronoun Type

The second independent variable is the type of pronouns used in the company's anti-retaliation policy. It is also manipulated at two levels (first-person pronouns vs. third-person pronouns). Participants who are assigned to the first-person anti-retaliation policy group receive the following reporting policy:

Q: If I report a fraud, will I be protected from retaliation?

A: All responses are kept anonymous. You will not be subject to intimidation or retaliation. This includes being left out, managerial or coworker abuse, threatening behavior, harassment, loss of job or promotion, or any other professional, personal, or financial form of retaliation both now and in the future.

If you believe that you are being retaliated against, you should report such conduct immediately to the Human Resources Department. Any individual who unlawfully discriminates or retaliates against you as a result of the protected actions may be subject to disciplinary action, up to and including immediate termination.

Participants who are assigned to the third-person anti-retaliation policy group receive the same anti-retaliation policy as presented above except that the first-person pronouns are replaced with third-person pronouns.

Q: If an employee reports a fraud, will he/she be protected from retaliation?

A: All responses are kept anonymous. He/She will not be subject to intimidation or retaliation. This includes being left out, managerial or coworker abuse, threatening behavior, harassment, loss of job or promotion, or any other professional, personal, or financial form of retaliation both now and in the future.

If he/she believes that he/she is being retaliated against, he/she should report such conduct immediately to the Human Resources Department. Any individual who unlawfully discriminates or retaliates against him/her as a result of the protected actions may be subject to disciplinary action, up to and including immediate termination.

Dependent Variables

The primary dependent variable in this study is measured by asking the participants' the following two questions:

1. Given this situation, how likely is it that someone in Rowan's position would report the CFO's fraudulent act?
2. Now imagine you are facing this situation. How likely is it that you would report the CFO's fraudulent act?"

Participants respond on a scale from 0 (definitely would not report) to 10 (definitely would report).

Follow-up Questions and Demographic Information

Following the dependent variables assessment, the questionnaire includes measurement of risk aversion, vividness of the whistleblowing policy, perceptions of the fraudulent act, and demographic information. In this study, participants' risk aversion is measured with a six-item scale based on the Domain-Specific Risk-Taking attitude developed by Weber et al. (2002).⁵ Item 1, 3, and 5 belong to the domain of financial gambling risk. Item 2, 4, and 6 belong to the domain

⁵ Prior research suggests that psychological test results based on survey questions are a reliable and valid approach of measuring individuals' risk aversion (Ekelund et al. 2005).

of financial investment risk. These six items are assessed on a 7-point Likert-type scale. The Domain-Specific Risk-Taking scale is a stable measurement of risk taking attitude used in many studies (Zhang et al. 2011; Hu and Xie 2012; Zhang et al. 2016).

Vividness of the whistleblowing policy is measured with a four-item scale based on Kelly et al. (1989) and Nagaraj (2007) (see Appendix C). Similar to prior research (e.g., Kaplan et al. 2009; Zhang et al. 2013; Brink et al. 2013), the instrument also includes several questions to that assess participant perceptions the fraudulent act, such as the perceived vividness of the policy, the seriousness of the fraud, the responsibility to report, and the risk of retaliation. At the end of the questionnaire, participants' demographic information, such as gender, age, and education are collected for further analysis (see Appendix C for a complete list of questions included in the research instrument).⁶

⁶ The instrument does not include direct questions to check the manipulation of first vs. third-person pronouns, as prior research indicates that the effect of different types of pronouns in a narrative disclosure is subconscious (Pennebaker 2011; Assay working). Thus, it would be confusing to ask participants about the type of pronouns in the internal whistleblowing policy as they will not likely register this consciously. In the manipulations, the only difference between treatment groups are the type of pronouns. All other features are held constant. Thus, a systematic reporting intention difference between groups should indicate that the type of pronouns used influenced participant decision making.

IV. RESULTS

Post-Experiment Questions

A total of 163 participants completed the experimental survey. Participants' demographic information is summarized in Table 3.1. The average participant age was 28 and the average work experience was 5.1 years. Approximately 48 percent of respondents were female, 52 percent were male, 32 percent were undergraduate students, 68 percent were graduate students. Twenty-four percent of the participants indicated they had discovered a person of greater authority engaged in questionable behaviors. Twenty-three participants reported that English was not their first language. Participants whose first language are not English may not be sensitive to the types of pronouns used in a context. Thus, they are excluded from subsequent analyses. When included as covariates, none of the above demographic variables were significant. Therefore, demographic variables are not included as covariates in subsequent analyses.

Table 3.2 reports the descriptive statistics for whistleblowing intentions measurement, and questions measuring participants' perception of the wrongdoing. Results show that the mean first-person reporting intention is 8.26, and the mean third-person reporting intention is 6.34. Table 3.2 also reports the descriptive statistics about participants' perception of the seriousness of the wrongdoing (mean 6.03), the personal cost of reporting (mean 4.21), the likelihood that there would be negative repercussions (mean 3.87), the likelihood of hurting the promotion (mean 3.99), the chance of being retaliated (mean 3.96), the responsibility to report (mean 6.41), the likelihood

that the company will thoroughly investigate the case (mean 4.93), the company will correct the wrongdoing (mean 4.94), and the level of disciplinary actions against wrongdoer (mean 5.39).

Table 3.3, Panel A reports the descriptive statistics and factor loading of language vividness measurement and risk aversion measurement. Each of the four items measuring the language vividness shows a minimum of 0.5 loading, and a strongly loading item is generally a 0.5 loading or higher (Costello and Osborne 2005). As discussed earlier, our risk aversion measurement has two domains: financial gambling risk domain and financial investment risk domain. As displayed in Panel A, Table 3.3, each of the financial gambling risk domain items (the first, third, and fifth item) enjoys a factor loading higher than 0.8, while each of the financial investment risk domain (the second, fourth, and sixth item) has a factor loading lower than 0.34. Weber et al. (2002) documented that the difference between these two domains is the level of control over the risk, and financial gambling risk is less controllable than financial investment risk. In our study, the risk involves the possibility of retaliation from the firm, which is difficult to control. Thus, I retain only the financial gambling risk domain items (the first, third, and fifth item) for future analysis. Table 3.3, Panel B reports the measurement reliability of the language vividness and risk aversion. The Cronbach's α of the two constructs are above 0.7, indicating adequate reliability (Nunnally 1978).

Hypothesis Testing and Research Question Analysis

Table 3.4 reports the Analysis of Variance (ANOVA) findings with reporting intentions as the dependent variable⁷. H1 predicts reporting intentions will be higher when the Reporting Policy is worded in first-person than when it is worded in third-person. Table 3.2, Panel A shows that the reporting intention is higher when the company's Reporting Policy is worded in first-person than

⁷ Dependent Variable: "How likely is it that you would report the CFO's fraudulent act?" scaled using an 11-point ascending scale (endpoints labeled "Extremely Unlikely" and "Extremely Likely").

when it is in third-person (8.57 versus 7.93) and the difference is significant ($F = 3.87, p = 0.05$). Thus, H1 is supported.

H2 predicts that reporting intentions will be lower when the Anti-Retaliation Policy is worded in first-person than when it is in third-person. The main effect of the Anti-Retaliation Policy Pronouns is not significant ($F = 0.21, p = 0.65$). Thus, H2 is not supported. H3a predicts that reporting intentions will be the highest when Reporting Policy is in first-person and the anti-retaliation policy is in third-person. H3b predicts that the reporting intentions will be the lowest when Reporting Policy is in third-person and the anti-retaliation policy is in first-person. The results of a one-way ANOVA do not indicate that whistleblowing intention in one treatment is significantly higher than other treatments ($F = 1.59, p = 0.19$). Thus, H3a and H3b are not supported. RQ1 and RQ2 investigate whether the types of pronouns in Reporting Policy interact with the types of pronouns in Anti-Retaliation Policy. As shown in Table 3.2 Panel A, there are no significant interactions between the two independent variables ($F = 0.74, p = 0.39$).

H4 predicts that the effect of the first-person pronoun anti-retaliation policy is stronger for employees with high risk aversion than for employees with low risk aversion. The median value of the risk aversion variable is 3.0. The participants are classified as either low risk seeking or high risk seeking based on a median split. The ANOVA analysis with Anti-Retaliation Policy Pronouns and Risk Aversion as independent variables shows that there is no significant interaction between the two variables ($F = 1.39, p = 0.24$). Thus, H4 is not supported.

Supplemental Analyses

Vividness of the Policy Mediation

As discussed earlier, the post-experiment questionnaire includes several questions to measure participants' perception of the vividness of the whistleblowing policy. Participants are

asked to rate how precise the policy is, how clear the policy is, how specific the policy is, and if they feel the policy is applicable to them. The variation of the types of pronouns used in companies' Reporting Policy may influence employees' perception of the vividness of the policy and in turn affect reporting intentions. In other words, the perceived vividness of the policy is predicted to mediate the Reporting Policy pronouns' effect on reporting intentions.

I use the PROCESS add-on in SPSS to examine the mediating effect (Hayes 2013). As Figure 3.1 illustrates, the standardized regression coefficient between Reporting Policy Pronouns and Language Vividness is statistically significant ($\text{Beta} = -0.31, p < 0.05$), as was the standardized regression coefficient between Language Vividness and Reporting Intentions ($\text{Beta} = 0.55, p < 0.05$). Reporting Policy Pronouns is significantly correlated with Reporting Intentions ($\text{Beta} = -0.31, p < 0.05$). The relationship between Reporting Policy Pronouns and Reporting Intentions is diminished when the relationships between Reporting Policy Pronouns and Language Vividness and between Language Vividness and Reporting Intentions are controlled (reduced from $\text{Beta} = -0.31, p < 0.05$ to $\text{Beta} = -0.14, p = 0.41$). The standardized indirect effect was $(-0.31)(0.55) = -0.17$. I test the significance of this indirect effect using normal theory tests in PROCESS. Results show that the indirect effect is significant ($\text{Beta} = -0.17, p = 0.01$)⁸. Thus, Language Vividness fully mediates the Reporting Policy Pronouns' effect on Reporting Intentions.

[Insert Figure 3 here]

⁸ I also employ the Baron and Kenny (1986) approach to test the model. Results support that Language Vividness fully mediates the Reporting Policy Pronouns' effect on Reporting Intentions.

V. CONCLUSIONS

Companies' codes of ethics potentially play an important role in guiding employees towards making the right decision when they encounter unethical behaviors. Firms exert effort to communicate the code of ethics with employees. Often employees are required to be familiar with the code, and may be required to undergo training specifically related to the code of ethics. Despite these efforts, the effectiveness of codes of ethics in encouraging desired employee behaviors is not conclusive (Kaptein and Schwartz 2008). One of the key issues for a code of ethics' success is effective communication (Stevens 2008). Pronouns plays an important role in effective communication. The purpose of the present study is to examine whether different types of pronouns used in the Reporting Policy and different types of pronouns used in the Anti-Retaliation policy influence employees' reporting intentions.

Results indicate that first-person pronouns encourage employee reporting intentions when they are used in the Reporting Policy. However, the results do not provide evidence that Anti-Retaliation policy pronoun type significantly affects reporting intentions. Mediation analysis indicates that participants' perceived vividness of the policy completely mediates the first-person Reporting Policy's effect on employees' reporting intentions.

These results suggest that firms desiring to motivate employees should pay attention, not only to the content of the ethics policy, but also to the linguistic vividness of the policy. Using first-person pronouns in the Reporting Policy may improve the vividness of the policy, and

ultimately influence employees' reporting intentions. However, pronoun type in the Anti-Retaliation Policy doesn't seem to influence employees' reporting intentions. As the Reporting Policy is usually displayed before the Anti-Retaliation Policy, participants may be most influenced by pronoun type in the Reporting Policy. Future research could test this potential order effect by only including the Anti-Retaliation Policy in the experimental design.

Language plays an important role in effective communication of the internal reporting policy. Future research can explore other language characteristics that help shape the most effective internal reporting policy, such as readability, use of uncertainty words, etc.

This study has a number of limitations. First, this study uses an experimental approach with limited information provided to participants in each case. Participants' reports may be different in "real life". However, the hypotheses rely on the differences among treatments instead of absolute levels. Thus, this limitation diminishes. Second, the internal reporting policy investigated in this study only focuses on the Reporting Policy and the Anti-retaliation Policy. A full internal reporting policy also includes investigative procedures, who is covered by the policy, etc. Third, there are many types of fraudulent acts in practice, this study only examines one fraud case. Inferences from this study may be limited.

REFERENCES

- Abrahamson, E. and C. Park. 1994. Concealment of negative organizational outcomes: An agency theory perspective. *Academy of Management Journal* 37(5): 1302-1334.
- Abrahamson, E. and E. Amir. 1996. The information content of the president's letter to shareholders. *Journal of Business Finance & Accounting* 23(8): 1157-1182.
- Ajzen, I. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50:179-211.
- American Express. 2016. *Code of Conduct*. Available at:
<http://ir.americanexpress.com/Cache/1500083779.PDF?O=PDF&T=&Y=&D=&FID=1500083779&iid=102700>
- Association of Certified Fraud Examiners (ACFE). 2008. Report to the nation on occupational fraud and abuse. Austin, TX: ACFE.
- Association of Certified Fraud Examiners (ACFE). 2005. Detecting and Deterring Fraud Using Hotlines. Continuing Education Course. Austin, TX: ACFE.
- Ayers, S. and S. E. Kaplan. 2005. Wrongdoing by Consultants: An Examination of Employees' Reporting Intentions. *Journal of Business Ethics* 57(2): 121-137
- Barnett, T., D. S. Cochran and G. S. Taylor. 1993. The Internal Disclosure Policies of Private-Sector Employers: An Initial Look at Their Relationship to Employee Whistleblowing. *Journal of Business Ethics* 12(2): 127-136.
- Bannon, S., K. Ford, & L. Meltzer. 2010. How to instill a strong ethical culture. *CPA Journal* 80(7): 56-58.
- Berson, Y., O. Shaul, & T. Dvir. 2008. CEO values organizational culture and firm outcomes. *Journal of Organizational Behavior* 29: 615-633.
- Berry, B. 2004. Organizational culture: A framework and strategies for facilitating employee whistleblowing. *Employee Responsibilities and Rights Journal* 16(1): 1-11.

- Blais, A. R., and E. U. Weber. 2006. A domain-specific risk-taking (DOSPERT) scale for adult populations. *Judgment and Decision Making* 1(1): 33-47.
- Brennan, N. M. and J. J. Kelly. 2007. A Study of Whistleblowing Among Trainee Auditors. *British Accounting Review* 39(1): 61-87.
- Brink, A. G., D. J. Lowe, and L. M. Victoravich 2013. The Effect of Evidence Strength and Internal Rewards on Intentions to Report Fraud in the Dodd-Frank Regulatory Environment. *Auditing: A Journal of Practice & Theory* 32(3): 87-104.
- Brink, A. G., S. J. Cereola, and K. B. Menk. 2015a. The Effects of Fraudulent Reporting, Materiality Level, Personality Traits, and Ethical Position on Entry-Level Employee Whistleblowing Decisions. *Journal of Forensic and Investigative Accounting* 7(1): 180-211.
- Brink, A. G., C. K. Eller, and H. Gan. 2015b. Reporting Fraud: An Examination of the Bystander Effect and Evidence Strength. *Advances in Accounting Behavioral Research* 18:125-154.
- Brink, A. G. and F. W. Rankin. 2013. The Effects of Risk Preference and Loss Aversion on Individual Behavior under Bonus, Penalty, and Combined Contract Frames. *Behavioral Research in Accounting* 25(2):145-170.
- Bodnaruk, A., T. Loughran., and B. McDonald. 2015. Using 10-K Text to Gauge Financial Constraints. *Journal of Financial and Quantitative Analysis* 50:4.
- Burgoon, J., W. J. Mayew, J. S. Giboney, A. C. Elkins, K. Moffitt, B. Dorn, M. Byrd, and L. Spitzley. 2016. Which Spoken Language Markers Identify Deception in High-Stakes Settings? Evidence from Earnings Conference Calls. *Journal of Language and Social Psychology* 35(2): 123-157.
- Cherry LL, Vesterman W. 1991. Writing tools – the STYLE and DICTION programs: 4.3 BSD Unix system documentation, University of California, Berkley.
- Christie, R., and F. L. Geis. 1970. How devious are you? Take the Machiavelli test to find out. *Journal of Management in Engineering* 15(4): 17.
- Chung, C. K., and J. W. Pennebaker. 2008. Variations in the spacing of expressive writing sessions. *British Journal of Health Psychology* 13(1): 15-21.
- Chung, C. K., and Pennebaker, J. W. (2007). The psychological function of function words. In K.Fiedler (Ed.), *Frontiers of social psychology* (343-359). New York, NY: Psychological Press.

- Cicchetti, D. V. 1994. Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment*. 6 (4): 284–290.
- Clatworthy, M., and M. J. Jones. 2001. The effect of thematic structure on the variability of annual report readability. *Accounting, Auditing & Accountability Journal* 14(3): 311-326.
- Collerson, J. 1994. English Grammar a Functional Approach (Primary English Teachers' Assoc, NSW, Newtown).
- Collins, R. L., S. E. Taylor, J. V. Wood, and S. C. Thompson. 1988. The vividness effect: Elusive or illusory? *Journal of Experimental Social Psychology* 24(1): 1-18.
- Committee of Sponsoring Organizations (COSO). 2010. Fraudulent financial reporting: 1998-2007, an analysis of U.S. public companies. New York, NY: <http://www.coso.org>.
- Corbin, J., A. Strauss. 1990. Grounded theory research: Procedures, canons and evaluative criteria. *Qualitative Sociology* 13: 3-21.
- Costello, A. B. and J. W. Osborn. 2005. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation* 10(7). Available online: <http://pareonline.net/pdf/v10n7.pdf>.
- Curtis, M. B., and E. Z. Taylor. 2009. Whistleblowing in Public Accounting: Influence of Identity Disclosure, Situational Context, and Personal Characteristics. *Accounting and the Public Interest* 9(1): 191-220.
- Davis, A., J. Piger, and L. Sedor. 2008. Beyond the numbers: Managers' use of optimistic and pessimistic tone in earnings press releases. Working paper, University of Oregon.
- Davidson, W. N., III, and D. L. Worrell. 1988. The impact of announcements of corporate illegalities on shareholder returns. *Academy of Management Journal* 31(1): 195-200.
- Donohue, W. A.; Y. Liang; D. Druckman. 2014. Validating LIWC Dictionaries. *Journal of Language and Social Psychology* 33(3): 282-301.
- Dyck, A., A. Morse, and L. Zingales. 2010. Who blows the whistle on corporate fraud? *Journal of Finance* 65 (6): 2213–2253.
- Eggins, S. 1994. An Introduction to Systemic Functional Linguistics (Frances Pinter, London).
- Ekelund, J., E. Johansson, M. R. Järvelin, and D. Lichtermann. 2005. Self-employment and risk aversion—evidence from psychological test data. *Labour Economics* 12(5): 649–659.

- Erkmen, T., A. O. Çalışkan, and E. Esen. 2014. An empirical research about whistleblowing behavior in accounting context. *Journal of Accounting & Organizational Change* 10(2): 229-243.
- Erwin, P. 2011. Corporate Codes of Conduct: The Effects of Code Content and Quality on Ethical Performance. *Journal of Business Ethics* 99(4): 535-548.
- Ethics Resource Center. 2012. *The 2011 National Business Ethics Survey: Workplace Ethics in Transition*. Arlington, VA: Ethics Resource Center.
- Ethics Resource Center (ERC). 2013. *National Business Ethics Survey of the U.S. Workforce*. Arlington, VA: ERC.
- Farrell, H., and B. J. Farrell. 1998. The Language of Business Codes of Ethics: Implications of Knowledge and Power. *Journal of Business Ethics* 17(6): 587-601.
- Farrell, J., and M. Cobbin. 2000. A content analysis of codes of ethics from fifty-seven national accounting organizations. *Business Ethics: A European Review* 9(3): 180-190.
- Fleiss, J L. 1986. *The Design and Analysis of Clinical Experiments*. New York: John Wiley & Sons; 1986.
- Fisher, I. E., M. R. Garnsey, S. Goel and K. Tam. 2010. The Role of Text Analytics and Information Retrieval in the Accounting Domain. *Journal of Emerging Technologies in Accounting* 7(1):1-24.
- Free, C. and P. R. Murphy. 2015. The Ties that Bind: The Decision to Co-Offend in Fraud. *Contemporary Accounting Research* 32(1): 18-54.
- Free, C. 2015. Looking through the fraud triangle: a review and call for new directions. *Meditari Accountancy Research* 23(2): 175-196.
- Frey, K. P., and A. H. Eagly. 1993. Vividness can Undermine the Persuasiveness of Messages. *Journal of Personality and Social Psychology* 65(1): 32-44.
- Francis, J., K. Schipper, and L. Vincent. 2002. Expanded disclosures and the increased usefulness of earnings announcements. *The Accounting Review* 77(3): 515-546.
- Frazier, K. B., R. W. Ingram, and B. M. Tennyson. 1984. A methodology for the analysis of narrative accounting disclosures. *Journal of Accounting Research*. 22 (1): 318-331.
- George, G., A. A. Jones., J. Harvey. 2014. Analysis of the language used within codes of ethical conduct. *Journal of Academic and Business Ethics* 8:1-24.

- Glover, A., and G. Hirst. 1996. Detecting stylistic inconsistencies in collaborative writing. In *The New Writing Environment: Writers at Work in a World of Technology*, edited by Sharpley, M., and T. Geest. London, U.K.: Springer-Verlag Company.
- Goel, S., J. Gangolly, S. R. Faerman, and O. Uzuner. 2010. Can Linguistic Predictors Detect Fraudulent Financial Filings? *Journal of Emerging Technologies in Accounting* 7(1): 25-46.
- Goel, S., and J. Gangolly. 2012. Beyond the numbers: Mining the annual reports for hidden cues indicative of financial statement fraud. *Intelligent Systems in Accounting, Finance and Management* 19(2): 75–89.
- Goldberg, L. 1965. *An Inquiry into the Nature of Accounting*. Sarasota, FL: AAA.
- Gundlach, M. J., S. C. Douglas, and M. J. Martinko. 2003. The Decision to blow the whistle: A Social Information Processing Framework. *Academy of Management Review* 28(1): 107-123.
- Hales, J., X. Kuang and S. Venkataraman. 2011. Who Believes the Hype? An Experimental Examination of How Language Affects Investor Judgments. *Journal of Accounting Research* 49(1): 223-255.
- Hayes, A. F. 2013. *Introduction to mediation, moderation, and conditional process analysis: A regression-based perspective*. New York: The Guilford Press.
- Hamill, R., T. D. Wilson. and R. E. Nisbett. 1980. Insensitivity to Sample Bias: Generalizing From Atypical Cases. *Journal of Personality and Social Psychology*. 39(4): 578-589.
- Hart, R. P. 1984. *Verbal style and the presidency: A computer-based analysis*. Orlando, FL: Academic Press, Inc.
- Hart, R. P. 1987. *The sound of leadership: Presidential communication in the modern age*. Chicago, IL: University of Chicago Press.
- Hart, R. P. 2000a. *DICTION 5.0: The text-analysis program*. Thousand Oaks, CA: Scolari/Sage Publications.
- Hart, R. P. 2000b. *Campaign talk: Why elections are good for us*. Princeton, NJ: Princeton University Press.
- Hart, R. P. 2001. *Redeveloping DICTION: Theoretical considerations*. In M. West (Ed.), *Theory, method, and practice of computer content analysis* (pp. 26-55). New York: Ablex.

- Hart, R. P., and S. Jarvis. 1997. Political Debate: Forms, Styles, and Media. *American Behavioral Scientist* 40: 1095-1122.
- Hassink, H., M. de Vries, L. Bollen. 2007. A Content Analysis of Whistleblowing Policies of Leading European Companies. *Journal of Business Ethics* 75(1): 25-44.
- Henry, E. 2006. Market reaction to verbal components of earning press releases: Event study using a predictive algorithm. *Journal of Emerging Technologies in Accounting* 3: 1-19.
- Hochstetler, A. 2001. Opportunities and decisions: Interactional dynamics in robbery and burglary groups. *Criminology* 39 (3): 737-764.
- Hooks, K. L., S. E. Kaplan, and J. J. Schultz. 1994. Enhancing Communication to Assist in Fraud Prevention and Detection. *Auditing: a journal of practice & theory* 13(2): 86-117.
- Hudson Employment Index. 2005. One in Three Workers Witness Ethical Misconduct Despite Clearly Communicated Guidelines. Washington, DC: Hudson.
- Hu, X., X. Xie. (2012). Validation of the domain-specific risk-taking scale in Chinese college students. *Judgment and Decision making* 7(2): 181-188.
- Ingram, R. W., and K. B. Frazier. 1983. Narrative disclosure in annual reports. *Journal of Business Research* 11(1): 49-60.
- John, O. P., Donahue, E. M., and Kentle, R. L. (1991). The big five inventory—versions 4a and 54. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- John, O. P., Naumann, L. P. , and. Soto, J. (2008) Paradigm shift to the integrative big five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, and L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press
- KPMG Forensic 2013: Integrity Survey 2013. KPMG LLP US.
- Kaplan, S. E. 1995. An examination of auditors' reporting intentions upon discovery of procedures prematurely signed-off. *Auditing: A Journal of Practice & Theory* 14(2): 90-104.
- Kaplan, S. E., K. Pany, J. A. Samuels, and J. Zhang. 2009. An examination of the effects of procedural safeguards on intentions to anonymously report fraud. *Auditing: A Journal of Practice & Theory* 28(2): 273-288.

- Kaplan, S. E. 1995. An Examination of Auditors' reporting Intentions Upon Discovery of Procedures Prematurely Signed Off. *Auditing: A Journal of Practice and Theory* 14(2): 90-104.
- Kaplan, S. E., K. R. Pope, and J. A. Samuels. 2010. The Effect of Social Confrontation on Individuals' Intentions to Internally Report Fraud. *Behavioral Research in Accounting* 22(2): 51-67.
- Kaplan, S. E., K. R. Pope, and J. A. Samuels. (2011). An Examination of the Effect of Inquiry and Auditor Type on Reporting Intentions for Fraud. *Auditing* 30(4): 29-49.
- Kaplan, S. E. and J. J. Schultz. 2006. *The role of internal audit in sensitive communications*. Altamonte Springs, FL. Institute of Internal Auditors Research Foundation.
- Kaplan, S. E., and J. J. Schultz. 2007. Intentions to report questionable acts: An examination of the influence of anonymous reporting channel, internal audit quality, and setting. *Journal of Business Ethics* 71(2): 109-124.
- Kaplan, S. E. and S. M. Whitecotton. 2001. An examination of auditors' reporting intentions when another auditor is offered client employment. *Auditing: A Journal of Practice and Theory* 20 (1): 45-63.
- Kaptein, M. and M. S. Schwartz. 2008. The Effectiveness of Business Codes: A Critical Examination of Existing Studies and the Development of an Integrated Research Model. *Journal of Business Ethics* 77(2): 111-127.
- Keil, M., A. Tiwana, R. Sainsbury, and S. Sneha. 2010. Toward a theory of whistleblowing intentions: a benefit-to-cost differential perspective. *Decision Sciences* 41(4): 787-812.
- Keenan, J.P. (1995). Whistleblowing and the First-Level Manager: Determinants of feeling obliged to blow the whistle. *Journal of Social Behavior and Personality* 10(3):571-584.
- Keenan, J. P. 2002. Whistleblowing: A Study of Managerial Differences. *Employee Responsibilities and Rights Journal* 14(1): 17-32.
- Kelly-Newton, L. 1980. A sociological investigation of the U.S.A. mandate for replacement cost disclosures. *Accounting, Organizations and Society* 5(3): 311-321.
- Kelley, C. A., W. C. Gaidis, and P.H. Reingen. 1989. The Use of Vivid Stimuli to Enhance Comprehension of the Content of Product Warning Messages. *Journal of Consumer Affairs* 23(2): 243-266.
- King, G. 1997. The effects of interpersonal closeness and issue seriousness on blowing the whistle. *Journal of Business Communication* 34(4): 419-436.

- Lackoff, G. 1973. Hedges: A study of meaning criteria and the logic of fuzzy concepts. *Journal of Philosophical Logic* 2(4): 458-508.
- Laczniak, G. R., and P. E. Murphy. 1991. Fostering ethical marketing decisions. *Journal of Business Ethics* 10(4): 259-271.
- Larmer, R. A. 1992. Whistle-blowing and employee loyalty. *Journal of Business Ethics* 11(2): 125-128.
- Liyanarachchi, G. and C. Newdick. 2009. The Impact of moral reasoning and retaliation on whistle-blowing: New Zealand evidence. *Journal of Business Ethics* 89(1): 37-57.
- Liyanarachchi, G. A., R. Adler. 2011. Accountants' whistle-blowing intentions: The impact of retaliation, age and gender. *Australian Accounting Review* 21(2): 167-182.
- Loughran, T., and B. McDonald. 2011. When Is a Liability Not a Liability? Textual Analysis, Dictionaries, and 10-Ks. *Journal of Finance* 66(1): 35-65
- Bodnaruk, A., T. Loughran., and B. McDonald. 2015. Using 10-K Text to Gauge Financial Constraints. *Journal of Financial and Quantitative Analysis* 50:4.
- Lowe, D. J., K. R. Pope, and J. A. Samuels. 2015. An examination of financial sub-certification and timing of fraud discovery on employee whistleblowing reporting intentions. *Journal of Business Ethics* 131(4): 757-772.
- Logsdon, J. M., and D. J. Wood. 2005. Global business citizenship and voluntary codes of ethical conduct. *Journal of Business Ethics* 59(1-2): 55-67.
- Maxham, J. G., and R. Netemeyer. 2003. Firms Reap What They Sow: The Effects of Shared Values and Perceived Organizational Justice on Customers' Evaluations of Complaint Handling. *Journal of Marketing* 67(1): 46-62.
- Mahajan, V., E. Muller, and R. Kerin. 1984. Introduction Strategy for New Products with Positive and Negative Word-of-Mouth. *Management Science* 30(12): 1389-1404.
- Mesmer-Magnus, J. R., and C. Viswesvaran. 2005. Whistleblowing in organizations: An examination of correlates of whistleblowing intentions, actions, and retaliation. *Journal of Business Ethics* 62(3): 277-297.
- Merchant, K. A. 1990. The effects of financial controls on data manipulation and management Myopia. *Accounting: Organizations and Society*. 297-313.
- Miller, G. S. 2002. Earnings performance and discretionary disclosure. *Journal of Accounting Research* 40(1): 173-203.

- Miceli, M. P. and J. P. Near. 1994. Relationships among value congruence, perceived victimization, and retaliation against whistle-blowers. The case of internal auditors. *Journal of Management* 20(4):773-794.
- Miceli, M. P. and J. P. Near. 1994. Definition of “whistle-blowing.” In *The Blackwell encyclopedic dictionary of human resource management*, ed. L. H. Peters, C. R. B. Greer, and S. A. Youngblood: 388,. Oxford: Blackwell Publishers.
- Miceli, M. P., J. P. Near., and K. Ryan. 1999. Can laws protect whistle-blowers? Results of a naturally occurring field experiment. *Work and Occupations* 26(1): 129-151.
- Miceli, M. P., and J. P. Near. 2002. What makes whistle-blowers effective? Three field studies. *Human Relations* 55(4): 455-479.
- Miceli, M. P., J. P. Near, and T. Dworkin. 2008. *Whistle-Blowing in Organizations*. New York, NY: Taylor-Francis.
- Miceli, M. P., J. P. Near, and T. M. Dworkin. 2008. *Whistle-Blowing in Organizations*. New York, NY: Routledge.
- Muhr, T. 1991 ATLAS/ti -A prototype for the support of text interpretation Qualitative Sociology. 14(4): 349-371.
- Murphy, P. R. and C. Free. 2016. Broadening the Fraud Triangle: Instrumental Climate and Fraud. *Behavioral Research in Accounting* 28(1): 41-56.
- Nagaraj, S. 2007. The Impact of Consumer Knowledge, Information Mode and Presentation Form on Advertising Effects (Doctoral dissertation).
- Nasdaq. 2016. *Initial Listing Guide*. Available at:
<https://listingcenter.nasdaq.com/assets/initialguide.pdf>
- Near, J. P., M. T. Rehg., J. R. van Scotter., and M. P. Miceli. 2004. Does type of wrongdoing affect the whistleblowing process? *Business Ethics Quarterly* 14(2): 219-242.
- Near, J. P., and M. P. Miceli. 1995. Effective whistleblowing. *Academy of Management Review* 20(3): 679-708.
- Near, J. P., and M. P. Miceli. 1985. Organizational dissidence: The case of whistle-blowing. *Journal of Business Ethics* 4(1): 1-16.
- New York Stock Exchange. 2009. *NYSE Listed Company Manual*. Available at:
http://nysemanual.nyse.com/LCMTTools/PlatformViewer.asp?selectednode=chp_1_4_3_11&manual=%2Fflcm%2Fsections%2Fflcm-sections%2F

- Nisbett, R. E., and L. Ross. 1980. *Human Inference: Strategies and Shortcomings of Social Judgment*. Englewood Cliffs, NJ: Prentice Hall.
- Nunnally, J. C., 1978. *Psychometric Theory*, 2nd ed. McGraw-Hill, New York.
- Paivio, A. 1969. Mental imagery and associative learning in memory. *Psychological Review* 76(3): 241-263.
- Park, H. 2004. Predictors of whistle blowing intention: an application of the theory of planned behavior. *Proceedings of the Winter Conference of the Korean Association for Public Administration*. 539-555.
- Pennebaker, J. W., R. J. Booth., and M. E. Francis. 2007. *Linguistic inquiry and word count: LIWC*. Austin, TX: LIWC.net.
- Pennebaker, J.W. *The Secret Life of Pronouns: What Our Words Say about Us*. New York: Bloomsbury, 2011.
- Qusqas, F. and B. H. Kleiner. 2001. The difficulties of whistleblowers finding employment", *Management Research News* 24: 97-100.
- Richards, T., and L. Richards. 1991. The NUD*IST qualitative data analysis system. *Qualitative Sociology*. 14: 307-324.
- Robinson, S. N., J. C. Robertson, and M. B. Curtis. 2012. The Effects of Contextual and Wrongdoing Attributes on Organizational Employees' Whistleblowing Intentions Following Fraud. *Journal of Business Ethics* 106(2): 213-227.
- Rogers, R., and T. Fogarty. 1997. Analysis or purification? An institutional assessment of U.S. financial analyst recommendations. Working paper, Portland State University.
- Robertson, J. C., C. M. Stefaniak, and M. B. Curtis (2011) Does Wrongdoer Reputation Matter? Impact of Auditor-Wrongdoer Performance and Likeability Reputations on Fellow Auditors' Intention to Take Action and Choice of Reporting Outlet. *Behavioral Research in Accounting* 23(2): 207-234.
- Robertson, C. and C. P. A. Fadil. (1998). Developing Corporate Codes of Ethics in Multinational Firms: Bhopal Revisited. *Journal of Managerial Issues* 10: 454-468.
- Rubin, V. L., E. D. Liddy, and N. Kando. 2006. Certainty identification in texts: Categorization model and manual tagging results. In *Computing Attitude and Affect in Text: Theory and Applications (The Information Retrieval Series)*, edited by Shanahan, J. G., Y. Qu, and J. Wiebe, 61–76. New York, NY: Springer-Verlag Company.

- Sadique, S., F. In, and M. Veeraraghavan. 2008. The impact of spin and tone on stock returns and volatility: Evidence from firm-issued earnings announcements and the related press coverage. Working paper, Monash University.
- Schaubroeck, J. M., S. T. Hannah, B. J. Avolio, S. W. J. Kozlowski, R. G. Lord, K. Linda, et al. 2012. Embedding ethical leadership within and across organization levels. *Academy of Management Journal*, 55: 53–78.
- Schultz, J. J., D. A. Johnson, D. Morris, and S. Dyrnes. 1993. An investigation of the reporting of questionable acts in an international setting. *Journal of Accounting Research* 31: 75–103.
- Schwartz, M. S. 2002. A Code of Ethics for Corporate Code of Ethics. *Journal of Business Ethics* 41(1/2): 27–43.
- Schwartz, M. S. 2004. Effective Corporate Codes of Ethics: Perceptions of Code Users. *Journal of Business Ethics* 55(4): 323–343.
- Seifert, D. L., J. T. Sweeney, J. Joireman, and J. M. Thornton. 2010. The influence of organizational justice on accountant whistleblowing. *Accounting, Organizations and Society* 35(7): 707–717.
- Securities and Exchange Commission (SEC). 2003. Standards Relating to Listed Company Audit Committees. 17 CFR Parts 228, 229, 240, 249, and 274 (Release Nos. 33-8220; 34-47654; IC-26001; File No. S7-02-03) RIN 3235-A175, available at: <http://www.sec.gov/rules/final/33-8220.htm>
- Securities and Exchange Commission (SEC), 2003, Disclosure Required by Sections 406 and 407 of the Sarbanes-Oxley Act of 2002, 2009-178, available at: <https://www.sec.gov/rules/final/33-8177.htm>
- Securities and Exchange Commission (SEC), 2009, SEC Charges General Electric with Accounting Fraud, 2009-178, available at: <http://www.sec.gov/news/press/2009/2009-178.htm>.
- Securities and Exchange Commission (SEC), 2015, Companies Cannot Stifle Whistleblowers in Confidentiality Agreements, available at: <https://www.sec.gov/news/pressrelease/2015-54.html>
- Seiha, Y., C. K. Chunga and J. W. Pennebaker. 2011. Experimental manipulations of perspective taking and perspective switching in expressive writing. *Cognition and Emotion Volume* 25(5): 926–938.
- Senay, I., M. Usak, P. Prokop. 2015. Talking About Behaviors in the Passive Voice Increases Task Performance. *Applied Cognitive Psychology* 29: 262–270

- Singh, J. B. 2006. A comparison of the contents of the codes of ethics of Canada's largest corporations in 1992 and 2003. *Journal of Business Ethics* 64(1): 17-29.
- Singh, J., E. Carasco, G. Svensson, G. Wooda and M. Callaghan. 2005. A comparative study of the contents of corporate codes of ethics in Australia, Canada and Sweden. *Journal of World Business* 40(1): 91-109.
- Smith, S. M., and D. R. Shaffer. 2000. Vividness Can Undermine or Enhance Message Processing: The Moderating Role of Vividness Congruency. *Personality and Social Psychology Bulletin* 26(7): 769-779.
- Smith, M., and R. J. Taffler. 2000. The chairman's statement: A content analysis of discretionary narrative disclosures. *Accounting, Auditing & Accountability Journal* 13(5): 624-646.
- Strassberg, R and W. Harrington. 2015. Where Rules Collide: the Problem of Confidentiality and Whistleblowers. New York Law Journal, available at: <http://www.goodwinprocter.com/~media/Files/Publications/Attorney%20Articles/2015/NYLJ%20Strassberg%20Harrington%20May%202015.pdf>
- Streiner, D. L, G. R. Norman. 1995. Health Measurement Scales: A Practical Guide to their Development and Use. 2. New York: Oxford University Press.
- Tabachnick, B. G. and L.S. Fidell. 2001. *Using Multivariate Statistics*. Boston: Allyn and Bacon.
- Taylor, E. Z. and M. B. Curtis. 2010. An Examination of the Layers of Workplace Influences in Ethical Judgments: Whistleblowing Likelihood and Perseverance in Public Accounting. *Journal of Business Ethics* 93(1): 21-37.
- Taylor, E. Z. and M. B. Curtis. 2013. Whistleblowing in Audit Firms: Organizational Response and Power Distance. *Behavioral Research in Accounting* 25(2): 21-43.
- Taylor, S. E.; S. Fiske. 1978. Salience, attention, and attribution: Top of the head phenomena. *Advances in Experimental Social Psychology* 11: 249-288.
- Taylor, S. E. and S. C. Thompson. 1982. Stalking the Elusive Vividness Effect. *Psychological Review* 89(2): 155-181.
- Uzuner, O., and B. Katz. 2005a. Capturing expression using linguistic information. In *Proceedings of the 20th National Conference on Artificial Intelligence*. Available at: <http://people.csail.mit.edu/ozlem/aaai05UzunerO.pdf>.
- Vandekerckhove, W., and D. Lewis. 2012. The Content of Whistleblowing Procedures: A Critical Review of Recent Official Guidelines. *Journal of Business Ethics* 108(2):253-264.

- Van Mastrigt, S.B., and D. Farrington. 2011. Prevalence and characteristics of co-offending recruiters. *Justice Quarterly* 28(2): 325-359.
- Walmart. 2016. *Global Statement of Ethics*. Available at: <https://www.walmartethics.com/uploadedFiles/Content/U.S.%20-%20English.pdf>
- Weber, E. U., A.R. Blais, and N.E. Betz. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors. *Journal of Behavioral Decision Making* 15(4): 263-290.
- Weber, J. 2010. Assessing the tone at the top: The moral reasoning of CEOs in the automobile industry. *Journal of Business Ethics* 92:167–182.
- Werner, C., and B. Latane. 1976. Responsiveness and communication medium in dyadic interactions. *Bulletin of the Psychonomic Society* 8(1): 13-15.
- Woods, M., T. Paulus, D. P. Atkins, and R. Macklin. 2015. Advancing Qualitative Research Using Qualitative Data Analysis Software (QDAS)? Reviewing Potential Versus Practice in Published Studies using ATLAS.ti and NVivo, 1994–2013. *Social Science Computer Review*. 1-21.
- Xu, Y. and D. Ziegenfuss. 2008. Reward Systems, Moral Reasoning, and Internal Auditors' Reporting Wrongdoing. *Journal of Business and Psychology* 22(4):323-331.
- Yen, A., E. Hirst, and P. Hopkins. 2007. A content analysis of the comprehensive income exposure draft comment letters. *Research in Accounting Regulation* 19: 53-79.
- Zhang, J., K. Pany, and P. M. J. Reckers. 2013. Under Which Conditions are Whistleblowing “Best Practices” Best? *Auditing: A Journal of Practice & Theory* 32(3): 171-181.
- Zhang, C., L. J. Zhang, and L. Shang. (2011). The verification of reliability and validity for Adolescent Risk-taking Questionnaire-Risk Behavior Scale (ARQ-RB) which applied to Chinese adolescent (in Chinese). *Chinese Mental Health Journal* 25:456-460.
- Zhang, C., L. J. Zhang, and L. Shang. (2016). Sensation-seeking and domain-specific risk-taking behavior among adolescents: Risk perceptions and expected benefits as mediators. *Personality and Individual Differences* 101: 299-305.
- Zimmerman, J., M. Wolf, A. Bock, D. Peham, and C. Benecke. 2013. The way we refer to ourselves reflects how we relate to others: Associations between first-person pronoun use and interpersonal problems. *Journal of Research in Personality* 47(3): 218-225.

Appendix A

Figure 1 – Model of whistleblowing

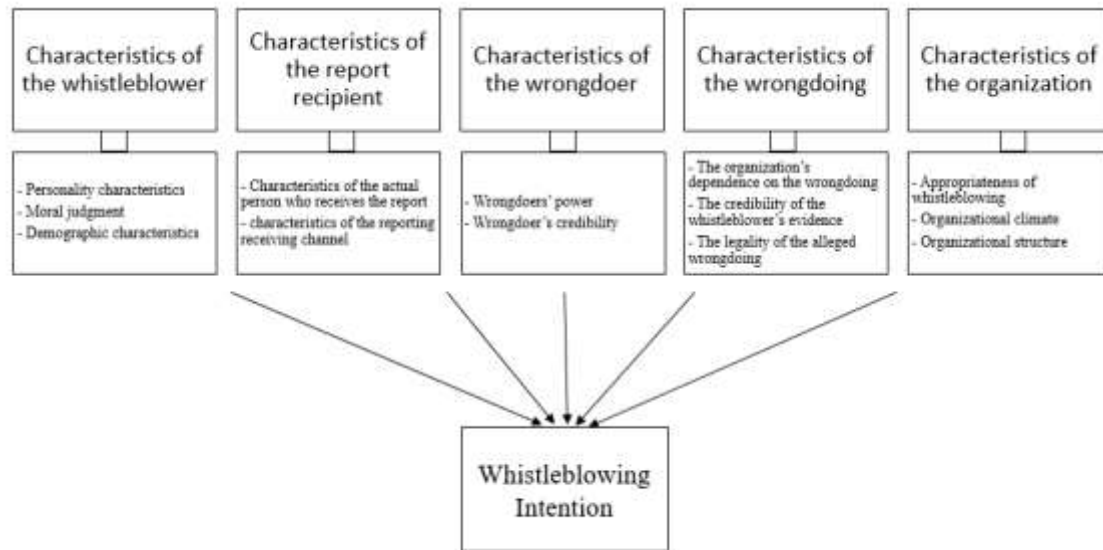


Table 1.1 - Summary of studies on characteristics of the whistleblower

CITATION	JOURNAL	RESEARCH METHOD	SAMPLE	INDEPENDENT VARIABLES	DEPENDENT VARIABLES	KEY RESULTS
Curtis and Taylor (2009)	Accounting and the Public Interest	Within-subjects scenario-based survey	122 auditors	Locus of control and ethical style	whistleblowing intentions	Auditors with an internal locus of control and auditors who exhibit a judging ethical style are more likely to report.
Dalton and Radtke (2013)	Journal of Business Ethics	2 by 1 between-subjects design	116 MBA students	Machiavellianism	whistleblowing intentions	Machiavellianism is negatively related to whistle-blowing.
Brink et al. (2015a)	Journal of Forensic and Investigative Accounting	2 by 1 between-subjects experiment	54 accounting students	Personality traits, ethical position, and wrongdoing materiality	whistleblowing intentions	There is a positive relation between the presence of higher levels of the alpha and beta meta-traits and whistle-blowing behaviors; individuals with idealistic ethical position are more likely to report than individuals with relativistic ethical position.
Kaplan et al. (2009)	Journal of Business Ethics	2 by 2 between-subjects design	118 MBA students	Gender and reporting channel	whistleblowing intentions	They find that female participants' reporting intentions are higher than for male participants only under the anonymous reporting channel condition.

Liyanarachchi and Adler (2011)	Australian Accounting Review	Quasi-experiment	2000 Australian accountants	Age and Gender	whistleblowing intentions	Among early career accountants, male accountants are more likely than female accountants to blow the whistle; when accountants are at the age group of 45 or above, female accountants' reporting intention in this age group tends to decline as the retaliation threat increases. In contrast, the change in retaliation threat has little impact on male accountants' reporting intention.
Erkmen et al. (2014)	Journal of Accounting & Organizational Change	Survey	116 accounting professionals	Age and types of wrongdoing	whistleblowing intentions	Female accounting professionals are more likely to blow the whistle than male accounting professionals when the fraud involves fake invoices, and older accounting professionals are more likely to blow the whistle than younger professionals when the fraud involves misclassification of sales and profits.

Table 1.2 - Summary of Studies on characteristics of the report recipient

CITATION	JOURNAL	RESEARCH METHOD	SAMPLE	INDEPENDENT VARIABLES	DEPENDENT VARIABLES	KEY RESULTS
Kaplan et al. (2010)	Behavioral Research in Accounting	2 by 2 between-subjects design	96 MBA students	Social confrontation and recipient power status	Whistleblowing intentions	The witness' reporting intentions to the supervisor's supervisor are stronger than to an internal auditor when there is unsuccessful social confrontation with the supervisor.
Kaplan et al. (2011)	Auditing: A Journal of Practice & Theory	2 by 2 by 2 between-subjects design	207 MBA students	Auditor inquiry, reporting channel	Whistleblowing intentions	Participants' whistleblowing intentions to an inquiring auditor are stronger than their whistleblowing intentions to a non-inquiring auditor and their whistleblowing intention to an internal auditor are stronger than their intentions to an external auditor.
Kaplan and Schultz (2007)	Journal of Business Ethics	2 by 2 by 3 mixed design	90 MBA students	Anonymous reporting channel, different fraud cases	Whistleblowing intentions	The existence of an anonymous channel does reduce the likelihood of reporting to non-anonymous channels.
Curtis and Taylor (2009)	Accounting and the Public Interest	within-subjects scenario-based survey	122 in-charge level auditors	Identity disclosure, locus of control and ethical style	Whistleblowing intentions	Reporting intention is significantly lower under a disclosed identity format, and there was no significant difference in reporting intention between

						anonymous and protected identity formats.
Kaplan et al. (2012)	Advances in Accounting, incorporating Advances in International Accounting	2×2×2 repeated measures design	81 MBA students	Reporting channel, retaliation to the previous whistleblower, and transgressor repercussions	Whistleblowing intentions	Witnesses' reporting intention to anonymous channel is higher than non-anonymous channel only when previous whistleblowing outcome is negative.
Kaplan et al. (2009)	Auditing: A Journal of Practice & Theory	2 by 1 between-subjects design	37 MBA students	Anonymous Hotline Administrator	Whistleblowing intentions	Reporting intentions to the internal hotline are significantly higher compared to the external hotline.
Zhang et al. (2013)	Auditing: A Journal of Practice & Theory	2 by 2 between-subjects design	130 MBA students	Anonymous Hotline Administrator, Previous Whistleblowing Outcomes	Whistleblowing intentions	Participants' reporting intentions to an external hotline are higher when the organization has a history of poor responsiveness to whistleblowing and when participants are low on the proactivity scale.

Table 1.3 - Summary of studies on characteristics of the wrongdoer

CITATION	JOURNAL	RESEARCH METHOD	SAMPLE	INDEPENDENT VARIABLES	DEPENDENT VARIABLES	KEY RESULTS
Kaplan (1995)	Auditing: A Journal of Practice & Theory	2 by 2 between-subjects experimental design	57 Audit seniors	Audit staff work history, audit step necessity	Whistleblowing intentions	Auditors' reporting intention are significantly stronger when the wrongdoer has poor work history and when the audit step is necessary.
Robertson et al. (2011)	Behavioral Research in Accounting	2 by 2 between-subjects experimental design	181 auditors	Likeability reputation, performance reputation	Whistleblowing intentions	There is less reporting intention when the wrongdoer has good performance reputation than poor performance reputation, and less reporting intention when the wrongdoer is more likeable.
Taylor and Curtis (2013)	Behavioral Research in Accounting	2 by 2 between-subjects experimental design	106 senior-level auditors	Organizational Response, power distance	whistleblowing intentions	Auditors' are more likely to blow the whistle when the wrongdoer is a co-worker than when he is the supervisor only if the previous organizational response is weak; if the organizational response is strong, auditors are more likely to report supervisor than co-worker.

Table 1.4 - Summary of studies on characteristics of the wrongdoing

CITATION	JOURNAL	RESEARCH METHOD	SAMPLE	INDEPENDENT VARIABLES	DEPENDENT VARIABLES	KEY RESULTS
Kaplan and Schultz (2007)	Journal of Business Ethics	2 by 2 by 3 mixed design	90 MBA students	Anonymous reporting channel, different fraud cases	whistleblowing intentions	Reporting intentions are lower under financial statement fraud than under theft case condition
Robinson et al. (2012)	Journal of Business Ethics	2 by 2 between-subjects design	181 auditors	Likeability reputation, performance reputation	whistleblowing intentions	Employees are less likely to report: financial statement fraud than theft; immaterial than material financial statement fraud
Kaplan et al. (2009)	Auditing: A Journal of Practice & Theory	2 by 2 between-subjects design	103 MBA students	Procedural safeguards (strong or weak) and the type of fraudulent act	whistleblowing intentions	There is a stronger reporting intention for misappropriation of assets compared to fraudulent financial reporting only when the reporting channel is anonymous.
Kaplan et al. (2011)	Auditing: A Journal of Practice & Theory	2 by 2 by 2 between-subjects design	207 MBA students	Type of fraudulent act, auditor inquiry, reporting channel	whistleblowing intentions	There is no systematic difference between the two different types of fraudulent acts, misappropriation of assets and fraudulent financial, nor does the type of fraudulent act interact with whether the auditor engages in inquiry or the report recipient.

Brink et al. (2013)	Auditing: A Journal of Practice & Theory	2 by 2 between-subjects design	81 MBA students	Strength of Evidence, and whistleblowing Incentives	whistleblowing intentions	The likelihood of reporting internally is greater than to the SEC. When evidence is strong, internal rewards increase reporting to SEC; and when evidence is weak the presence of an internal incentive decreases SEC reporting intentions.
Brink et al. (2015b)	Advances in Accounting Behavioral Research	2 by 2 between-subjects design	137 MBA and Masters level accounting students	Strength of evidence, other employees 'awareness of the act	whistleblowing intentions	When there is strong evidence indicating a fraudulent act, individuals with sole knowledge are more likely to report than when others are aware of the fraudulent act (the bystander effect). However, the bystander effect is not found when evidence of fraud is weak.
Brink et al. (2015a)	Journal of Forensic and Investigative Accounting	2 by 1 between-subjects design	54 accounting students	Wrongdoing materiality, personality traits, and ethical position	whistleblowing intentions	Materiality of the problem influences witness' reporting intentions through its positive association with higher idealistic orientation and higher levels of the alpha and beta meta-traits.

Table 1.5 - Summary of studies on characteristics of the organization

CITATION	JOURNAL	RESEARCH METHOD	SAMPLE	INDEPENDENT VARIABLES	DEPENDENT VARIABLES	KEY RESULTS
Wainberg and Perreault (2016)	Behavioral Research in Accounting	2 by 2 between-subjects	68 graduate students	Anti-retaliation policy and job security	Whistleblowing intentions	Vivid anti-retaliation policy may actually have the opposite of the intended effect and lowers whistleblower' reporting intention, because it increases the salience of retaliatory threats.
Zhang et al. (2013)	Auditing: A Journal of Practice & Theory	2 by 2 between-subjects	130 MBA students	Anonymous Hotline Administrator, Previous Whistleblowing Outcomes	Whistleblowing intentions	When organizations have a history of negative outcome to previous whistleblowers and when witnesses are low on proactivity scale, the witnesses are less likely to report to internal hotlines but more likely to report to external hotline.
Taylor and Curtis (2013)	Behavioral Research in Accounting	2 by 2 between-subjects	106 senior-level auditors	Organizational Response, power distance	Whistleblowing intentions	When organizational response is strong, the witnesses are more likely to report supervisors than peers. Without strong organizational response, they are more likely to report peers than supervisors.
Dalton and Radtke (2013)	Journal of Business Ethics	2 by 1 between - subjects	116 MBA students	Machiavellianism and ethical environment	Whistleblowing intentions	Organization's ethical environment increases witnesses' reporting especially when the witnesses are high in Machiavellianism.

Xu and Ziegenfuss (2008)	Journal of Business and Psychology	2 by 1 between-subjects	201 internal auditors	Cash reward, employment contract reward	Whistleblowing intentions	Internal auditors are more likely to report wrongdoing when cash reward or employment contract reward are provided
Brink et al. (2013)	Auditing: A Journal of Practice & Theory	2 by 2 between-subjects	81 MBA students	Internal reward Incentives, Strength of Evidence	Whistleblowing intentions	The likelihood of reporting internally is greater than to the SEC. When evidence is strong, internal rewards increase reporting to SEC; and when evidence is weak the presence of an internal incentive decreases SEC reporting intentions.
Seifert et al. (2010)	Accounting, Organizations and Society	2 by 2 by 2 between-subjects	447 internal auditors and management accountants	Organizational justice	Whistleblowing intentions	Organizational procedural justice, distributive justice, and interactional justice increase the likelihood that an organizational accountant would internally report financial statement fraud.
Brennan and Kelly (2007)	British Accounting Review	Survey	240 trainee auditors	Organizational structures	Whistleblowing intentions	Having formal structures is positively associated with employees' reporting intention. Training offered by organization increases employees' reporting confidence.
Lowe et al. (2013)	Journal of Business Ethics	2 by 2 between-subjects	76 MBA students	Financial sub-certification procedure	Whistleblowing intentions	The witnesses with knowledge of a superior who committed a fraudulent act and certified that there is no fraud have lower reporting intentions.

Appendix B

Linguistic Variables

Pronouns:

First person: I me mine my we us our ours

Second person: you your yours

Third person: He she him her his hers they them their theirs

Uncertainty words:

could may maybe might perhaps possibilities possibility possible possibly probabilistic
probabilities probability probable probably sometime sometimes somewhat somewhere

Tone:

Negativity: don't disappoint disappoints disappointing disappointed disappointment risk risks
risky threat threats threaten threatened threatening penalty penalties negative negatives
negatively fail fails failed failing failure weak weakness weaknesses weaken weakens weakening
weakened difficult difficulty hurdle hurdles obstacle obstacles slump slumps slumping slumped
uncertain uncertainty uncertainties unsettled unfavorable downturn depressed down decrease
decreases decreasing decreased decline declines declining declined fall falls falling fell fallen
drop drops dropping dropped deteriorate deteriorates deteriorating deteriorated worsen worsens

worsening worse worst low lower lowest less least smaller smallest shrink shrinks shrinking
shrunk below under challenge challenges challenging challenged poor poorly

Positivity: do pleased delighted reward rewards rewarding rewarded opportunity opportunities
enjoy enjoys enjoying enjoyed encouraged encouraging positive positives success successes
successful successfully succeed succeeds succeeding succeeded accomplish accomplishes
accomplishing accomplished accomplishment accomplishments strong strength strengths certain
certainty definite solid excellent stellar good leading achieve achieves achieved achieving
achievement achievements progress progressing deliver delivers delivered delivering leader
leading up increase increases increasing increased rise rises rising rose risen double doubled
doubles improve improves improving improved improvement improvements enhance enhances
enhanced enhancing enhancement enhancements strengthen strengthens strengthening
strengthened stronger strongest strongly better best more most above record high higher highest
greater greatest larger largest grow grows growing grew grown growth expand expands
expanding expanded expansion exceed exceeds exceeded exceeding beat beats beating

Table 2.1 Content Characteristics

General content, scope, and tone

Executive letter	Executives opening letter Executives pictures in the opening letter
Importance of the policy	Read and understand the policy Read and understand the policy affirmation Policy training Policy Compliance affirmation Understand the policy is the condition of employment
Comprehension aid	Q/A or FAQ Case scenario Decision assistance tool
<i>Who, what, and where</i>	
Who is covered by the policy?	Employees Executives Entire group Board of directors Contract worker or temporary worker Business partners
What is the responsibility?	Employee responsibility-ask questions Employee responsibility-report concerns Employee responsibility-report concerns even if no problem found Employee responsibility-report concerns in good faith Managers responsibility-creat environment Managers responsibility-lead by example Managers responsibility-maintain no retaliation policy Managers responsibility-respond to report
Where to report?	Audit committee Compliance or Ethics Coworker Finance/Accounting department Executives External auditor Hotlines Internal audit Legal division Supervisors Ombudsperson Security office

	Third Party
	HR
	Implicit order
	Explicit order
	Anonymous reporting
	Fax
	Email
What is the reporting media?	Mail
	Phone
	Text
	Website
<i>Investigation procedures, wrongdoer disciplinary action, and anti-retaliation policy</i>	
	Investigation procedures-general statement
	Investigation procedures-witness cooperation
	Investigation procedures-witness no misleading information
Investigation procedures	Investigation procedures-punishment of witness misleading investigation
	Investigation procedures-corrective action mentioned
	Investigation procedures-external investigation issues(government)
	Investigation procedures-confidentiality and anonymity
	Wrongdoers-including failure to report
	Wrongdoers-including manager failure to detect
Wrongdoer	Wrongdoers-include managers ignorance
	Mention of disciplinary action
	Mention of disciplinary action-Termination of job
	Mention of disciplinary action- legal punishment
	Mention of disciplinary action- Monetary loss
	Protection from retaliation- General statement
	Protection from retaliation- Good Faith
	Protection from retaliation- Good Faith-definition of good faith
Anti-retaliation policy	Protection from retaliation- Investigation
	Protection from retaliation- list of retaliations
	Protection from retaliation- Retaliation will be punished
	Protection from retaliation- Retaliation will be punished-Job termination
	Protection from retaliation- Retaliation will be punished-legal action

Table 2.2 Content Characteristics Percent Out of the Total Sample

Panel A: General content, scope, and tone		n (total sample = 50)	Percent
<i>General content, scope, and tone</i>			
Executive letter	Executives opening letter	39	78%
	Executives pictures in the opening letter	29	58%
Importance of the policy	Read and understand the policy	39	78%
	Policy Compliance affirmation	16	32%
	Policy training	30	60%
	Understand the policy is the condition of employment	4	8%
Comprehension aid	Q/A or FAQ	32	64%
	Case scenario	5	10%
	Decision assistance tool	31	62%
Panel B: Who, what, and where			
<i>Who, what, and where</i>			
Who is covered by the policy?	Employees	50	100%
	Executives	4	8%
	Entire group	21	42%
	Board of directors	31	62%
	Contract worker or temporary worker	18	36%
	Business partners	14	28%
	Employee responsibility-ask questions	43	86%
	Employee responsibility-report concerns	49	98%
	Employee responsibility-report concerns even no problem found	8	16%

What is the responsibility?	Employee responsibility-report concerns in good faith	25	50%
	Managers responsibility-create environment	28	56%
	Managers responsibility-lead by example	24	48%
	Managers responsibility-maintain no retaliation policy	2	4%
	Managers responsibility-respond to report	23	46%
Where to report?	Audit committee	13	26%
	Compliance or Ethics	41	82%
	Coworker	2	4%
	Finance/Accounting department	8	16%
	Executives	11	22%
	External auditor	3	6%
	Hotlines	11	22%
	Internal audit	14	28%
	Legal division	36	72%
	Supervisors	48	96%
	Ombudsperson	7	14%
	Security office	9	18%
	Third Party	15	30%
	HR	40	80%
	Implicit order	33	66%
	Explicit order	11	22%
	Anonymous reporting	42	84%
What is the reporting media?	Fax	8	16%
	Email	22	44%
	Mail	18	36%
	Phone	41	82%
	Text	1	2%

	Website	24	48%
Panel C: Investigation procedures, wrongdoer disciplinary action, and anti-retaliation policy			
<i>Investigation procedures, wrongdoer disciplinary action, and anti-retaliation policy</i>			
Investigation procedures	Investigation procedures-general statement	33	66%
	Investigation procedures-witness cooperation	31	62%
	Investigation procedures-witness no misleading information	11	22%
	Investigation procedures-punishment of witness misleading investigation	6	12%
	Investigation procedures-corrective action mentioned	6	12%
	Investigation procedures-external investigation issues(government)	9	18%
	Investigation procedures-confidentiality and anonymity	26	52%
Wrongdoer	Wrongdoers-including failure to report	13	26%
	Wrongdoers-including managers' failure to detect	4	8%
	Wrongdoers-include managers' ignorance	10	20%
	Mention of disciplinary action	45	90%
	Mention of disciplinary action-Termination of job	42	84%
	Mention of disciplinary action- legal punishment	17	34%
	Mention of disciplinary action- Monetary loss	4	8%
	Protection from retaliation- General statement	48	96%
	Protection from retaliation- Good Faith	41	82%

Anti-retaliation policy	Protection from retaliation- Good Faith- definition of good faith	9	18%
	Protection from retaliation- Investigation	4	8%
	Protection from retaliation- list of retaliations	10	20%
	Protection from retaliation- Retaliation will be punished	18	36%
	Protection from retaliation- Retaliation will be punished-Job termination	15	30%
	Protection from retaliation- Retaliation will be punished-legal action	4	8%

Table 2.3 Content Characteristics in Companies' Internal Whistleblowing Policy

Panel A: Content Characteristics Words Percent			
		Number of words	Percent
<i>General content, scope, and tone</i>			
Executive letter		11,074	9.8%
Importance of the policy		4,555	4.0%
Comprehension aid		32,571	28.8%
<i>Who, what, and where</i>			
Who is covered by the policy?		3,866	3.4%
What is the responsibility?		14,540	12.8%
Where to report?		24,534	21.7%
What is the reporting media?		5,006	4.4%
<i>Investigation procedures, wrongdoer disciplinary action, and anti-retaliation policy</i>			
Investigation procedures		5,928	5.2%
Wrongdoer disciplinary action		3,861	3.4%
Anti-retaliation policy		7,239	6.4%
Total		113,174	100.0%
Panel B: Content Characteristics Words Percent within Each Content Category			
		Number of words	Percent
<i>General content, scope, and tone</i>			
Importance of the policy	Read and understand the policy	1,619	35.5%
	Read and understand the policy affirmation	716	15.7%
	Policy training	1,620	35.6%
	Policy Compliance affirmation	490	10.8%
	Understand the policy is the condition of employment	110	2.4%
	Total	4,555	100.0%
Comprehension aid	Q	9,811	30.1%
	A	17,561	53.9%

	Case scenario	2,011	6.2%
	Decision assistance tool	3,188	9.8%
	Total	32,571	100.0%
<i>Who, what, and where</i>			
Who is covered by the policy?	Employees	1,249	32.3%
	Executives	107	2.8%
	Entire group	649	16.8%
	Board of directors	873	22.6%
	Contract worker or temporary worker	366	9.5%
	Business partners	622	16.1%
	Total	3,866	100.0%
What is the responsibility?	Employee responsibility-ask questions	2,642	18.2%
	Employee responsibility-report concerns	7,233	49.7%
	Employee responsibility-report concerns even no problem found	459	3.2%
	Employee responsibility-report concerns in good faith	881	6.1%
	Employee responsibility total	11,215	77.1%
	Managers responsibility-creat environment	1,004	6.9%
	Managers responsibility-lead by example	690	4.7%
	Managers responsibility-maintain no retaliation policy	140	1.0%
	Managers responsibility-respond to report	1,491	10.3%
	Managers responsibility total	3,325	22.9%
	Employee and manager responsibility total	14,540	100.0%
Where to report?	Anonymous reporting	3,048	12.4%
	Audit committee	622	2.5%
	Compliance or Ethics	4,053	16.5%
	Coworker	1	0.0%
	Executives	224	0.9%
	External auditor	60	0.2%
	Finance/Accounting department	104	0.4%
	Hotlines	6,137	25.0%
	HR	1,825	7.4%
	Internal audit	341	1.4%
	Legal division	2,435	9.9%
	Ombudsperson	757	3.1%
	Security office	275	1.1%
	Supervisors	3,819	15.6%
	Third Party	833	3.4%

	Total	24,534	100.0%
What is the reporting media?	Email	792	15.8%
	Fax	406	8.1%
	Mail	998	19.9%
	Phone	1,721	34.4%
	Text	6	0.1%
	Website	1,083	21.6%
	Total	5,006	100.0%
<i>Investigation procedures, wrongdoer disciplinary action, and anti-retaliation policy</i>			
Investigation procedures	Investigation procedures-general statement	1,903	32.1%
	Investigation procedures-witness cooperation	1,002	16.9%
	Investigation procedures-witness no misleading information	382	6.4%
	Investigation procedures-punishment of witness misleading investigation	177	3.0%
	Investigation procedures-corrective action mentioned	204	3.4%
	Investigation procedures-external investigation issues(government)	776	13.1%
	Investigation procedures-confidentiality and anonymity	1,484	25.0%
	Total	5,928	100.0%
Wrongdoer	Wrongdoers-including failure to report	245	6.3%
	Wrongdoers-including manager failure to detect	65	1.7%
	Wrongdoers-include managers' ignorance	233	6.0%
	Mention of disciplinary action	1,415	36.6%
	Mention of disciplinary action-Termination of job	1,227	31.8%
	Mention of disciplinary action- legal punishment	559	14.5%
	Mention of disciplinary action- Monetary loss	117	3.0%
	Total	3,861	100.0%
Anti-retaliation policy	Protection from retaliation- General statement	3,371	46.6%
	Protection from retaliation- Good Faith	1,896	26.2%
	Protection from retaliation- Good Faith-definition of good faith	309	4.3%
	Protection from retaliation- Investigation	74	1.0%
	Protection from retaliation- list of retaliations	367	5.1%
	Protection from retaliation- Retaliation will be punished	646	8.9%

Protection from retaliation- Retaliation will be punished-Job termination	416	5.7%
Protection from retaliation- Retaliation will be punished-legal action	160	2.2%
Total	7,239	100.0%

Table 2.4: Linguistic Characteristics in Companies' Internal Whistleblowing Policy

Panel A: Linguistic Characteristics Percentage			
		n (number of words)	Percent
Pronouns		5,463	4.8%
Uncertainty Words		760	0.7%
Linguistic Tone		1,856	1.6%
Total words in the policy		113,174	100.0%

Panel B: Linguistic Characteristics within Pronouns and Linguistic Tone			
		n (number of words)	Percent
Pronouns	First person	1,588	29.1%
	singular		
	First person plural	970	17.8%
	Total first person	2,558	46.8%
	Second person	2,332	42.7%
	Third person	185	3.4%
	singular		
	Third person plural	388	7.1%
	Total third person	573	10.5%
	Total pronouns	5,463	100.0%
Linguistic Tone	Negative	295	15.9%
	Positive	1,561	84.1%
	Total linguistic tone	1,856	100.0%

Table 2.5: The Content Characteristics in Executives' Opening Letter

	Executive letter(C-Coefficient)
Importance of the policy	0.41
Comprehension aid	0.01
Who is covered by the policy?	0.13
What is the responsibility?	0.41
Where to report?	0.39
What is the reporting media?	0.03
Investigation procedures	0
Wrongdoer disciplinary action	0
Anti-retaliation policy	0.14

Table 2.6: The Content Characteristics in Q/A Comprehension Aid

	Q/A(C-Coefficient)
Importance of the policy	0
Who is covered by the policy?	0.13
What is the responsibility?	0.39
Where to report?	0.39
What is the reporting media?	0.03
Investigation procedures	0
Wrongdoer disciplinary action	0
Anti-retaliation policy	0

Table 2.7: Percentage of Linguistic Characteristics in Each Content Characteristic

Panel A: Percentage of Types of Pronouns in Each Content Characteristic									
	First person			Second person		Third person		Total pronouns	
	Percent			Percent		Percent		Percent	
	Total	t		Percent		Percent		Percent	
	n	n	(n/total n)	n	n)	n	n)	n	n)
Executives	11,07	81						1,04	
opening letter	4	7	7.4%	193	1.7%	37	0.3%	7	9.5%
Importance of		13							
the policy	4,555	5	3.0%	69	1.5%	60	1.3%	264	5.8%
Comprehension	32,57	95						1,31	
aid	1	2	2.9%	262	0.8%	97	0.3%	1	4.0%
Who is covered		10							
by the policy?	3,866	9	2.8%	6	0.2%	32	0.8%	147	3.8%
What is the	14,54	21				10			
responsibility?	0	4	1.5%	472	3.2%	7	0.7%	793	5.5%
	24,53	13				17		1,31	
Where to report?	4	1	0.5%	1,018	4.1%	0	0.7%	9	5.4%
What is the									
reporting media?	5,006	27	0.5%	116	2.3%	6	0.1%	149	3.0%
Investigation									
procedures	5,928	55	0.9%	103	1.7%	9	0.2%	167	2.8%
Wrongdoer									
disciplinary									
action	3,861	39	1.0%	7	0.2%	12	0.3%	58	1.5%
Anti-retaliation									
policy	7,239	79	1.1%	86	1.2%	43	0.6%	208	2.9%

Panel B: Percentage of Uncertainty Words and Linguistic Tone in Each Content Characteristic

		Uncertainly		Negative		Positive	
	Total n	n	Percent (n/total n)	n	Percent (n/total n)	n	Percent (n/total n)
Executives opening letter	11,074	27	0.2%	23	0.2%	304	2.7%
Importance of the policy	4,555	11	0.2%	13	0.3%	30	0.7%
Comprehension aid	32,571	38	0.1%	36	0.1%	334	1.0%
Who is covered by the policy?	3,866	10	0.3%	0	0.0%	31	0.8%
What is the responsibility?	14,540	119	0.8%	37	0.3%	227	1.6%
Where to report?	24,534	271	1.1%	51	0.2%	228	0.9%
What is the reporting media?	5,006	39	0.8%	2	0.0%	41	0.8%
Investigation procedures	5,928	78	1.3%	23	0.4%	48	0.8%
Wrongdoer disciplinary action	3,861	112	2.9%	93	2.4%	92	2.4%
Anti-retaliation policy	7239	55	0.8%	15	0.2%	133	1.8%

Figure 2.1: The Overlaps Between Types of Pronouns and Content Characteristics

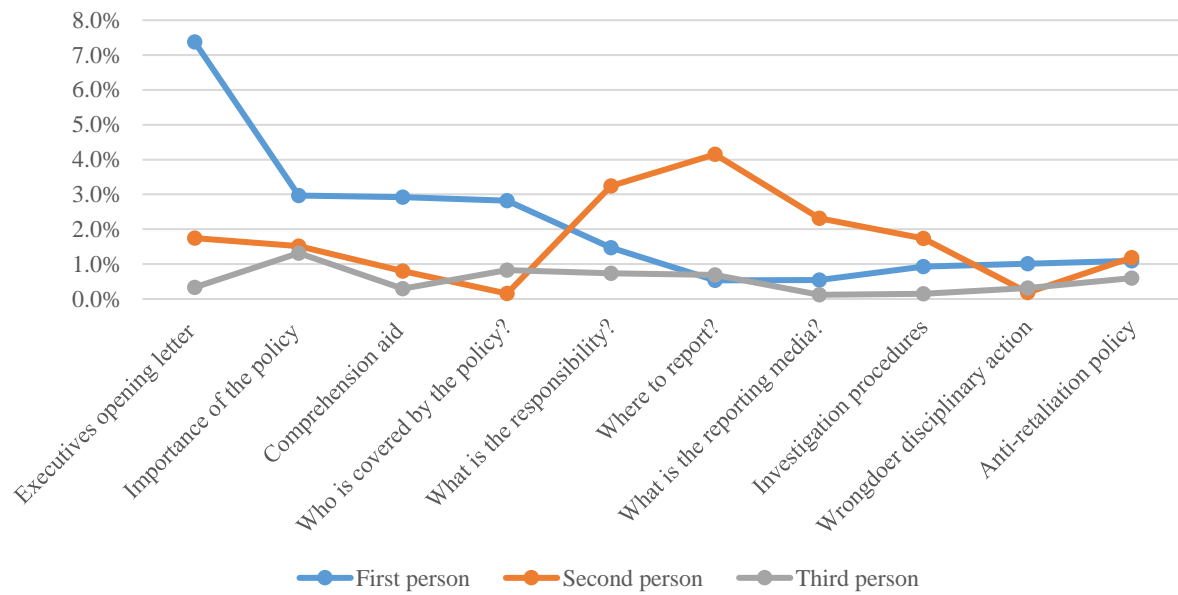


Figure 2.2: The Overlaps Between Content Characteristics and Uncertainty words and Linguistic Tone

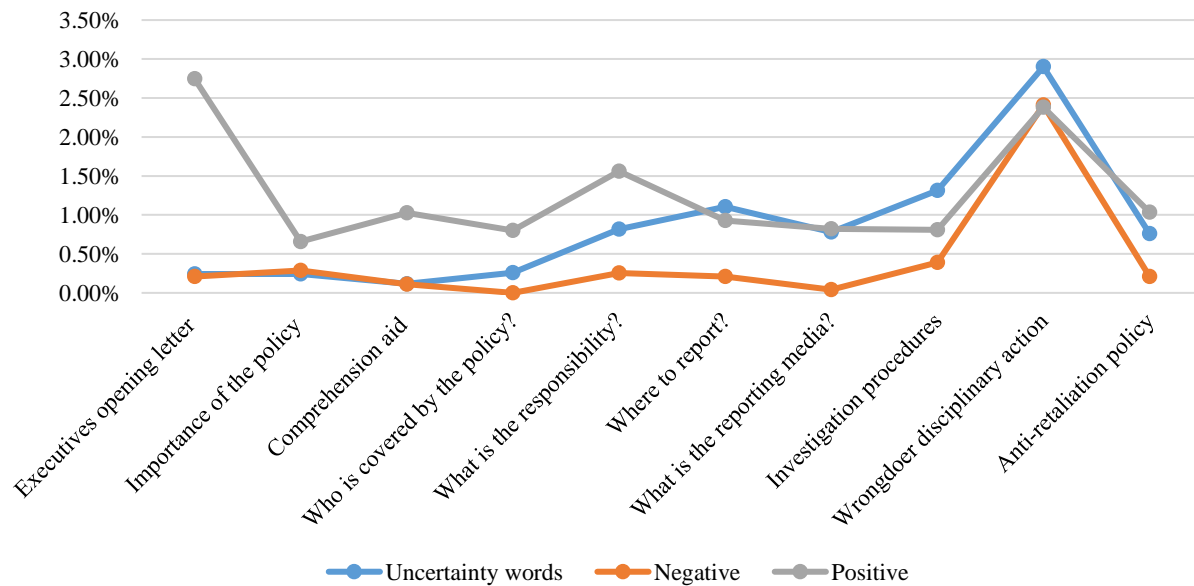


Table 2.8: The Usage of Fictitious Third-person and Generic Third-person in Q/A

	n (n= number of codes)	Percent
Fictitious third person	18	86%
Generic third person	3	14%
Total	21	100%

Appendix C

TABLE 3.1
Participant Demographic Information
(all participants: n = 163)
(successful participants: n = 136)

Panel A: Means and Standard Deviation

	All Participants	Retained Participants
Age		
Mean	27.8	28.1
Std. Dev.	6.9	7.1
Years of Work Experience		
Mean	5.1	5.5
Std. Dev.	6.0	5.9

Panel B: Frequencies and Percentages

	All Participants	Retained Participants
Gender		
Female	48%	55%
Male	52%	45%
Education		
Undergraduate	32%	28%
Graduate	68%	72%
Have discovered a person of greater authority engaging in questionable behavior?	23.8%	25.2%

TABLE 3.2
Descriptive Statistics for Exit Questions
(Retained participants: n = 136)

	Mean (Std. Dev.)
Panel A: Reporting Intentions	
How likely is it that you would report the CFO's fraudulent act? (0–10, where 10 = definitely would report)	8.26 (1.94)
How likely is it that someone in Rowan's position would report the CFO's fraudulent act? (0–10, where 10 = definitely would report)	6.34 (2.10)
Panel C: Respondent Attitude Questions	
Please indicate the seriousness (i.e., the amount of harm done) by the fraudulent act in the case. (1-7, where 7 = very serious)	6.03 (1.15)
Please indicate Rowan's personal cost of reporting the fraudulent act. (1-7, where 7 = very high)	4.21 (1.97)
Please indicate how likely it is that there would be negative repercussions for Rowan if he reports the fraud. (1-7, where 7 = very likely)	3.87 (1.72)
Please indicate the likelihood that reporting the issue would harm Rowan's chances of being promoted at the firm. (1-7, where 7 = very likely)	3.99 (1.77)
Please indicate the likelihood that there would be any form of retaliation against Rowan if he reports the fraud. (1-7, where 7 = very likely)	3.96 (1.64)
Please indicate Rowan's responsibility (duty or obligation) to report the fraudulent act. (1-7, where 7 = very high)	6.41 (0.83)
Please indicate the likelihood that you believe the company will thoroughly investigate the act if it is reported. (1-7, where 7 = very likely)	4.93 (1.49)
Please indicate the likelihood you believe the company will correct the questionable act if the act is reported. (1-7, where 7 = very likely)	4.94 (1.48)
Please indicate the level of disciplinary action facing the CFO if the questionable act is reported. (1-7, where 7 = very high)	5.39 (1.52)

TABLE 3.3
Language Vividness and Risk Aversion
(Retained participants: n = 136)

Panel A: Descriptive Statistics

	Mean (Std. Dev.)	Factor loading
Language Vividness		
1. How precise XOTLE's policy for reporting unethical conduct is? (1-7, where 7 = very precise)	5.43 (1.35)	0.88
2. How clear XOTLE's policy for reporting unethical conduct is? (1-7, where 7 = very clear)	5.59 (1.42)	0.88
3. How specific XOTLE's policy for reporting unethical conduct is? (1-7, where 7 = very precise)	5.20 (1.54)	0.88
4. Do you feel that XOTLE's policy for reporting unethical conduct is applicable to you? (1-7, where 7 = very applicable)	5.44 (1.35)	0.51
Risk Aversion		
1. Betting a day's income at the horse races. (G)	1.41 (0.93)	0.82
2. Investing 10% of your annual income in a moderate growth mutual fund. (I)	5.21 (1.55)	0.09
3. Betting a day's income at a high-stake poker game. (G)	1.75 (1.37)	0.80
4. Investing 5% of your annual income in a very speculative stock. (I)	3.47 (1.71)	0.25
5. Betting a day's income at a sporting event. (G)	1.81 (1.40)	0.81
6. Investing 10% of your annual income in a new business venture. (I)	4.23 (1.74)	0.33

Panel B: Measurement Reliability

	Number of Items	Cronbach's alpha (standardized)
Language Vividness	4	0.81
Risk Aversion	3 ⁹	0.76

Note: I = investment, G = gambling

⁹ Weber et al. (2002) documented that the difference between these two domains is the level of control over the risk, and financial gambling risk is less controllable than financial investment risk. In our study, the risk involves the possibility of retaliation from the firm, which is difficult to control. Thus, I retain only the financial gambling risk domain items (the first, third, and fifth item) for future analysis.

TABLE 3.4

Panel A: Means (Std. Deviation) for Reporting Likelihood

		Anti-retaliation Policy		
		<u>First-person Pronoun</u>	<u>Third-person Pronoun</u>	<u>Total</u>
Reporting Policy	First-person Pronoun	8.65(1.59) n = 34	8.51(1.76) n = 35	8.57(1.67) n = 69
	Third-person Pronoun	7.71(2.22) n = 33	8.15(2.09) n = 34	7.93(2.15) n = 67
	Total	8.19(1.97) n = 67	8.33(1.92) n = 69	

Panel B: ANOVA Results

<u>Source</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>
Corrected Model	17.70	3	5.90	1.58	0.20
Reporting Policy Pronouns	14.41	1	14.41	3.87	0.05
Anti-Retaliation Policy Pronouns	0.78	1	0.78	0.21	0.65
Reporting Policy Pronouns *					
Anti-Retaliation Policy Pronouns	2.74	1	2.74	0.74	0.39
Error	491.29	132	3.72		
Total	9790.25	136			
Corrected Total	508.98	135			

Dependent Variable: “How likely is it that you would report the CFO’s fraudulent act?” scaled using an 11-point ascending scale (endpoints labeled “Extremely Unlikely” and “Extremely Likely”).

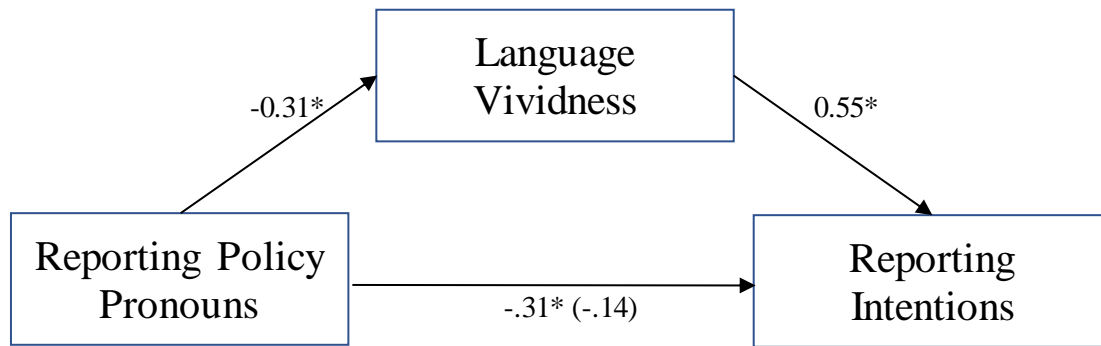


Figure 3.1: Standard regression coefficients for the relationship between Reporting Policy Pronouns and Reporting Intentions as mediated by Language Vividness. The standardized regression coefficient between Reporting Policy Pronouns and Reporting Intentions, controlling for Language Vividness, is in parentheses.

* $p < 0.05$

XOTLE, Inc. Overview

XOTLE, Inc. is an oilseed refining company that was founded in 1987. The company employs approximately 2,000 employees and is listed on the New York Stock Exchange. Over the past few years, the company's operating results were steady and slightly below the industry average.

Rowan Geoffrey is an accountant who works in the Finance department of XOTLE, Inc. Rowan's responsibilities include booking and recording accounting entries related to operating expenses and preparing related operating financial reports. After finishing his financial reports, he sends them to Gilbert Elias, the CFO of the company, for review.

On January 4th, 2014, Rowan was looking over 2013's financial report. He realized that the marketing expenses number was significantly lower in the final financial report than what he originally reported to Elias (the CFO). Rowan went back to review the entries and found that a significant amount of marketing expenditures were capitalized as assets rather than being expensed. In his original work, Rowan had recorded all of these marketing expenditures as expenses. However, Elias reclassified the expenses as assets. Rowan had not received any notification or explanation for this change.

In prior years, similar marketing expenditures were always expensed. No changes were made to the marketing strategy in 2013. According to U.S. GAAP, these types of marketing expenditures should be expensed. Capitalizing the marketing expenditures understated expenses and overstated profit. Further, due to the capitalization of the expenditures, the 2013 earnings per share (EPS) ratio increased from \$0.89 to \$0.91. Therefore, Rowan is fairly confident that Elias (CFO) engaged in fraudulent financial reporting by changing the classification of the marketing expenditures.

The following is XOTLE's policy of unethical conducts reporting.

Q: If I detect [an employee detects] unethical/fraudulent acts, what is my [his/her] responsibility to speak up? How should I [he/she] raise a concern?

A: You [He/She] must speak up promptly if there is any reason to suspect that anyone in the company has violated company policies or local laws. **Your [His/Her]** report will be taken seriously and investigated appropriately. It is better to report a suspicion that turns out not to be an issue than to ignore a possible violation of the law or Company policy.

To comply with the Sarbanes-Oxley Act, XOTLE, Inc. maintains an anonymous reporting hotline for whistle blowers. **You are [He/She is]** encouraged to call the hotline. The hotline is administered by the internal auditors of XOTLE, Inc. The hotline is available 24 hours a day and 365 days a year. The telephone calls made to the hotline are to be reported to the audit committee for further investigation. The identity and any information about the **you [him/her]** will be kept strictly confidential.

Q: If I report [an employee reports] a fraud, will I [he/she] be protected from retaliation?

A: All responses are kept anonymous. You [He/she] will not be subject to intimidation or retaliation. This includes being left out, managerial or coworker abuse, threatening behavior, harassment, loss of job or promotion, or any other professional, personal, or financial form of retaliation both now and in the future.

If **you believe [he/she believes]** that you are **[he/she is]** being retaliated against, **you [he/she]** should report such conduct immediately to the Human Resources Department. Any individual who unlawfully discriminates or retaliates against **you [him/her]** as a result of the protected actions may be subject to disciplinary action, up to and including immediate termination.

PLEASE ANSWER THE FOLLOWING QUESTIONS REGARDING THE CASE IN THE ORDER LISTED. **DO NOT GO BACK AND CHANGE YOUR ANSWERS.** YOU MAY REFER BACK TO THE CASE MATERIALS IF YOU WISH.

FOR THE FOLLOWING QUESTIONS, **PLEASE CIRCLE** THE NUMBER OR OPTION THAT CORRESPONDS WITH YOUR ANSWER.

1. Given this situation, how likely is it that someone in Rowan's position would report the CFO's fraudulent act?

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

No Likelihood

Moderate

High

Likelihood

Likelihood

(Definitely **would**
report)

(Definitely **would**
not report)

2. Now imagine you are facing this situation. How likely is it that you would report the CFO's fraudulent act?

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

No Likelihood

Moderate

High

Likelihood

Likelihood

(Definitely **would**
report)

(Definitely **would**
not report)

3. How would you rate XOTLE's policy for reporting unethical conduct?

Very Vague	1	2	3	4	5	6	7	Very Precise
Very Unclear	1	2	3	4	5	6	7	Very Clear
Not at all Specific	1	2	3	4	5	6	7	Very Specific

4. Do you feel that XOTLE's policy for reporting unethical conduct is applicable to you?

1	2	3	4	5	6
7					
Not at all Applicable			Neutral		Very Applicable

5. Does XOTLE have a reporting hotline for whistle blowers? **Yes**_____ **No** _____

6. Please indicate the seriousness (i.e., the amount of harm done) by the fraudulent act in the case.

	1	2	3	4	5	6
7						
	Very Low		Neutral		Very High	

7. Please indicate Rowan's personal cost of reporting the fraudulent act.

	1	2	3	4	5	6
7						
	Very Small		Neutral		Very Large	

8. Please indicate how likely it is that there would be negative repercussions for Rowan if he reports the fraud.

	1	2	3	4	5	6
7						
	Very Unlikely		Neutral		Very Likely	

9. Please indicate the likelihood that reporting the issue would harm Rowan's chances of being promoted at the firm.

	1	2	3	4	5	6
7						
	Very Low		Neutral		Very High	

10. Please indicate the likelihood that there would be any form of retaliation against Rowan if he reports the fraud.

	1	2	3	4	5	6
7						
	Very Low		Neutral		Very High	

11. Please indicate Rowan's responsibility (duty or obligation) to report the fraudulent act.

	1	2	3	4	5	6
7						
	Very Low		Neutral		Very High	

12. Please indicate the likelihood that you believe the company will thoroughly investigate the act if it is reported.

	1	2	3	4	5	6
7						
	Very Unlikely		Neutral		Very Likely	

13. Please indicate the likelihood you believe the company will correct the questionable act if the act is reported.

7	1	2	3	4	5	6
	Very Unlikely		Neutral		Very Likely	

14. Please indicate the level of disciplinary action facing the CFO if the questionable act is reported.

7	1	2	3	4	5	6
	Very Low		Neutral		Very High	

15. Please indicate your likelihood of engaging in each activity or behavior, and check the box the extent to which you agree.

		Extrem v Unlikely	Moderate ly	Somewha t Unlikely	Not Sure	Somewha t Likely	Moderate ly Likely	Extrem ely
a.	Betting a day's income at the horse races.							
b.	Investing 10% of your annual income in a moderate growth mutual fund.							
c.	Betting a day's income at a high-stake poker game.							
d.	Investing 5% of your annual income in a very speculative stock.							
e.	Betting a day's income at a sporting event							
f.	Investing 10% of your annual income in a new business venture							

16. What is your current age? _____

17. Please indicate your gender: _____ Male _____ Female

18. Is English your first language? _____ Yes _____ No

19. How many years of professional work experience do you have? _____

20. Which program are you in?

B.S. in Accounting _____

Master of Accountancy _____

Post-baccalaureate certificate in Accounting _____

Master of Business Administration (MBA) _____

Other _____

21. What is your highest level of education completed?

High School _____

Some College _____

Associates Degree _____

Bachelor Degree _____

Some Graduate School _____

Master Degree or Higher _____

22. Do you hold any of the following designations? (Check all that apply)

CPA _____

CIA _____

CMA _____

Other _____

None _____

23. Which group best represents your race or ethnicity?

White _____

Black/African American _____

Asian _____

Hispanic _____

Other _____

24. Have you discovered a person of greater authority engaging in questionable or wrongful behavior? YES _____ NO _____

If so, did you take action to report that behavior?

YES _____

NO _____

N/A _____

VITA

Lei Gao was born in China and moved to the USA in 2010 to pursue a master degree. He started his Ph.D. in Accounting in 2013 at Virginia Commonwealth University. He earned a BBA (Financial Management) from the Tianjin University of Commerce and a Master of Accounting and Information Systems from Virginia Tech. During his graduate studies, Lei was recognized as the J. Michael Cook Doctoral Consortium Fellow, received the Dean's scholar award, and received the Doctoral Teaching Excellence award. Lei accepted a full-time position as an Assistant Professor in Accounting at University of Akron, Ohio in August 2017.