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FROM SITUATIONAL VARIABLES TO WHISTLE-BLOWING INTENTIONS:
WHISTLE-BLOWING WITHIN THE "THEORY OF PLANNED BEHAVIOR"

by

DOMNIKI J. DEMETRIADOU

A dissertation submitted to the Graduate Faculty in Psychology
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy, The City University of New York

2003

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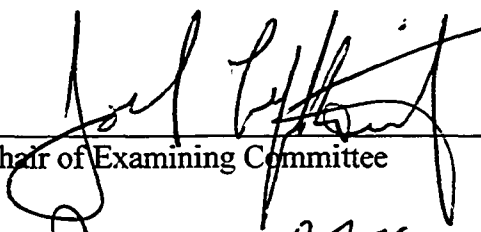
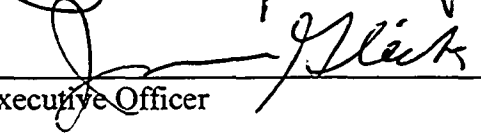
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Abstract

**FROM SITUATIONAL VARIABLES TO WHISTLE-BLOWING INTENTIONS:
WHISTLE-BLOWING WITHIN THE “THEORY OF PLANNED BEHAVIOR”**

by

Domniki J. Demetriadou

Advisor: Professor Joel Lefkowitz

The purpose of the present research was to (1) explore the feasibility of using the theory of planned behavior (Ajzen, 1988) to investigate the formation of intention to blow the whistle on observed organizational wrongdoing and (2) understand how corporate ethical values and fairness and work group support (variables external to the primary model) influence the formation of the intention to blow the whistle.

Overall, the hypotheses, as refined on the basis of confirmatory factor analysis (CFA) results of the measurement model of this study, were either supported or partially supported, with a few notable exceptions, suggesting that the theory of planned behavior may be a viable model for guiding research in the whistle-blowing arena.

In terms of the process via which external to the theory variables influence the formation of intentions to blow the whistle, findings showed that participants' intention to report an observed organizational wrongdoing to someone or some group within their organization that could take action was directly influenced by their sense of control over

performing the target behavior. In turn, participants' sense of control over performing the target behavior was directly influenced by their assessment of whether (a) they felt they had the personal resources necessary to go through with the reporting and (b) they perceived their workgroup as supportive over their blowing-the-whistle internally. However, findings should be viewed as tenuous because of the reliabilities of the measures used.

Future research should be directed at cross-validating the modified final model of this research as well as at comparing the data fit across several models representing the different theoretical perspectives used in the whistle-blowing literature. If future research supports the findings of the present research, organizations, in their effort to promote internal reports of observed organizational wrongdoing, may be faced with the challenge of finding ways to influence factors that may not be directly under their control (e.g., perceptions of available social and financial support, levels of moral judgment of individual employees).

Dedication

In loving memory of Dr. Sheldon S. Zalkind, my teacher, my mentor and friend, without whose guidance this work would have never come to be. His patience, his caring, and his wonderful sense of humor will live with me for ever.

Acknowledgment

A heart-felt “Thank You” to Dr. Joel Lefkowitz and all the members of my committee who have truly made this process a positive learning experience, going above and beyond, and all my family and friends who stood by me and encouraged me when I felt like giving up.

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Chapter I. Introduction

Overview

The mass media have frequently focused on cases in which questionable organizational practices have led to less than desirable, if not disastrous, consequences despite efforts of organizational 'insiders' to stop the process (e.g., Enron, the FBI, Worldcomm, the Challenger tragedy, the Ford Pinto and the GM Corvair cases). However, those are only a few of the many cases of wrongdoing that occur in organizations, and some of these have been examined in academic studies. White-collar crime or corporate corruption has been referred to in the literature as the "nation's largest growth industry" (Schutt, 1982).

Although no one can claim with any degree of confidence that the frequency of occurrence of organizational wrongdoing has increased over the years, it is evident from the constant media coverage that what has increased is the public's awareness and the attention given to such incidents. Events that have transpired during the last couple of decades (e.g., the Iran-Contra scandal, the S&L crisis, the Challenger disaster, the serious allegations made against tobacco industry practices) suggest that organizational wrongdoing is and ought to be a significant concern for all sectors of society. Although there may be some individuals within organizations who would maintain that some forms of organizational 'wrongdoing' may be cost-effective, many argue that organizational wrongdoing represents a drain on the economy or a threat to social institutions (Cressey & Moore, 1983; Axline, 1990; Flynn, 1995), but no consensus exists as to the extent or

seriousness or even actual costs associated with incidents of organizational wrongdoing (Murphy, 1993).

In terms of the extent of organizational wrongdoing, Clinard (1990) presents more than 100 cases of organizational wrongdoing; in virtually all of these, executives or upper management engaged in such activities as price fixing, endangering employee or public safety, fraudulent cost overruns, and bribery. Mathews (1987), based on survey findings, reports a total of 703 incidents of illegalities across 485 U.S. manufacturing corporations handled by four federal regulatory agencies over a span of eight years. Although discussions of workplace dishonesty have traditionally focused on situations in which the organization is the ultimate victim (e.g., employee theft, work slow-downs, or goldbricking), the estimated costs associated with such cases pale in comparison to the estimated costs the public incurs as a result of organizational wrongdoing. Meier and Short (1982) estimated annual losses in excess of \$100 billion as a result of organizational wrongdoing, which could easily double if one included technical violations of the law, such as antitrust violations (Murphy, 1993). Even though organizational wrongdoing may not always lead to disastrous or catastrophic consequences or be associated with a large price tag, it may often carry a cost in terms of organizational effectiveness and efficiency, as well as to organizational stakeholders, and to industrial or societal well-being.

Due to this state of affairs, authors in the business ethics literature claim that “business ethics” is often a contradiction in terms (Barach, 1985) and that more competitive environments either directly or indirectly encourage questionable practices. As a result, modern organizations may often pressure or encourage their employees to

behave in ways that compromise ethical standards (Jackall, 1988; Barach, 1985). Such questionable organizational practices can range from substandard quality of products or services, to potential health and safety hazards to consumers and the environment (Grossman, 1988). A survey conducted in the field of business ethics showed that nearly 40% of the respondents reported having experienced situations in which their supervisors have asked them to do something they felt was unethical (Posner & Schmidt, 1987). Earlier survey studies reported that approximately 65% of managers across various levels agreed that managers feel under pressure to compromise personal standards to achieve company goals and approximately 78% agreed that although organizational ethics may be sound, line employees compromise ethical standards because of management pressures to achieve results (Carroll, 1975). Organizational employees, even if they are not asked to directly participate in questionable practices, often are exposed to incidents of organizational wrongdoing. According to the U.S. Merit Systems Protection Board (USMSPB, 1984), two large-scale survey studies conducted in 1980 and 1983 showed that approximately half of 8,500 federal employees and a quarter of 8,592 federal employees, respectively, reported having observed at least one wasteful or illegal activity during the preceding year.

Thus, there is evidence, both anecdotal and empirical, that questionable practices occur within organizations that can be potentially harmful to employees, the organization itself, its stakeholders and the public, in general. Even though a fair number of individuals are often aware of the occurrence of such practices, such questionable organizational behaviors frequently go unreported and seldom do they become public knowledge. Based on the USMSPB survey results, from the employees who reported

having observed at least one wasteful or illegal activity, only about 30% indicated that they reported their observation to someone or some group that could take appropriate action (U.S. Merit Systems Protection Board, 1984). Individuals who did not report the observed activity to an individual or group, reported doing so primarily due to their belief that no corrective action would be taken (53% of respondents) and secondarily due to their fear of reprisal (19% of the respondents) (USMSPB, 1984).

Hence, it becomes apparent that organizations and society, in general, need to find ways to encourage individuals to report observed wrongdoing so that it can be addressed and, one hopes, corrected before it results in undesirable consequences. However, if conformity to organizational values, approaches and goals is often rewarded by such actions as better performance evaluations (Senger, 1971) or promotions (Pennings, 1970), then what is the process through which an employee forms the intention, and ultimately engages in the behavior of blowing-the-whistle on their employing organization for its questionable practices? Once the process is identified, then the determinants of the intention formation leading to the actual behavior can be more fully explored and understood. By identifying these determinants one can later attempt to influence organizational employees' whistle-blowing intention and behavior, and ultimately address organizational wrongdoing more effectively.

There has been a fair amount of literature written on the topic of whistle-blowing over the past two decades by a quite diverse group of individuals, including journalists, attorneys, government agencies, and academicians from a variety of backgrounds. Most of the whistle-blowing literature to date has focused on organizational wrongdoing and "upward" control efforts (Graham, 1986) where an organizational employee raises

concerns about superiors' actions or decisions and reports them to parties, internal or external to the organization, who can effect action (Near, 1989).

Up until the early 1980s, most of the scholarly work written on whistle-blowing dealt almost exclusively with policy and legal issues, exploring the legal ramifications and protection afforded to whistle-blowers (e.g., Ewing, 1983; Malin, 1983; Rowe & Baker, 1984), or presented compilations of case studies of whistle-blowing, indicating the need for the development of policies to encourage and protect responsible whistle-blowing acts (e.g., Nader, Petkas & Blackwell, 1972; Peters & Branch, 1972; Westin, 1981).

From the early 1980's on, the focus shifted toward addressing the organizational implications that whistle-blowing acts have for all the parties involved, with particular attention to the consequences such behavior has for organizations. Arguments and supporting data have been presented from both advocates and skeptics of the desirability of organizational whistle-blowing. Authors such as Clinard (1983) cite data supporting the notion that illegal organizational activity is related to decreases in organizational performance, thus lending support for the desirability of whistle-blowing as one of the means of identifying and correcting such activities. At the same time, there are indications in the literature that the decline of organizational authority and its leadership is associated with consequences such as reduced employee loyalty and commitment as well as task performance (Near & Miceli, 1985). Because whistle-blowing in organizations can and has been construed as a challenge and threat to the organizational authority structure, some authors caution organizations to consider the potential negative

consequences prior to engaging in attempts to encourage whistle-blowing (e.g., Weinstein, 1979).

From the mid-1980s to date, a somewhat more systematic approach has been taken in establishing theoretical contexts within which to examine whistle-blowing behavior and identify factors that relate to this process of reporting organizational wrongdoing. Initially focusing on the observer of organizational wrongdoing, this body of literature attempted to identify common experiences and characteristics of whistle-blowers (e.g., Brabeck, 1984; Near & Jensen, 1983; Parmerlee, Near & Jensen, 1982) as well as characteristics that distinguish whistle-blowers from other individuals who observe but choose not to report the organizational wrongdoing (e.g., Miceli & Near, 1984). After exploring individual differences, the focus of the literature expanded to include situational or organizational factors that influenced employees' whistle-blowing behavior.

Despite the fact that much has been written on the topic of whistle-blowing, only a few theoretically-based pieces of work have appeared in the whistle-blowing literature (e.g., Dozier & Miceli, 1985; Farrell & Petersen, 1982; Near & Miceli, 1985). From a theoretical perspective, whistle-blowing has been studied within the context of relevant existing theories such as motivational theories (e.g., Near & Miceli, 1985; Miceli & Near, 1985), prosocial behavior (e.g., Dozier & Miceli, 1985), and organizational dissidence or principled dissent (e.g., Weinstein, 1979; Near & Miceli, 1985; Graham, 1986). In terms of the conceptualization of the whistle-blowing process, the models developed have, for the most part, paralleled the empirical work conducted in the field in terms of their focus and emphasis on either the observer of organizational wrongdoing or the organization,

yielding long, complex, decision-tree-like models of whistle-blowing. Only a few articles in the literature have expanded the models to include factors such as work-group norms and their influence on the whistle-blowing process (e.g., Greenberger, Miceli & Cohen, 1987).

From a methodological perspective, there have been several books written about case histories of whistle-blowing (e.g., Peters & Branch, 1972; Nader et al., 1972; Westin, 1982; Glazer & Glazer, 1989) and the results of several survey studies have been published (e.g., Near & Jensen, 1983; Parmelee, Near & Jensen, 1982; Miceli & Near, 1985; Miceli & Near, 1988) in business and psychology journals. However, the number of experimental, quasi-experimental or field study research articles conducted in the area of whistle-blowing has been either limited (e.g. Brabeck, 1984; Trevino & Victor, 1992; Dozier, 1988; Miceli, Dozier & Near, 1991; Keenan, 1990; Zalkind, 1990; Casal & Zalkind, 1993) or has not been published. This relative scarcity of empirical work in the literature is not surprising given the difficulty of conducting such research in the field of whistle-blowing. With regard to the conduct of field studies on whistle-blowing behavior, obtaining access to organizations is very unlikely. Because whistle-blowing usually addresses very sensitive organizational issues, such as questionable policies and practices, sharing with or disclosing information to researchers is very difficult; it is reasonable to assume that most organizations discourage (or attempt to suppress) reports of possible organizational wrongdoing and they are certainly not open to outside scrutiny or investigation since their public image or even their survival may be at stake. With regard to the conduct of experimental or quasi-experimental studies, whistle-blowing research may require the creation of situations which more often than not would raise

questions regarding the ethics of the research project (especially given the fact that subject deception might be involved and that the whistle-blowing act itself often entails subjects undergoing an emotionally conflicting and sometimes distressing decision-making process).

In terms of the samples involved in whistle-blowing studies, most of the earlier studies, conducting secondary data analyses, have focused on public sector employees and whistle-blowing (e.g., USMSPB, 1981; USMSPB, 1984; Miceli, Dozier & Near, 1987; Miceli & Near, 1984; Miceli & Near, 1985; Near & Miceli, 1986; Miceli & Near, 1988; Near & Miceli, 1988). There have been only a few efforts that attempted to examine the topic of whistle-blowing from the perspective of upper-, middle- or first level managers, or of private sector employees (e.g., Keenan, 1990, 1989, 1988; Zalkind, Demetriadou & Schreier, 1990; Zalkind, Verdi & Wee, 1992). In addition, it is interesting to note that, although most case studies involve primarily male whistle-blowers, many of the earlier pieces of research were conducted using female participants who were primarily blowing-the-whistle on gender-related discrimination. Furthermore, although most of the literature indicates that observers first report organizational wrongdoing internally, some of the research investigated exclusively external whistle-blowing (e.g., Parmerlee et al., 1982; Near & Jensen, 1983).

A review of the available literature shows that whistle-blowing research, much like many investigations of new topics, has focused on who blows-the-whistle, under what circumstances and with what consequences. As a result, there is a fair amount of descriptive data regarding the personal characteristics of whistle-blowers, characteristics that may distinguish whistle-blowers from non-whistle-blowers and situational and

organizational factors that may facilitate or inhibit whistle-blowing behavior. What appears to be lacking in the whistle-blowing literature is research that goes beyond descriptions and provides explanations about how characteristics of individuals and situations lead an organizational member to form the decision to blow-the-whistle on observed organizational wrongdoing. Because the detailed external circumstances surrounding each whistle-blowing case are and will always be different from each other and unique in their nature (Near & Jensen, 1983), the process through which one can identify the commonalities across the different cases in an attempt to understand the phenomenon of whistle-blowing is an important one, and still remains elusive. Even the current descriptive knowledge of whistle-blowing behavior is hampered by the fact that the empirical work is still in its developmental stages and most variables have been examined by either only one study or, where they have been looked at by more than one study, they have been measured in different ways, thus, yielding tentative findings, at best (Miceli & Near, 1992). Hence, most of the literature yields findings that are not consistently supported across different studies and, as a result, the most frequently reached conclusion in this body of empirical work is that the whistle-blowing process is complex and the relationship of external variables to whistle-blowing is a complicated one.

The present study aims to deal with part of this complexity: it is suggested that the relative lack of consistent findings regarding the determinants of whistle-blowing behavior may be due to the fact that the variables explored in the literature to date are not influencing whistle-blowing behavior directly, but rather that their effects are mediated by other variables. Because whistle-blowing is a personal choice and decision, it stands

to reason that it would be affected by individuals' perceptions of reality (i.e., most of the external variables explored in the whistle-blowing research). Thus, the present study uses a model which hypothesizes that "external" variables (i.e., characteristics of the individual and the situation) do indeed have an effect on the formation of intentions to behave in certain ways as well as on the subsequent performance of such behaviors. However, the model also predicts that the effect of these external variables on intentions and behaviors is indirect and is mediated by their effect on the attitudinal, subjective and behavioral control belief sets held by individuals. The present study is predicated on the argument that if commonalities are to be found across the diverse whistle-blowing cases, research has to focus on, among other factors, observers' internal attitudinal and normative belief sets regarding whistle-blowing, and not exclusively on the external factors which influence these belief sets.

Thus, the purpose of the present study is to identify the determinants of employees' intentions to report observed organizational wrongdoing, explore the influence that some organizational factors may have on those determinants and explore the feasibility of a proposed model of whistle-blowing intention formation. As such, it attempts to provide a systematic way of identifying aspects of organizational interventions that may create organizational climates conducive to whistle-blowing. It is the present researcher's belief that until the process of whistle-blowing is clearly understood, in terms of its antecedents and consequences, effective comprehensive management strategies for dealing with whistle-blowing and the whistle-blower cannot be identified.

The remainder of this chapter describes prior research on the whistle-blowing process and its components; it summarizes the state of knowledge obtained thus far regarding characteristics of whistle-blowers, and the factors affecting individuals' decision to blow-the-whistle on organizational wrongdoing. It also presents an alternative, more parsimonious theoretical model that incorporates and unifies most of the concepts used to date in the literature and within which whistle-blowing may be studied more effectively.

The Nature of Whistle-Blowing

The Components of Whistle-Blowing

Whistle-blowing has been defined in various ways within the literature. Weinstein (1979) describes whistle-blowing as one form of "bureaucratic opposition," or as "attempts to change a bureaucracy by those who work within the organization but do not have any authority" (p. 2). Ewing (1980) describes whistle-blowing as an act performed by "the quixotic individual who feels obliged to discourage or even publicize wrongdoing, to criticize waste or to decline an immoral directive" (p. 328). To date, the most comprehensive and most frequently cited definition of whistle-blowing is the one given by Near and Miceli (1985): "... the disclosure by organizational members (former or current) of illegal, immoral or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action" (p. 4).

Regardless of how general or narrow one's definition of this behavior is, whistle-blowing as a process involves at least four elements; namely, the whistle-blower, the whistle-blowing act, the receiver of the complaint and the organization against which the

complaint is made (Near & Miceli, 1985). Whistle-blowers' situations possess at least four observable characteristics: (1) they are current or former employees of the organization where the wrongdoing was observed; (2) they usually lack the authority to change or stop the wrongdoing that is under their employers' control; (3) they may or may not make the report anonymously; and (4) they may or may not hold a position that requires reporting of organizational wrongdoing when it is observed (Near & Miceli, 1985).

The whistle-blowing act has been conceptualized as the disclosure of information regarding organizational activities that "harm third parties" (Elliston, 1982) or "jeopardize the public interest" (Farrell & Petersen, 1982). Although the activities may be defined in a myriad of ways such as "misconduct, neglect or irresponsibility" (Farrell & Petersen, 1982), or "wasteful activities" (USMSPB, 1981, 1984), they all have to be perceived as illegitimate and objectionable to the potential whistle-blower in the context of what is perceived to be within the organization's authority (Near & Miceli, 1985).

Most of the case studies published in the literature involve external whistle-blowing (i.e., reporting of the observed wrongdoing to someone or some group outside the organization). Some authors (e.g., Farrell & Petersen, 1982) argue that this represents the only case of true whistle-blowing and others view it as a "case of bureaucratic oppositions going 'outside'" (Weinstein, 1979; p. 9). Still other authors suggest that whistle-blowing can, and usually does, occur internally - as long as the complaint is made to persons other than or in addition to the ones prescribed by the chain of command - or externally, or in some combination of the two (e.g., Hirschman, 1970; Nader et al., 1972; Peters & Branch, 1972; USMSPB, 1981, 1984; Westin, 1981). In fact, most of the

authors state that whistle-blowing tends to occur internally first with external whistle-blowing occurring usually after internal reports fail to bring about change. However, due to the lack of empirical data, Near and Miceli (1985) argue that a report of any observed questionable or wrongful organizational activity by an organizational observer to anyone may be sufficiently threatening to both the whistle-blower as well as the organization to be considered whistle-blowing.

In terms of the organizations that are the target of whistle-blowing behavior, there do not appear to be specific characteristics that can distinguish them from organizations that do not experience whistle-blowing behavior. However, the type of the organization (e.g., small or large, private or public sector, etc.) may make a difference in terms of its response to the whistle-blowing act (Near & Miceli, 1985).

The Whistle-Blowing Process

Near and Miceli (1985) view whistle-blowing as a process comprised of four distinct steps, each of which involves a response to a decision taken in the preceding step. The first two steps involve decisions that have to be made by the whistle-blower, and the latter two steps involve decisions that have to be made by the organization in response to the whistle-blowing act. In the first two steps the whistle-blower has to decide whether the observed organizational activity is objectionable or wrongful (i.e., illegal, unethical or illegitimate) and, if the activity is judged to be wrongful, the whistle-blower has to then decide whether the activity should be reported. Once the whistle-blowing act occurs, the organization has to decide what action to take vis-a-vis both the reported activity (i.e., continuation or cessation) and the whistle-blower (i.e., reward, no action or punishment).

In terms of the first step in the process, Near and Miceli (1985) postulate that observers will be more likely to decide that the activity is wrongful if it conflicts with their personal values or the stated values of the organization and if the supporting evidence is clear and unambiguous. Near and Miceli (1985) enumerate several factors that may have an impact on the observer's decision to report the organizational wrongdoing; namely, whether the observer considers the wrongdoing to be serious, knowledge of reporting channels, the observer's belief that reporting will be efficacious and the observer's personal situation (e.g., personal costs, availability of alternative financial and emotional resources, and personal characteristics).

The proposed study focuses on this second step in the whistle-blowing process described by Near and Miceli (1985). The study will attempt to explore the relative impact most of these factors have on respondents' formation of intent to report observed organizational wrongdoing. Thus, using the "theory of planned behavior" (Ajzen, 1988) as a guiding model, the present study examines the impact of specific antecedents (i.e., organizational and work group norms and individual characteristics) on observers' behavioral and normative beliefs as well as the impact of attitudes, subjective norms, perceived behavioral control, and moral obligation on intentions to blow-the-whistle on organizational wrongdoing.

Chapter II. Literature Review

Empirical Findings Regarding the Whistle-Blower and the Whistle-Blowing Act

A review of the whistle-blowing literature indicates that factors hypothesized or empirically shown to be predictive of whistle-blowing behavior can be summarized into two major categories: (1) characteristics of the individual observer of organizational wrongdoing, including dispositional and demographic characteristics as well as occupational or job-related characteristics; and, (2) situational characteristics, including characteristics of the observed organizational wrongdoing, work-group and organizational characteristics. The organization of the following section, describing hypothesized relationships and empirical findings regarding individual and situational variables and whistle-blowing behavior, is largely based on Miceli and Near's (1992) classification of this body of literature.

Characteristics of the Individual Observer of Organizational Wrongdoing

Researchers have suggested that organizational member characteristics and dispositions may affect their reactions and responses to organizational wrongdoing (Farrell & Petersen, 1982; Kolarska & Aldrich, 1980; Perrucci, Anderson, Schendel, & Trachtman, 1980; Miceli, Dozier, & Near, 1991). A review of related bodies of literature has led authors to hypothesize about the relationship and predictive utility that several dispositional and occupational variables may have with whistle-blowing behavior. For example, it is speculated that tolerance for ambiguity and field dependence may affect identification or recognition of an observed organizational activity as wrongdoing (Miceli

& Near, 1992), whereas self-confidence or self-esteem and a “live and let live” tendency may influence both individuals’ responses to observed organizational activities and their likelihood to engage in the whistle-blowing behavior (Kolarska & Aldrich, 1980; Farrell & Petersen, 1982; Near & Miceli, 1985; Graham, 1986; Miceli & Near, 1992). However, none of these variables have been investigated in whistle-blowing research.

The empirical research that has investigated the relationship among various characteristics of the organizational employee and whistle-blowing behavior is rather limited and has been criticized in terms of its methodological shortcomings. Some of the existing research conducted in the area of whistle-blowing behavior did not include any comparison groups; often only non-random samples of whistle-blowers were surveyed and descriptive results were presented but no statement could be made in terms of how they differed, if at all, from organizational employees who observed wrongdoing but did not report it (Miceli & Near, 1992). In addition, most of the empirical work conducted in the area of whistle-blowing has been cross-sectional survey-based research yielding primarily descriptive data regarding whistle-blowing behavior and whistle-blowers without the ability to draw any conclusions about or provide any support for cause-effect relationships. Furthermore, most of the survey research in the area of whistle-blowing behavior has relied on participants’ recall to reconstruct events that may have occurred in the past, thus, raising questions regarding the accuracy of the reported data. These studies also often involve issues of method covariance among the measures used (Near, Baucus, & Miceli, 1993). That is, individual respondents self-reported on their behavior regarding observation and reporting of organizational wrongdoing, their beliefs and attitudes regarding whistle-blowing behavior, and their perceptions of the wrongdoing

incident as well as the organizational circumstances related to both the wrongdoing and its reporting, such as organizational responses to whistle-blowers and the reported wrongdoing, itself. Finally, participants' responses provide the only measures of their own behavior and its antecedents and they are asked to speculate as to why they behaved as they did (Near & Miceli, 1985). Hence, the possibility exists that respondents may have adjusted their perceptions to become more in line with their beliefs, attitudes and behaviors and may have engaged in post-decision justification regarding their blowing-the-whistle.

With these research limitations in mind, findings regarding dispositional and job- or occupation-related variables that have been investigated by at least one whistle-blowing study are presented below.

Dispositional Variables

Research in the prosocial behavior domain has shown that locus of control influences an individual's propensity to engage in prosocial behavior (Spector, 1982; Miceli, Dozier & Near, 1991); this finding has led whistle-blowing researchers to hypothesize that employees with an internal locus of control will be more likely to blow-the-whistle on observed organizational wrongdoing than employees with an external locus of control. Locus of control has been investigated by only one whistle-blowing study (Miceli et al., 1991); no main effects for locus of control were found in this experimental study with regard to the likelihood of reporting observed wrongdoing (involving "data fudging" within an educational institution), nor were any interaction

effects observed between locus of control and threatened retaliation on whistle-blowing behavior.

Based on altruistic and prosocial behavior research findings, whistle-blowing researchers have also postulated that whistle-blowers will have higher levels of moral judgment development than individuals who observed organizational wrongdoing but who did not report it (Dozier & Miceli, 1985; Miceli et al., 1991). The results of previous research regarding individuals' level of moral development and its relationship to the likelihood of blowing-the-whistle on organizational wrongdoing have been mixed (Miceli, Dozier & Near, 1987; Brief & Motowildo, 1986; Brabeck, 1984).

Preliminary findings of research conducted by Fritzsche and Becker (1984) on management behavior and ethical philosophy indicated that individuals who reported that they followed a "rights" philosophy in responding to a series of ethical dilemma vignettes were more likely to report intentions to blow-the-whistle on wrongdoing than individuals who followed an "act utilitarian" philosophy. Such findings suggested that individuals whose responses indicated the use of a "rights" philosophy in responding to the ethical dilemmas tended to place more emphasis on ethical values relative to economic or other values, thus, leading to a greater willingness to report organizational wrongdoing than individuals using different criteria in their decision-making processes. In a similar vein, results from a survey study, conducted by Jos, Tompkins and Hayes (1989), indicated that about three-quarters of the whistle-blowers surveyed expressed support for the idea that universal moral rules exist that ought to guide one's judgments and rejected relativistic views about morals. Over half of them said they believed that such universal rules should apply without exception. However, the absence of a matched comparison

group of non-whistle-blowers who had observed wrongdoing and non-observers in this survey, limits the conclusions that can be drawn from the findings.

In yet another study, participants with high moral judgment were more likely than those with lower moral judgment to point out a manuscript error in response to the manuscript author's specific request (i.e., under supportive whistle-blowing conditions) (Brabeck, 1984). Contrary to Brabeck's (1984) findings, however, research conducted by Miceli et al. (1991) found that whistle-blowing was related to lower rather than higher moral judgment development levels. It is possible that different situations may have an effect on the relationship between whistle-blowing behavior and individuals' levels of moral development. For example, in Brabeck's (1984) study, where participants were asked to identify errors in the manuscript, high levels of moral development were facilitative of whistle-blowing, whereas in the Miceli et al. (1991) study, where participants were either given no instructions or were explicitly asked not to report the wrongdoing, low levels of moral development facilitated whistle-blowing behavior. Thus, it is possible that whether a position involves explicit instructions regarding auditing responsibilities or not may moderate the effect that the level of moral judgment development has on whistle-blowing behavior, at least within the context of this body of research.

With regard to the amount of information a person has about where to report organizational wrongdoing -- a factor thought to facilitate or inhibit whistle-blowing behavior -- Keenan (1990) found that there is a positive relation between a person's moral assessment of minor fraudulent activities and the amount of information the person has about reporting channels and procedures (i.e., the more severe one's assessment of minor

frauds, the more information that person possesses). In relation to moral assessment of observed activities, Near & Miceli (1985) report some preliminary evidence that moral development levels influence perceptions of wrongfulness for various activities and that individuals with higher levels of moral development are more likely to blow-the-whistle than other observers.

It has been also hypothesized in the literature that the decision to engage in whistle-blowing behavior is influenced by the individual's perceived efficaciousness of such behavior to resolve the observed wrongdoing. Farrell and Petersen (1982) postulated that "those who perceive their efficacy within the organization to be low will, in the long run, engage in little political behavior" (p. 409). In support of that hypothesis, the USMSPB (1981) results indicated that the potential efficacy of the whistle-blowing act was the most important factor in motivating federal employees to blow-the-whistle on organizational wrongdoing. Near and Jensen (1983) also found that perceived efficacy of future whistle-blowing acts and individuals' willingness to engage in future whistle-blowing behavior were closely related to perceived change in managerial attitudes regarding the wrongdoing brought about by past reporting, but they were unrelated to retaliation.

One survey study explored the relationship between self-monitoring and whistle-blowing. The overwhelming majority of the whistle-blowers surveyed (i.e., over 90% of a sample of 161 respondents) scored low on Snyder's scale of self-monitoring, indicating that they are unlikely to look to others or to situational aspects for cues to appropriate behavior (Jos, Tompkins & Hayes, 1989). Instead their behavior showed little change from one situation to another because they relied on their internal beliefs, attitudes and

values. However, because this study did not include a comparison group of non-whistle-blowers, no conclusions can be drawn regarding whether this characteristic distinguishes whistle-blowers from observers of wrongdoing who remain silent.

Attitudinal dispositions of organizational members are also hypothesized to affect an employee's decision to engage in whistle-blowing behavior. Miceli and Near (1984), in a secondary analysis of the USMSPB's 1981 survey data, found that whistle-blowing behavior was related to general attitude toward whistle-blowing acts, in general. Whistle-blowers, both internal and external, reported stronger approval levels of whistle-blowing in terms of the desirability of this behavior, in general, than did nonobservers or inactive observers of organizational wrongdoing. Miceli and Near (1985) also reported that individuals who observed but did not report observed organizational wrongdoing were less approving of whistle-blowing than observers who reported the organizational wrongdoing. However, due to the nature of the research on which these findings are based, no causal relationships can be drawn. Such differences in attitudes toward whistle-blowing behavior may be due to post-decision justification on the part of both whistle-blowers and non-whistle-blowers (Miceli & Near, 1992).

In terms of religious beliefs, some anecdotal data and findings of one study seem to indicate that whistle-blowers view themselves as "moderately religious" (Soeken & Soeken, 1987) and considered that their religious faith contributed to their decision to engage in whistle-blowing behavior, although the authors point out that religious beliefs alone should not be viewed as a sufficient cause of whistle-blowing (Glazer & Glazer, 1987).

Finally, an individual's conformity to organizational pressures to behave in questionable ways has been hypothesized to be related to whistle-blowing behavior. There may be several situations in which employees are asked to either participate in organizational wrongdoing or in the cover-up of organizational wrongdoing. This issue has been primarily addressed in the literature concerning ethical and unethical behavior in organizations, especially as it relates to employee acquiescence or conformity with such organizational requests or pressures (e.g., Carroll, 1975). Within the whistle-blowing literature, conformity to engage in organizationally requested unethical behavior has been explored in terms of its relationship to subsequent whistle-blowing behavior. Exploratory analyses indicate that, in a controlled experiment, (1) the majority of participants did not conform to requests to engage in unethical behavior, and (2) there was no relationship between conformity and whistle-blowing behavior, leading the researchers to tentatively conclude that whistle-blowing and conformity to organizational requests to behave in questionable practices are probably distinct phenomena (Miceli et al., 1991).

Demographic Variables

Most of the case studies in the whistle-blowing literature involve male whistle-blowers (e.g., Soeken & Soeken, 1987; Jos, Tompkins & Hayes, 1989). Although technically not considered whistle-blowing, research investigating the reporting of shoplifters by bystanders found that women were less likely to report their observations than were men (Gelfand, Hartmann, Walder & Page, 1973). Within the whistle-blowing context, findings suggest that women are less likely to blow-the-whistle than are male observers of organizational wrongdoing (Soeken & Soeken, 1987; Miceli & Near, 1988;

Miceli, Dozier & Near, 1991; Miethe, 1999). Such gender differences in the likelihood of one's blowing-the-whistle on observed wrongdoing were explained in the literature by the relationship that various dispositional and personal characteristics have with gender (e.g., gender differences in professional membership, occupational status and job position, levels of self-esteem and initiative). However, research conducted by Miceli et al. (1991) showed that gender differences in whistle-blowing propensity remained, even after statistically or experimentally controlling for moral judgment development, locus of control, the nature of the observed wrongdoing and opportunities for observation of the wrongdoing. Finally, in terms of gender and reported intention to blow-the-whistle on organizational wrongdoing, Fritzsche (1988) found no differences between male and female marketing managers and their reported intent to blow-the-whistle on wrongdoing presented in hypothetical vignettes.

Four studies have reported on the relationship of marital status and whistle-blowing behavior (Parmerlee et al., 1982; Soeken & Soeken, 1987; Jos, Tompkins & Hayes, 1989; Miethe, 1999). Three out of the four studies indicate that individuals who blew-the-whistle to someone or some group outside the organization were more likely to be married than other employees; Miethe (1999) found no differences between the proportions of non-observers, internal whistle-blowers and external whistle-blowers and marital status of respondents. It has been hypothesized that marital status influences individuals' evaluation of the costs associated with their decision to blow-the-whistle by affecting the availability of alternative financial or emotional support sources. However, no study has investigated whether that finding holds true for internal whistle-blowers as well. One study has reported that almost all of the whistle-blowers indicated that they

had received support from family members and friends (Near, Parmerlee, White, & Jensen, 1981); however, there was no comparison group used in this study to help identify whether that is a characteristic that is unique to whistle-blowers alone.

Age of whistle-blowers has often been looked at in combination with the individual's tenure in an organization, due to the often high relationship between the two variables. The two studies that have investigated the relationship of age to whistle-blowing behavior yielded inconsistent results, probably due to different sample characteristics and the nature of the wrongdoing. Parmerlee et al. (1982) reported that female employees who blew-the-whistle on sex discrimination to an outside agency tended to be younger than the average female employee, whereas Soeken and Soeken (1987) reported that whistle-blowers, who were mostly male, tended to be slightly older than the average employee. However, these studies used a non-random sample and did not control for tenure, among other things, thus, making interpretation of these inconsistent findings difficult (Miceli & Near, 1992). Finally, based on an analysis of whistle-blowing data from multiple sources, Miethe's (1999) findings indicate that although most workers prefer remaining silent over reporting observed organizational wrongdoing, a higher proportion of younger than older employees do not engage in whistle-blowing.

Miceli and Near (1988a), in a secondary data analysis of the USMSPB 1983 survey, combined the original variables of age and years of service and found that employees with more seniority were more likely to blow-the-whistle on organizational wrongdoing than less senior employees. However, the effect of tenure or years of service on whistle-blowing are not consistent across the different studies. Contrary to Miceli &

Near's (1988a) findings, Soeken & Soeken (1987) reported that whistle-blowers were similar to other employees in terms of length of tenure with their employing organization.

In terms of education, again, the findings of the research on whistle-blowing are far from consistent and conclusive. Parmerlee et al. (1982) reported that women who blew-the-whistle on discriminatory employment practices in their organization to an outside government agency tended, on the average, to have higher levels of education than women in the work force. Similarly, Jos, Tompkins and Hayes (1989) reported that close to two-thirds of the 161 whistle-blowers surveyed were relatively well-educated (i.e., held at least a Bachelor's degree); however, their study used a "capture sample" (p. 552) (i.e., a sample drawn from the population of known whistle-blowers) and as such limits the conclusions that can be drawn relative to populations of non-reporters of observed organizational wrongdoing. Miceli and Near (1984) found that education levels varied depending on whether an individual blew-the-whistle internally or externally; external whistle-blowers were slightly less educated than the average organization employee whereas internal whistle-blowers were slightly more educated.

Job- and Occupation-Related Variables

Research to date suggests that there is a relationship between salary earned and whistle-blowing behavior. Miceli and Near (1984, 1988a), in a secondary analysis of the USMSPB survey data, reported that whistle-blowers tended to earn higher salaries than other federal government employees; however, it is unclear whether there was a statistical control for the possible confounding effects of tenure. The same relationship was also found for the private sector (Miceli, Near & Schwenk, 1991).

In terms of job performance, a couple of studies have shown that whistle-blowers tend to perceive themselves to be higher performers than individuals who observe organizational wrongdoing but who do not report it (Miceli & Near, 1988a; Miceli, Near & Schwenk, 1991). However, neither of the two studies obtained direct measures of job performance; Miceli, Near and Schwenk (1991) used self-reported job performance measures and Miceli and Near (1988) correlated whistle-blowing with the number of performance-based awards reportedly received by respondents during the preceding two years of employment with the federal government.

Supervisory status has also been postulated to have an effect on whistle-blowing behavior primarily due to the amount of influence afforded to individuals who hold higher positions within the organization (Jos, Tompkins, & Hayes, 1989). Miceli and Near (1984) reported that internal whistle-blowers were more likely to be supervisors than other members of the organization. Miethe (1999), similarly, found that supervisors are more likely to be whistle-blowers (especially external whistle-blowers) than non-supervisors. However, occupying higher levels within the organizational hierarchy may not increase the likelihood of blowing-the-whistle. A study that presented executives, middle managers and first-level supervisors with vignettes describing hypothetical wrongdoing found no differences among the participants in terms of their reported intentions to blow-the-whistle on the hypothetical wrongdoing (Fritzsche, 1988). It is possible that the likelihood of blowing-the-whistle is not merely and solely a function of supervisory level but is rather influenced by individuals' perceptions of what they have achieved and what they can achieve in the future within the employing organization. Peters and Branch (1972), based on a series of case studies, indicate that the majority of

the “pure” whistle-blowers (i.e., individuals who blew-the-whistle while still employed in the organization) had reached a “career plateau - a point at which they could no longer stifle their urge to speak out in the honest hope of attaining a pinnacle of influence someday from which they could really clean things up” (p. 281).

The professional status of an individual has also been hypothesized to affect whistle-blowing behavior primarily due to the existence of a professional code of ethics and higher levels of prestige within an organization (Miceli & Near, 1992; Perrucci et al., 1980). Research findings to date are somewhat inconsistent as to the actual effect that professional status has on whistle-blowing behavior. Miceli and Near (1984) found that, within the federal government, the likelihood of blowing-the-whistle on observed organizational wrongdoing did not differ as a function of professional status, which was operationalized as high pay and high education level. However, in other studies, results indicated a significant positive relationship between professional status and whistle-blowing behavior (Miceli & Near, 1988a; Perrucci et al., 1980; Jos, Tompkins & Hayes, 1989).

It has also been postulated in the literature that organizations making the reporting of observed organizational wrongdoing part of their employees' jobs may increase opportunities for the observation of organizational wrongdoing and encourage internal whistle-blowing (Miceli & Near, 1992). Some research indicates that internal whistle-blowers were more likely than employees who did not observe organizational wrongdoing to hold positions that required them to observe and report wrongdoing, thus supporting the proposition that when whistle-blowing is role-prescribed the likelihood of observing wrongdoing increases. However, even though researchers have hypothesized

that organizations may encourage whistle-blowing to parties internal to the organization by making the observation and reporting of wrongdoing role-prescribed, the belief that whistle-blowing is part of an employee's role has been shown to be related to both internal and external whistle-blowing behavior (Miceli, Near & Schwenk, 1991).

Individual employees' knowledge of the appropriate channels and procedures for reporting observed organizational wrongdoing has also been postulated to influence an observer's willingness to take action (Kolarska & Aldrich, 1980). Miceli and Near (1984) found that whistle-blowers believed they were more knowledgeable about where to report wrongdoing than other employees who observed but did not report organizational wrongdoing.

Researchers have also postulated that supervisory status, in addition to whistle-blowing behavior, is also related to the amount of knowledge one has about where and how to report observed organizational wrongdoing; however, there is some indication that there are some variables moderating this relationship. In a study conducted by Keenan (1990a), first-level managers were shown to differ in terms of the knowledge of reporting channels and procedures that they felt they possessed depending on gender (i.e., male first-level managers reported having more knowledge than female first-level managers); however, this finding did not hold true for upper-level managers (Keenan, 1990b). This particular finding has been cited as a possible explanation for research results indicating that propensity to blow-the-whistle varies as a function of the individual observer's gender (Miceli & Near, 1992).

Keenan (1990a) also reported that tenure was related to the amount of knowledge employees felt they possessed regarding where and how to report observed organizational

wrongdoing; lower seniority first-level managers reported having less information regarding the proper reporting channels and complaint recipients than did more senior first-level managers. Even though knowledge of reporting channels and procedures has been linked to whistle-blowing behavior as well as supervisory status and tenure, it is unclear from the current research whether these variables are causally related and, if so, what is a probable causal order in this sequence.

Finally, research conducted in the area of altruistic and prosocial behaviors has led several authors in the whistle-blowing literature to postulate that individual employees who are satisfied with aspects of their work life will be more inclined to report observed organizational wrongdoing than employees who are not satisfied with their job (Motowidlo, 1984; Miceli & Near, 1992). Also, research on employee “citizenship” has shown that organizations that provide rewards on a consistent and fair basis can encourage their employees to reciprocate by helping, in turn, the organization (Bateman & Organ, 1983). Finally, research based on the model of “exit, voice and loyalty” (Hirschman, 1970; Farrell, 1983) provided support for the proposition that employee satisfaction is positively related to voice and loyalty (Rusbult & Lowery, 1985).

Two field studies have investigated the relationship of employee satisfaction and whistle-blowing behavior. Miceli and Near (1988a) found a positive relationship between favorable job responses (such as satisfaction with working for the federal government, utilization of one’s skills, fairness of reward distribution, satisfaction with current performance appraisal systems and with one’s last performance evaluation) and whistle-blowing behavior, thus, providing evidence in support of the hypothesis that satisfaction with one’s employment situation promotes prosocial behavior. However, the

expected relationship between satisfaction with the reward structure of the organization and employees' helping behavior has failed to receive consistent support from research findings thus far – Miceli, Near and Schwenk (1991) found that whistle-blowers tended to report lower satisfaction with their pay than other organizational employees.

Situational Characteristics

In addition to dispositional and background characteristics, researchers have suggested that situational characteristics related to the observed wrongdoing, the work group and the employing organization may also affect organizational members' reactions and responses to observed wrongdoing (Miceli & Near, 1992). Again, using findings of research conducted in related bodies of literature, researchers have developed various hypotheses about the relationship between several situational variables and whistle-blowing behavior. For example, variables such as work or role overload, and work group norms have been considered in terms of their influence on whistle-blowing behavior (Miceli & Near, 1992). However, no research to date has directly investigated these propositions.

The empirical research that has investigated the relationship among various situational characteristics and whistle-blowing behavior is once again rather limited and has been criticized for the same methodological shortcomings as the research on dispositional and personal characteristics of whistle-blowers which have been described earlier. Again, with these research limitations in mind, findings regarding situational characteristics of the observed wrongdoing, the work group within which the

organizational member operates and the employing organization that have been investigated by at least one whistle-blowing study are presented below.

Characteristics of the Observed Organizational Wrongdoing

In terms of the nature of the observed wrongdoing, researchers have postulated that identification of the wrongdoing by the observer as either illegal or objectionable on the basis of criteria other than that prescribed by law may influence the decision to report the wrongdoing especially to someone or some group outside the organization that can effect action (Miceli & Near, 1992). The one study reporting data related to this postulation found that reporting of wrongdoing did not differ as a function of the nature of the observed wrongdoing; illegal wrongdoing was no more likely to be reported than wrongdoing that was judged objectionable on other grounds (Miceli, Near & Schwenk, 1991).

In addition to the illegal or objectionable nature of the wrongdoing, the degree of clarity or ambiguity of wrongfulness associated with the observed activity may further affect how the observer responds to it (Near & Miceli, 1985). Several authors in the whistle-blowing literature have postulated that, unless the observed wrongdoing is particularly deplorable and glaring, personal characteristics of potential whistle-blowers such as their beliefs about whistle-blowing have little to do with their decision to blow-the-whistle on observed organizational wrongdoing (Near, 1989). Miceli and Near (1985) found that seriousness of observed organizational wrongdoing was related to who the recipient of the whistle-blowing behavior would be, with most serious wrongdoing being reported to parties external to the organization. In another study, though, managers

responding to vignettes presenting them with hypothetical wrongdoing did not differ in terms of their reported intention to blow-the-whistle to someone outside the organization as a function of the level of seriousness of the wrongdoing (Fritzsche, 1988). In both studies, seriousness was operationalized primarily in terms of financial consequences, thus, not allowing for generalization of results to other types of seriousness of wrongdoing (e.g., in terms of worker or community safety or health, environmental protection, etc.) (Miceli & Near, 1992).

In addition to the seriousness of wrongdoing, the nature of the evidence that wrongdoing has occurred has been hypothesized to influence whistle-blowing behavior. Miceli and Near (1985), in support of this hypothesis, found that occurrence of whistle-blowing behavior was related to the existence of clear and direct evidence that organizational wrongdoing had occurred, although the obtained effects were not strong. Specifically, whistle-blowers were more likely to report that they had more direct evidence of the wrongdoing than observers who chose not to report the wrongdoing. Furthermore, external whistle-blowers were more likely to report having observed more serious wrongdoing in organizations with high levels of wrongdoing and a more retaliatory whistle-blowing climate. However, there was no support for the proposition that whistle-blowers have more sources of evidence of wrongdoing than individuals who observe organizational wrongdoing but who do not report it (Miceli & Near, 1985).

The prevalence of wrongdoing incidents occurring within an organization has also been hypothesized to influence both whistle-blowing behavior and the selection of reporting channels (i.e., internal versus external); however, the hypothesized directions of its effects have varied depending on whether researchers viewed it as a manifestation of

organizational tolerance for wrongdoing or as a factor that increases the difficulty of ignoring or rationalizing the legitimacy of the wrongdoing incidents and makes employees feel that “enough is enough” (Miceli & Near, 1992). In support of the latter supposition, the preliminary findings of one study indicate that external whistle-blowing had a weak association with a perceived high prevalence of organizational wrongdoing and that respondents who observed more organizational wrongdoing were more likely to report the one incident that they perceived as the most serious or as having the most direct personal effect on them than respondents who observed fewer incidents of organizational wrongdoing (Miceli & Near, 1985).

Finally, in terms of the perpetrator of the wrongdoing, preliminary findings show that the likelihood of an observer blowing-the-whistle on organizational wrongdoing decreases when the status of the wrongdoer is higher rather than lower (Miceli, Near & Schwenk, 1991) suggesting that potential whistle-blowers weigh the wrongdoer’s status or his/her ability to retaliate before taking action (Miceli & Near, 1992).

Work-Group Characteristics

Based on research conducted in the area of bystander intervention and findings related to the concept of ‘diffusion of responsibility’, it has often been postulated in whistle-blowing research that the presence of a large number of observers of organizational wrongdoing would have an inhibitory effect on individual members’ decision to report the observed wrongdoing (e.g., Dozier & Miceli, 1985; Graham, 1986).

However, the results of studies conducted within the whistle-blowing context have not only failed to provide support for that hypothesis but have provided preliminary

indications that the opposite effect actually occurs (Miceli & Near, 1988a; Miceli, Dozier & Near, 1991); internal whistle-blowing occurred more commonly in larger as opposed to smaller work groups where there were more rather than fewer observers of organizational wrongdoing present.

A possible explanation for this unexpected finding is that the presence of more rather than fewer observers of organizational wrongdoing facilitates whistle-blowing behavior by decreasing the likelihood of an organization retaliating against a whistle-blower. There are two possible explanations: (a) it is more difficult to discredit and/or ignore a whistle-blower reporting an organizational violation when there are more individuals who can publicly acknowledge the same wrongdoing (Weinstein, 1979); and, (b) it requires more effort on the part of the organization to retaliate against a group of individuals as compared to retaliation against a single reporter. Even though research findings supporting these statements have not been consistently obtained in the existing whistle-blowing -retaliation literature (e.g., Parmerlee et al., 1982), perceived social support on the part of the observer of organizational wrongdoing may make the difference between deciding to blow-the-whistle or not.

Another explanation, which is more consistent with later findings in the prosocial behavior research regarding the influence of the presence or absence of other observers of organizational wrongdoing on whistle-blowing behavior, is that other conditions, such as group cohesion level, may be moderating the diffusion of responsibility effect within a whistle-blowing context (Miceli & Near, 1992). According to these research findings, observers of organizational wrongdoing may feel a greater sense of personal responsibility for reporting the wrongdoing when they are either members of a large and

tightly knit group of co-workers or members of a small group of relative strangers (Miceli & Near, 1992; Rutkowski, Gruder & Romer, 1983; Senneker & Hendrick, 1983).

However, one study has found some support for the diffusion of responsibility hypothesis; within the context of external whistle-blowing, occurrence was higher when there were fewer observers present (Miceli, Near & Schwenk, 1991). Such a finding indicates the possibility that the presence of more or fewer observers of organizational wrongdoing may have a different effect depending on whether internal or external whistle-blowing is the focal activity of investigation (Miceli & Near, 1992).

In addition to group size and group cohesion, Greenberger, Miceli and Cohen (1987) postulated that work group norms may influence members' decision to blow-the-whistle on observed organizational wrongdoing. Members of a group have available to them the group's "trustworthy recipes" (Louis, 1990) on which they draw in developing individualized definitions of any given situation. Such situational definitions provide an individual with a practical theory of what is going on, in concrete terms, which includes notions of what typically occurs in situations similar to the one they are facing, and when certain behaviors should occur, along with beliefs regarding why things occur the way they do and the amount of control they believe they have over these things (Louis, 1990). Thus, similar to an organization's culture and climate, work groups can influence the occurrence of whistle-blowing behavior by defining reality and the appropriate responses to this reality as well as what might happen to the whistle-blower and the work group after the whistle-blowing act occurs.

Based on the social influence literature, it has been proposed that whistle-blowing will be less likely to occur in groups that are highly cohesive and in which the majority is

large, unanimous and credible or if the whistle-blowing act is perceived as threatening to the existence of the work group. In contrast, whistle-blowing will be more likely if the potential whistle-blower views him/herself as competent, and is a long-term member with accumulated idiosyncrasy credits, who desires distinctiveness and is not dependent on the work group (Greenberger, Miceli & Cohen, 1987).

However, despite the fact that whistle-blowing behavior can potentially impact not only the life of the whistle-blower and the organization but the life of the whistle-blower's work group (Jensen, 1987), and the empirical findings that work groups help define reality and influence members' reactions to work situations (Griffin, 1983), little research has been conducted in the whistle-blowing arena investigating the effects of work groups on potential and actual whistle-blowing behavior of their membership.

Organizational Characteristics

A number of organizational characteristics have been hypothesized to influence the occurrence of whistle-blowing behavior in an organization. Organizational size and structure have been thought to affect organizational members' responses to observed wrongdoing (Near & Miceli, 1985; Graham, 1986). Contrary to predictions, Miceli & Near (1985) found that whistle-blowers were more likely to be members of larger organizations, independent of the choice of reporting channel (i.e., internal versus external). Data from a national survey of personnel executives' perceptions regarding organizational whistle-blowing behavior to parties external to the organization indicated that (1) personnel executives of larger companies perceived a higher level of employee-voiced concerns to the EEOC and OSHA; (2) personnel executives of unionized

companies perceived a higher level of employee-voiced concerns to the EEOC and the media than executives of non-unionized companies; and, (3) personnel executives of larger and of unionized companies perceived a greater overall level of external whistle-blowing than those of other organizations (Barnett, 1992).

Also, Weinstein (1979) postulated that organizations that are more hierarchical, authoritarian or bureaucratic would inhibit whistle-blowing behavior of their members. In support of this proposition, Miceli, Near and Schwenk (1991) found that both internal and external whistle-blowers perceived their organizations to be less bureaucratic than did observers of organizational wrongdoing who did not report it.

There is also some preliminary evidence that the type of industry may be related to whistle-blowing behavior (Miceli & Near, 1992). In an exploratory study of the effect of industry on whistle-blowing, Miceli, Near and Schwenk (1991) reported that external reporting channels were more likely to be used by reporters employed by government agencies or financial industries. However, explanations for this finding are highly speculative at this stage of the research. Barnett (1992) also reported that, although organization industry group was not significantly related to whistle-blowing to agencies such as the EEOC, the media or law enforcement or to overall levels of external whistle-blowing, personnel executives of manufacturing companies reported a higher perceived level of employee-voiced concerns to the OSHA.

Additional factors thought to influence whistle-blowing include profitability of the organization, level of competition in the industry and the societal culture within which the organization operates (Miceli & Near, 1992). Although most of these factors have not been investigated by empirical research, one scenario-based study provided

some support for the influence of the culture of the environment within which the organization operates on the intentions of managers to report the hypothetical wrongdoing. Becker and Fritzsche (1987) reported that French and American managers were more likely than German managers to blow-the-whistle on hypothetical organizational wrongdoing regarding automotive manufacturing defects.

Finally, aspects of organizational climate have been hypothesized to influence whistle-blowing behavior in organizations. Organizations have been viewed as having different climates (Powell & Butterfield, 1978) or cultures (Riley, 1983) which affect individual members' values, beliefs and attitudes as well as organizational practices in general. Also, organizations are thought to develop different climates for different aspects of the work environment (Schneider & Reichers, 1983), such as climate for whistle-blowing (Zalkind, 1987). According to Thompson and Luthans (1990), organizational cultures and climates are "socially constructed realities that provide learned ways of coping with experiences. . . . The socially constructed realities come about through patterns of direct and vicarious interactions involving the cognitive matching of antecedents-behaviors-consequences that reinforce accepted norms of behavior" (p. 327-328).

Thus, since organizational members' perceptions of organizational climate represent a response to external stimuli, such as organizational history or policies and practices regarding a specific aspect of organizational work life, and the members' cognitive processing of those external stimuli and the assignment of psychological meaning to them (Joyce & Slocum, 1990; Near, Baucus & Miceli, 1993), it is necessary to consider organizational responses to both the wrongdoing and the whistle-blower in

order to understand the relationship between perceived organizational climate for whistle-blowing and whistle-blowing behavior.

Most of the whistle-blowing studies have focused on individual differences in beliefs and values that organizational employees hold regarding wrongdoing and whistle-blowing behavior and their influence on decisions to blow-the-whistle on observed organizational wrongdoing. One study has focused on organizational climates for whistle-blowing as reflected in the shared values of organizational members and their influence on organizational practices (i.e., seriousness and frequency of wrongdoing incidents, whistle-blowing frequency and incidence of retaliation against reporters of wrongdoing) (Near, Baucus & Miceli, 1993).

Although the dependent variables of interest should correspond to the level of analysis (i.e., individual differences in beliefs and their consequences on individuals' behaviors and/or attitudes versus differences in organizational climates or shared values and their consequences on organizational practices or aggregate measures of organizational members' behaviors), the two are not independent of each other and do not exist in isolation. Shared organizational values and beliefs have an effect on how individual members of the organization view and respond to work place situations and, in turn, individual members' beliefs may help form, shape and change the values held by organizations.

However, no study that the present researcher is aware of has attempted to investigate the cross-level mechanism(s) through which organizational climate-related cues influence organizational members' responses to observed organizational wrongdoing.

Organizational Whistle-Blowing Climate

It has been postulated that organizations, either consciously or unconsciously, develop and maintain different climates and cultures for whistle-blowing (Zalkind, 1988; Miceli & Near, 1992). Several aspects of organizational behavior regarding both wrongdoing and whistle-blowing behavior may influence perceptions of employees regarding organizational whistle-blowing climate and culture and their decision-making processes of whether to report observed organizational wrongdoing.

According to Miceli & Near (1985), whistle-blowing climate can be separated into two dimensions: (1) tolerance for wrongdoing or dependence of the organization on the wrongdoing for its survival, and (2) the extent to which the organization encourages whistle-blowing through formal and informal communications. Although the first dimension was useful in identifying external whistle-blowers, internal whistle-blowers and inactive observers experience similar climates (Miceli & Near, 1985). Thus, it has been hypothesized that the difference between “silence” (i.e., inactive observation) and “direct voice” (i.e., reporting) (Kolarska & Aldrich, 1980) is more a function of the observer’s concern over the observed wrongdoing than a function of organizational receptiveness to reports of wrongdoing or organizational communications (Miceli & Near, 1985).

The existence of a code of ethics or conduct within the organization can influence organizational members’ assessments of potentially questionable organizational activities, their perception of personal responsibility for action as well as their estimated likelihood that corrective action will follow a report (Miceli and Near, 1992; Murphy,

1989). A possible explanation for these hypothesized relationships is that the socialization process within an organization or within a profession as it takes place through a code of ethics may impart a “service ethic” or a “sense of social responsibility” (Perrucci, Anderson, Schendel, & Trachtman, 1980; p. 150). Also, explicit organizational statements regarding what is considered acceptable and unacceptable organizational behavior and established reporting channels as well as organizational history of responses to previous whistle-blowing incidents may function to structure situations for the observer, provide cues regarding the efficacy of whistle-blowing and influence the degree of trust an employee places on the organization to do the ‘right thing.’ The observers’ degree of trust that the organization will behave in a fair and appropriate way may determine not only whether the observer will report the wrongdoing but also where the observer will report it (i.e., internally or externally) (Near & Miceli, 1985).

Support for the effect of formal or informal policies regarding organizational ethics on ethical behavior and whistle-blowing in the workplace has been mixed. Some research findings suggest that the existence of formal or informal organizational policies favoring ethical behaviors increases organizational members’ ethical behaviors thus lending support for the proposition that organizational stimuli can influence members’ ethical behavior (e.g., Hegarty & Sims, 1979). Trevino & Victor (1992) also reported that, within the context of peer reporting (i.e., a lateral rather than an upward control attempt), codes of conduct discouraging unethical behavior and encouraging employees to report code violations to management had a significant positive influence on employees’ inclination to report observed peer wrongdoing in a field survey study and in one of two scenario-based studies.

Although codes of conduct or codes of ethics may be helpful in communicating organizational standards to employees and in creating a perception of organizational emphasis on ethical and legal behavior (Casal & Zalkind, 1993), some researchers indicate that organizational emphasis on policy and formal codes of conduct or ethics alone may be insufficient as a means of dealing with organizational unethical behaviors, organizational wrongdoing and internal reporting of these behaviors when observed (Mathews, 1987; Keenan, 1990). In order for organizational communications regarding tolerance of wrongdoing, expectations of reporting observed questionable activities by employees and organizational responses to reported wrongdoing to be more effective, the organization would have to support them with reporting channels and reward structures that are consistent with such communications (Near & Miceli, 1987; Miceli & Near, 1988; Trevino & Youngblood, 1990). In terms of supportive reward structures, however, there is some evidence that some organizational members may consider monetary awards as inappropriate for what they may perceive as a moral action. In a secondary data analysis of the USMSPB 1980 survey data, Miceli and Near (1984) found that whistleblowers and organizational members who did not observe any organizational wrongdoing were less likely to say that financial incentives would encourage them to blow-the-whistle than observers of wrongdoing who remained silent. Consistent with Miceli and Near's (1984) findings, only 1 out of 139 first-level managers participating in a survey indicated that financial rewards for reporting wrongdoing would be the most encouraging factor in their decision to blow-the-whistle (Keenan, 1988a).

Some empirical work has been conducted regarding whistle-blowing behavior and its relationship to organizational climates. Blackburn (1988) found that organizational

members who voiced their concerns held more positive views of top management and perceived a more participatory climate than observers of wrongdoing who remained silent. Miceli & Near (1985) also found that whistle-blowers employed by organizations perceived to have more supportive whistle-blowing climates tended to engage primarily in internal whistle-blowing behavior. In addition, Keenan (1990b) found that, in organizations with whistle-blowing-related policies and practices and a low retaliatory climate, upper-level managers held more positive perceptions about the adequacy of organizational encouragement of whistle-blowing than managers in other organizations. Keenan (1988a) also reported that first-level managers working in organizations perceived to have more supportive and less defensive climates (as operationalized by the subscales of the Communication Climate Inventory measure) indicated a greater confidence that they would not experience retaliation if they were to blow-the-whistle on organizational wrongdoing.

Finally, Near, Baucus & Miceli (1993), through a secondary analysis of the USMSPB 1980 survey data, attempted to investigate differences in shared values of organizational members and their relationship to organizational practices related to incidents of wrongdoing and whistle-blowing behavior. Their findings suggested that (1) positive organizational values (i.e., values endorsing avoidance of organizational wrongdoing and reporting of observed wrongdoing and discouraging retaliation against whistle-blowers) were not significantly related to wrongdoing incidence; (2) positive beliefs about whistle-blowing and protection from retaliation had a strong negative relationship with serious organizational wrongdoing incidence; and, (3) knowledge about reporting channels, but not members' positive beliefs or protection from retaliation, was

strongly and positively related to whistle-blowing incidence (Near, Baucus & Miceli, 1993). Based on these findings, the researchers concluded that organizational values were not strongly associated with organizational practices. However, their reliance on preexisting measures of what they consider “values,” their small number of organizations (i.e., N=15) and the range restriction in the value variables among the different federal agencies may have attenuated the relationship obtained between the organizational values and practices variables.

Individuals’ expectations of organizational responses to both the reports of the wrongdoing and the reporters of wrongdoing themselves are also thought to influence the decision making process of whether to blow-the-whistle on observed organizational wrongdoing. Such expectations may be influenced in turn by both organizational history in dealing with whistle-blowing incidents and individuals’ perceptions regarding whether the organization is dependent on the wrongdoing for its continued operation. It has been hypothesized that organizations that are perceived to be dependent on wrongdoing may provide cues that they will resist taking corrective action regarding the reported wrongdoing and that they will retaliate against the reporter of the wrongdoing (Miceli & Near, 1985).

Based on the literature on prosocial behavior, it has been hypothesized that observers of organizational wrongdoing will decide to engage in whistle-blowing behavior only to the extent that they expect it to be efficacious; if observers of wrongdoing do not feel that the organization is willing and able to take corrective action then whistle-blowing cannot be considered a reasonable or feasible choice of action (Miceli & Near, 1992). Empirical findings thus far tend to support this hypothesized

relationship between expected organizational response to the reported wrongdoing and whistle-blowing behavior. Secondary analyses of the USMSPB 1980 and 1983 survey data indicate that perceived organizational responsiveness has a positive relationship with whistle-blowing behavior (Miceli & Near, 1984; Near & Miceli, 1987). Casal and Zalkind (1993) also found that employee decisions to report organizational wrongdoing were related to expectations that reporting would be effective, in a sample of private sector accountants who were aware of fraudulent activities in their organizations.

Barnett, Cochran and Taylor (1993) reported that in private sector organizations that developed and implemented internal disclosure policies and procedures, personnel executives perceived an increase in internal whistle-blowing and a decrease in external whistle-blowing subsequent to the implementation of such policies. They also reported that existence of such policies was related to perceptions of greater managerial responsiveness to reported wrongdoing, which in turn was related to increased incidence of internal whistle-blowing.

Qualitative research has shown that although managers across all levels of the hierarchy state that they are supportive of whistle-blowing and they prefer to be informed about serious organizational wrongdoing occurring in their organizations (Clinard, 1983; Keenan, 1988), frequently the organizational response to reports of wrongdoing tends to be retaliatory in nature (Parmerlee, Near & Jensen, 1982; Near & Miceli, 1986; Jos, Tompkins & Hayes, 1989). Such a response could be attributed to the fact that whistle-blowing behavior may often be perceived as threatening the existing authority structure of the organization, the cohesiveness of the work group(s), the survival of the organization (if it is dependent on the wrongdoing) and, in the case of external whistle-blowing, the

public image of the organization. Alternatively, this inconsistency between managers' expressed preferences and actual responses to whistle-blowing may be indicative of their ambivalence regarding how to best handle whistle-blowing situations.

As Near, Baucus and Miceli (1993) point out, whistle-blowers may serve as role models that shape and influence individuals' beliefs and organizational and group norms regarding both organizational wrongdoing and whistle-blowing behavior, and as such, organizational responses to whistle-blowers and the reported wrongdoing itself may be important in understanding incidence of whistle-blowing behavior within an organization.

Although the most publicized cases involve retaliation against the whistle-blower and cover-up of the reported wrongdoing, the organizational responses to whistle-blowing and the reported wrongdoing itself may vary greatly across organizations and across whistle-blowing situations within the same organization. An organization's response can range from the most favorable, where management is both supportive to the whistle-blower and most likely to resolve the matter and remedy the situation internally, to the most unfavorable, where management retaliates fully, openly, and deliberately against the whistle-blower and denies that the organization is doing something wrong (Parmerlee et al., 1982).

Research indicates that organizations do not respond with equal fervor to all whistle-blowers. It has been hypothesized that organizations are more likely to retaliate against whistle-blowers who report the organizational violations or questionable practices to some party external to the organization and who are perceived to have credibility in the public eye (Weinstein, 1979; Farrell and Petersen, 1982). It has also been suggested that the more serious or institutionalized the wrongdoing, the more likely it is that the

organization's response will be a retaliatory one (Near and Miceli, 1985; Weinstein, 1979). Most of these expectations are based on the assumption that organizations engage in a rationalistic process (i.e., organizational level of retaliation is in direct proportion to the degree of threat the management of the organization experiences as a result of whistle-blowing) in determining their response to the whistle-blowing situation (e.g., Parmerlee et al., 1982). However, other researchers postulate and provide preliminary empirical evidence that organizations engage in a strategic process (i.e., the organization retaliates against whistle-blowers who represent the least amount of threat to the organization, usually as determined by the merit of the whistle-blower's case) (Near & Jensen, 1983; Near & Miceli, 1986).

Whatever the specific factors that determine an organization's response to a whistle-blowing incident may be, organizational retaliation is primarily aimed at protecting the organization from the whistle-blower, maintaining its private and public image and well-being, and potentially discouraging potential future whistle-blowing (O'Day, 1972) and these organizational responses to whistle-blowing incidents help shape organizational members' perceptions and beliefs relating to whistle-blowing.

Organizational climate regarding whistle-blowing behavior has been considered by researchers to be one of the factors influencing retaliatory responses on the part of the organization; the less supportive the climate, the more likely it is that the organization will try to retaliate against the whistle-blower (Near and Miceli, 1986). A factor purported to inhibit the organization's tendency to retaliate against whistle-blowers is social support; whistle-blowers who receive support from supervisors, coworkers or other internal or external to the organization sources are less likely to be retaliated against

(Near and Jensen, 1983; Parmerlee et al., 1982; Near and Miceli, 1986). It has been postulated that both the probability of blowing-the-whistle and expectations regarding resultant retaliation are influenced by issues of trust (Miceli & Near, 1994; King 1999). In addition, the level of perceived top management support and merit of the whistle-blower's case were found to be predictive of the whistle-blower's perception of comprehensiveness of retaliation experienced as a result of the report (Near & Jensen, 1983).

Survey results of one study provide some support for these statements by indicating that there is a belief among employees of various organizations that the fear of being fired (a severe form of retaliation) deters acts of whistle-blowing (Callahan & Collins, 1992). Ironically, aside from this one study, a finding that appears to be fairly consistent across both the qualitative and quantitative whistle-blowing literature is that organizational retaliation does not seem to deter whistle-blowers from their intent to report observed wrongdoing in the future (e.g., Near & Jensen, 1983; Near & Miceli, 1986; Miceli, Dozier & Near, 1991; Jos, Tompkins & Hayes, 1989). Furthermore, threatened retaliation was found to be associated with a greater propensity to report observed organizational wrongdoing to individuals or groups outside the organization rather than to internal parties in at least one study in the literature (Miceli & Near, 1985). However, such findings should be viewed with caution because most of the data come from retrospective survey-based perceptions of whistle-blowers that are questionable in terms of their subjection to distortions, and also, there may have been self-selection of respondents in terms of their participation in the studies in question.

Summary and Conclusions from the Whistle-Blowing Literature

Most of the existing work on whistle-blowing can be classified in one of several categories: (1) case studies of whistle-blowers (e.g., Nader, Petkas & Blackwell, 1972; Weinstein, 1979; Westin, 1981; Ewing, 1983; Glazer & Glazer, 1989); (2) a description and explication of legal issues related to whistle-blowing and legal protection afforded to whistle-blowers (e.g., Parliman, 1987; Rogine, 1985; Sculnick, 1986; Massengil & Petersen, 1989); (3) conceptual analyses of whistle-blowing as a process (e.g., Elliston, 1982a, 1982b; Near & Miceli, 1985; Dozier & Miceli, 1985; Graham, 1986; Greenberger, Miceli & Cohen, 1987; Near & Miceli, 1987); and, (4) empirical studies of whistle-blowing (e.g., Parmerlee, Near & Jensen, 1982; Near & Jensen, 1983; Brabeck, 1984; Miceli & Near, 1988; Keenan, 1990; Miceli & Dozier, 1991; Zalkind, Demetriadou & Schreier, 1990; Zalkind, Verdi & Wee, 1992; Casal & Zalkind, 1993).

Most of the existing conceptual work and resultant research focuses primarily on the identification of individual, group and situational or organizational variables that affect the whistle-blowing process, and they yield a fair amount of descriptive information regarding whistle-blowing but offer little beyond theoretical speculations in terms of explaining how such variables might influence the process.

Thus, a review of the theoretical and empirical work in the area of whistle-blowing reveals that we know a little bit about a lot of issues but very few of the factors thought to influence whistle-blowing behavior have received consistent support in the literature. This may be attributed primarily to two factors: (1) whistle-blowing is unquestionably a complex and relatively rare process because of its sensitive and often ambivalent nature, and (2) too many different theoretical perspectives have been utilized

concurrently to facilitate the justification of specific hypotheses made in relation to whistle-blowing (e.g., altruistic and prosocial behavior, expectancy theory, and power-dependence). Although the latter is not a shortcoming or a drawback in and of itself, the fact that most of these theories come from related, but not identical, domains of behavior can potentially be problematic and may help explain the reasons for failing to obtain support for hypotheses that would otherwise appear intuitively appealing. As a possible resolution to this state of affairs and as an alternative and more comprehensive way of looking at whistle-blowing as a distinct behavioral phenomenon in its own right, the present study proposes the use of the “theory of planned behavior” (Ajzen, 1988) as a means of exploring and gaining further understanding of the formation of organizational members’ intentions to report observed organizational wrongdoing. This theoretical perspective, if found to be applicable in the area of whistle-blowing, it offers two advantages over other approaches used to date: (1) it allows for an exploration of not only the factors affecting whistle-blowing behavior but also the mechanism via which they exercise their effects, and (2) it incorporates in its theoretical postulations and methodology many of the perspectives that have been used to explain whistle-blowing behavior (e.g., power-dependence, prosocial behavior, expectancy theory).

A Proposed New Model for the Study of Whistle-Blowing Intentions:

Ajzen’s (1988) Theory of Planned Behavior

Ajzen’s (1988) model of planned behavior is based on the underlying assumptions that people act in accordance with their beliefs and available information, though not always in a strictly logical manner, and that intentions and performance of a specific

behavior is “contingent on the presence of appropriate opportunities or on possession of adequate resources (time, money, skills, cooperation of other people, etc.)” (Ajzen & Madden, 1986).

According to the theory, which is an elaboration and expansion of the theory of reasoned action (Ajzen & Fishbein, 1980), the way a person will behave can be predicted from the person’s behavioral intentions, which in turn can be predicted from the person’s relevant attitudes and beliefs. Specifically, the intention to perform a given behavior is a weighted additive function of several factors: (1) the person’s own attitude toward the behavior in question, (2) the person’s subjective norm about what relevant referent others think the person should do, and (3) the behavioral control the person perceives having over performing the behavior in question.

All these factors are considered to be the immediate antecedents of behavioral intention and, along with their determinants, are hypothesized to be the intervening variables which mediate or help explain the relationship between external stimuli and behavioral intentions. However, the relative weight of these components in predicting intentions may vary across different situations and across different people. The model of planned behavior is presented in Figure 1.

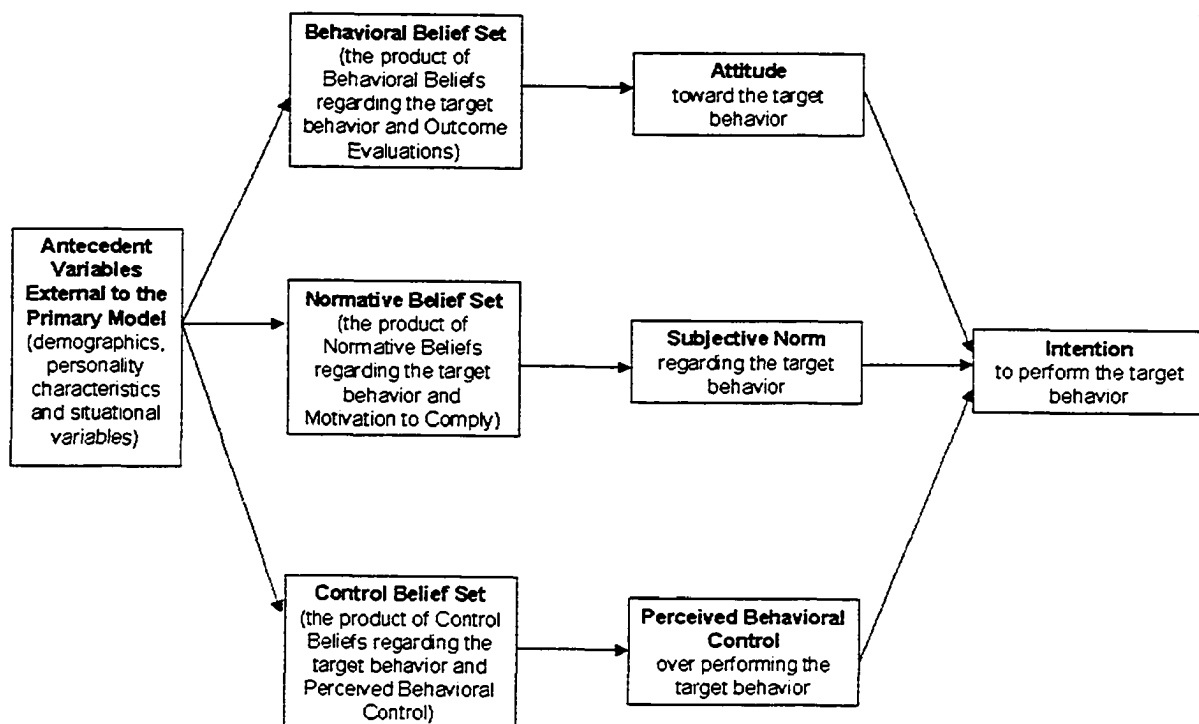


Figure 1. Ajzen's Model of Planned Behavior. Adapted from Ajzen, 1988.

There has been considerable evidence in support of the theory of planned behavior provided by research conducted in a variety of experimental and naturalistic settings (Ajzen & Madden, 1986; Beck & Ajzen, 1991). In terms of the model's historical predictive power, Ajzen (1988) summarized findings from several studies involving a wide variety of intentions ranging from using birth control pills or having an abortion to attending church during Easter or smoking marijuana. For these studies, Ajzen (1988) reports multiple correlations ranging from .73 to .89 in the investigation of the link between intention as the dependent variable and attitudes toward and subjective norms relative to the behavior as the independent variables. Similarly, other empirical work in the attitude-intention-behavior arena has consistently shown that the model can yield high levels of prediction of intentions and it is comparable to two other similar models (i.e., Triandis' Model of Interpersonal Behavior and Sheth's model for predicting primarily

consumer buying intentions and actual purchasing behavior) in terms of its predictive ability (Oskamp, 1991). However, the multiple correlation indices are undoubtedly overestimated due to the use of self-report measures for both independent and dependent variables and as such they should be viewed with caution.

Attitude, Behavioral Beliefs and Outcome Evaluations

According to Ajzen and Fishbein (1980) and Ajzen (1988), a person's attitude toward a given behavior is comprised of behavioral beliefs (i.e., beliefs about the probability of occurrence of certain consequences of performing the behavior in question), each of which is multiplied by the person's evaluation of that consequence. The sum of all the (expectancy) x (value) products yields the person's attitude toward the behavior in question.

Within the context of whistle-blowing behavior, research conducted by Miceli and Near (1984) has indicated that, in retrospective reports, whistle-blowers are more likely to believe that whistle-blowing, in general, is more desirable than are inactive observers or non-observers of wrongdoing. However, Miceli and Near (1992) in their review of the literature conclude that cause-effect relationships cannot be drawn from such research and, even if that were possible, it would be of "little practical importance" (p. 114). Such a conclusion is based on the fact that "while values and beliefs predict whistle-blowing, their effects, in general, are weaker than are those of situational variables concerned with the particular incident of wrongdoing" (Miceli & Near, 1992; p. 114).

Such conclusions and explanations for these findings are explicitly addressed by the Ajzen (1988) model of planned behavior. According to this theory, general measures

of values, beliefs, or attitudes (e.g., whether whistle-blowing is desirable) will indeed be only weakly related to the prediction of whistle-blowing intention and behavior in a specific situation, because such general measures can only predict behavioral predispositions or overall patterns of behavior, at best (Ajzen & Fishbein, 1980). Thus, although in agreement with Miceli and Near (1992) that such general measures “are of little value if we are interested in predicting and understanding some particular action with respect to the object” (Ajzen & Fishbein, 1980; p. 27), they argue that this is a limitation that can be overcome by assessing people’s attitudes toward the specific behavior and not toward the general behavioral category. Ajzen and Fishbein (1980) argue that “any behavioral criterion can be predicted from attitude -- be it a single action or a pattern of behavior -- provided that the measure of attitude corresponds to the measure of behavior” (p. 27). By ‘correspondence,’ Ajzen and Fishbein (1980) refer to the concept that in order to obtain accurate indices of relationships between predictors and criteria, the measures used to assess these variables have to match each other in their level of specificity or generality in terms of target, action, context and time. Any lack of correspondence on any of those four elements can reduce the accuracy of prediction (Ajzen & Fishbein, 1980). Finally, the strength of prediction is dependent on the temporal proximity of obtaining predictor and criterion measures; the longer the lapse of time between assessing intentions and actual behavior, the lower the observed relationship between intention and behavior, especially in the presence of unexpected events.

Subjective Norms, Normative Beliefs, and Motivation to Comply

According to the theory of planned behavior (Ajzen, 1988), a person's subjective norm is comprised of normative beliefs (i.e., beliefs about what each relevant significant other thinks the person should do), each of which is multiplied by the person's motivation to comply with each of the referent others; the sum of the products of normative beliefs x motivation to comply yields the person's subjective norm.

Within the theory, the assessment of both attitudes and subjective norms corresponds to the underlying assumptions of the major theoretical frameworks employed to explain the relationship between various factors and whistle-blowing behavior. According to motivation theory in general and expectancy theory in particular, the force for blowing-the-whistle on organizational wrongdoing is a function of an individual's expectancy (i.e., perceived likelihood) that certain outcomes, such as correction of the wrongdoing or managerial attention to the complaint, will follow the whistle-blowing act. Furthermore, the evaluation of these outcomes is a function of the extent to which each one is instrumental in leading to desirable or undesirable consequences (valences) for the individual.

Within the context of the planned behavior model (Ajzen, 1988), this expectancy theory perspective is incorporated into the belief set (both behavioral and normative) individuals hold with regard to whistle-blowing behavior in general. The expectancy theory perspective is operationalized within this proposed model in the measurement of both the strength of each behavioral and normative belief (i.e., the perceived likelihood of occurrence) and the outcome evaluation of the behavioral beliefs (i.e., the desirability versus undesirability of each behavioral outcome) and the desire to comply with referent others. The sum of the cross-products of strength and outcome evaluation of the

behavioral beliefs and of the strength of the normative belief and motivation to comply represent the behavioral and normative belief sets each individual holds vis-a-vis the whistle-blowing behavior.

Perceived Behavioral Control

Research findings have indicated that for cases in which the target behavior is difficult, such as attempted weight loss (Schifter & Ajzen, 1985) or attendance at classes and achievement of high grades in college (Ajzen & Madden, 1986), a person's feelings of perceived control over the behavior adds substantially to the prediction of intention and behavior. Such a variable would be expected to function in a similar fashion within the context of reporting observed organizational wrongdoing given the often ambivalent and complex nature of this behavior. According to the theory of planned behavior, perceived behavioral control "refers to the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles" (Ajzen, 1988; p. 132). This addition of the "behavioral control" variable to the model of the theory of planned behavior (Ajzen, 1988) distinguishes it from its predecessor theory of reasoned action (Ajzen & Fishbein, 1980).

Just as beliefs regarding the consequences of the behavior of interest are viewed as the determinants of attitudes, and normative beliefs are viewed as the determinants of subjective norms, so too beliefs about resources and opportunities may be viewed as being the determinants of perceived behavioral control. These beliefs may be based on past experience with the behavior under investigation, but they may also be influenced by indirect information about the behavior, experiences of other relevant individuals or by

other factors that may increase or reduce the perceived difficulty of performing the behavior of interest (Ajzen & Madden, 1986).

Thus, within the area of whistle-blowing intentions and behavior, the concept of perceived behavioral control allows for the incorporation of a number of variables which have been postulated to affect an individual's decision to report observed organizational wrongdoing. For example, the power-dependency framework has been used by a number of researchers to describe and explain the course of the whistle-blowing process. If whistle-blowing is viewed as a political behavior (Farrell & Petersen, 1982), then perceived power -- which has also been defined as the inverse of dependence (Emerson, 1962) -- will affect both the observer's decision to blow-the-whistle and the organization's response to both the reporter and the reported wrongdoing. Based on Emerson's (1962) postulations, in a case of clear and serious wrongdoing, the observer's decision to report the activity will likely be affected by the degree of the observer's dependence on the organization and the availability of alternative resources. This led researchers to hypothesize that whistle-blowing occurrence will be higher when alternative job opportunities are perceived by the observer as both available and acceptable (Near & Miceli, 1985). Within the proposed model these variables can be subsumed and assessed under the concept of "perceived behavioral control" (Ajzen, 1988).

Variables 'External' To The Theory

Individual characteristics such as self-esteem, locus of control, or demographic or background variables have also been postulated in the existing literature to influence

whistle-blowing behavior through their effects on the perceived efficacy of the whistle-blowing behavior, among other factors (Miceli, Van Scotter, Near & Rehg, 2001). The theory of planned behavior does not deny that such variables are influential in the shaping of the behavioral, normative as well as the control belief sets people hold vis-a-vis the target behavior. However, the theory considers such variables to be external to the conceptual components of the model, and their effect on whistle-blowing intention (and ultimate behavior) is always mediated by the influence they exert on the conceptual antecedents of intention and behavior.

Thus, according to the model of planned behavior (and its predecessor theory of reasoned action), all these factors are linked to the behavior of whistle-blowing only indirectly and to the extent that they influence the way individuals perceive and feel about the behavior in question, as manifested by the behavioral and normative beliefs they hold (Ajzen & Fishbein, 1980).

An Additional Variable Postulated to Enhance Prediction of Whistle-Blowing Intentions

The theoretical framework of planned behavior described so far is, in principle, open to the inclusion of additional predictor variables (Ajzen & Fishbein, 1980; p. 247). In fact, there is some research evidence that additional predictor variables can add significantly to the predictive ability of the model in some situations (Oskamp, 1991).

Based on findings from research in the relevant whistle-blowing literature previously described, the variable of perceived moral obligation has been added to Ajzen's (1985) original model of planned behavior for the purposes of the current research on whistle-blowing. The expansion of the model, to include the concept of

perceived moral obligation as a determinant of whistle-blowing intention, is based on studies which have shown that the personal moral obligation variable adds to our ability to predict intentions in morally relevant situations such as returning an erroneously received tax refund (Gorsuch & Ortberg, 1983) or using birth control (Pagel & Davidson, 1984).

General Conclusion and Purpose of Present Research

A review of the model of planned behavior makes it apparent that many of the most relevant theoretical perspectives linked to the exploration and explanation of the whistle-blowing process (e.g., expectancy theory, power-dependence relations) are either implicitly or explicitly incorporated within this model.

Given that the model of planned behavior incorporates a number of concepts central to other theories, if it is shown to be applicable to the whistle-blowing domain, it can potentially provide researchers with a more straightforward and parsimonious model to use in the investigation of this complex phenomenon. It accounts for mediating factors leading from external stimuli and personal characteristics to the formation of the intention to report observed organizational wrongdoing. The adapted 'planned behavior' model (Ajzen, 1988) proposed for the present investigation of antecedents of the formation of whistle-blowing intentions is presented in Figure 2, at the end of this section. The present model is a derivative of the original one proposed by Ajzen (1988) but the general concepts have been specified to correspond to the behavior of interest (i.e., whistle-blowing or reporting observed organizational wrongdoing). In addition, certain variables 'external' to the primary model have been selected in order to explore their influence on

the immediate antecedents of attitudes, normative and perceived behavioral control beliefs individuals hold vis-a-vis whistle-blowing behavior.

Thus, in addition to exploring the feasibility of using the theory of planned behavior in the whistle-blowing behavior domain, the present study investigates the effects of organizational and work group climate variables on the formation of whistle-blowing intentions. The purpose of this second part of the investigation is two-fold: (1) to explore the influence of organizational climate variables on whistle-blowing intentions, an area that has not been seriously addressed in the existing empirical whistle-blowing literature, with a few notable exceptions (e.g., Zalkind, Demetriadou, & Schreier, 1990; Zalkind, Verdi & Wee, 1992; Casal & Zalkind, 1993), and (2) to explore the mechanism via which variables 'external' to the theory have an effect on the formation of whistle-blowing intentions.

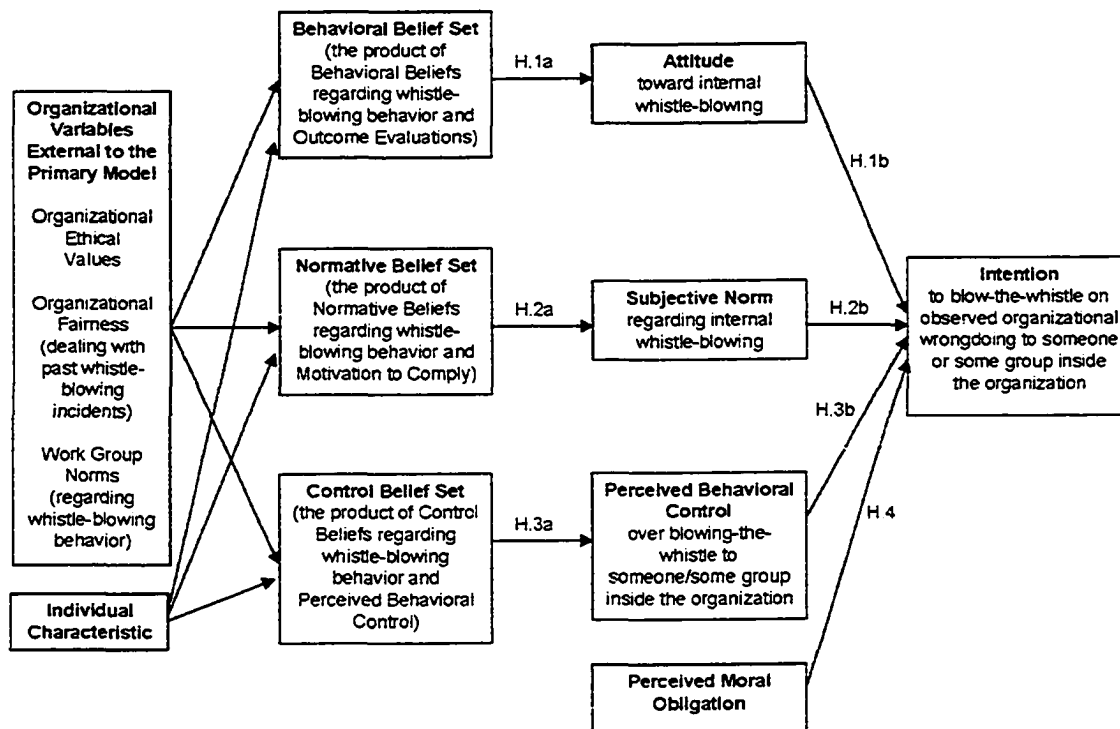


Figure 2. Proposed Model of Whistle-blowing Intention Formation

Chapter III. Problem and Hypotheses

Primary Model

In the present study, whistle-blowing intentions and their antecedents are examined within the framework of the theory of planned behavior (Ajzen, 1988). According to this model, individuals' intentions to perform a target behavior are determined by: (1) the general attitude toward the behavior, and (2) the overall subjective norm these individuals hold vis-a-vis the target behavior, as well as (3) the behavioral control individuals perceive themselves to have in relation to the performance of the target behavior. In addition, based on previous research findings (Beck & Ajzen, 1991), because the target behavior investigated in the present research involves ethical issues, the original theory of planned behavior model is expanded to include (4) individuals' perceived moral obligation to perform the target behavior, as an immediate antecedent of whistle-blowing intent. The general attitude, overall subjective norm and perceived behavioral control are, in turn, determined, respectively, by an underlying corresponding set of behavioral, normative and behavioral control beliefs that individuals hold relative to the target behavior. Thus, within the context of the whistle-blowing behavior domain, it is hypothesized that:

Hypothesis 1a: *The behavioral belief set (i.e., the sum of the cross-products of behavioral belief strength and outcome evaluation) participants report holding vis-a-vis internal reporting of observed wrongdoing is a direct antecedent that is positively related to the overall attitude these participants report holding relative to the target behavior; and,*

Hypothesis 1b: *the overall attitude participants report holding relative to internal reporting of observed wrongdoing is a direct antecedent that is positively related to their ratings of their intent to report the observed organizational wrongdoing to someone or some group inside the organization that can take corrective action (target behavior).*

Thus, a more positive behavioral belief set will result in reports of a more positive overall attitude toward the target behavior, which, in turn, will result in higher ratings of intent to report the wrongdoing.

Hypothesis 2a: *The normative belief set (i.e., the sum of the cross-products of the normative belief strength and motivation to comply with each referent other) participants report holding vis-a-vis internal reporting of observed wrongdoing is a direct antecedent that is positively related to the overall subjective norm these participants hold relative to the target behavior; and,*

Hypothesis 2b: *the overall subjective norm participants hold relative to internal reporting of observed wrongdoing is a direct antecedent that is positively related to their ratings of their intent to report the observed organizational wrongdoing to someone or some group inside the organization that can take corrective action (target behavior).*

Thus, a more positive normative belief set will result in reports of a more positive overall subjective norm toward the target behavior, which, in turn, will result in higher ratings of intent to report the wrongdoing.

Hypothesis 3a: *The behavioral control belief set (i.e., the sum of the cross-products of behavioral control belief strength and control belief power) participants report holding vis-a-vis internal reporting of observed wrongdoing is a direct antecedent that is positively related to the perceived control these participants report having over performing the target behavior; and*

Hypothesis 3b: *participants' reported perceived behavioral control over internal reporting of observed wrongdoing is a direct antecedent that is positively related to their ratings of their intent to report the observed organizational wrongdoing to someone or some group inside the organization that can take corrective action (target behavior).*

Thus, a more positive behavioral control belief set will result in reports of a more positive perceived control over performing the target behavior, which, in turn, will result in higher ratings of intent to report the wrongdoing.

Hypothesis 4: *The perceived moral obligation participants report holding vis-a-vis internal reporting of observed wrongdoing is a direct antecedent that is positively related to their ratings of intent to report the observed organizational wrongdoing to someone or some group inside the organization that can take corrective action (target behavior).*

Thus, the higher the perceived moral obligation to report observed organizational wrongdoing, the higher the ratings of intent to report the hypothetical observed organizational violations to someone or some group inside the organization that can take corrective action.

Variables "External" to the Primary Model

Within this mediated prediction model of behavioral intention to report organizational wrongdoing, it is also proposed that certain variables or conditions "external" to the primary theoretical model (environmental or individual) can influence the behavioral, normative and perceived behavioral control belief set individuals hold relative to the target behavior. These should, in turn, affect the general attitude, overall subjective norm and perceived control individuals hold vis-a-vis the target behavior, and, thus, will result in reports of different levels of intent to report the observed violation to someone or some group inside the organization that can take corrective action. Accordingly, an organization interested in promoting acts of whistle-blowing internally, may influence employees' intentions to report observed violations by adopting policies and behaving in ways that can change a sufficient number of the underlying beliefs determining attitudes, subjective norms, and perceived control employees hold relative to this behavior (Ajzen & Fishbein, 1980).

In order to empirically examine these theoretical postulations, this study investigates the effects that (1) perceived organizational ethical values, (2) perceived overall organizational fairness, and (3) perceived work group support regarding whistle-blowing behavior have on individuals' belief structures underlying attitudes, subjective

norms and perceived control over the performance of the target behavior and the resultant intentions to report observed organizational wrongdoing to an individual or group inside the organization that can take action (target behavior).

Organizational Ethical Values

Organizational behavior, in general, is guided by formal (and informal) ethical philosophies and policies as well as by an individual's notions of what is good and bad or what is acceptable or unacceptable workplace behavior. According to Murphy (1993), findings relating to ethical workplace behavior "suggest that to understand honesty in the workplace, we must examine the norms, customs, and assumptions of members of the organization, as well as the messages conveyed by the organization about the range and limits of acceptable behavior" (p. 6). Such standards of acceptable and unacceptable behavior in the workplace are conveyed by both formal communications (e.g., mission statements, human resource policies, reward structures) and informal channels (e.g., work group norms, behaviors of executives and managers).

In terms of formal organizational communications, organizations often may set mutually inconsistent or even conflicting objectives for their employees. For example, organizations may give a directive to their workforce to obey the law, although stressing that the business objective is to maintain or increase profit margins. In cases where employees receive conflicting messages and directives, they may look for cues in established organizational policies in order to resolve this potential conflict among objectives and gain some sense as to the amount of support they will receive if they report the questionable practices internally. Because such situations do occur in organizations, it has been recommended in the management literature that, in order to promote ethical

behavior and facilitate whistle-blowing internally, any ambiguity regarding organizational priorities should be eliminated by top management by clearly stating that legal and ethical considerations and constraints should come before and supersede such traditional objectives as market share, sales and profits (Waters, 1980). Such organizational interventions, however, according to the theory of planned behavior, will impact whistle-blowing intentions and ultimate behavior indirectly, through their effect on individuals' belief structures that underlie attitudes, subjective norms and perceived behavioral control which are considered to be the only direct antecedents of whistle-blowing intentions. Thus, in the present research, it is hypothesized that:

Hypothesis 5: Participants providing higher ratings on the Corporate Ethical Values scale for their organization, when compared with participants with lower ratings, report holding more positive behavioral, normative and behavioral control belief sets.

As a result, according to the model, participants who give their organizations higher ratings on the Corporate Ethical Values scale, when compared with participants who give their organizations lower ratings on the same scale, are expected to also report a more positive general attitude, overall subjective norm and perceived behavioral control relative to the target behavior. These will, in turn, result in higher ratings of intent to report the observed organizational violation to someone or some group inside their organization that can take corrective action.

Organizational Fairness

In addition, organizational responses to previous occurrences of whistle-blowing can either reinforce or contradict the explicit organizational policies regarding the appropriateness or acceptability of such a behavior in the workplace. Hence, having formal policies designed to facilitate internal reporting of organizational wrongdoing may not be sufficient; how the organization presents, upholds and applies such policies may be just as important as the actual content of these communications (Waters, 1990). Employees may and do look to past organizational responses to understand the practical implications of existing formal policies. Even in the absence of cues regarding organizational responses to the infrequently occurring whistle-blowing behavior, an organizational "culture of fairness" may mean that employees will believe that both reports of observed wrongdoing and the reporters themselves will be dealt with honestly and ethically by the organization. Again, however, according to the theory of planned behavior, the impact such perceptions have on whistle-blowing intentions is indirect and mediated through their effect on individuals' belief structures underlying the direct antecedents of whistle-blowing intentions (i.e., attitude, subjective norm and behavioral control over reporting the observed organizational wrongdoing to someone or some group inside the organization that can take corrective action). Thus, it is hypothesized that:

Hypothesis 6: *Participants reporting more positive perceptions of overall organizational fairness, when compared with participants reporting more negative perceptions of overall organizational fairness, report holding more positive behavioral and normative belief sets regarding the target behavior.*

As a result, according to the model, participants reporting more positive perceptions of fairness for their organizations, when compared with participants reporting more negative perceptions of fairness, are expected to also report a more positive general attitude and subjective norm vis-a-vis the target behavior which will result in higher ratings of intent to report the observed organizational violation to someone or some group inside their organization that can take corrective action.

Work-Group Norms

In addition to formal organizational policies and the organizational history of applying these policies, work groups may be just as influential in a group member's decision to report or not to report observed organizational wrongdoing for a number of reasons. First, groups often help a member define whether blowing-the-whistle on the observed violations is an acceptable behavior from the work group's perspective (Murphy, 1993). Second, groups can and often do reward and punish members who report wrongdoing, depending on whether they perceive or consider whistle-blowing to be an acceptable behavior (Hackman, 1976). Weinstein (1979) suggested that insofar as co-workers can influence their members' perceptions about whether an observed event is right or wrong as well as whether reporting the observed event to some party is an acceptable and appropriate response, they can influence whether whistle-blowing behavior occurs or not. Thus, work groups can affect both the levels of wrongdoing occurring within an organization as well as the members' responses to such activities through the enforcement of norms (i.e., informal structural and functional characteristics of the group which serve the purpose of regulating membership behavior) (Hackman,

1976). Such norms can be shaped and influenced by superiors' and work group members' opinions, attitudes and statements, as well as by events that have occurred in the organization's and group's history, among other things (Feldman, 1984). Similar to Corporate Ethical Values and Organizational Fairness, work group norms impact whistle-blowing intentions and ultimate behavior indirectly through the effect they have on the belief structures that underlie attitudes, subjective norms and perceived behavioral control over blowing-the-whistle, which are the direct and immediate antecedents of whistle-blowing intentions. Hence, it is hypothesized that:

Hypothesis 7: Participants reporting “supportive” work group conditions for voicing objections to someone/some group inside the organization, when compared with participants reporting “unsupportive” work group conditions, report holding more positive behavioral and normative belief sets regarding the target behavior.

As a result, according to the model, participants reporting "supportive" work group conditions, when compared with participants reporting "unsupportive" work group conditions, are expected to also report a more positive general attitude and overall subjective norm relative to the target behavior which will, in turn, result in higher ratings of intent to report the observed organizational violation to someone or some group inside their organization that can take corrective action.

Figure 3 presents the proposed model of whistle-blowing intention formation, including all hypothesized relationships.

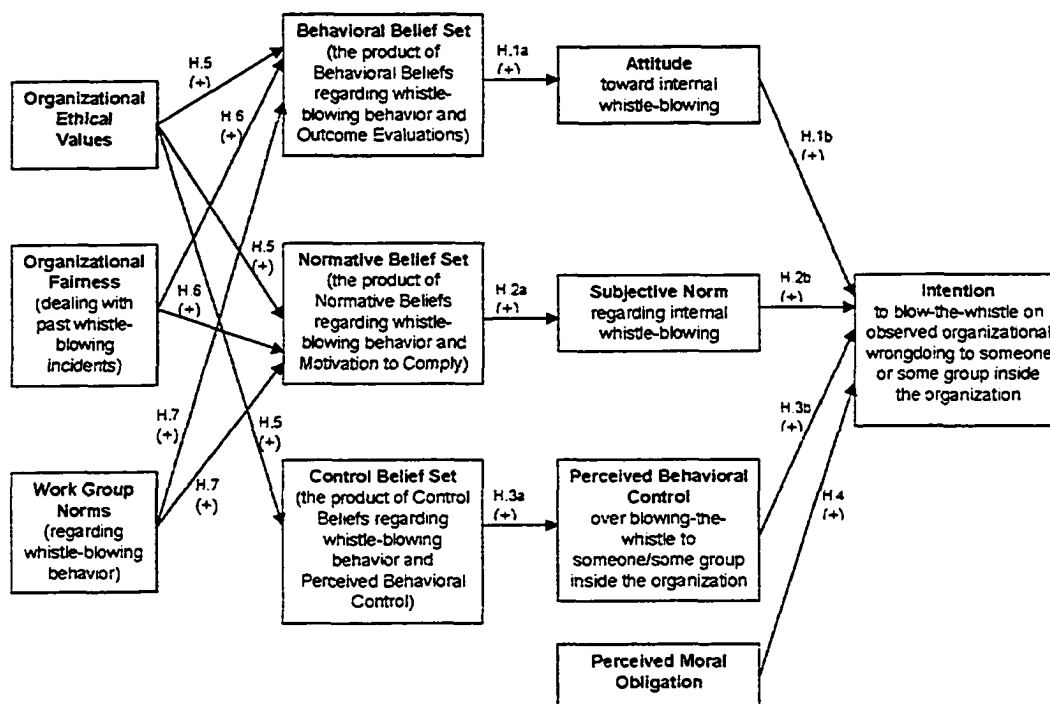


Figure 3. Proposed Model of Whistle-blowing Intention Formation - Hypothesized Relationships

In summary, according to the model of planned behavior, all influences on whistle-blowing intentions and ultimate behavior from variables "external" to the primary model are mediated by the effect these variables have on either (a) the observer's beliefs regarding the consequences of performing the behavior, the observer's beliefs regarding what referent others think the observer should do, as well as on the observer's perceived control over performing the behavior, or, (b) the relative influence these components have in determining the intention to report observed organizational wrongdoing to someone or

some group inside the organization (Ajzen & Fishbein, 1980). Thus, in the present research, it is postulated that participants' personal characteristics, such as sex, education, seniority level, and general as well as task-specific self-efficacy, will impact the reported intent to blow-the-whistle on the observed violation both through their direct effect on participants' belief sets and through the differential influence that general attitude, subjective norm, behavioral control and moral obligation have on the target behavior for subgroups within each of these variables. However, given the inconsistent findings of previous whistle-blowing research, no a priori hypotheses are stated regarding how the model will differ among subgroups at different levels of each of the aforementioned variables. If this latter theoretical postulation regarding the formation of intentions to internally report observed organizational wrongdoing receives empirical support, it may point to the need for organizations not only to influence employees' beliefs regarding the performance of the behavior through general company-wide efforts but also to develop flexible programs targeted at different audience groups in order to influence intentions effectively.

Chapter IV. Method

Sample

Prior to distribution of surveys to participants, power analyses were conducted to determine the sample size that would provide enough power to reject a false null hypothesis at the .95 level of significance (Cohen & Cohen, 1983). Power analyses results indicated that a sample of approximately 215 cases was needed.

Of 800 surveys distributed, 273 surveys were returned by participants (a response rate of 34.12%) from a diverse number of organizations and occupations across the US. Twenty-one (21) surveys were eliminated because of incomplete responses, resulting in a final sample of 252 participants. Table 1 presents the frequencies for the total sample on all collected demographic and background variables.

Demographics for the total sample of respondents indicated that 69.20% (n=173) were female and 30.80% (n=77) were male. Approximately 75.00% (n=185) identified themselves as White, 11.30% (n=28) as Black, with the remaining evenly distributed across the Asian, Hispanic and "Other" groups. Most of the respondents indicated being either married or single (not having a significant other) [39.40% (n=99) and 33.50% (n=84), respectively], having no children (62.70%, n=156) and ranged in age from 16 to 56 or over, with the median being 31 to 35 years of age.

Two-thirds of the sample (66.90%, n=168) reported having at least a 4-year college degree, with almost a third of the sample (29.50%, n=74) having a graduate school degree. Slightly over three-quarters of the sample (75.70%, n=190) reported being employed full-time and over a third of the sample reported that their job involved professional work (35.80%, n=86). The next largest groups reported that their job

involved primarily administrative or managerial work (15.40% and 15.80%, respectively). Close to 40.00% of the respondents (n=98) indicated working for their current employer for less than 2 years, earning a median annual income that ranged from \$30,000 to \$40,000.

Table 1

Frequencies of Demographic Variables

Variable	Frequency	Percent
Sex		
Male	77	30.5
Female	173	68.7
Marital Status		
Single	84	33.3
Have significant other (live separately)	31	12.3
Have significant other (live together)	14	5.6
Married	99	39.3
Separated/Divorced	16	6.3
Widowed	7	2.8
Have Children		
Yes	93	36.9
No	156	61.9
Age		
16-20	9	3.6
21-25	56	22.2
26-30	40	15.9
31-35	36	14.3
36-40	19	7.5
41-45	30	11.9
46-50	24	9.5
51-55	28	7.1
56+	20	7.9

Table 1 (continued)

Frequencies of Demographic Variables

Variable	Frequency	Percent
Years Employed By Current Employer		
Less than 2	98	38.9
2 to 4 years	55	21.8
5 to 9 years	45	17.9
10 or more	52	20.6
Type of Employing Organization		
Business (for profit)	121	48.0
Business (not for profit)	49	19.4
Educational Institution/Hospital	52	20.6
Charitable Organization	6	2.4
Government/Regulatory Organization	23	9.1
Organizational Levels of Supervision/Management		
1 level	5	2.0
2 levels	28	11.1
3 levels	82	32.5
4 or more levels	136	54.0
Job Responsibilities		
No supervisory responsibility	104	41.3
Supervisory responsibility	71	28.2
Managerial responsibility	61	24.2
Executive responsibility	14	5.6
Ethnic Identification		
Asian	10	4.0
Black	28	11.1
Hispanic	11	4.4
White	185	73.4
Other	14	5.6
Education		
HS Graduate	18	7.1
Some college	40	15.9
2-year college graduate	25	9.9
4-year college graduate	61	24.2
Graduate school training	33	13.1
Graduate school degree	74	29.4
Work Status		
Full-time	190	75.4
Part-time	57	22.6
Not working now	4	1.6

Table 1 (continued)

Frequencies of Demographic Variables

Variable	Frequency	Percent
Type of Work		
Clerical	23	9.1
Professional	86	34.1
Administrative	37	14.7
Managerial	38	15.1
Technical	15	6.0
Sales	16	6.3
Unskilled work	8	3.2
Skilled work	17	6.7
Auditing Responsibility		
No	150	59.5
Yes	97	38.5
Seniority Level		
Very low	27	10.7
Low	47	18.7
Middle	106	42.1
High	46	18.3
Very high	22	8.7
Income		
5K or less	18	7.1
5,001 to 10K	11	4.4
10,001 to 15K	12	4.8
15,001 to 20K	8	3.2
20,001 to 30K	43	17.1
30,001 to 40K	42	16.7
40,001 to 50K	40	15.9
50,001 to 60K	21	8.3
60,001 or more	55	21.8

Procedure

Surveys were collected from a convenience sample. This non-student convenience sample consisted of individuals who were known to the researcher through professional relationships or contacts. Each potential participant was contacted by the researcher either in person or via telephone or mail and was provided with an anonymous,

postage-paid mailer packet. In addition, the researcher solicited the assistance of each potential participant in reaching out to up to five additional individuals, preferably within their current employing organization. Employment settings ranged from large corporations to small non-profit agencies. Industry sectors ranged from healthcare and educational institutions to financial and technology services.

Each mailer packet contained an introductory cover letter/consent form describing the research and the survey. A copy of the introductory cover letter/consent form is shown in Appendix A. Participation was voluntary and anonymous.

In addition, the researcher asked some of the prospective participants to take five survey packets and distribute them to individuals they knew (coworkers, family members, friends, etc.). Individuals were instructed to have their respondents return their completed surveys using the postage-paid envelope addressed to the investigator, which was included in the survey packets.

Survey

Each subject was administered one of two versions of the survey questionnaire. Each survey contained a general procedure description section, a hypothetical stimulus question, several sections measuring the components of the 'theory of planned behavior' model, a measure of moral obligation, several measures regarding the participants' perceptions of their employing organization, such as organizational ethical values, organizational procedural justice, work group support in independent decision-making, global job satisfaction, a measure of general self-efficacy and a background information section. Surveys were identical in terms of the presentation order of the components of the model measures and the variables "external" to the model. Items assessing intention

to report the violation and some of its immediate antecedents (i.e., perceived behavioral control, and moral obligation) were separated from each other (with the exception of the six evaluative attitude scales and the two items measuring the perceived subjective norm) and were interspersed among sets of items assessing specific beliefs about the target behavior and the other variables measured in this study.

The same stimulus regarding the hypothetical observation of wrongdoing in the employing organization preceded the presentation of the measures of the theoretical components of the model. The hypothetical stimulus (see Appendix B) asked the participants to imagine that, while employed by their current organization, they are assigned to work on a project that involves certain organizational practices which they "find personally objectionable because you feel they are violating ethical principles." Organizational wrongdoing was consistently presented as "personally objectionable" and as a general rather than specific event, in order to eliminate ambiguity regarding the perceived seriousness of the observed wrongdoing. The focus of this research was not on identifying specific factors (e.g., misleading reporting of financial data or questionable hiring practices) that people define as "organizational wrongdoing" but rather on whistle-blowing behavior once a person has already interpreted a situation as personally objectionable. This improves upon previous research designs whose event specificity limited generalizability regarding whistle-blowing and did not address the mechanism via which external situation-specific factors led to a decision to report or not observed organizational wrongdoing. A copy of the survey is presented in Appendix C.

Measures

Dependent Variable: Intent to Blow the Whistle Internally

In order to obtain a more reliable estimate of intention to report observed organizational wrongdoing (to an individual or group inside the organization that can take action), a three-item 'intent to blow-the-whistle internally' (subsequently referred to as "Intention To Report") scale was constructed. Seven-point Likert-format bipolar scales were used to respond to each of the three items. Participants were asked to indicate (1) the probability that "My intent would be to report the observed violation to an individual or group inside the organization that can take action" (abbreviated as REPINT1) (scale ranging from "Extremely Likely" to "Extremely Unlikely"), as well as (2) their agreement with the statement "I would try to report the observed violations to an individual or group inside the organization that can take action" (abbreviated as REPINT2) (scale ranging from "Strongly agree" to "Strongly disagree"). In addition, participants were also asked to (3) respond to the statement "The likelihood that I would intend to report the observed violations to an individual or group inside my organization that can take action is:" (abbreviated as REPINT3) (scale ranging from "Extremely small" to "Extremely large").

The three Intention To Report items were separated and interspersed among the other items in the survey but presented in fixed positions across all versions of the survey.

The three-item Intention To Report scale is presented in Appendix D. All items measuring Intention to Report were reverse coded so that a higher rating indicated a higher intention to report the observed violation. Ratings across the three items were summed for a total Intention To Report score. The Cronbach's alpha reliability coefficient for the Intention To Report scale in this study was found to be .78.

In accord with the principles outlined by the "theory of planned behavior," and their emphasis on correspondence across all measures in terms of action, target, context and time (Ajzen & Fishbein, 1980), and in order to eliminate ambiguity in interpreting participants' responses in terms of the referent recipient of the reporting behavior, the three items, as well as all the other model-related items, explicitly asked respondents their intentions to report the observed organizational violations to someone or some group inside the organization that can take corrective action. Thus, the focus was clearly limited to internal, as opposed to external (e.g., to media, government agencies), whistle-blowing (target behavior). In addition, the choice to limit the focus of the present research on internal whistle-blowing was based on literature findings that external whistle-blowing often follows internal reports that fail to bring about change to the wrongful practices and predicated on the assumption that organizations would like to understand and promote such behavior over employees' external reporting of organizational violations, which could be potentially embarrassing and threatening to the image and wellbeing of the organization.

Measures of Immediate Determinants of Behavioral Intention

According to the model of "planned behavior", three major factors determine a person's behavioral intentions: a personal or attitudinal component, a social or normative component, and a perceived behavioral control over performing the target behavior component. In the present study, one more factor was added to these immediate determinants of behavioral intention to report observed organizational violations (to an individual or group inside the organization that can take action); namely, a moral obligation component.

Overall Attitude toward internal reporting of the observed violations (target behavior)

In order to measure respondents' general evaluation or overall feeling of favorableness or unfavorableness toward the target behavior, an "attitude toward internal reporting of the observed violations" (subsequently referred to as "Overall Attitude") scale was constructed. Overall Attitude toward the target behavior of internal whistle-blowing was measured using the semantic differential method (Osgood, Suci, & Tannenbaum, 1957) and it consisted of a set of six bipolar evaluative adjective scales (i.e., harmful-beneficial, good-bad, punishing-rewarding, pleasant-unpleasant, foolish-wise, and useful-useless). A seven-point bipolar scale was used for rating each of the six pairs; no point values were given for each of the choices on the scales. Subsequently, and consistent with the Ajzen & Fishbein (1980) guidelines, responses were scored from -3 on the negative side of each scale (e.g., bad, harmful, unpleasant) to +3 on the positive side (e.g., good, beneficial, pleasant); ratings were summed across the six scales to yield a single index of respondents' attitude toward the target behavior.

Items 2, 4, and 6 were reverse coded so that all items were scored in the same direction. A positive total score denoted a favorable attitude whereas a negative total score denoted an unfavorable attitude toward the behavior of reporting observed organizational violations to an individual or group inside the organization that can take action; the higher the score the more positive the attitude toward the target behavior (scale values can range from -18 to +18). The Cronbach's alpha reliability coefficient for the Overall Attitude scale in this study was found to be .78. The Overall Attitude measure is presented in Appendix E.

Overall Subjective Norm

In order to measure the second determinant of behavioral intention, the "Subjective Norm" (i.e., respondents' perception that most people who are important to them think they should or should not perform the target behavior), two items were developed: (1) a global or overall "normative belief" item; respondents were asked to indicate how most people who are important to them would feel about their performing the target behavior on a seven-point bipolar scale ranging from "They would extremely approve" to "They would extremely disapprove." Responses to this item were scored from -3 on the negative side of the scale (i.e., "extremely disapprove") to +3 on the positive side (i.e., "extremely approve"); this item was reverse coded so that positive ratings indicated approval. (2) A global or overall "motivation to comply" item; respondents were asked to indicate how much they wanted to do what the people who are important to them thought they should do using a seven-point bipolar scale ranging from "Very much" to "Not at all." This item was also reverse coded so that higher ratings reflected a higher motivation to comply with important others' thoughts about performance of the target behavior by the respondent.

For each respondent, the product of the ratings on each of the two items (i.e., overall normative belief and overall motivation to comply) was computed to yield the overall Subjective Norm index (possible range for the subjective norm index: -21 to +21). The product of the ratings was used to capture their interactive effect. This index was used as a single-item measure and thus, no reliability estimate was computed. The two items used to derive the subjective norm index are presented in Appendix E.

Overall Perceived Behavioral Control

Once again, in order to obtain a more reliable estimate of perceived behavioral control over reporting observed organizational wrongdoing to an individual or group inside the organization that can take action, a three-item "perceived behavioral control" (subsequently referred to as "Perceived Control") scale was constructed. Seven-point Likert format bipolar scales were used to respond to all three items. Participants were asked to indicate their agreement to the statement "If I wanted to, I could easily report the observed violation to an individual or group inside my organization" (DIRCONT1) (scale ranging from "Extremely Agree" to "Extremely Disagree"). Participants were also asked to respond to the following question: "How much control would you have over whether you would or would not follow through with reporting the observed violations to an individual or group inside the organization that can take action?" (DIRCONT2) (scale ranging from "Complete control" to "Very little control"). Finally, participants were asked to respond to the statement "Reporting the observed violation for me would be:" (DIRCONT3) (scale ranging from "Extremely Easy" to "Extremely Difficulty").

The three Perceived Control items were separated and interspersed among the other items in the survey but presented in the same fixed positions across all versions of the survey as were all the other items following the presentation of the scenarios. The three-item Perceived Control scale is presented in Appendix F. All three Direct Control items (DIRCONT1 - DIRCONT3) were reverse coded so that higher ratings were indicative of higher perceived behavioral control levels. Ratings across the three items were summed for a total Perceived Control score; a higher score denoted a higher perceived behavioral control over reporting the observed violations to an individual or

group inside the organization that can take action. The Cronbach's alpha reliability coefficient for the Perceived Control scale in this study was found to be .35.

Moral Obligation

"Moral Obligation" was assessed by three items, shown below and in Appendix F; they were adapted from a previous study (Beck and Ajzen, 1991) to fit the target behavior of interest (i.e., internal reporting of observed organizational wrongdoing). The items are intended to measure "personal feelings of moral obligation or responsibility to perform, or refuse to perform, a certain behavior" (p. 289; Beck and Ajzen, 1991). Participants were asked to respond to the following three statements: (1) "I feel it would be morally wrong for me *not* to report the observed violation" (MOROBL1), (2) "Reporting the observed violation goes against my principles" (MOROBL2), and (3) "I would feel guilty if I did not report the observed violation" (MOROBL3). Participants responded to each of these three statements by using a seven-point Likert format scale ranging from "extremely agree" to "extremely disagree" for MOROBL1 and MOROBL2, and "extremely likely" to "extremely unlikely" for MOROBL3.

In previous research, the three-item moral obligation measure has yielded alpha reliability coefficients ranging from .71 to .79, depending on the target behavior (Beck and Ajzen, 1991). Both in the pretest phase and in the present study, the measure of moral obligation had a Cronbach's alpha reliability coefficient of .70. (Subsequent to confirmatory factor analysis results, this scale was combined with the dependent variable of Intention to Report because of the high correlation of the two latent variables.)

Measures of the Antecedent Belief Sets of Overall Attitude, Subjective Norm and Perceived Behavioral Control.

According to the original model of reasoned action (Ajzen & Fishbein, 1980) and the subsequent revised model of planned behavior (Ajzen, 1988), beliefs underlie a person's attitudes. In order to develop the behavioral belief set items that were used in the final survey, the procedures recommended by Ajzen and Fishbein (1980) to identify modal salient beliefs (i.e., set of beliefs that are salient in a given population relative to the behavior under investigation) were followed as part of a pilot study.

An open-ended survey was distributed to a convenience sample of 15 individuals who were employed full-time and represented a diversity of occupations and organizations. Twelve of the 15 surveys were completed and returned anonymously to the investigator. The survey elicited beliefs regarding: (1) advantages, disadvantages or anything else respondents associated with performing the target behavior (i.e., reporting observed violations to someone or some group inside the organization that can take action); (2) groups who would approve of, groups who would disapprove of, or any other groups that came to mind in relation to the respondent performing the target behavior; and (3) factors that may facilitate, factors that may inhibit, or any other factors that came to mind in relation to the respondent's performance of the target behavior.

All the responses from the 12 surveys for each of the three sections were compiled and beliefs referring to similar outcomes were grouped together. Due to the relatively small number of conceptually different outcome beliefs elicited from this small group, the decision was made to include all of the statements, irrespective of the frequency with which each one was mentioned across the respondents.

Behavioral Beliefs , Outcome Evaluations and Behavioral Belief Set

A set of 14 beliefs regarding consequences of performing the target behavior, identified by the pilot survey respondents, was used in the construction of two sections of the survey (PART I and PART II) measuring: (1) belief strength (i.e., respondents' subjective probability that their performing the target behavior would lead to each of the listed outcomes) (PART I), and (2) outcome evaluations (i.e., respondents' evaluations or attitudes toward each of the consequences of performing the target behavior) (PART II). A listing of the 14 beliefs and the rating scales used is presented in Appendix G.

The strength of each belief was measured using a seven-point bipolar scale ranging from "Extremely likely" to "Extremely unlikely." Responses were scored from -3 ("Extremely unlikely") to +3 ("Extremely likely"). All items were reverse coded so that a positive rating indicated beliefs of greater likelihood of occurrence of each consequence. The Cronbach's alpha reliability coefficient for the Behavioral Belief strength scale was found to be .47.

Similarly, the evaluation of each of the consequences was measured using seven-point bipolar scales, the labels of which varied from one item to another in order to match the nature of the consequence (e.g., bother me-not bother me, wise-foolish, harmful-beneficial, good-bad, etc.). Responses were again scored from -3 on the negative side of the scale (e.g., bother me, foolish, harmful, bad, etc.) to +3 on the positive side (e.g., not bother me, wise, beneficial, good, etc.). Response set was avoided by changing the presentation order of the "positive/negative" ends of the scales across the 14 items. Thus, items 2, 5, 7, 8, 11, and 14 were reverse coded so that all items were scored in the same direction, with a positive score reflecting respondents' positive evaluations. The

Cronbach's alpha reliability coefficient for the Behavioral Belief evaluation scale was found to be .36.

In accordance with the theoretical model's supposition that "a person's attitude toward a behavior can be predicted by multiplying her evaluation of each of the behavior's consequences by the strength of her belief that performing the behavior will lead to that consequence and then summing the products for the total set of beliefs" (p. 67, Ajzen & Fishbein, 1980), the product of belief strength and outcome evaluation for each of the 14 statements was computed for each participant. The Cronbach's alpha reliability coefficient for the Behavioral Belief products scale was found to be .85.

The products of belief strength and outcome evaluation of the behavioral belief items were then summed across all statements to derive a single index of the overall "Behavioral Belief Set" held by each participant. The range of possible values for this index is -126 to +126, with -126 representing a very strong negative overall Behavioral Belief Set and +126 representing a very strong positive overall Behavioral Belief Set held by a respondent toward the target behavior.

Normative Beliefs, Motivation to Comply and Normative Belief Set

A set of nine salient referents identified by the pilot survey respondents was used in the construction of two sections of the survey (PART III and PART IV) measuring: (1) normative beliefs [i.e., respondents' beliefs that various referents (e.g., spouse or "significant other", coworkers, family members, head of the organization) think they should or should not perform the target behavior] (PART III) and (2) motivation to comply with each of the nine referents (PART IV). A listing of the nine referents and the ratings scales used is presented in Appendix H.

The respondents' normative beliefs about the likelihood that each of the nine referents would think that respondents should perform the target behavior was measured using a seven-point bipolar scale ranging from "Extremely likely" to "Extremely unlikely." Responses were scored from -3 ("Extremely unlikely") to +3 ("Extremely likely"). All items were reverse coded so that a positive rating reflected a respondent's expectation that referents believed that the respondent should perform the target behavior. The Cronbach's alpha reliability coefficient for the Normative Belief scale was found to be .83.

The motivation to comply with what each of the referents thought the respondents should do was measured using a seven-point bipolar scale ranging from "Not at all" (+1) to "Very much" (+7), with higher ratings reflecting a higher motivation to comply with a referent and vice versa. The Cronbach's alpha reliability coefficient for the Normative Belief - motivation to comply with each referent scale was found to be .91.

Similar to the Behavioral Belief Set index and in accordance with the model, the overall "Normative Belief Set" index was computed by first obtaining the product of each normative belief by the corresponding motivation to comply for each participant. The Cronbach's alpha reliability coefficient for the Normative Belief products scale was found to be .86. Then the products of each item obtained for that participant were summed across all referents (possible values for the index range from -189 to +189).

Control Beliefs, Control Belief Power and Control Belief Set

A set of eight factors identified by the pilot survey respondents as facilitating or inhibiting the reporting of observed organizational violations to someone or some group inside the organization that can take action (target behavior) was used in the construction

of two sections of the survey (PART V and PART VI) measuring: (1) control beliefs (i.e., respondents' perception that each of the control factors is present in the hypothetical organization or in their personal situation) (PART V), and (2) control belief power (i.e., respondents' belief that each of the control factors would influence the ease or difficulty of their following through with the performance of the target behavior) (PART VI). Some of the items included in these sections pertained to organizational communication channels, organizational policies regarding reports of violations, beliefs of seriousness of the violation, availability of financial and social support to the participant in dealing with potential unfavorable outcomes of reporting. A complete listing of the eight factors and the ratings scales used is presented in Appendix I.

The perceived presence or absence of each of the eight control factors in the hypothetical situation, employing organization or the respondents' personal life was measured using a seven-point bipolar scale ranging from "Extremely Agree" to "Extremely Disagree." Responses were scored from -3 ("Extremely Disagree") to +3 ("Extremely Agree"). The Cronbach's alpha reliability coefficient for the Control Belief scale was found to be .76.

The perceived power of each of the control factors (i.e., the extent to which each control factor would make it easier or more difficult for the respondents to follow through with the performance of the target behavior) was measured using a seven-point bipolar scale ranging from "Extremely Easy" (+7) to "Extremely Difficult" (+1), with higher ratings indicating that a control factor is a greater facilitator of respondents' following through with the target behavior. The Cronbach's alpha reliability coefficient for the Control Belief power scale was found to be .84.

Similar to the Behavioral Belief Set index and in accordance with recommendations made in the literature (Ajzen, 1991; Valois, Desharnais, Godin, Perron, & Lecomte, 1993), the perceived Control Belief Set index was computed by first obtaining the product of each control belief by the corresponding power of the control belief for each participant, and then summing all the products obtained for that participant across all eight beliefs (possible values for this index range from -168 to +168). The Cronbach's alpha reliability coefficient for the Control Belief products scale was found to be .78.

Variables External to the Model

General Self-Efficacy

Self-efficacy has been defined as the individual's belief in his/her ability to perform a task or to execute a specific behavior successfully (Bandura, 1977 as cited in Woodruff and Cashman, 1993). Self-efficacy expectancies are postulated to have a strong influence on the initial decision to perform a behavior, the amount of effort to be expended and the persistence in the face of adversity (Bandura, 1977).

Although self-efficacy has been predominantly conceptualized as a task- or situation-specific set of beliefs, a reconceptualization of self-efficacy as a global concept (often referred to as general self-efficacy) is based on the postulation that the assessment of the collection of experiences from a variety of situations is the expectation that people carry into new situations (Woodruff and Cashman, 1993). Researchers have argued that there is evidence that the experiences contributing to efficacy expectancies can generalize to behaviors other than the target behavior (Bandura, Adams, and Beyer, 1977) and that generalized self-efficacy expectations "are likely to manifest themselves in general patterns of behavior and in responses to situations about which the individual has little or

no information" (p. 671, Sherer, et al., 1982). Thus, in the context of this research, where little information about the hypothetical organization is provided beyond the variables of interest and where the target behavior is one of presumed low frequency of occurrence in real life, a general self-efficacy measure should be sufficient in providing an estimate of participants' general expectancies.

Based on this reconceptualization of self-efficacy as a global concept, in the present research self-efficacy was measured by a General Self-efficacy Scale which was originally created in German and subsequently developed for use in different cultures (Schwarzer, Bäßler, Kwiatek, & Schröder, 1997). The scale was designed to measure general self-efficacy expectancies without any reference to specific situations or behaviors. The ten-item General Self-efficacy scale has been found to be "reliable and valid in numerous studies" (p. 73; Schwarzer, et al., 1997). Psychometric characteristics of the ten-item scale (i.e., reliability indices, item-total correlations, and factor loadings) have provided empirical support that this General Self-efficacy Scale can be considered as homogeneous and unidimensional (Schwarzer, et al., 1997).

Participants are asked to respond by indicating the degree to which each of the ten statement (items) are descriptive of themselves using a four-point scale ranging from "Not at all True" to "Exactly True." A higher score denoted higher general self-efficacy expectations. The General Self-efficacy scale is shown in Appendix J.

The original German General Self-efficacy Scale has been used in numerous pieces of research where it has yielded internal consistencies of .75 to .90 (Schwarzer, et al., 1997). In terms of cross-cultural research, Schwarzer, et al. (1997) reported Cronbach alpha reliability coefficients of .84, .81 and .91 for German, Spanish and Chinese

samples, respectively. The Cronbach's alpha reliability coefficient for the General Self-efficacy Scale in this study was found to be .85.

In addition, research indicates that there are evidence of both convergent and discriminant validity (Schwarzer, et al., 1997). Construct validity was demonstrated by the relationship of the Self-Efficacy Scale with three other traits (i.e., depression, anxiety, and optimism, as measured by a 16-item depression scale, the State-Trait Anxiety Inventory and the Life Orientation Test, respectively) (Schwarzer, et al., 1997). The General Self-efficacy Scale related to the three measures in theoretically appropriate ways but in not sufficient magnitude to indicate that any of these measures assessed precisely the same underlying characteristic as the General Self-efficacy Scale.

In addition to the General Self-efficacy Scale, and in response to arguments made in the self-efficacy literature regarding prediction and measure-specificity, a more domain-specific measure of self-efficacy was also used in the present research. Based on arguments made in previous research that, typically, there is better prediction achieved by variables that are measured in a specific manner, a task- or behavior-specific measure of self-efficacy was utilized to explore whether it may provide more accurate estimates of individuals' expectations for specific target behaviors. The intent of this item was to be used as a separate variable.

Thus, in addition to the General Self-efficacy Scale, participants were also asked to indicate their agreement to the statement "I can bring about changes in my organization by voicing my opinions," using a seven-point Likert-format scale ranging from "Extremely agree" (+7) to "Extremely disagree" (+1). This task-specific efficacy item is also presented in Appendix J.

Demographic and Background Variables

The last section of the survey asked participants for several types of demographic and background information. Data collected included: sex, marital status, having children or not, age category, ethnicity identification, education level, type of work, employment status, tenure with present employer, type of employing organization, level of organizational supervision/management, level of organizational responsibility, auditing responsibility, seniority level, and income category. The demographic/background items are included in the survey; see Appendix C.

Job Satisfaction

Research findings indicate that job satisfaction is related to honest/dishonest and prosocial behavior in the workplace (Murphy, 1993; Miceli & Near, 1992). Thus, an item measuring global job satisfaction with one's job in the employing organization was included in the survey. Responses to the global job satisfaction item were recorded on a seven-point Likert-format scale ranging from "Extremely Dissatisfied" (+1) to "Extremely Satisfied" (+7). The global job satisfaction item is presented in Appendix K.

Perceived Organizational Ethical Values

Although corporate culture has been defined as a multi-faceted construct including assumptions, beliefs, goals, knowledge and values that are shared among members of an organization, corporate values are considered to be highly influential in directing the actions of individual members (Schwartz & Davis, 1981; Sathe, 1984; Hunt, Wood & Chonko, 1989). Corporate values are used to define and maintain the standards of what is the "right" or "wrong" thing to do and what things are "worth" or "not worth" doing (Jansen & von Glinow, 1985) and these ethical standards in turn influence individual members' choices (Conner & Becker, 1975).

A five-item Corporate Ethical Values scale, developed by Hunt, et al. (1989), was used to measure the degree to which organizations take an interest in ethical issues and act in an ethical manner. This scale was selected over a few other available ethical climate scales in the literature because it captures broad-based perceptions regarding: "(1) the extent to which employees perceive that managers are acting ethically in their organization (see item 1), (2) the extent to which employees perceive that managers are concerned about the issues of ethics in their organization (see item 3), and (3) the extent to which employees perceive that ethical (unethical) behavior is rewarded (punished) in their organization (see items 2, 4, and 5)." (p. 83-84; Hunt, et al., 1989). Two studies using the Corporate Ethical Values scale reported coefficient alphas of .78 and .85 (Hunt, et al., 1989; Singhapakdi, Kraft, Vitell & Rallapalli, 1995). Results of an exploratory factor analysis (principal components) indicated that the scale had a unidimensional structure (Hunt, et al., 1989). Participants responded to each of the five items using a seven-point Likert format scale ranging from "Strongly Disagree" (+1) to "Strongly Agree" (+7); items 1 and 2 were reverse coded so that all items were scored in the same direction. The Cronbach's alpha reliability coefficient for the Corporate Ethical Values scale in this study was .64. The Corporate Ethical Values five-item scale is shown in Appendix K.

Overall Organizational Fairness

Organizational justice literature has suggested that employees are concerned about matters of justice and their perceptions of justice influence job attitudes and they may possibly help explain a variety of organizational behaviors as well (Greenberg & Tyler, 1987; Greenberg, 1990; Tanksy, 1993). Research suggests that there is a relationship between perceptions of overall fairness or specific types of organizational justice and

altruism as well as organizational citizenship behavior (e.g., Konovsky & Folger, 1991, cited in Tansky, 1993; Farh, Podsakoff & Organ, 1990; Moorman, 1991; Tansky, 1993).

Since researchers have viewed whistle-blowing behavior as an example of altruistic or organizational citizenship behavior (e.g., Dozier & Miceli, 1985; Miceli et al., 1991), employees' overall perceptions of the fairness of an organization may influence their decision of whether to report observed organizational wrongdoing to someone or some group inside the organization that can take corrective action.

A three-item scale, developed by Tansky (1993) was used to measure respondents' perceptions of overall fairness of their organization. The items asked participants to indicate their perceptions of whether management treats them honestly and ethically, whether they consider their organization as fair overall, and whether organizational programs and policies in their organization are fair. Tansky (1993) reports an alpha reliability coefficient of .73 with factor analysis results suggesting a unidimensional structure for the three-item scale.

Participants responded to each of the three items using a five-point Likert format scale ranging from "Strongly Disagree" (+1) to "Strongly Agree" (+5). The Cronbach's alpha reliability coefficient for the Overall Organizational Fairness scale in this study was .67. The three-item Overall Organizational Fairness scale is shown in Appendix L.

Perceived Work Group Support for Voicing Objections Inside the Organization

A three-item scale was developed for the purpose of the present research measuring individuals' perceptions of work-group/coworker support for their intention to voice objections to someone or some group inside the organization that can take corrective action. Upon development of the scale, a focus group was conducted to determine whether the items were clear and easily understandable. Results of the focus

group indicated that the items were clear and these were, thus, adopted unchanged for use on this scale. The final three-item scale was then pilot tested using 22 adults working full time. The Cronbach's alpha reliability coefficient for the scale in the present study was .73. The revised measure was not significantly related to the Marlow Crowne Social Desirability Scale ($r=.10$, n.s.). The three-item scale is shown in Appendix L.

Analyses

Subsequent to data collection and prior to conducting any analyses for the postulated hypotheses, data were subjected to the "single-factor" test (Podsakoff & Organ, 1986) in an attempt to address the percept-percept or common method variance issue raised by the use of the self-report survey methodology used in this study. Under this procedure, all variables of the model are subjected to a factor analysis and "the results of the unrotated factor solution are examined to determine the number of factors that are necessary to account for the variance in the variables" (p. 536; Podsakoff & Organ, 1986).

A LISREL structural equation model was used to test the hypothesized relationships among (1) organizational and work group climate conditions relating to whistle-blowing, (2) the Behavioral, Normative and Control Belief Sets, (3) the Overall Attitude toward whistle-blowing behavior, overall Subjective Norm, Perceived Control and Moral Obligation to report observed wrongdoing, and (4) the Intention To Report the observed wrongdoing to someone or some group inside the organization that can take corrective action. Figure 3 illustrates all the hypothesized relationships.

The structural equation models available in LISREL 8 consider the measurement relationship between observed variables and their latent underlying factors as well as the

hypothesized relationships among latent underlying independent (exogenous) factors or constructs and their associated latent dependent (endogenous) factors or constructs. The structural equation model, unlike classical path analysis, has the advantage of looking at relationships and estimating direct and indirect structural effects among latent rather than observed variables that are presumably free of measurement error and are, therefore, more valid or free of bias. The hypothesized relationships among the observable indicators and their underlying theoretical constructs constitute the measurement part of the model, whereas the relationships among the latent variables or theoretical constructs constitute the structural equation part of the model. Because the testing of the structural equation model is meaningless without a sound measurement model, confirmatory factor analyses must be performed prior to testing the specified theoretical model (Jöreskog & Sörbom, 1993). These analyses were conducted at the item level.

Confirmatory Factor Analysis (CFA).

If more than one observed indicator variable is available to measure a particular latent construct, CFA allows the researcher to cluster such variables in predetermined, theoretically-driven ways to evaluate the extent to which a given data set "confirms" what is believed to be its underlying structure (Mueller, 1996). LISREL 8.30/SIMPLIS uses the maximum likelihood (ML) approach to test such a priori hypotheses about the factorial nature of the observed variables (i.e., the survey items). Thus, in a CFA, the researcher has to be able to specify that each observed measure or item x_i depends only on one or a few latent factors ξ_j . Covariances among observed items in the sample are used to estimate factor loadings and uniqueness that best reproduce the population covariance matrix, based upon the maximization of a likelihood function (Gorsuch, 1983).

In any CFA model, the model-implied variance/covariance matrix $[\Sigma(\theta)]$ of the observed variables can be expressed by:

$$\Sigma(\theta) = \Lambda_x \Phi \Lambda'_x + \Theta_\delta$$

That is, when a particular model is hypothesized to underlie the observed indicators, the variance/covariance matrix of the observed variables, $\Sigma(\theta)$, can be written as a function of above three basic model-implied matrices where:

1. Λ_x (LX or Lamda X) is the matrix of structural coefficients (λ 's) linking the observed and latent or factor variables;
2. Φ (PH or Phi) is the variance/covariance matrix of latent constructs (ξ 's); and,
3. Θ_δ (TD or Theta Delta) is the variance/covariance matrix of measurement errors (δ 's) associated with the observed variables.

Any CFA model can, thus, be determined by the patterns of zero and non-zero elements in these three matrices.

Structural Equation Model (SEM) Analysis.

SEM in LISREL 8.30/SIMPLIS, like CFA, also relies on a maximum likelihood (ML) approach to data analysis. The general structural model is represented by a system of structural relationships and is similar to a regression analysis. Every SEM is composed of exogenous (independent) and endogenous (dependent) variables. Exogenous variables are presumed to have a directional and explanatory effect on endogenous variables in any given model. The latent endogenous variables (η or eta) can be expressed by:

$$\eta = B\eta + \Gamma\xi + \zeta$$

where:

1. B (Beta) is the matrix of structural coefficients (β 's) (i.e., directional paths) between and among the latent endogenous variables (η 's);
2. Γ (Gamma) is the matrix of structural coefficients (γ 's) between the latent endogenous (η 's) and exogenous (ξ 's) variables; and,
3. ζ (zeta) is the error term associated with the latent endogenous variables (i.e., the residual error term associated with the prediction of η from ξ).

Structural relationships among and between endogenous and exogenous variables can, thus, be specified in terms of the patterns of zero and non-zero elements in these matrices and an endogenous variable can be expressed in terms of its relationship with other endogenous and exogenous variables and its error term.

Model/Hypothesis Testing in LISREL.

Although the nature of the hypotheses of this research was what Jöreskog and Sörbom (1993) refer to as "strictly confirmatory" – in which a single model is selected, empirical data are collected to test it and the model is either accepted or rejected – in practice, the researcher assumed a "model generating" approach. The Theory of Planned Behavior (Ajzen, 1988) as well as the measurement model used to collect the empirical data served as tentative initial models which may be applicable in the whistle-blowing behavior arena. If the initial models (or parts of the models) did not fit well the given data, the models were modified on the basis of modification indices that were theoretically and conceptually justified and tested again using the same data set. Thus, several "models" were tested using this process aiming at finding a model which did not only capture the data well from a statistical point of view, but also contained parameters which could be given a substantively meaningful interpretation. However, as with any statistical analysis and evaluation of causal inferences, causal relationships in

LISREL/SIMPLIS “can only be established as more or less reasonable relative to alternative specifications” (Jöreskog & Sörbom, 1988, p.1).

In the present research, the original model of planned behavior as specified by Ajzen (1988) was evaluated relative to a null model which specifies that there are no relationships (no common variance) among any of the latent exogenous or endogenous variables specified by Ajzen's model. The model examined the directional effects that the latent variables of general attitude toward the target behavior, overall subjective norm regarding the target behavior, perceived behavioral control over performing the target behavior and moral obligation to perform the target behavior have upon the intent to perform the target behavior (i.e., report the observed violation to someone or some group inside the organization that can take action). In addition, directional relationships between the latent behavioral, normative and behavioral control belief set variables and the latent variables of general attitude, overall subjective norm, and perceived behavioral control were examined.

Then, a specification search was performed to identify possible re-specifications to the original model that resulted in a "better fit" while still yielding "parameters having practical significance and substantive meaning" (Schumacker & Lomax, 1996, p.106). Finally, the organizational and work group climate variables were incorporated in the "best fitting" model resulting from the previous analysis, with directional effects specified according to Ajzen's (1988) theory of planned behavior stipulations regarding the effects of "external" variables to behavioral intentions. Again, this expanded model, presented in Figure 3, was evaluated relative to the null model that specified that there are no relationships among these "external" variables and the latent endogenous variables.

Fit Indices in LISREL

After a particular model is specified and the associated parameters are estimated based on a sample, the question of whether the data fit the hypothesized model must be addressed. If the goodness of fit is not adequate, the next step is to try and detect the possible source of the lack of fit.

The output from LISREL/SIMPLIS provides a wealth of information useful for model evaluation and assessment of fit which can be classified into two groups -- measures of overall fit of the model and detailed measures of fit of individual model parameter estimates. Information from both of these groups should be used in the interpretation of results, while not losing sight of the fact that none of the indices are absolute. These indices should be viewed as rules of thumb which, when considered together, provide the most accurate evaluation of the research findings.

Individual Model Parameter Fit Indices

Feasibility of Parameter Estimates

It is recommended that any model evaluation and assessment of fit begin with an examination of the individual model parameter estimates to see if there are any unreasonable values or other anomalies (Jöreskog & Sörbom, 1993; Mueller, 1996). Thus, structural coefficients (i.e., λ 's, β 's and γ 's) should be examined for possible theory-contradicting signs or magnitudes; covariance matrices (i.e., Θ_{δ} , Φ , Θ , and Θ_{ϵ}) should be examined for possible negative estimates; and coefficients of determination that are associated with each structural equation (sometimes interpreted as reliability estimates of the observed variables in confirmatory factor analytic situations) should be examined for values that are negative, near zero or greater than one. If any of the above occurrences is

identified in the results, chances are good that the sample data set does not fit the hypothesized model or that the model has been misspecified (Mueller, 1996).

t-Values

LISREL provides t-values for each of the estimated parameters. The t-value is the ratio between the estimated parameter and its standard error. If a t-value is above a certain level, then the corresponding parameter can be considered to be statistically significant and important to the model. As a rule of thumb for large samples (i.e., $n > 60$), t-values greater than 2.00 are generally considered to indicate statistical significance (Mueller, 1996; Jöreskog & Sörbom, 1993).

Standardized Residuals

A standardized residual is a residual (i.e., an observed minus a fitted variance or covariance) divided by its estimated standard error. Standardized residuals are independent of the units of measurement of the variables and, thus, provide a "statistical" metric for judging the size of a residual and are indicative of how well the model reproduces the observed data. A large positive residual indicates that the model underestimates the covariance between the two variables, whereas a large negative residual indicates that the model overestimates the covariance between the variables (Jöreskog & Sörbom, 1993). In general, standardized residuals of 2.00 or less are indicative of a good data-model fit (Roth, 1992).

Modification Indices

A modification index is computed by LISREL/SIMPLIS for each fixed or constrained parameter in the model. Each modification index represents the expected decrease in chi square (χ^2) if the particular parameter was to be set free and the model was re-estimated. The modification index is approximately equal to the difference in χ^2

between two models in which a specific parameter is fixed/constrained in one model and free in the other, while all other aspects of the model remain constant. The largest modification index indicates the parameter that improves the data-model fit the most when set free. However, parameters with the largest modification index should be set free or have their constraints relaxed only if the parameters can be interpreted substantively and the signs of the expected parameter estimates meet the theory-driven expectations or a priori hypotheses (Jöreskog & Sörbom, 1993). Modification indices are interpreted as a χ^2 statistic with one degree of freedom and they are affected by sample size in the same way as the overall χ^2 (Hayduk, 1987).

Overall Model Fit Indices

Many overall measures of data-model fit have been suggested and studied in the literature in an attempt to propose a single useful criterion by which to judge whether a data set is consistent with an a priori hypothesized model (Jöreskog & Sörbom, 1993). Each of the suggested overall model fit measures has advantages and disadvantages that need to be considered before a model is accepted or rejected on the basis of any one of the available fit indices (Mueller, 1996).

The Chi-Square (χ^2) Statistic

One of the most common approaches to data-model fit assessment involves the use of the chi square (χ^2) test. The test evaluates whether or not the unrestricted population variance/covariance matrix of the observed variables (Σ) is equal to the model-implied or fitted variance/covariance matrix [$\Sigma(\theta)$]; i.e., it tests the null hypothesis

$$H_0: \Sigma = \Sigma(\theta)$$

If the proposed model is "correct," then the null hypothesis is true and, since the χ^2 statistic increases in magnitude as the discrepancy between the two matrices increases, a significant χ^2 would indicate a lack of data-model fit whereas a non-significant χ^2 would support the null hypothesis. Thus, in reality, the χ^2 is a "badness-of-fit" measure in the sense that a small χ^2 corresponds to a good data-model fit, large χ^2 to a bad fit and a χ^2 of zero corresponds to a perfect fit.

The χ^2 test depends greatly on sample size and certain distributional assumptions regarding the observed data (e.g., multivariate normality, if the maximum likelihood method of estimation is used). Large sample sizes and deviations from normality tend to artificially increase the χ^2 over and above what would be expected based on model misspecifications (Mueller, 1996; Jöreskog & Sörbom, 1993). In addition, the χ^2 test can not be used to evaluate just-identified models (i.e., models in which the number of parameters estimated is equal to the number of non-redundant elements in the observed variables' variance/covariance matrix, resulting in zero degrees of freedom). Finally, more complex models, by default, result in a χ^2 statistic that indicates a better data-model fit than simpler models, as the expense of parsimony. Because of such shortcomings or limitations, Jöreskog and Sörbom (1993) advocate evaluating χ^2 not as a formal test statistic but rather to use it somewhat informally by evaluating its size relative to its associated degrees of freedom (i.e., χ^2/df). A small χ^2 ratio value is considered indicative of a good fit whereas a large value is indicative of a poor data-model fit. The evaluation of magnitude of size of the χ^2 ratio, however, is relative and usually left up to investigators to determine what constitutes a small/large ratio value; in practice, some interpret ratios as high as 3.00, 4.00, or even 5.00 as still representing a good data-model fit (Bollen, 1989). Finally, it should be noted that even this use of the χ^2 statistic is not

free of the sample size dependency issue — larger samples result in larger χ^2 values which, in turn, result in larger χ^2/df ratios, since df does not vary as a function of sample size.

The Chi-Square (χ^2) Difference Statistic

As mentioned previously, more restricted models result in higher overall χ^2 values than less restricted models. The goodness/badness-of-fit of such nested models can be compared statistically by evaluating the difference in their χ^2 tests. A χ^2 difference statistic can be computed as follows:

$$\chi^2_{\text{diff}} = \chi^2_{\text{constrained}} - \chi^2_{\text{less constrained}}$$

with the following degrees of freedom:

$$\text{df}_{\text{diff}} = \text{df}_{\text{constrained}} - \text{df}_{\text{less constrained}}$$

If this difference in χ^2 is statistically significant, then the data-model fit, as assessed by the overall χ^2 statistic, for the less restricted model is significantly better than for the more restricted model. If the χ^2_{diff} is not statistically significant, all other things being equal, the more restricted model should be retained as the "better" model, on the basis of the principle of parsimony.

The Goodness of Fit (GFI) and Adjusted Goodness of Fit (AGFI) Indices

Jöreskog and Sörbom (1993) proposed the GFI and AGFI indices as alternatives to the χ^2 statistic in an attempt to reduce the dependence on sample size in evaluating data-model fit and provide measures that are more robust against deviations from normality. These indices do not depend on sample size explicitly in their calculation — although the sampling distribution of any measure does depend ultimately on N — and they measure how much better a model fits as compared to no model at all. LISREL's GFI indicates the relative amount of variance and covariance that can be accounted by a

specified model (Mueller, 1996). The GFI, when adjusted for degrees of freedom in order to penalize more complex models, yields the AGFI. Both of these measures range between zero and one, with larger values indicating a better data-model fit. Traditionally, values that approximate .90 or better are considered to be indicative of good fit.

The Normed (NFI), Nonnormed (NNFI) and Normed Comparative (CFI) Fit Indices

Bentler and Bonett's (1980) NFI and NNFI measures, and their CFI extension (Bentler, 1990) represent another class of overall fit measures that were developed in response to the sample size dependency problem associated with the χ^2 statistic. Like the GFI and AGFI, they approach the fit issue in a comparative way. However, rather than assessing the fit of a specified model by comparing it to not having a model at all, these measures assess fit by comparing the hypothesized model to some reasonable but more restrictive (i.e., fewer parameters to be estimated) baseline model (Mueller, 1996). Usually, the independence model is chosen as the baseline model. The independence model is a very restricted structure in which (a) no latent factors are hypothesized to underlie the observed variables; (b) observed variables are measured without error; and (c) the observed variables are specified to be independent. Thus, the NFI and NNFI indicate improvement in data-model fit produced by less constrained models that allow common factors.

The NFI is normed to a zero to one range, with larger values indicating a better data-model fit. However, one disadvantage of the NFI is that it is still affected by sample size and might not equal 1.00 even if the hypothesized model is correct (Bentler, 1990). To rectify this problem, Bentler and Bonett (1980) proposed the use of the NNFI measure. This index, although not normed which may sometimes result in values outside

the zero to one range, takes the degrees of freedom of both the baseline and specified model into account. Finally, Bentler (1990) developed the normed CFI to address the fact that the NFI often results in an underestimate of the data-model fit, especially for small samples. In practice, values close to .90 or better for these indices are generally considered to be indicative of good overall fit (Mueller, 1996).

Root Mean Square Error of Approximation (RMSEA)

The use of the χ^2 statistic is based on the assumption that the model holds exactly in the population, which may not be a justified assumption in most empirical research. To address this limitation of the χ^2 statistic, the RMSEA has been proposed as one of the fit indices which takes into consideration the error of approximation in the population. Browne & Cudeck (1993) suggest that a value of .05 of the RMSEA indicates a close fit and that values up to .08 represent reasonable errors of approximation in the population.

Root Mean Square Residual (RMR)

The RMS is a measure of the average of the fitted residuals and, as such, it indicates the average discrepancy between the variance/covariance elements in the observed and fitted matrices. The RMR can only be interpreted in relation to the sizes of the observed variances and covariances in the observed sample matrix. Higher RMR's indicate greater discrepancy and, thus, poorer data-model fit.

Table 2 contains the variance/covariance matrix of the observed variables used to assess the measurement and structural equation models.

Table 2
Covariance matrix analyzed to assess the measurement model (Primary Model)
Sample Size: 205

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. MOROBL2	0.76														
2. INTREP3	0.36	0.91													
3. INTREP1R	0.38	0.58	0.88												
4. CONTRL1R	0.21	0.29	0.37	0.88											
5. MOROBL1R	0.26	0.37	0.38	0.07	0.89										
6. CONTRL2R	0.15	0.14	0.12	0.13	-0.02	0.92									
7. INTREP2R	0.43	0.51	0.50	0.21	0.34	0.12	0.89								
8. MOROBL3R	0.36	0.45	0.39	0.11	0.54	0.09	0.45	0.89							
9. CONTRL3R	0.13	0.20	0.29	0.26	0.00	0.06	0.20	0.03	0.95						
10. ATT1	0.15	0.17	0.27	0.15	0.10	0.13	0.22	0.13	0.17	0.93					
11. ATT2	0.27	0.30	0.37	0.26	0.20	0.14	0.28	0.25	0.20	0.50	0.91				
12. ATT3	0.22	0.12	0.19	0.20	0.06	0.05	0.26	0.15	0.19	0.46	0.29	0.93			
13. ATT4	0.09	0.07	0.18	0.17	0.10	-0.02	0.15	0.11	0.35	0.14	0.13	0.35	0.95		
14. ATT5	0.22	0.22	0.35	0.22	0.27	0.04	0.25	0.26	0.08	0.48	0.36	0.40	0.17	0.92	
15. ATT6	0.20	0.33	0.37	0.24	0.34	0.13	0.20	0.30	0.10	0.43	0.45	0.30	0.12	0.49	0.93
16. SN	0.21	0.22	0.31	0.16	0.30	0.02	0.14	0.34	0.08	0.27	0.34	0.25	0.06	0.36	0.39
17. NBPERS	0.30	0.33	0.35	0.16	0.35	0.11	0.37	0.46	0.14	0.27	0.39	0.29	0.15	0.46	0.39
18. NBORG	0.21	0.32	0.36	0.30	0.31	0.11	0.26	0.38	0.28	0.30	0.43	0.28	0.21	0.39	0.43
19. NBOTH	0.30	0.32	0.30	0.15	0.31	0.07	0.30	0.32	0.07	0.27	0.33	0.18	0.12	0.28	0.39
20. CBORGFAC	0.03	0.18	0.20	0.25	0.09	0.07	0.11	0.11	0.25	0.28	0.33	0.18	0.11	0.28	0.40
21. CBPERSFA	0.23	0.26	0.23	0.12	0.17	0.03	0.21	0.15	0.29	0.22	0.22	0.23	0.13	0.26	0.26
22. BBACTREP	0.16	0.38	0.32	0.36	0.18	0.19	0.19	0.26	0.21	0.26	0.33	0.23	0.01	0.26	0.45
23. BBBENEF	0.12	0.25	0.26	0.28	0.29	0.09	0.21	0.29	0.12	0.34	0.32	0.32	0.16	0.45	0.57

Table 2 (continued)
 Covariance matrix analyzed to assess the measurement model (Primary Model)
 Sample Size: 205

Variables	16	17	18	19	20	21	22	23
1. MOROBL2								
2. INTREP3								
3. INTREP1R								
4. CONTRL1R								
5. MOROBL1R								
6. CONTRL2R								
7. INTREP2R								
8. MOROBL3R								
9. CONTRL3R								
10. ATT1								
11. ATT2								
12. ATT3								
13. ATT4								
14. ATT5								
15. ATT6								
16. SN	0.98							
17. NBPERS	0.51	1.00						
18. NBORG	0.40	0.62	1.00					
19. NBOTH	0.36	0.48	0.50	1.00				
20. CBORGFAC	0.27	0.33	0.47	0.25	1.00			
21. CBPERSFA	0.16	0.29	0.18	0.11	0.33	1.00		
22. BBACTREP	0.28	0.33	0.57	0.26	0.53	0.22	1.00	
23. BBBENEF	0.38	0.40	0.51	0.38	0.44	0.22	0.59	1.00

Chapter V. Results

Preliminary Analyses

Prior to any hypothesis-testing, data were subjected to the “single-factor” test (Podsakoff & Organ, 1986) in order to address the issue of percept-percept or common method variance raised by the self-report survey methodology used in this study. All model variables in the study were subjected to a factor analysis. The results of the unrotated factor solution indicated that the one-factor model’s predictions were not very good estimates of the observed correlations ($\chi^2=2620.80$, $df=740$, $p<.001$) and that more than a single factor was necessary to account for the variance observed in the study’s variables. Thus, there was no support for the hypothesis that all observed variance was due to common method.

In addition, prior to conducting any structural equation modeling analyses, raw data characteristics were examined (means, standard deviations and bivariate correlations for model data are presented in Appendix N). Preliminary screening of the raw data indicated that the assumption of multivariate normality required by structural equation modeling estimation methods did not hold for some variables in the present data set. Utilization of the Weighted Least Squares (WLS) method or correction for the bias in standard errors estimated by the Maximum Likelihood (ML) method was not possible in the present study, due to the moderate sample size. According to Jöreskog, Sörbom, Toit & Toit (1999) an alternative solution to non-normality is to normalize the variables. As a result, the raw data for all variables were converted into normal scores before running any analyses.

Model Testing

Model Testing

Structural equation modeling was used to test the proposed model because it allows for a simultaneous test of the hypotheses while taking into account the error in the measurement of the variables (Bollen, 1989). Data were analyzed using PRELIS 2.0 and LISREL 8.30/SIMPLIS (Jöreskog & Sörbom, 1999) structural equation modeling software.

Structural equation models are often used to test theorized relationships between or among hypothetical constructs that cannot be observed or measured directly. The measurement of a hypothetical construct is indirect and accomplished through the measurement of one or more observable indicators that are assumed to capture or represent the construct adequately. The hypothesized relationships among the theoretical constructs constitute the structural equation part of the model, whereas the relationships between the observable indicators of the theoretical constructs constitute the measurement part of the model. In order to test the conceptual model, each of these two parts must be formulated and tested. Furthermore, not only should each of these two parts be defined and tested but this should occur in a specific order. The testing of the structural model, i.e., the testing of the specified theory, may be meaningless unless it is first established that the measurement model holds. Thus, the measurement model should be tested before the structural relationships are tested (Jöreskog & Sörbom, 1993).

Phase 1: Testing the Measurement Model

According to Jöreskog & Sörbom (1993, p. 113):

The testing of the structural model, i.e., the testing of the initially specified theory, may be meaningless unless it is first established that the measurement model holds. If the chosen indicators for a construct do not measure that construct, the

specified theory must be modified before it can be tested. Therefore, the measurement model should be tested before the structural relationships are tested.

It may be useful to do this for each construct separately, then for the constructs taken two at a time, and then for all constructs simultaneously. In doing so, one should let the constructs themselves be freely correlated, i.e., the covariance matrix of the constructs should be unconstrained.

The researcher has found it prudent to follow Jöreskog & Sörbom's (1993) advice, especially given the fact that most measures used were specifically developed for the present research and were not previously tested in the literature. However, testing some of the constructs separately was problematic because they were assessed using three or fewer items and as such the measurement models, if appropriately specified, would result in either models that could not be identified or in saturated models which, by default, would fit the data perfectly. For those scales, constructs were tested in pairs rather than separately. In addition, due to sample size limitations and the relatively large number of individual survey items, measurement models were assessed in groupings rather than all at once. Thus, the following set of measurement models were evaluated together: (a) the Intent To Report the observed organizational wrongdoing, the Overall Attitude toward reporting the wrongdoing, the Perceived Behavioral Control and the Moral Obligation scales; (b) the Behavioral Belief, the Normative Belief and the Control Belief Set scales; and, (c) the Corporate Ethical Values, the Organizational Fairness and the Work-Group Support scales.

a. CFA results for the Intent To Report and Moral Obligation scales

The model for the two constructs was first specified as consisting of two factors with the three report items free to load on the first factor and the three moral obligation

items free to load on the second factor. After model respecification whereby the error variances for two moral obligation items were freed to correlate, the data fit the specified model well. However, a review of the estimated parameter in the phi matrix indicated a very high relationship between the two latent factors ($\phi_{21}=.95$). Thus, a new one-factor model was specified and tested.

Similar to the two-factor model, the initial results of the CFA indicated that the data-model fit could be improved by letting the error variances for three pairs of items correlate (INTREP1 & INTREP3, INTREP1 & MOROBL3, and MOROBL1 & MOROBL3). A review of the expected changes resulting from implementation of such respecifications indicated that only two out of the three could be reasonably justified both from a theoretical and statistical perspective. The model was, thus, modified to allow the error variances between INTREP1 and INTREP3 as well as between MOROBL1 and MOROBL3 to correlate. The unidimensional nature of the six items was supported by the CFA results. The modified one-factor model had the best overall fit when compared to the null and the two-factor model. A review of the individual parameter estimates of the retained measurement model indicated that (a) all estimated standardized structural coefficients (i.e., factor loadings or λ 's) were statistically significant and had signs consistent with theoretical expectations; and (b) there were no large associated standard errors (as indicated by large t-ratios). Five out of the six indicators of the Intent To Report factor had moderate and acceptable reliabilities (standardized coefficients of determination or R^2 ranged from .41 to .61). The original items designed to assess Intent to Report were slightly better indicators of the underlying factor than the Moral Obligation items. The estimated reliability for the first moral obligation item (MOROBL1R - "I feel it would be morally wrong for me not to report the observed

violation.") was relatively low ($R^2=.28$), indicating that this variable may not have been as good an indicator of the underlying factor as the remaining items (probably due to the double-negative wording of the item).

The one-factor model as well as the fit indices for each of the tested models are presented below in Figure E1 and Table E1, respectively. These data support the conclusion that Moral Obligation and Intent to Report are not separate constructs and were combined to represent the single latent variable of Intent to Report.

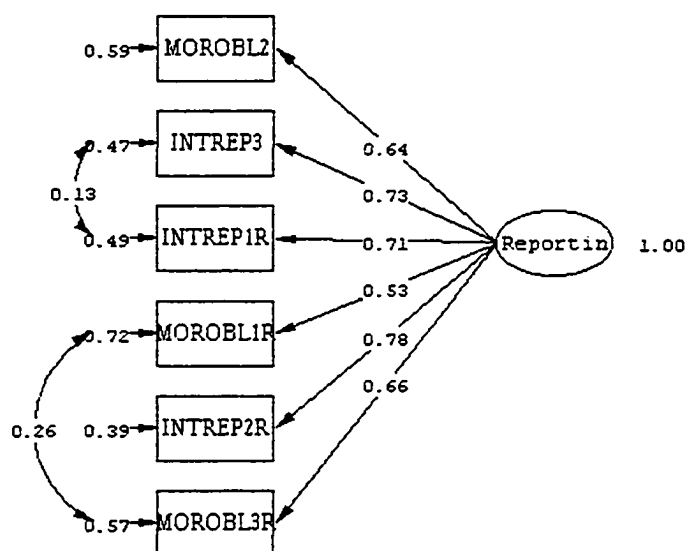


Figure E1. One-factor model of Intent To Report and Moral Obligation scales

Table E1 Fit Indices for the One-Factor Model of the Intent to Report and Moral Obligation Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	479.46***	15	31.96	.46	.24	.00	.00	.48	.36
2-Factor Model (modified)	13.60 (p=.059)	7	1.94	.98	.93	.97	.99	.07	.02
1-Factor Model (modified)	7.14 (p=.41)	7	1.02	.99	.97	1.00	1.00	.003	.02

b. CFA results for the Overall Attitude scale

Initially, a six-item one-factor model was specified and tested. Results indicated a somewhat reasonable data-model fit and suggested the addition of an error covariance between items ATT3 and ATT4. The respecified model showed significant improvement over the initial one where all error covariances were fixed to zero ($\Delta\chi^2=18.27$ with $\Delta df=1$, $p<.001$). Although the review of the estimated parameters did not point to any model misspecifications, the standardized factor loading and R^2 for item ATT4 were noticeably low indicating that this item was an unreliable indicator of the underlying construct of Overall Attitude ($\lambda=.26$ and $R^2=.069$). On the basis of these estimates, the researcher decided to drop this item from the scale. The five-item one-factor scale was evaluated for data-model fit; the modified model had a significantly better fit than the six-item model ($\Delta\chi^2=20.82$ with $\Delta df=4$, $p<.001$). A review of the individual estimated parameters of the retained five-item model showed that all standardized factor loadings were statistically significant and in the expected direction, with relatively small standard errors. Examination of the coefficients of determination (R^2) revealed that all items had moderate and acceptable estimated reliabilities ranging from .44 to .60. The five-item measurement model and the fit indices are presented below in Figure E2 and Table E2, respectively. The modified 5-item Overall Attitude scale was retained in the model.

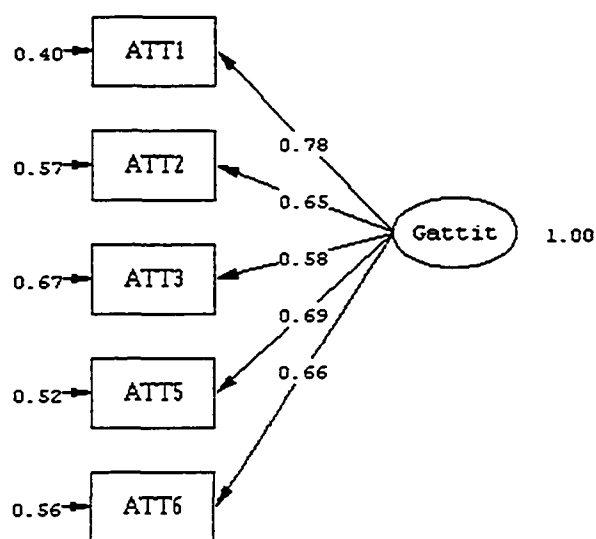


Figure E2. Measurement model of the Overall Attitude scale

Table E2 Fit Indices for the Measurement Model of the Overall Attitude Scale

	χ^2	df	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	307.46***	10	30.75	.55	.32	.00	.00	.45	.34
6-Item Model	39.93***	9	4.44	.94	.86	.88	.84	.13	.06
5-Item Model	19.11 (p=.002)	5	3.82	.97	.90	.94	.91	.11	.04

d. CFA results for the Intent To Report and Perceived Behavioral Control scales

The model was initially specified as consisting of two factors with six items free to load on the Intent To Report scale (see above) and three items free to load on the Perceived Behavioral Control scale. Modification indices of the initial analysis suggested the addition of paths from the Perceived Behavioral Control construct to items in the Intent To Report scale and several error covariances among items both within and between the two scales. For conceptual and theoretical reasons, only one of the recommended parameters was freed to be estimated; namely, the error covariance between MOROBL1R and MOROBL3R (a finding consistent with the results from the CFA of the Intent to Report scale; see above). The addition of this freed parameter resulted in a significant improvement of data-model fit when compared to the initially specified model ($\Delta\chi^2=39.54$ with $\Delta df=1$, $p<.001$). A review of the fit indices indicated that the data fit the modified model reasonably well. The individual estimated parameters of the two-factor model revealed that all factor loadings were statistically significant and in the expected direction. Again, items loading on the Intent To Report factor had moderate and acceptable reliabilities, with the MOROBL1R item being the least reliable indicator of the latent factor. Items loading on the Perceived Behavioral Control factor had much lower coefficients of determination than items on the Intent To Report factor (R^2 's ranging from a troublesome .06 to .39), indicating that they might not have been very good choices as indicators of an individual's perceived general sense of control over performing the specific behavior. The estimated correlation (ϕ) between the two latent variables was .65. The modified measurement model and the fit indices are presented in Figure E3 and Table E3, respectively. The modified scales allowing for one correlated error covariance between two items were retained in the model.

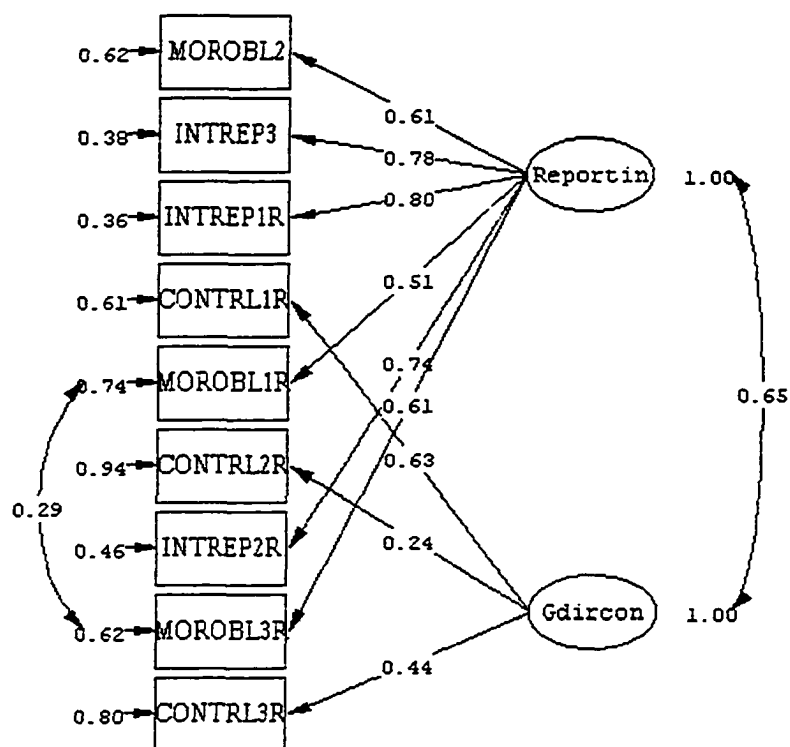


Figure E3. Measurement model of the Intent To Report and Perceived Behavioral Control scales

Table E3 Fit Indices for the Measurement Model of Intent To Report and Perceived Behavioral Control Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
								A	
Independence Model	575.61***	36	15.99	.50	.38	.00	.00	.34	.28
Initial Model (uncorrelated error variances)	85.76***	26	3.30	.91	.85	.85	.89	.11	.06
Modified Model (correlated error covariance)	49.61 (p=.002)	25	1.98	.95	.91	.93	.95	.07	.05

e. CFA results for the Overall Attitude and Perceived Behavioral Control scales

The measurement model was specified so that the five attitude items were free to load on the Overall Attitude construct and the three control items were free to load on the Perceived Behavioral Control construct. Modification indices suggested the addition of an error covariance between an attitude and a control item; however, there was no compelling theoretical justification for that parameter to be freed. A review of the model's individual estimated parameters showed all factor loadings to be statistically significant and in the expected direction. Coefficients of determination of the individual parameters indicated that all items had moderate and acceptable reliabilities, with the exception of the one Perceived Behavioral Control item mentioned in section (c) above. The estimated correlation (ϕ) between the two latent factors was .53. Overall results indicated a reasonable data-model fit (see Figure E4 and Table E4 for the measurement model and associated fit indices, respectively).

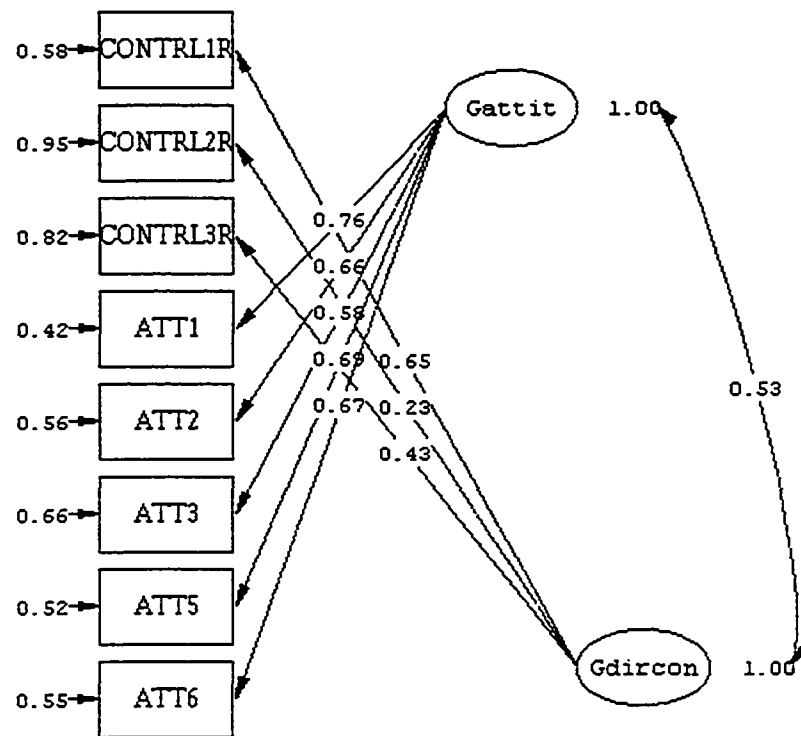


Figure E4. Measurement model of the Overall Attitude and Perceived Behavioral Control scales

Table E4 Fit Indices for the Measurement Model of the Overall Attitude and Perceived Behavioral Control Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	546.92***	28	19.53	.60	.48	.00	.00	.30	.25
Measurement model	38.12 (p=.006)	19	2.01	.96	.92	.92	.94	.07	.04

f. CFA results for the Intent To Report and Overall Attitude scales

The measurement model was specified so that the six report-related items were free to load on the Intent To Report construct and the five attitude items were free to load on the Overall Attitude construct. Based on previous results, the error variances between two of the Intent To Report items (i.e., MOROBL1R and MOROBL3R) were freed to correlate. Modification indices suggested the addition of a path from the Intent To Report construct to one of the attitude items and two error covariances between two attitude items and between an attitude and a control item. A review of the expected χ^2 change was small and the expected new estimates could not be supported conceptually; thus, none of the modifications were implemented. Results indicated a reasonable data-model fit. All LISREL estimated factor loadings were statistically significant and with the expected signs. The estimated correlation (ϕ) between the latent factors was .56. The measurement model and the fit indices are presented in Figure E5 and Table E5, respectively.

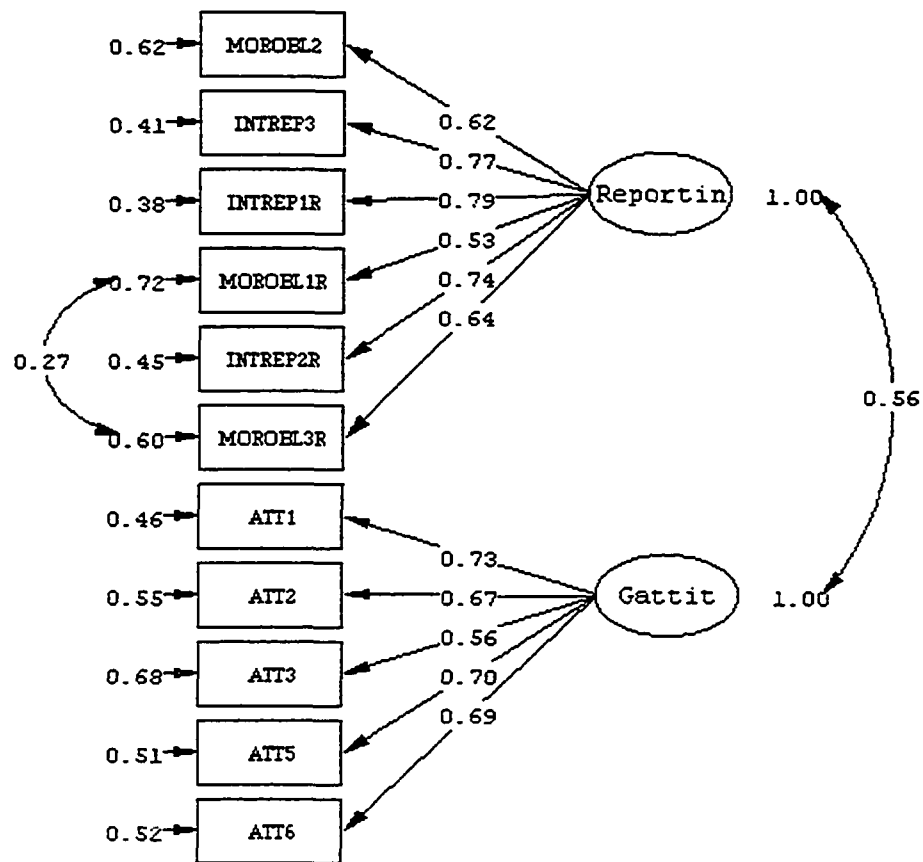


Figure E5. Measurement model of the Intent To Report and Overall Attitude scales

Table E5 Fit Indices for the Measurement Model of the Intent To Report and Overall Attitude Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	902.08***	55	16.40	.41	.29	.00	.00	.37	.31
Measurement model	99.55***	42	2.37	.92	.87	.91	.93	.08	.05

g. CFA results for the Intent To Report, Overall Attitude and Perceived Behavioral Control scales

The separate measurement models were combined and tested for data-model fit. Once again, modification indices suggested the addition of error covariances between items as well as two paths from constructs to items free to load on other scales. A review of the expected changes in χ^2 if these modifications were implemented were not statistically compelling nor could the anticipated parameter estimates be justified from a theoretical perspective. One modification index indicated that an Intent To Report item should be freed to load on both the Intent To Report and the Perceived Behavioral Control scales and may have been a reasonable model respecification. However, for purposes of clarity and given the fact that the structural equation model postulated the Perceived Behavioral Control construct to be a predictor of Intent To Report, the researcher chose not to free that item to load on both latent constructs. A review of the model's individual estimated parameters indicated that all structural coefficients were statistically significant and had appropriate signs. Once again, item reliabilities as assessed by R^2 were moderate and acceptable with the notable exception of the one Perceived Behavioral Control item, as mentioned previously. The estimated correlations of the latent factors was strongest between Intention To Report and Perceived Behavioral Control ($\phi=.65$); the relationship between Intent To Report and Overall Attitude was .57 and between Overall Attitude and Perceived Direct Control was .54. Overall results indicated a reasonable data-model fit (see Figure E6 and Table E6 below for the measurement model and associated fit indices, respectively).

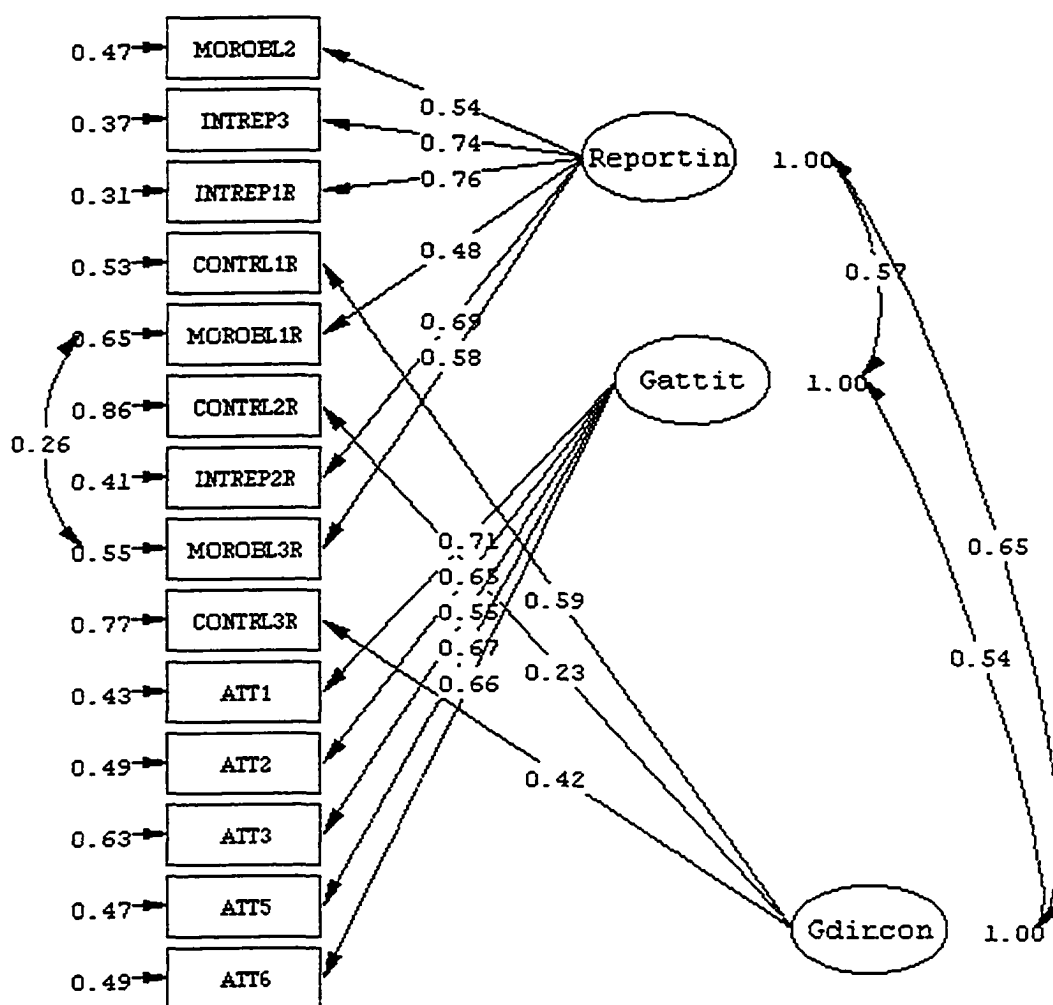


Figure E6. Measurement model of the Intent To Report, Overall Attitude and Perceived Behavioral Control scales

Table E6 Fit Indices for the Measurement Model of the Intent To Report, Overall Attitude and Perceived Behavioral Control Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	1020.12***	91	11.21	.43	.34	.00	.00	.31	.27
Measurement model	149.65***	73	2.05	.90	.86	.90	.92	.07	.06

h. CFA results for the Behavioral Belief Set scale

A single-factor measurement model was initially specified and evaluated because the fourteen items were conceptualized and developed as a means of assessing the construct of the behavioral belief set individuals held vis-à-vis the target behavior. Although results indicated that the one-factor explained item variances significantly better than the null model, the fit indices suggested a data-model fit that was modest, at best. Even after implementation of conceptually justified and meaningful modifications, the data-model fit did not show a marked improvement (see Table E7 below for fit indices associated with these models).

A content review of the items indicated that they could be classified into two or three categories, each capturing different subsets of beliefs an individual may hold vis-à-vis the target behavior. Namely, items addressed either benefits or outcomes that could result from the behavior (labeled "Bbbenef") or actions that the organization could take in response to the behavior (labeled "Bbactrep"). The latter group (i.e., Bbactrep) could be further divided into organizational actions taken either with regard to the whistle-blower or in response to the reported violation. Thus, two alternative measurement models were specified and evaluated for their relative data-model fit; namely, a two-factor and a three-factor model. The two models, even after implementing conceptually justified and meaningful modifications involving additional item-factor paths and item error covariances, resulted in comparable data-model fits. In order to select the better of the two models, modification indices, estimated parameters, standardized residuals and additional model fit indices were examined in more detail. The initial run of the three-factor model resulted in modification indices that suggested the addition of seven paths which would allow five items to load on two or more factors as compared to only two

cross-loadings suggested by the modification indices of the two-factor model initial run. Thus, at first glance, the two-factor model appeared to be more conducive to a conceptual interpretation of the factors than the three-factor model. Estimated parameters and t-values were equivalent for the two models; however, a review of the phi matrix elements indicated that the estimated relationship between the latent factor of organizational actions taken with regard to the whistle-blower and the latent factor of organizational actions taken in response to the report of the wrongdoing was strong ($\phi_{31}=.72$) suggesting that a single factor may be sufficient to meaningfully explain item variance. A review of the standardized residuals resulting from the analysis of the modified two- and three-factor models indicated that the latter may have tended to slightly overestimate the covariance between certain variables when compared to the former model. A comparison of the Root Mean Square Error of Approximation (RMSEA) values for the two models indicated that the degree of approximation in the population was smaller for the two-factor model than it was for the three-factor model ($RMSEA_{2\text{-factor}}=.065$ with the 90% confidence interval ranging from .047 to .082 whereas $RMSEA_{3\text{-factor}}=.068$ with the 90% confidence interval ranging from .051 to .085) with the two-factor model's lower bound being below the recommended value of .05 (Browne & Cudeck, 1993). Finally, the models were compared with regard to the extent to which their results may have been obtained by capitalizing on chance by examining their respective Expected Cross-Validation Indices (ECVI). Although both models had ECVIs that were less than the ECVI associated with the saturated versions of the models the two-factor model appeared to fit better than the three-factor model ($ECVI_{2\text{-factor}}=.98$, $ECVI_{3\text{-factor}}=1.01$ and $ECVI_{\text{saturated}}=1.03$). Thus, the two-factor model was retained as the "best" measurement model for the 14 behavioral belief items. All factor loadings were positive, statistically

significant and with moderate and acceptable R^2 's, with the exception of the behavioral belief item regarding coworker retaliation. The behavioral belief items regarding the expectation that (a) the organization would correct the reported violation and (b) the organization's legal/ethical practices would improve were freed to load on both latent factors. These two items, in retrospect, can be considered to be both actions the organization could take in response to the reported violation as well as outcomes or benefits resulting from the reporting of the observed violation; thus, allowing these two items to cross-load was deemed conceptually justified. The estimated correlation between the two latent behavioral belief factors was .57. Figure E7, presenting the modified two-factor model and Table E7, listing the fit indices associated with the different models assessed and their iterative modifications are given below.

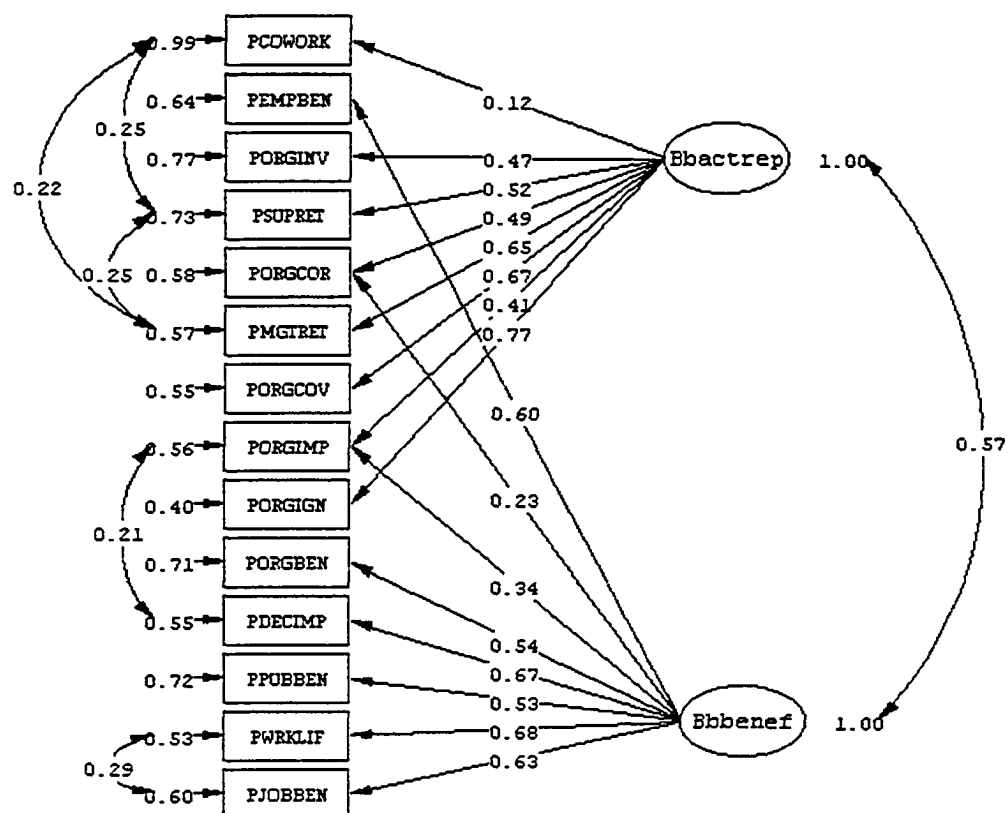


Figure E7. Two-factor measurement model of the Behavioral Belief Set items

Table E7 Fit Indices for the Measurement Models of the Behavioral Belief Items

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence (Null) Model	1043.95***	91	11.47	.43	.34	.00	.00	.31	.20
One-Factor Model (unmodified)	382.80***	77	4.97	.76	.68	.62	.68	.15	.10
Three-Factor Model (modified)	142.42***	70	2.03	.91	.87	.90	.92	.07	.06
Two-Factor Model (modified)	130.33***	69	1.89	.92	.87	.92	.94	.06	.05

i. CFA results for the Normative Belief Set scale

The data-model fit of the nine items developed to assess the construct of normative belief sets held by individuals about referents' approval of performing the target behavior was initially evaluated against a one-factor model. The one-factor model had a significantly better fit than the null model ($\Delta\chi^2=1109.80$ with $\Delta df=17$, $p<.001$). LISREL modification indices suggested the addition of error covariances between most of the nine items, all of which would result in a significant decrease in χ^2 and thus, in a better data-model fit. However, even after freeing selected error covariances, data had only a modest fit with the hypothesized one-factor model (see Table E8 below for fit indices associated with the modified one-factor model).

A review of the patterns of relationships of error variances seen in the modification indices of the one-factor model analysis seemed to suggest that certain clusters of items were more closely related to each other than to the remaining items in the Normative Belief Set scale. A review of the items in the scale indicated that the nine items could be logically classified in one of three groups or clusters – normative belief sets held by an individual regarding (a) referents in one's personal life, (b) referents associated with one's job, and (c) other referents not directly related to one's personal life or current employment setting. Thus, a new three-factor model was specified whereby (a) items relating to personal referents (i.e., spouse, family and friends) were free to load on the Normative Belief Set - Personal Referents (labeled "NB-pers") scale; (b) items regarding referents related to one's current employment (i.e., coworkers, supervisor, management, and head of the organization) were free to load on the Normative Belief Set - Job Referents (labeled "NB-job") scale; and (c) items relating to one's profession and agencies outside one's organization were free to load on the Normative Belief Set - Other

Referents (labeled "NB-oth") scale. Initial results indicated an improvement over the original unmodified one-factor model ($\Delta\chi^2=206.41$ with $\Delta df=7$, $p<.001$) but still only a modest, at best, data model fit. Modification indices suggested a number of path additions that would result in sizable χ^2 decreases. In terms of factor loadings, analyses suggested that the item dealing with normative beliefs held regarding one's coworkers should be allowed to cross-load on more than one factor. If one considers that employees often develop friendships and personal relationships with people that they work with, it seemed reasonable to allow the coworker-related item to load on both the NB-job and NB-pers scales. Although modification indices also suggested the addition of a path from NB-oth to the coworker-related item, the decrease in χ^2 and the factor loading were not significant after allowing this item to load on both the NB-job and NB-pers scales and, thus, was not implemented. Regarding error covariances, three out of the suggested six were deemed substantive and appropriate for inclusion; namely, the error variances between spouse-coworker, coworker-profession, and management-head of the organization were set free to correlate. Results indicated that the modified three-factor model had a good data-model fit and represented a significant improvement over the original three-factor model ($\Delta\chi^2=134.35$ with $\Delta df=4$, $p<.001$). A review of the individual estimated parameters of the retained model showed all factors to be statistically significant with moderate and acceptable reliabilities. The standardized factor loadings also indicated that the normative belief item regarding one's coworkers had a stronger association with the latent factor of Normative Belief Set – Personal Referents than with the Normative Belief Set – Job Referents. The correlation among the latent factors ranged from .52 to .63. The final measurement model of the normative belief set items

and the fit indices associated with the iterations in the model development and refinement are presented below in Figure E8 and Table E8, respectively.

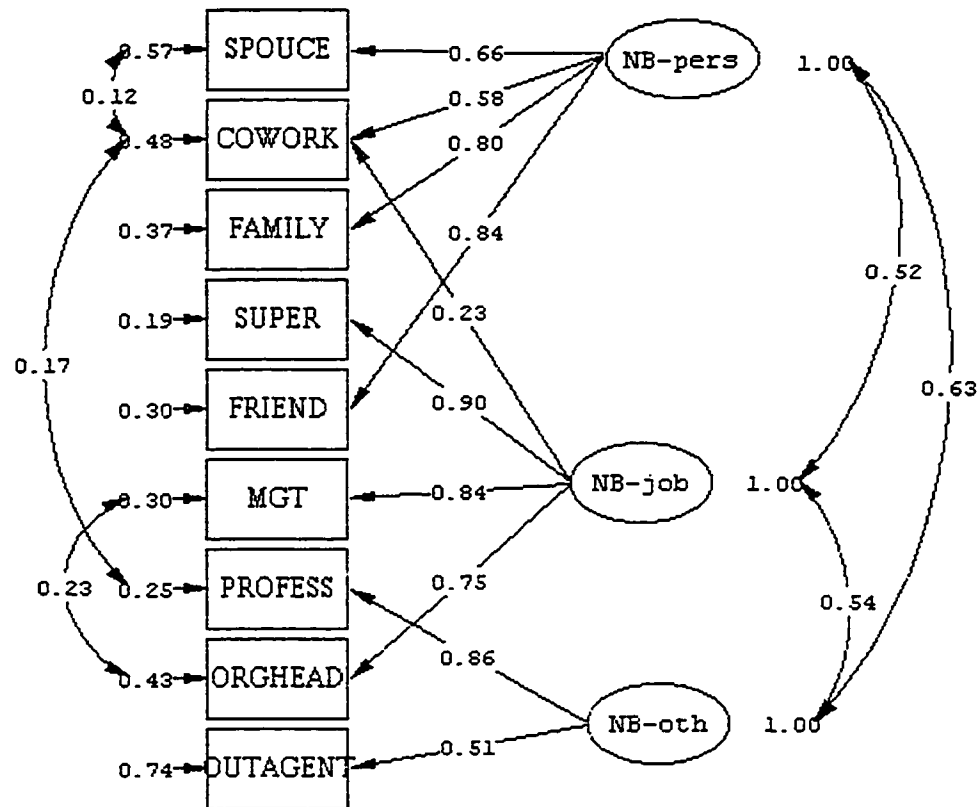


Figure E8. Three-factor measurement model of the Normative Behavioral Belief items

Table E8 Fit Indices for the Measurement Models of the Normative Behavioral Belief Items

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	1012.79***	36	28.13	.38	.23	.00	.00	.44	.39
One-Factor Model (unmodified)	367.00***	27	13.59	.64	.40	.54	.65	.30	.16
Three-Factor Model (unmodified)	160.59***	24	6.69	.86	.74	.79	.86	.16	.12
Three-Factor Model (modified)	26.24 (<i>p</i> =.16)	20	1.31	.97	.94	.99	.99	.04	.03

j. CFA results for the Control Belief Set scale

In order to evaluate the eight items developed to assess the construct of a control belief set held by individuals vis-à-vis the target behavior, a one-factor model was initially specified and evaluated for data-model fit. Results demonstrated an adequate degree of fit (see Table E9 below for the fit indices associated with the one-factor model).

However, parameter estimates for half of the observed variables comprising the scale indicated that these items may be unreliable indicators of the construct as initially conceptualized. A review of the content of the eight items involved raised the possibility that a one-factor model may not be sufficient to meaningfully explain item variance. Four of the eight items addressed organization-related issues regarding individuals' perceptions of policies/procedures and expected organizational responses to reports of wrongdoing and their influence on the ease of reporting. Two out of the eight items dealt with individuals' perceptions of personal resources (financial and social) to handle potential negative consequences of reporting. Finally, the last two items dealt with individuals' perceptions of the effect that believing the violation to be serious or minor would have on their ease or difficulty of reporting the observed violation.

A subsequent two-factor model was specified and evaluated. The four items addressing organizational factors influencing ease or difficulty of reporting were freed to load on the Control Belief Set – Organizational Influences (labels "Cbs-oi") construct. The two items dealing with assessments of severity of the violation were conceptually deemed less related to organizational factors that influence an individual's sense of control over reporting and more akin to personal perceptions/evaluations that affect one's sense of ease or difficulty over performing an act or behavior. Thus, the decision was made to free the two violation-related items along with the financial and social resource

items to load on the Control Belief Set – Personal Influences (Cbs-pi) construct. Initial results of the two-factor model indicated a modest data-model fit (see Table E9 below for fit indices associated with the initial two-factor model). Modification indices suggested the addition of a couple of paths from constructs to observed indicators but neither were large enough to justify allowing items to load on more than one construct in order to improve the data-model fit at the expense of clarity of conceptual interpretation of the factors. Modification indices also indicated that the addition of several covariances of error terms would improve the data-model fit. Three of the suggested modifications were deemed justifiable and were added to the initial model; namely, error covariances were added for the following pairs of items: FAIRWB and FAIRREP, POLICY and VIOSER, and VIOSER and VIOMIN. The results for this modified model indicated an improved data-model fit when compared to the original one ($\Delta\chi^2=31.72$, $\Delta df=3$, $p<.001$). The two factors were correlated ($\phi=.65$) but their relationship was not so high as to indicate a one-factor model. All estimated parameters were significant ($t>2.00$) and in the expected direction, with the exception of the loading of one item, VIOMIN ($\lambda_{61}=.13$, n.s., with an $R^2=.018$). The parameter estimates for the VIOMIN item indicated that this item is not a significant or reliable indicator of the underlying construct of Cbs-pi. Thus, the item was dropped from this scale and the two-factor model was re-evaluated using seven rather than eight items. As previously, the error variances between POLICY and VIOSER and between FAIRWB and FAIRREP were allowed to correlate. The results of the seven-item, two-factor model indicated a good data-model fit, with no suggested modifications. The final seven-item, two-factor measurement model is presented in Figure E9 below; the fit indices for all model iterations described above are presented in Table E9 below.

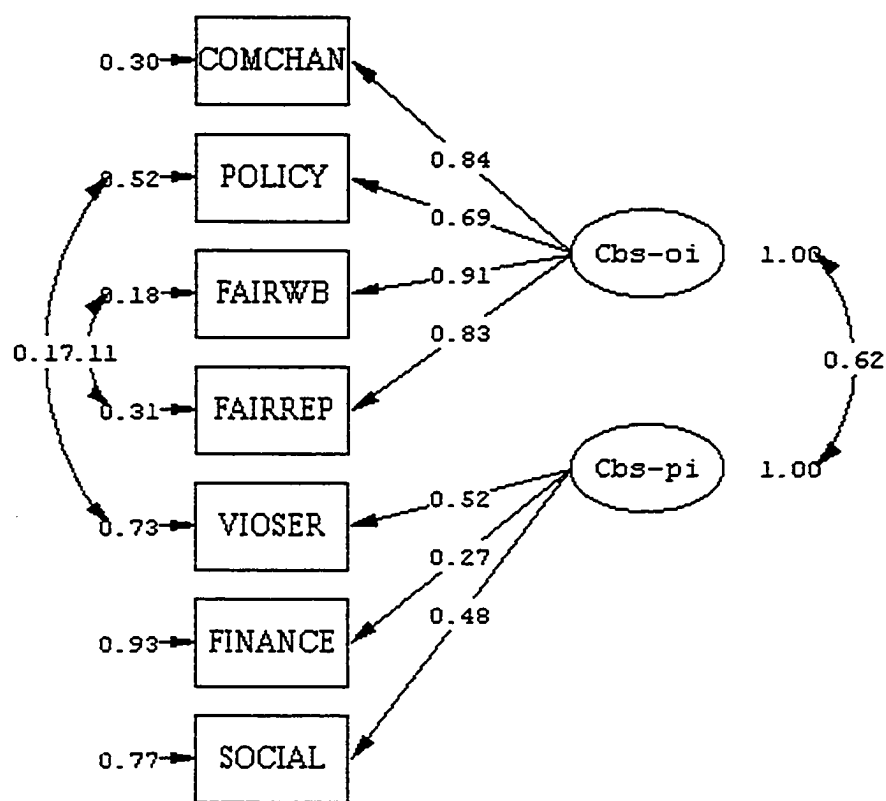


Figure E9. Seven-item, two-factor measurement model of Control Belief Set scale

Table E9 Fit Indices for the Measurement Models of the Control Belief Set scale

	χ^2	df	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	675.24***	28	24.12	.51	.38	.00	.00	.36	.32
One-Factor Measurement Model	66.51***	20	3.32	.92	.86	.90	.93	.11	.07
8-Item, Two-Factor Model (unmodified)	61.03***	19	3.21	.93	.87	.90	.94	.10	.07
8-Item, Two-Factor Model (modified)	29.09 (p=.023)	16	1.82	.97	.92	.96	.98	.06	.04
7-Item, Two-Factor Model	17.24 (p=.10)	11	1.57	.98	.94	.98	.99	.05	.03

k. CFA results for Behavioral Belief and Normative Belief Set scales

The separate measurement models were combined and tested for data-model fit. Once again, modification indices suggested the addition of error covariances between items but no item-factor paths. A review of the expected changes in χ^2 , if these modifications were implemented, indicated that most suggestions were neither statistically compelling nor meaningful. Two suggested modifications, however, were implemented; namely the error covariances between (a) the behavioral belief item pertaining to coworker retaliation and the normative belief item regarding coworker approval of the intent to report the observed violation and (b) the behavioral belief item pertaining to supervisor retaliation and the normative belief item regarding supervisor approval of the intent to report the observed violation were set free to correlate. Although the two modifications resulted in a significant decrease in χ^2 ($\Delta\chi^2=40.62$ with $\Delta df=2$, $p<.001$), the fit indices for the modified model did not show any marked improvement, with the exception of the RMSEA index whose lower bound now fell within the recommended level.

A review of the retained model's individual estimated parameters showed all factor loadings to be statistically significant and their estimated reliability indicators moderate and acceptable, with the previously mentioned exception of the behavioral belief item regarding coworker retaliation. The estimated relationships among the latent factors of behavioral and normative belief sets ranged from .30 to .69. Overall, results indicated a reasonable data-model fit (see Figure E10 and Table E10 below for the measurement model and associated fit indices, respectively).

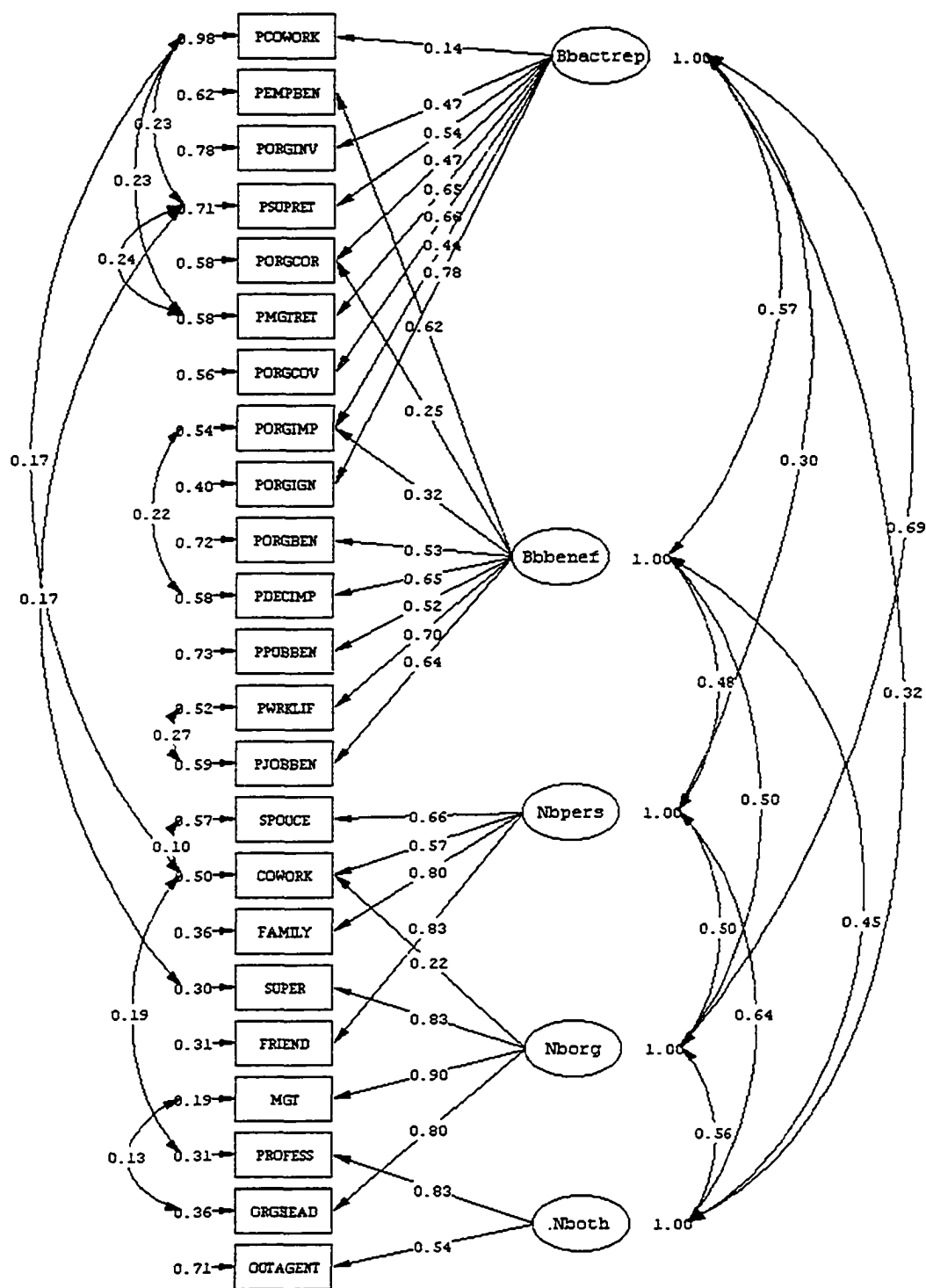


Figure E10. Measurement model of the Behavioral Belief and Normative Belief Set items

Table E10 Fit Indices for the Measurement Model of the Behavioral Belief and Normative Belief Set Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	2398.58***	253	9.48	.32	.26	.00	.00	.30	.29
Measurement Model (unmodified)	390.68***	209	1.87	.86	.82	.90	.92	.063	.06
Measurement Model (modified)	350.06***	207	1.69	.87	.83	.92	.93	.056	.06

1. CFA results for Behavioral Belief and Control Belief Set scales

Again, the two separate measurement models were combined and tested for data-model fit. Modification indices suggested the addition of several error covariances between items as well as two paths that would allow items to load on more than one factor. A review of the expected changes in χ^2 , if these modifications were implemented, were again deemed neither statistically compelling nor meaningful or substantively interpretable and were, thus, not implemented. An examination of the individual estimated model parameters showed all factor loadings to be statistically significant, with the exception of the coworker retaliation behavioral belief item. Estimated coefficients of determination were moderate and acceptable with two notable exceptions (i.e., the behavioral belief item regarding expected coworker retaliation and the control belief item regarding having the financial resources to deal with potentially unfavorable outcomes of reporting the observed violation). The estimated correlations among the latent behavioral and control belief set factors ranged from .42 to .67. Overall results indicated a reasonable data-model fit (see Figure E11 and Table E11 below for the measurement model and associated fit indices, respectively).

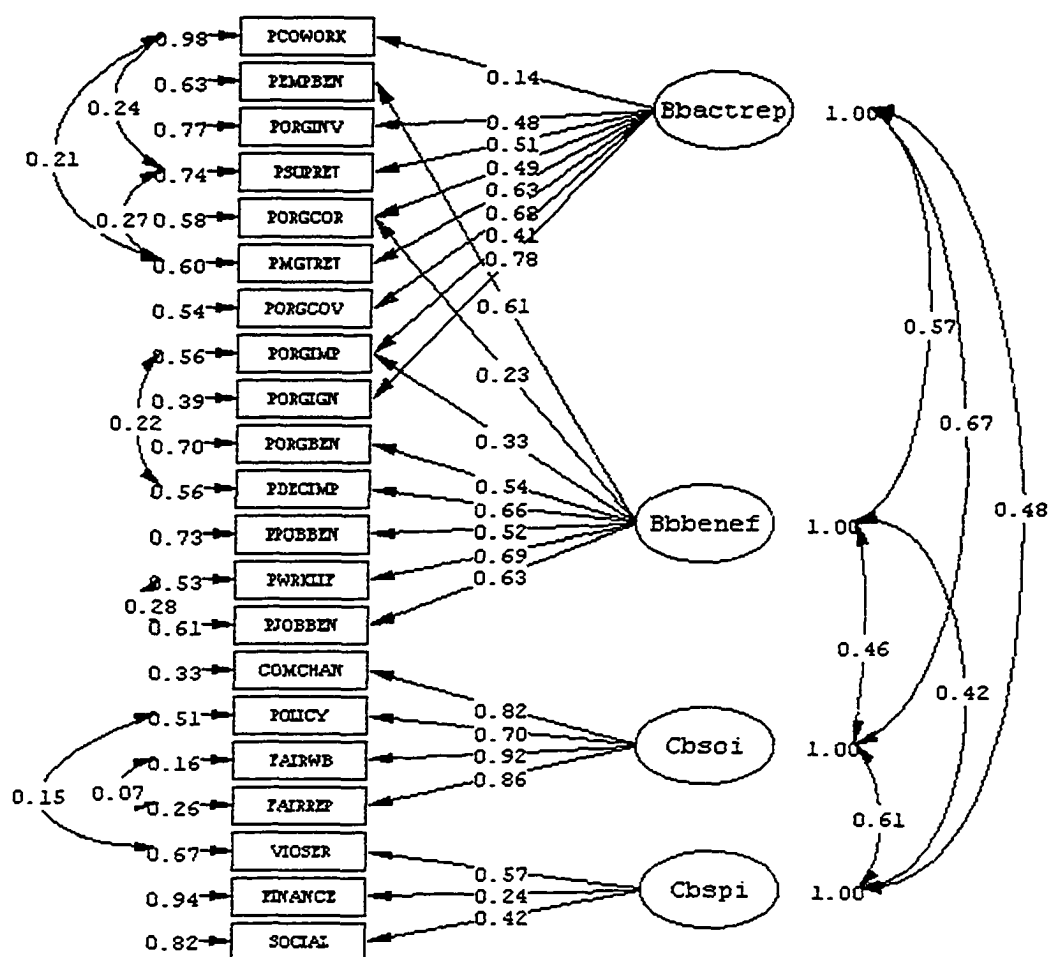


Figure E11. Measurement model of the Behavioral Belief and Control Belief Set items

Table E11 Fit Indices for the Measurement Model of the Behavioral Belief and Control Belief Set Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	1977.40***	231	8.56	.36	.30	.00	.00	.28	.27
Measurement Model	295.88***	174	1.70	.88	.84	.91	.93	.06	.06

n. CFA results for Normative Belief and Control Belief Set scales

The separate measurement models were combined and tested for data-model fit. Once again, modification indices suggested the addition of error covariances between two items as well as two item-factor paths. A review of the expected changes in χ^2 , if these modifications were implemented, indicated that suggested additions were neither statistically compelling nor were they meaningful or substantively interpretable. Overall results indicated a reasonable data-model fit and a review of the individual estimated parameters showed all factor loadings to be statistically significant. Estimated reliabilities were moderate and acceptable, with the exception of the control belief item regarding financial resources to deal with potentially negative consequences resulting from blowing the whistle. Estimated correlations among the latent normative and control belief sets ranged from .23 to .63. The measurement model and the associated fit indices are presented below in Figure E12 and Table E12, respectively.

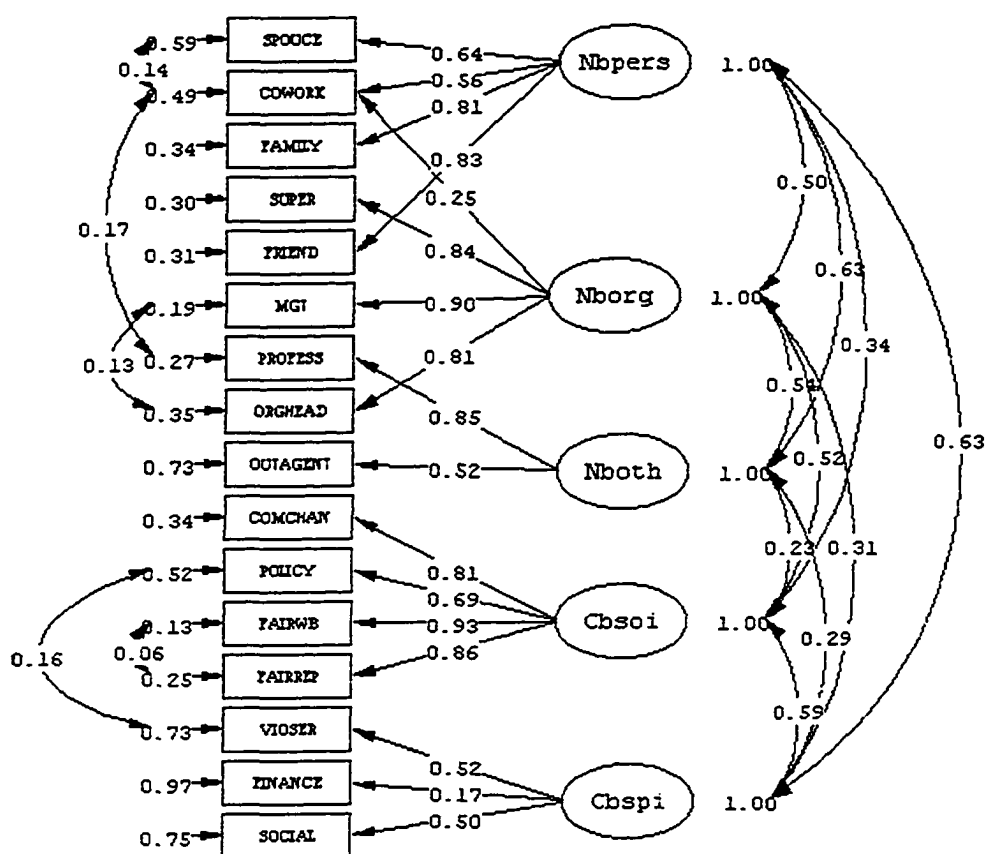


Figure E12. Measurement model of the Normative Belief and Control Belief items

Table E12 Fit Indices for the Measurement Model of the Normative Belief and Control Belief Set Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	1871.45***	136	13.76	.37	.29	.00	.00	.32	.31
Measurement Model	148.05***	88	1.68	.92	.87	.95	.97	.06	.05

o. CFA results for Behavioral Belief, Normative Belief and Control Belief Set scales

Finally, all three separate measurement models, with all implemented modifications thus far, were combined and tested for data-model fit. Modification indices suggested the addition of eight error covariances between items and seven item-factor paths allowing items to cross-load on more than one factor. Again, a review of the expected changes in χ^2 , if these modifications were implemented, indicated that most suggestions were neither statistically compelling nor substantively interpretable or meaningful. Overall, results indicated a reasonable data-model fit and a review of the estimated factor loadings showed that they were all statistically significant, with the exception of the control belief item regarding financial resources available to deal with potentially negative outcomes of blowing the whistle. Estimated reliabilities were moderate and acceptable with the exception of the behavioral belief item regarding coworker retaliation and the control belief item regarding financial resources available to the individual. The measurement model and associated fit indices are presented below in Figure E13 and Table E13a, respectively; the estimated correlations among the latent constructs/factors are presented in Table E13b, below.

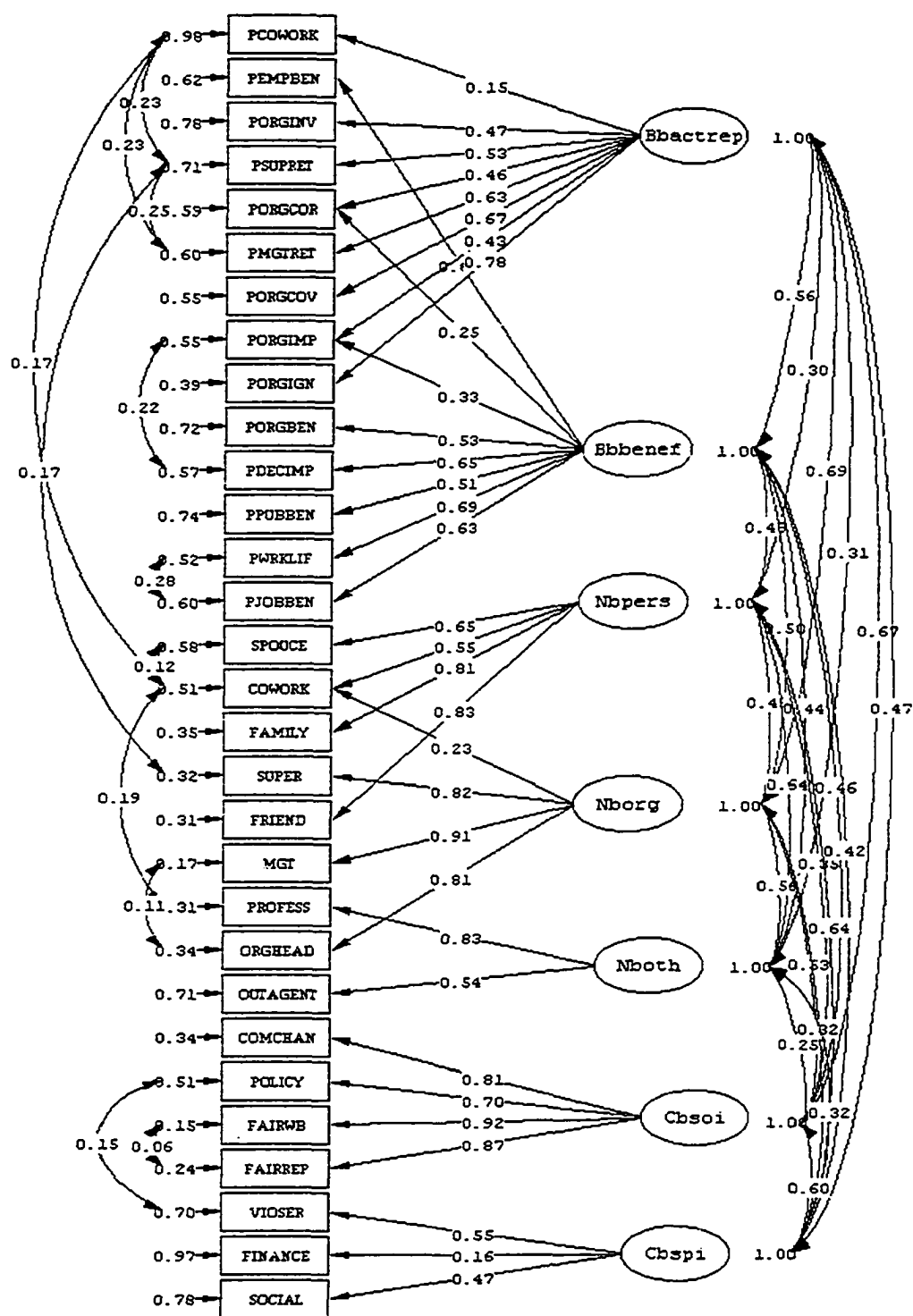


Figure E13. Measurement model of the Behavioral Belief, Normative Belief and Control Belief Set items

Table E13a Fit Indices for the Measurement Model of the Behavioral Belief, Normative Belief and Control Belief Set Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	3473.19***	465	7.47	.29	.24	.00	.00	.28	.27
Measurement Model	617.11***	369	1.67	.84	.80	.90	.92	.05	.06

Table E13b Correlation Matrix of the Measurement Model's Latent Variables

	Bbactrep	Bbbenef	Nb-pers	Nb-org	Nb-oth	Cbs-oi	Cbs-pi
Bbactrep	1.00						
Bbbenef	.56	1.00					
Nb-pers	.30	.48	1.00				
Nb-org	.69	.50	.49	1.00			
Nb-oth	.31	.44	.64	.56	1.00		
Cbs-oi	.67	.46	.35	.53	.25	1.00	
Cbs-pi	.47	.42	.64	.32	.32	.60	1.00

q. CFA results for exogenous variable measures: Corporate Ethical Values, Organizational Fairness and Work-Group Support Scales

The first scale examined was the Corporate Ethical Values scale (labeled "Cethval"). A five-item one-factor model was specified and tested. Modification indices resulting from the initial data-model fit test suggested the addition of error covariances between two sets of items in this scale. A review of the expected χ^2 change and resulting estimates, if those parameters were to be set free, indicated that only one of the two paths could be justified from a theoretical and statistical perspective. Thus, the initial model was respecified so that the error variances between items CEV2R and CEV3R were free to correlate. From a conceptual perspective, freeing up the error covariance between these items was justified based on the fact that they were the only two, out of the five, items in the Corporate Ethical Values scale that were reverse coded, thus, signifying that some of their error covariance may be capturing a method variance effect. The addition of the error covariance path resulted in a significant decrease in χ^2 ($\Delta\chi^2=9.61$ with $\Delta df=1$, $p<.01$) and an improved data-model fit. The measurement model and the fit indices are presented below in Figure K1 and Table K1, respectively.

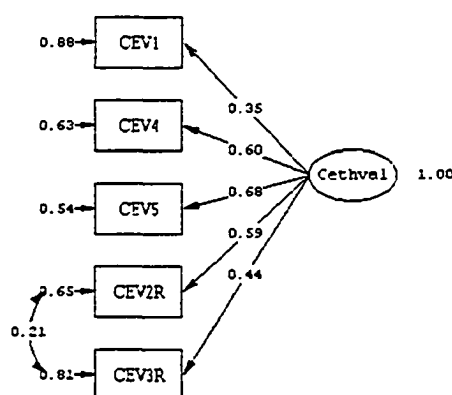


Figure K1. Measurement model of the Corporate Ethical Values scale

Table K1 Fit Indices for the Measurement Model of the Corporate Ethical Values Scale

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	166.76***	10	16.68	.71	.56	.00	.00	.31	.24
Initial Model	17.97 (p=.003)	5	3.59	.97	.90	.83	.92	.11	.05
Modified Model	8.39 (p=.095)	4	2.10	.98	.94	.93	.97	.07	.03

Next the five-item Corporate Ethical Values and the three-item Work-Group Support (labeled "Pwkgsup") scales were jointly tested for data-model fit. Based on previous results, the error variance between the CEV2R and CEV3R items were set free to correlate. Results indicated that the data fit the model well. The measurement model and the fit indices are presented below in Figure K2 and Table K2, respectively.

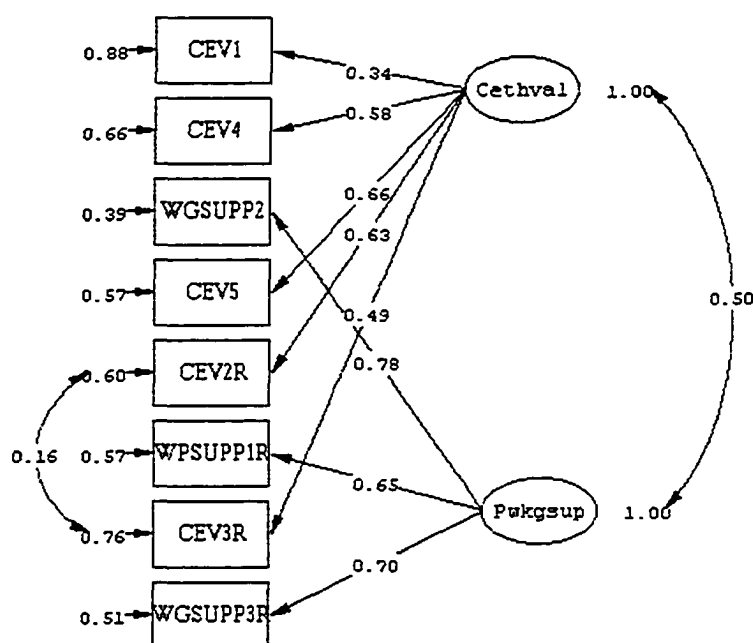


Figure K2. Measurement model of the Corporate Ethical Values and Work-Group Support scales

Table K2 Fit Indices for the Measurement Model of the Corporate Ethical Values and Work-Group Support Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	362.36***	28	12.94	.62	.51	.00	.00	.29	.25
Measurement Model	26.70 (p=.085)	18	1.48	.97	.94	.96	.97	.05	.04

The five-item Corporate Ethical Values and the three-item Organizational Fairness (labeled "Porgfair") scales were also examined together. The model, as previously, was specified so that the error variances of CEV2R and CEV3R were free to correlate. LISREL results indicated that the data fit the model well. However, the relationship between the Corporate Ethical Values and Organizational Fairness constructs was significantly high ($\phi=.84$), raising some concerns over the appropriateness of a two-factor structure. The measurement model and the fit indices are presented below, in Figure K3 and Table K3, respectively.

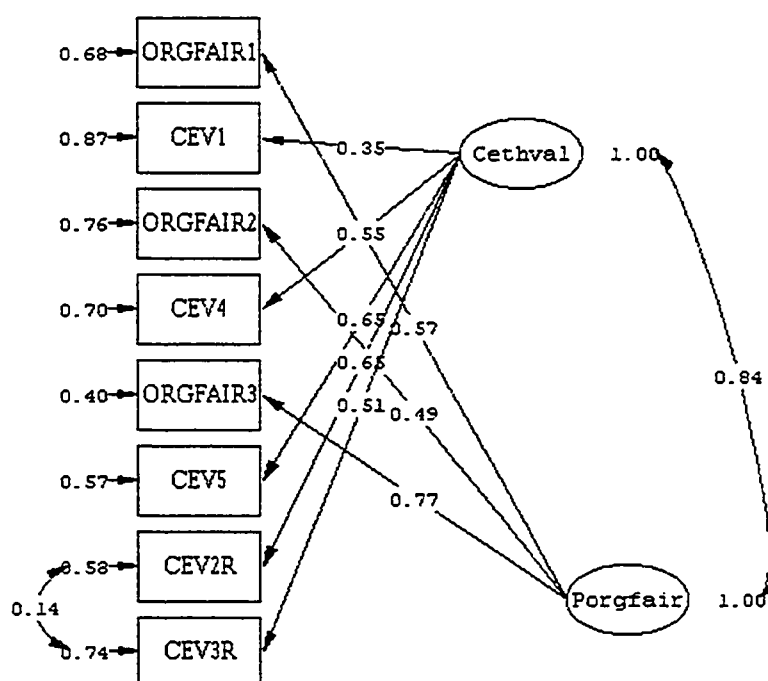


Figure K3. Measurement model of the Corporate Ethical Values and Organizational Fairness scales

Table K3 Fit Indices for the Measurement Model of the Corporate Ethical Values and Organizational Fairness Scales

	χ^2	df	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	348.76***	28	12.46	.59	.47	.00	.00	.31	.26
Measurement Model	27.66 (p=.067)	18	1.54	.97	.94	.95	.97	.05	.04

The structure of the Organizational Fairness and Work-Group Support scales was also examined by specifying a model so that the three 'fairness' items were free to load on the Organizational Fairness scale and the three 'support' item were free to load on the Work-Group Support scale. Although initial results indicated that the data fit the model well, modification indices suggested that the addition of two paths (from each construct to an item on the other scale) as well as the freeing a number of items' error variances to correlate would significantly improve the data-model fit. A review of the expected decrease in the χ^2 , and the expected new estimates for the freed parameters as well as an examination of the affected items themselves indicated that only the addition of two error covariance parameters could be justified. The model was, thus, respecified so that the error variances between ORGFAIR2 and ORGFAIR3 and between ORGFAIR3 and WGSUPP2 were set free to correlate. All estimated parameters were significant, with the exception of the error variance for ORGFAIR1 which was negative but not significant, and results for the modified model indicated a good data-model fit (the modified model and the fit indices are presented below, in Figure K4 and Table K4, respectively).

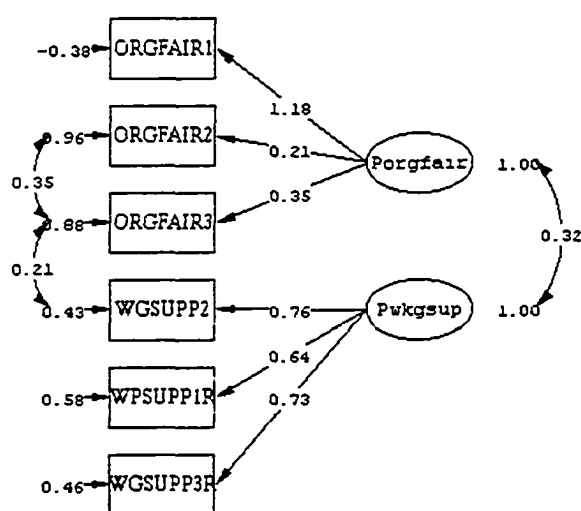


Figure K4. Measurement model of the Organizational Fairness and Work-Group Support scales

Table K4 Fit Indices for the Measurement Model of the Organizational Fairness and Work-Group Support Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	276.75***	15	18.45	.66	.53	.00	.00	.31	.26
Initial Model	33.19***	8	4.15	.95	.86	.82	.90	.13	.07
Measurement Model (modified)	2.84 (p=.83)	6	.47	1.00	.98	1.03	1.00	.00	.02

Finally, a model including all three scales (i.e., Corporate Ethical Values, Organizational Fairness and Work-Group Support) was specified and assessed for data-model fit. Although LISREL results indicated a good data-model fit, an examination of the phi matrix parameter estimates reinforced previous concerns over the appropriateness of a two-factor structure for the Corporate Ethical Values and Organizational Fairness scales ($\phi_{21}=0.92$). The measurement model and fit indices are presented below in Figure K5 and Table K5, respectively.

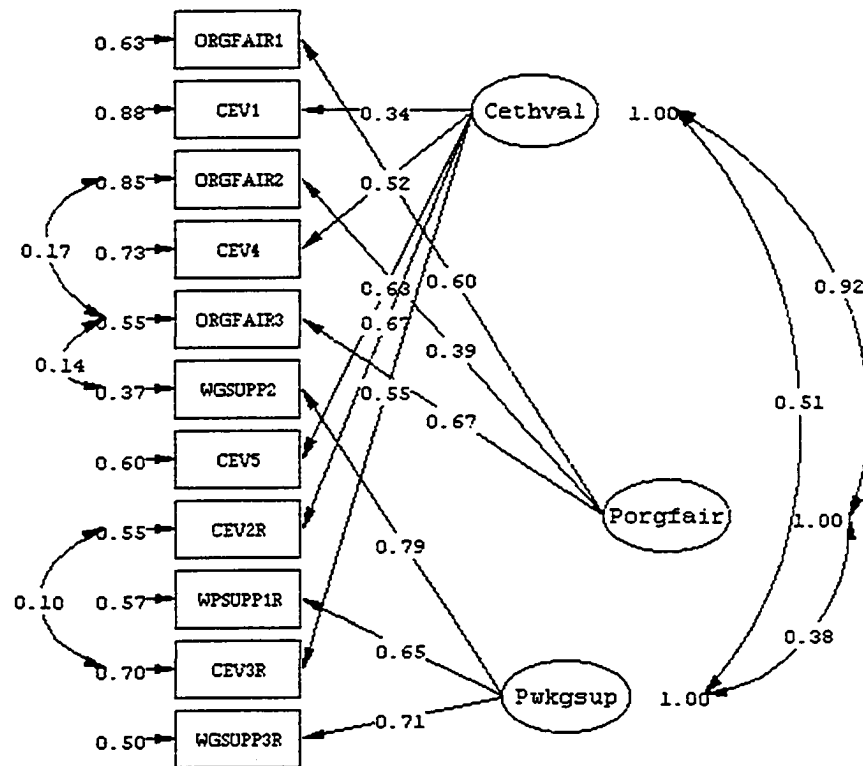


Figure K5. Three-factor measurement model of exogenous variables

Table K5 Fit Indices for the Three-Factor Model of the Exogenous Variables (Corporate Ethical Values, Organizational Fairness and Work-Group Support Scales)

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	571.33***	55	10.39	.55	.46	.00	.00	.28	.25
Three-Factor Model	53.29 (p=.06)	38	1.40	.96	.92	.96	.97	.04	.05

Based on the estimated relationship between the Corporate Ethical Values and Organizational Fairness constructs, the decision was made to re-examine the two scales using a one-factor structure. When all eight items (i.e., five CEV and three ORGFAIR items) were specified to load on a singular factor, LISREL results indicated as good a data-model fit as the two-factor model with minimal effects on factor loadings of the eight items. All estimated factor loadings were statistically significant. Estimated reliabilities were moderate and acceptable, with the exception of the first Corporate Ethical Values item ["If a manager in my company is discovered to have engaged in unethical behavior that results primarily in *personal gain* (rather than organizational gain), he or she will be promptly reprimanded."] ($R^2=.12$) and the second Organizational Fairness item ("Management in my organization treats me honestly and ethically.") ($R^2=.15$). All items were retained; the one-factor model and the associated fit indices are presented in Figure K6 and Table K6, respectively.

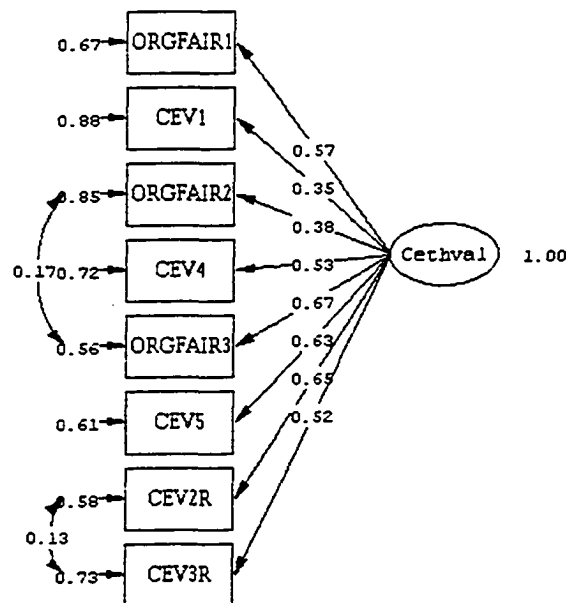


Figure K6. One-factor model of Corporate Ethical Values and Organizational Fairness scales

Table K6 Fit Indices for the One-Factor Model of Corporate Ethical Values and Organizational Fairness Scales

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	348.76***	28	12.46	.59	.47	.00	.00	.31	.26
Two-Factor Model	27.66 (p=.067)	18	1.54	.97	.94	.95	.97	.05	.04
One-Factor Model	25.01 (p=.12)	18	1.39	.97	.94	.97	.98	.04	.04

Finally, the “new” eight-item Ethical Values and Fairness scale and Work-Group Support scale were jointly examined for data-model fit. Results indicated that the data fit the two-factor model of the exogenous variables reasonably well and the data-model fit indices were almost identical to the results from the three-factor model with a slight improvement in indices of parsimony (PGFIs of .55 and .58, and PNFI of .63 and .66 for the three- and two-factor model, respectively). All estimated factor loadings were statistically significant. Estimated reliabilities were moderate and acceptable with the exception of the one Corporate Ethical Values item and the Organizational Fairness item mentioned previously. The estimated correlation between the latent Corporate Ethical Values and Work Group Support factors was .48. The exogenous variable measurement model and the associated fit indices are presented below in Figure K7 and Table K7, respectively.

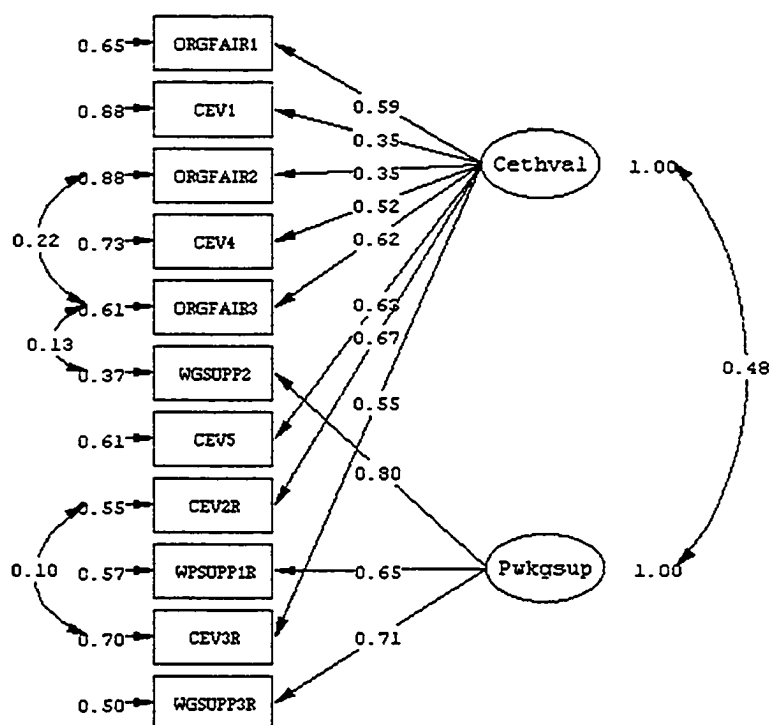


Figure K7. Measurement model of exogenous variables

Table K7 Fit Indices for the Measurement Model of the Exogenous Variables (Corporate Ethical Values & Fairness and Work-Group Support)

	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	571.33**	55	10.39	.55	.46	.00	.00	.28	.25
Three-Factor Model	53.29 (p=.051)	38	1.40	.96	.92	.96	.97	.04	.05
Two-Factor Model	55.82 (p=.049)	40	1.39	.95	.92	.96	.97	.04	.05

Phase 2: Testing the Structural Model

The original Ajzen's Model of Planned behavior as it applied in the formation of intention to report observed organizational wrongdoing and the subsequent model modifications were tested with structural equation modeling using PRELIS 2.00 and LISREL 8.30/SIMPLIS. All structural equation models were analyzed using the sample covariance matrix, listwise deletion and a sample size of 205 respondents. Given the relatively small sample size, the decision was made to fix the previously established measurement model in order to keep the sample size to estimated parameter ratio within the recommended levels so that tests of statistical significance could be trusted (i.e., 5:1 at the very least and preferably 10:1 or larger; Bentler & Chou, 1988; Bentler, 1993). This decision was also supported by other researchers conducting structural equation modeling analyses stating that when the number of common factors is small compared to the number of observed variables, fit indices can be misleading (Schmidt & Ryan, 1993). The "fixing" of the measurement model was done in two steps. First, based on the previous measurement model analyses and their results, a score was computed for each of the factors identified by summing ratings of individual items loading on each respective factor. Each of these factors was used to serve as the observed variable of the appropriate model's latent variables. The measurement model was then fixed by specifying the factor loadings for the latent variables equal to the square root of the reliability (i.e., the reliability index or the correlation between obtained scores on a given scale and the theoretical true scores), and the measurement error in the observed variables fixed to one minus the measure's reliability multiplied by the variance of the observed measure [i.e., $(1-r)*\text{variance}$]. The reliability estimates and variances, listed in Appendix M, were used

to estimate the reliability and measurement error of the measures. A reliability estimate of .80 was assumed for the single item of the Subjective Norm construct.

The subsequent analyses of the theoretical model reflected initially a "strictly confirmatory" and then a "model generation" situation rather than an "alternative" or "competing models" approach (Jöreskog & Sörbom, 1993; p. 115). In other words, the intent of the present research was (a) to test whether Ajzen's Model of Planned Behavior was appropriate and could adequately capture empirical data in the realm of intention formation of reporting observed organizational wrongdoing to someone or some group inside an organization that could take corrective action; and, (b) using Ajzen's model as a tentative starting point, to modify it, if necessary, so as to develop a more refined model that fits the data well both from a statistical and a theoretical perspective. The intent of the present study was not to specify and compare the relative data-model fit of Ajzen's model vis-à-vis the models suggested in the whistle-blowing literature (although in the model generation phase, technically, several nested models were compared for their relative data-model fit).

Analyses of the Structural Equation Model of Whistle-Blowing Intention Formation - Primary Model

The two primary hypotheses developed on the basis of Ajzen & Fishbein's (1980) Theory of Reasoned Action and Ajzen's (1988) Model of Planned Behavior proposed that:

- a. individuals' intentions to perform a target behavior are determined by general attitudes toward the behavior, subjective norms and perceived behavioral control the individuals have over the behavior; and,

- b. individuals' general attitudes, subjective norm and perceived behavioral control are in turn determined by individuals' beliefs about the consequences of performing the behavior (i.e., behavioral belief sets), beliefs about the normative expectations of relevant referents (i.e., normative belief sets) and beliefs about the amount of control they have over performing the target behavior (i.e., behavioral control belief set), respectively.

These two hypotheses were tested by constraining the gamma (Γ) and beta (B) matrices in LISREL. The Γ matrix contained the parameters of regression coefficients associated with the paths from the behavioral belief, the normative belief and the behavioral control belief set exogenous latent factors to the general attitude, overall subjective norm and direct control endogenous latent factors. The Γ matrix was constrained in such a way that (1) the Behavioral Beliefs – Organizational Actions (labeled "Bbs_act") and the Behavioral Beliefs – Benefits of Reporting (labeled "Bbs_ben") were freed to predict Overall Attitude (labeled "Gatt_5r") (addressing Hypothesis 1a; see pages 62-63); (2) the Normative Beliefs regarding Personal Referents (labeled "Nb_pers"), Job-Related Referents (labeled "Nb_job") and Other Referents (labeled "Nb_oth") were freed to predict Subjective Norm (labeled "Sn") (addressing Hypothesis 2a; see page 63); and, (3) Control Beliefs regarding Organizational Influences (labeled "Cbs_oi") and Personal Influences (labeled "Cbs_pi") were freed to predict Perceived Behavioral Control (labeled "Gdircon") (addressing Hypothesis 3a; see page 64). All other elements in the gamma matrix were fixed to zero, allowing no other relationships between the exogenous and endogenous variables.

The beta matrix contained the parameters or regression coefficients associated with the paths from the Overall Attitudes, Subjective Norm and Perceived Behavioral Control latent factors to the latent factor of Intention to Report the observed organizational wrongdoing. The beta matrix was specified in a way that Overall Attitudes, Subjective Norm and Perceived Behavioral Control were freed to predict Intention to Report (labeled "Repint_r") (addressing Hypotheses 1b, 2b and 3b; see pages 63-64). All other elements in the beta matrix were fixed to zero allowing no other relationships. Hypothesis 4, regarding the relationship between Moral Obligation and Intention to Report an observed organizational wrongdoing became moot in the model specification due to the final measurement model results, whereby it was merged with the Intention to Report scale to form a unidimensional factor. Indices obtained for this initial model (Model #1), presented in Table M1 below, indicate that the data-model fit was fair. Table M1 also shows that the eleven-factor null or independence model hypothesizing no relationships between and among any of the latent exogenous and endogenous variables had a very poor fit.

The resulting modification indices for the beta matrix indicated that Subjective Norm and Perceived Behavioral Control were both strongly and positively related to Overall Attitude. These suggested modifications were not inconsistent with Ajzen's Model of Planned Behavior, which allows for non-recursive paths among the Overall Attitude, Subjective Norm and Perceived Behavioral Control determinants of behavioral intention; thus, the constraints in the beta matrix were relaxed by allowing Subjective Norm and Perceived Behavioral Control to predict Overall Attitude. The modification indices also suggested the addition of error covariance between the two Control Belief Set composites (i.e., Control Beliefs held regarding organizational factor influences and

Control Beliefs held regarding personal factor influences). The suggested modification was deemed reasonable since some of the items in the two sub-scales, such as strength of the belief that the observed violation was serious or not and whether it would make it easier or harder to report it to someone or some group inside the organization, may have been influenced by a number of factors not accounted for in the present model.

The modified model was again re-evaluated for data-model fit. Indices indicated that Model #2, presented in Figure M1 and Table M1 below, had a significantly better fit than Model #1 ($\Delta\chi^2=60.93$, $\Delta df=3$, $p<.001$), while not compromising the theoretical underpinnings of the Ajzen model.

A re-examination of the γ parameters estimated for Model #2 indicated that all coefficients were significant ($t>2$) with the exception of Overall Attitude which did not significantly predict Intention To Report ($t=.47$) after the two paths from Subjective Norm and Perceived Behavioral Control to Overall Attitude were added. A review of the estimated γ and β parameters indicated that (1) Overall Attitude was significantly predicted by Subjective Norm, Perceived Behavioral Control and Behavioral Beliefs regarding benefits of reporting observed organizational wrongdoing but not by Behavioral Beliefs regarding organizational actions taken in response to reporting, thus partially supporting Hypothesis 1a; (2) Subjective Norm was significantly predicted by Normative Beliefs held regarding personal referents but not by Normative Beliefs held regarding job-related or other referents, thus supporting a refined version of Hypothesis 2a; and, (3) Perceived Behavioral Control was significantly predicted by Control Beliefs regarding both personal and organizational factor influences, thus supporting Hypothesis 3a.

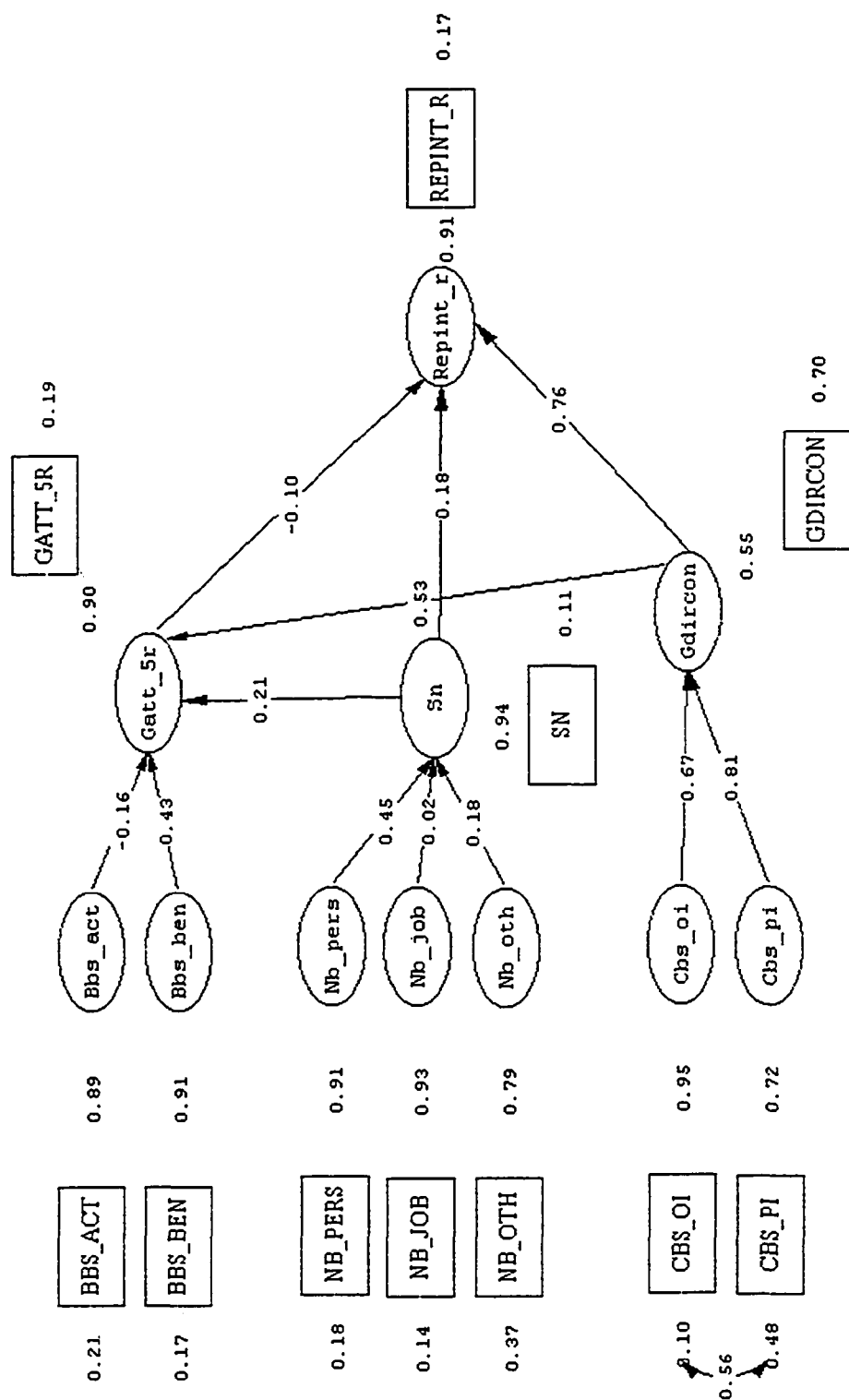


Figure M1. Structural Model #2 - Primary

Table M1 Fit Indices for the Primary Structural Model

	χ^2	df	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	890.63***	55	16.19	.40	.28	.00	.00	.38	4.76
Model #1	109.53***	24	4.56	.92	.77	.77	.80	.13	.80
Model #2	48.60***	21	2.31	.96	.87	.91	.97	.08	.39

Analyses of the Structural Equation Model of Whistle-Blowing Intention Formation Model - Extended Model

In addition to the previous postulations, the Theory of Reasoned Action and the Model of Planned Behavior suggests that external variables affect behavioral intentions and ultimate behavior only indirectly, and their relationship to the formation of behavioral intentions is possible only through their relationship to one or more variables specified by the theory. Thus, it was hypothesized that organizational characteristics such as Corporate Ethical Values/Fairness and Work-Group Support would influence the formation of behavioral intentions indirectly by their effects on behavioral belief, normative belief or behavioral control belief sets.

This theoretical postulation was again tested by constraining the gamma and beta matrices in LISREL 8.30/SIMPLIS. The gamma matrix contained the parameters of regression coefficients associated with the paths from the Corporate Ethical Values/Fairness and Work Group Support exogenous latent variables to the behavioral, normative and behavioral control belief set endogenous latent factors. The beta matrix contained the parameters of regression coefficients associated with the paths addressing all the latent factors of the primary model. The beta matrix was specified in such a way as to incorporate and reflect all the paths identified in the retained Model #2, described in the section above (see Figure M1 and Table M1). Fit indices obtained for this initial model (Model #3), presented in Table M2 below, indicate that the data-model fit was fair. Table M2 also shows that the 13-factor null model hypothesizing no relationship between/among any of the latent exogenous and endogenous variables had a poor fit.

An examination of the β parameters estimated for Model #3 replicated the pattern of statistical significance found in Model #2 described previously. The resulting

modification indices in the gamma matrix indicated that Work Group Support had a strong and positive relationship both with the latent endogenous factor of Perceived Behavioral Control and its antecedent of Control Beliefs regarding personal factor influences. Since the Perceived Behavioral Control and its antecedent composite of Control Beliefs regarding personal factor influences encompassed the notion of available social support resources to deal with potentially negative consequences of blowing the whistle, the two modifications were deemed reasonable and justifiable. Thus, the constraints on the gamma matrix were relaxed by allowing Work Group Support to predict the latent endogenous factors of Control Belief Set - Personal Influences and Perceived Behavioral Control. The modified model (Model #4) was then re-evaluated for data-model fit. Indices indicated that Model #4, presented in Figure M2 and Table M2 below, had a significantly better fit than Model #3 ($\Delta\chi^2=56.14$, $\Delta df=3$, $p<.001$).

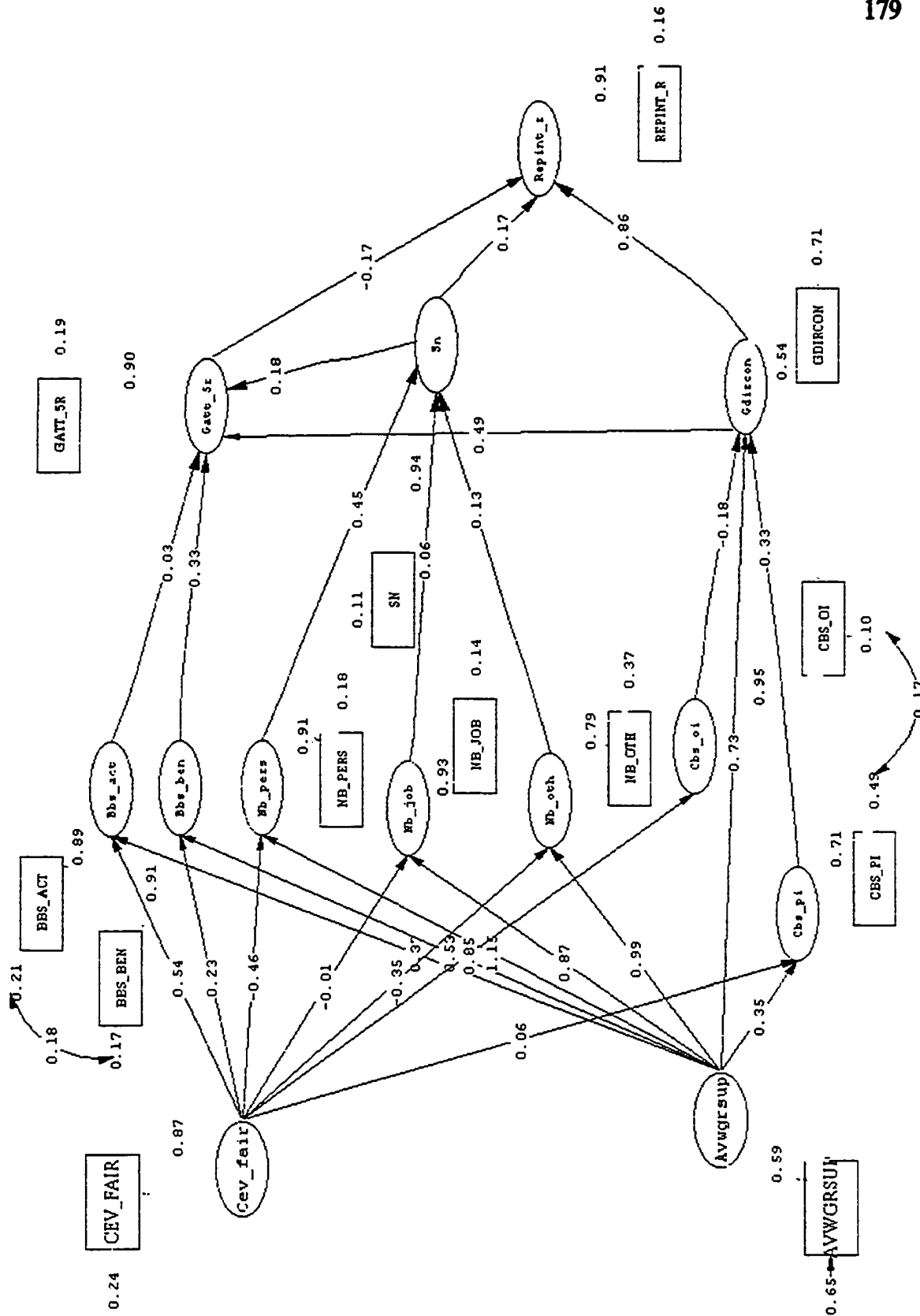


Table M2 Fit Indices for the Extended Structural Model

	χ^2	df	χ^2/df	GFI	AGFI	NNFI	CFI	RMSEA	RMR
Independence Model	1159.94***	78	14.87	.36	.25	.00	.00	.38	4.81
Model #3	157.73***	51	3.09	.90	.82	.85	.90	.10	.89
Model #4	101.59***	48	2.12	.93	.87	.92	.95	.07	.50

A re-examination of the β and γ parameters estimated for the retained Model #4 indicated the following:

1. Overall Attitude did not significantly predict Intention To Report, thus lending no support to Hypothesis 1b;
2. Subjective Norm approached statistical significance as a predictor of Intention To Report ($t=1.93$), thus marginally supporting Hypothesis 2b;
3. Perceived Behavioral Control was a statistically significant predictor of Intention To Report, thus lending support to Hypothesis 3b;
4. the Behavioral Belief Set regarding benefits expected to result from blowing the whistle on observed organizational wrongdoing was statistically significant in predicting the Overall Attitude held by participants regarding whistle-blowing behavior, whereas the Behavioral Belief Set regarding actions the organization would be expected to take in response to the reporting was not. Thus, Hypothesis 1a was supported in a refined form;
5. Perceived Behavioral Control and Subjective Norm were both statistically significant predictors of the Overall Attitude held by participants vis-à-vis whistle-blowing behavior. Although this was not an a priori hypothesis, the post hoc model modification is not inconsistent with the theoretical underpinnings of the Ajzen model;
6. the Normative Belief Set regarding personal referents was a statistically significant predictor of the Subjective Norm held by participants, whereas Normative Belief Sets held regarding job-related or other referents were not. Thus, a more refined version of Hypothesis 2a was supported by the results.

7. The Behavioral Control Belief Set regarding personal factor influences on participants' intent to report an observed organizational violation was statistically significant in predicting Perceived Behavioral Control over performing the behavior whereas the Behavioral Control Belief Set regarding organizational factor influences was not. Thus, results provided support for a more refined version of Hypothesis 3a.

In addition to the Behavioral Control Belief Set regarding personal factor influences, perceived Work Group Support was identified as a statistically significant predictor of Perceived Behavioral Control. Although this was not part of the original hypothesis, it was deemed to be a conceptually logical and justified addition to the model.

However, this addition does raise questions about Ajzen's (1988) and Ajzen and Fishbein's (1980) conceptualization regarding the manner in which factors external to their primary model exert their influence on the formation of behavioral intentions.

In terms of the effects that external factors have on the variables comprising the primary model, a review of the estimated parameters indicated that Corporate Ethical Values/Fairness (which in the final version encompassed the Organizational Fairness items, thus, rendering Hypothesis 6 moot) was:

1. A statistically significant predictor of the Behavioral Belief Set regarding actions the organization was expected to take in response to the reporting but not of the Behavioral Belief Set regarding benefits expected to result from the reporting (although it did approach significance; $t=1.94$);
2. A statistically significant predictor of the Normative Belief Set regarding personal referents, but not of job-related referents and it only approached statistical significance for the Normative Beliefs held regarding other referents ($t=1.93$). It

should be noted, however, that the estimated relationships were all negative, thus providing evidence contrary to the directional prediction of Hypothesis 5, which inferred that there was a positive relationship between Corporate Ethical Values/Fairness and Normative Belief Sets; and,

3. A statistically significant predictor of the Control Belief Set regarding organizational factor influences over the formation of the reporting intention but not of the Control Belief Set held regarding personal factor influences.

Estimated parameters also indicated that perceived Work Group Support was a statistically significant predictor of all Behavioral and Normative Belief Set factors, thus lending support to Hypothesis 7 which inferred a positive relationship between Work Group Support and Behavioral and Normative Belief Sets. Although not part of the original Hypothesis 7, model modifications also indicated that Work Group Support was a statistically significant predictor of the Control Belief Set participants reported holding vis-à-vis personal factor influences on their behavioral intent to report observed organizational wrongdoing. A simplified version of the final structural model showing only significant findings is presented in Figure M3, below.

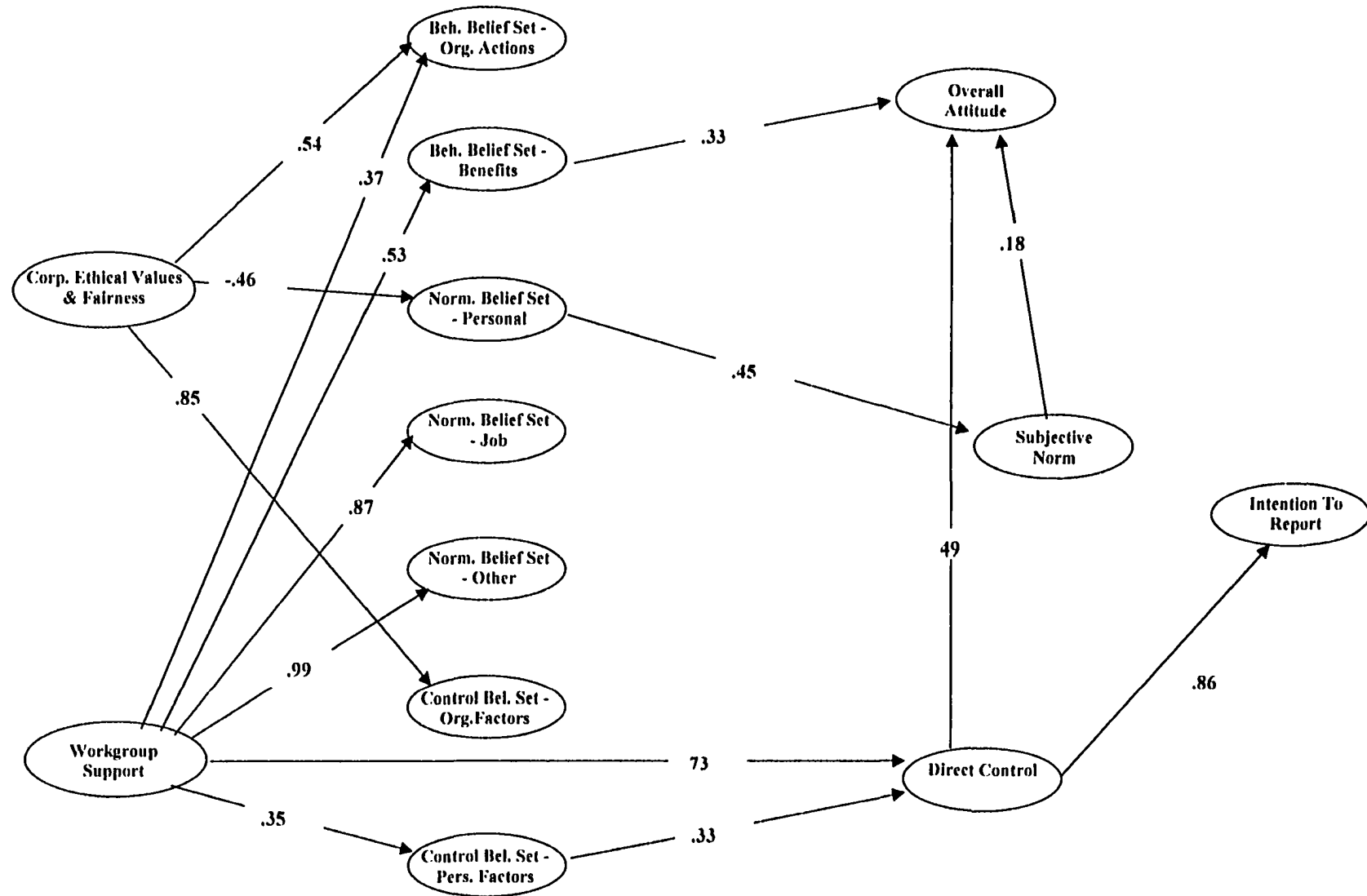


Figure M3. Final Structural Model of Whistle-blowing Intention Formation - Significant Findings

Chapter VI. Discussion

The primary purpose of the present research was to explore the feasibility of using the theory of planned behavior (Ajzen, 1988) to investigate the formation of intention to blow the whistle on observed organizational wrongdoing. Although substantial work has been done in the whistle-blowing arena, most of it has been descriptive in nature with only a few attempts to couch this organizational phenomenon within an integrated theoretical context. This research typically focused on whistle-blowing act characteristics and situational or organizational characteristics affecting whistle-blowing rather than on interrelated causal mechanisms. The majority of these earlier attempts often resulted in long, complex, decision-tree-like models of whistle-blowing with a strong focus on describing either individual characteristics of whistleblowers or organizational variables linked to the performance of the target behavior, thus, lacking substantive theoretical underpinnings.

Rather than viewing whistle-blowing as a subset of other similar behavioral domains (e.g., altruism, prosocial behavior, organizational dissidence or principled dissent), the theory of planned behavior was considered a viable alternative approach, incorporating many of the theoretical perspectives that have been used to date in the whistle-blowing literature. If shown to be applicable to the whistle-blowing domain, it would provide researchers with a parsimonious model to guide the investigation and provide a medium for the consistent classification, aggregation and conceptual understanding of subsequent research in the whistle-blowing arena. Furthermore, and in

a similar vein, the theory of planned behavior can also be independently applied to domains of behavior similar to whistle-blowing that are lacking theoretical integration.

In addition to the exploration of the immediate antecedents of whistle-blowing intention formation within the context and parameters of the model of planned behavior, this research also attempted to understand how variables external to the primary model influence the formation of individuals' intentions to blow the whistle on observed organizational wrongdoing.

Overall, the hypotheses, as refined on the basis of the confirmatory factor analysis (CFA) results of the measurement model of this study, were either supported or partially supported, with a few notable exceptions. Out of the seven (7) originally postulated hypotheses, only five were testable given the final measurement model derived in the present study. Hypothesis 4, which postulated that participants' perceived moral obligation would be positively related to their ratings of intent to report the observed organizational wrongdoing to someone/some group inside the organization, had to be eliminated because CFA results suggested that the measure of moral obligation was very closely associated with the measure of intent to report the observed violation which led to the combination of the two measures into a single scale. Similarly, Hypothesis 6, which postulated that participants' perceptions of organizational fairness would be positively related to their behavioral and normative belief sets regarding the target behavior, had to be eliminated because CFA results suggested that the measure of perceived organizational fairness was very closely associated with the measure of perceived Corporate Ethical Values which led to the combination of the two measures into a single

scale. Although collapsing these constructs precluded the ability to assess the impact of these variables separately (the originally hypothesized positive effects that both of these variables would have on the Behavioral, Normative and Control Belief Sets were still indirectly supported or partially supported). Findings regarding each of the remaining hypotheses are discussed in further detail below.

The Primary Model Variables

Antecedents of the Intention To Report

In addition to the goal of identifying a general and parsimonious model to guide whistle-blowing research while still capturing the diversity of previous work done in the field, the present research attempted to understand the process by which intentions to blow the whistle on observed organizational wrongdoing are formed. Based on the principles of the theory of planned behavior, several hypotheses were postulated regarding the direct and indirect antecedents of whistle-blowing intentions. Specifically, it was hypothesized that overall attitudes (Overall Attitude regarding whistle-blowing behavior), overall expectations of significant referents' approval of performing the behavior (Subjective Norm) and overall perceived control over performing the behavior (Perceived Direct Control) would all influence the whistle-blowing intentions reported by participants. SEM results showed that these three immediate antecedents explained a substantial portion of the variance ($R^2=.67$) in the dependent variable of Intention To Report.

The results further showed Perceived Behavioral Control to be the only statistically significant antecedent of Intention To Report internally report observed organizational wrongdoing, with Subjective Norm approaching statistical significance. Overall Attitude toward whistle-blowing behavior did not appear to significantly influence intention formation in the present study.

Although the original hypothesis that all three immediate antecedents would be significant predictors of Intention To Report was only partially supported, the finding that Perceived Behavioral Control over performing the behavior was the only statistically significant predictor of whistle-blowing intention may be idiosyncratic to the sample of this study. It is possible that most participants may have had little or no familiarity with or exposure to whistle-blowing behavior. Most employees do not regularly think of whistle-blowing and organizational ethical wrongdoing in the absence of catastrophic or newsworthy events. In general employees also may not possess a well-formed conception of what individual and corporate ethical responsibilities are, which predisposes individuals in the direction of complacency and/or ignorance. If indeed this was the case with the sample of this study, any attitudes or subjective norms they reported holding vis-à-vis this behavior may have been their 'best' guess regarding evaluations of this behavior and referent others' opinions about their reporting rather than based on any real-life experience. This effect may have been magnified by the general nature of the stimulus situation. On the other hand, evaluations of whether they could go through with reporting an observed organizational wrongdoing was most likely based on a realistic assessment of their currently available resources and current organizational

conditions. If those assumptions are correct, then it would be reasonable to expect that participants' responses to the hypothetical situation would be determined primarily by their perception of whether they felt they could report the wrongdoing inside their organization rather than by their attitude or subjective norm regarding this behavior. Alternatively, even if participants did have direct whistle-blowing experience, it could be postulated that perceived control is a more behaviorally-anchored construct and thus, is by nature more closely related to the behavioral intention to report organizational wrongdoing than are attitudes and norms. This line of reasoning would benefit from additional research using the Ajzen model.

Antecedents of Overall Attitude, Subjective Norm and Perceived Behavioral Control

Based on the model of planned behavior, it was also hypothesized that Overall Attitude, Subjective Norm and Perceived Behavioral Control would be determined by the Behavioral, Normative and Behavioral Control Belief sets, respectively.

The original hypothesis postulated that the Behavioral Belief Set participants reported holding vis-à-vis whistle-blowing behavior would be positively related to their Overall Attitude toward the target behavior. The assessment of the measurement model indicated that the Behavioral Belief Set was not a unidimensional concept. Results suggested two related but distinct behavioral belief sets held by participants relative to the whistle-blowing behavior; namely, a behavioral belief set regarding actions taken in response to the report or the reporter of an observed violation (Bbs_act) and a behavioral belief set regarding benefits that would result from reporting an observed violation

(Bbs_ben). The results of the SEM analyses showed that there was a positive relationship between the two behavioral belief sets and Overall Attitude but that relationship was significant only for the behavioral belief set regarding benefits participants expected to result from reporting the observed violation.

The finding that expected benefits and not organizational actions taken vis-à-vis the report or the reporter was the significant determinant of Overall Attitude toward whistle-blowing behavior lends additional support to findings of previous research which indicate that whistle-blowers are primarily motivated by their commitment to values (Jos, et al, 1989). A limited number of empirical studies in the field of whistle-blowing have attempted to provide viable explanations for whistle-blowers' willingness to take risks and make sacrifices in the face of adverse potential consequences. Dozier and Miceli (1985), for example, viewed whistle-blowing as a "prosocial" behavior that involves both egotistic and altruistic motives whereby observers of wrongdoing engage in some form of weighing costs and benefits associated with blowing the whistle. However, Near and Jensen (1983) found no relationship between comprehensiveness of retaliation and the willingness to blow the whistle, suggesting that whistle-blowers may be more likely to rely on moral standards that emphasize deontological principles rather than on a cost-benefit decision-making process. In one survey research study, Jos, et al. (1989) found that the majority of whistle-blowers tended to express support for the idea that universal moral rules exist and ought to apply without exceptions. Those willing to blow the whistle were not only committed to certain values but they were also capable of acting on this sense of obligation even when there were strong organizational and situational

pressures to the contrary (Jos, et al., 1989). The findings of the present research provide evidence that, even though there is an evaluation of costs on the part of observers of wrongdoing, the expectation that certain benefits will result from blowing the whistle is the major determinant of the Overall Attitude that people hold vis-à-vis whistle-blowing behavior. In addition, the finding of the present research that the perceived seriousness of the observed wrongdoing is one of the factors influencing individuals' sense of behavioral control over blowing the whistle lends additional support to the conception of whistle-blowing as a primarily value-driven act and it is consistent with previous research linking seriousness of wrongdoing and whistle-blowing behavior in general (Miceli & Near, 1985).

The presence of a significant indirect relationship between an individual's intent to report observed organizational wrongdoing and a value-based construct is not only supported in the whistle-blowing research but also in prosocial behavior, organizational commitment, job attitude, attraction-selection-attrition and social and cognitive psychological research. It suggests, consistent with the Ajzen and Fishbein and the Ajzen models, that individuals' assessment and evaluation of beliefs form the precursors of attitude formation and subsequent behavioral intentions. It may be useful at this time in the field of organizational psychology to begin to identify and investigate those values most pertinent to individual behavior in organizational contexts. It is likely that value-based typologies predictive of individual behaviors in organizations will vary across contexts such as corporate and not-for-profit environments.

An interesting finding regarding the factors influencing overall attitude toward whistle-blowing behavior in the present study was the addition of two unidirectional paths from direct perceived behavioral control and overall subjective norm to overall attitude. Although these additions were unexpected, they may be justified if the present study's sample consisted of relatively "naïve" participants in terms of their exposure to or familiarity with whistle-blowing behavior. The issue of novelty of the target behavior (i.e., whistle-blowing) has been raised by some researchers in the past with regard to the Fishbein and Ajzen model (e.g., Schwartz & Tessler, 1972; Songer-Nocks, 1976). It seems reasonable to assume that if a person has no prior experience with the behavior in question, his/her attitude toward that behavior may be influenced by factors which are more "solidified" (or known) or on which a person has more information. This assumption is further strengthened by the findings of the present study that show overall attitude being more influenced by direct perceived behavioral control than by overall subjective norm.

The present study also postulated that the normative belief set participants reported holding vis-à-vis the performance of the target behavior would be positively related to reports of overall subjective norm. Of the three normative belief sets identified by the CFA of the measurement model (i.e., normative beliefs regarding personal, work-related and 'other' referents), the normative belief set held vis-à-vis personal referents was the only statistically significant determinant of the overall subjective norm held by respondents. Social impact theory (Latané, 1981) would suggest that groups that maintain more contact with the observer of an organizational violation will be likely to be

more influential. That theoretical postulation coupled with the fact that almost half the sample had a tenure of two years or less with their present organization may explain why the normative belief set regarding personal referents was the only significant determinant of the overall subjective norm in this study. Individuals may not have established strong work-related referents in comparison to their personal referents. Additionally, "other referents" may not be as known to the average employee (e.g., regulatory agencies, professional associations).

It was further hypothesized that the behavioral control belief set participants reported holding vis-à-vis the target behavior would be positively related to the direct perceived behavioral control that these participants felt they had over blowing-the-whistle. Literature in the whistle-blowing arena has suggested that there are at least three sets of interrelated variables that may influence decisions on whether to blow the whistle: characteristics of the issue at hand, the employee's power relationship to the organization and the employee's personal characteristics and motivations. These issues were captured in the two sets of behavioral control beliefs in the present study and results provided some support for the notion that individuals who feel less dependent on an organization due to availability of resources feel more in control of whether they can blow the whistle on observed organizational wrongdoing. The behavioral control belief set participants held relative to personal influences (i.e., availability of financial resources and social support to deal with potentially unfavorable outcomes of whistle-blowing as well as participants' perceptions that the observed violation was of a serious nature) was a statistically significant determinant of the direct perceived behavioral control, whereas

the behavioral control belief set regarding organizational influences/factors (such as policies and procedures as well as channels of reporting) was not. This is not at all surprising if one considers that individuals have less information about organizational factors, especially in larger and more unpredictable environments and when such factors pertain to infrequently encountered situations, than they do when compared to their own personal contexts.

In addition, whistle-blowing literature has postulated that knowledge of reporting policies and channels may be a necessary condition for individual employees to blow the whistle (Kolarska & Aldrich, 1980), and research has provided some empirical evidence that whistle-blowers tended to believe that they had greater knowledge of where to report wrongdoing within their organization than did inactive observers (Miceli & Near, 1984). However, research data were retrospective and subject to rationalization on the part of the respondents. Findings of the present research suggest that although organizational factors such as existing policies and reporting channels may be considered by employees, it is the employees' perception regarding resources available to them as individuals in coping with adverse effects that is most influential in their sense of control over performing the whistle-blowing act or not. This finding is consistent with some previous research showing that virtually all whistle-blowers had received emotional support from family and friends (Near, Parmerlee, white & Jensen, 1981; cited in Miceli & Near, 1992) and supports theoretical postulations that observers of wrongdoing with social or financial support from family or friends could be expected to blow the whistle at higher rates than those lacking such support (Weinstein, 1979).

The "External Variables"

The present study also explored the mechanism by which the variables of organizational and workgroup climate, both considered "external" to the model of planned behavior, influence whistle-blowing intention formation. The present study's SEM results lend support to Ajzen's theoretical postulation that although individual or situational characteristics influence behavior, their influence is indirect and mediated by the effect they have on individuals' behavioral, normative and/or control belief sets (i.e., the immediate antecedents of the general attitude and subjective norm people hold vis-à-vis the target behavior and the degree of control these people perceive having over the performance of the target behavior). Consistent with the postulations of the theory of planned behavior, the organizational ethical/fairness climate as well as the work group support climate showed no direct effects on whistle-blowing intention but they did show an effect on the behavioral, normative and behavioral control belief sets held by participants.

An unanticipated finding of the present study was the direct influence had by the workgroup support climate on the variable of Perceived Behavioral Control (i.e., one of the immediate antecedents of whistle-blowing intention). Although this was a model specification that was initially empirically driven, it was deemed appropriate and conceptually justified because of the nature of the measures - both Perceived Behavioral Control and its antecedent latent variable of Control Belief Set regarding personal factor influences (Cbs_pi) encompassed either explicitly or implicitly notions of social support. Given the fact that the scale of Cbs_pi contained only one item explicitly addressing the

issue of social support - encompassing the notion of workgroup support, it can be reasonable to hypothesize that it failed to capture all the elements that individuals consider when they assess the control they have over blowing the whistle on observed organizational wrongdoing. Had the Control Belief Set regarding personal factor influences (Cbs_pi) been operationalized in greater detail, the influence of workgroup support climate on Perceived Behavioral Control may have been indirect and mediated solely by its effect on the Cbs_pi. For example, it would be reasonable to expect that if work groups define for members whether whistle-blowing is an acceptable behavior from the group's perspective (Murphy, 1993), that would increase a member's perceived behavioral control over performing an act espoused by group norms. However, this issue is an empirical question and refinement and extension of the present measures in future research is warranted if we are to determine whether this unanticipated finding reflects a challenge to the theoretical postulations of the model of planned behavior or a shortcoming of variable operationalization in the present research.

Effects of Organizational Ethical Values/Fairness and Work-Group Support

Climate variables on Behavioral, Normative and Behavioral Control Belief Sets

According to the theory of planned behavior, the effect of variables external to the conceptual components of the model are not direct but rather mediated by the influence they exert on the conceptual antecedents of intention. In other words, according to the proposed model, all 'external' factors are linked to whistle-blowing intention formation only indirectly and to the extent that they influence the way individuals perceive and feel about the behavior in question, as manifested by the behavioral, normative and behavioral

control beliefs they hold (Ajzen & Fishbein, 1980). Overall, this theoretical postulation of the model was supported by the findings of this research. Evaluation of both the primary and extended models did not show any direct effect of the 'external' variables of organizational ethics/fairness climate and work group support on the intention to report organizational wrongdoing or its immediate antecedents (with the one exception noted previously regarding the direct effect of work-group support on direct perceived behavioral control). However, these 'external' variables did have significant direct effects on the exogenous variables of behavioral, normative and control belief sets influencing the immediate antecedents of intention formation (i.e., Overall Attitude, Subjective Norm and Perceived Behavioral Control). This lends strength to the conceptual structure, causal relationships and applicability of the model in the behavioral domain of whistle-blowing.

Originally, it was hypothesized that perceived Corporate Ethical Values would be positively related to the behavioral, normative and behavioral control belief sets held by participants. This hypothesis was modified on the basis of CFA results to include perceptions of organizational fairness along with the ethical values climate variable. This hypothesis was partially supported by the findings of the present study. Perceptions of organizational ethical values and fairness had a significant positive effect on the behavioral belief set held regarding organizational actions expected to be taken vis-à-vis the report (e.g., improvement of legal/ethical practices, correction or cover-up of the reported violation) and the reporter (e.g., retaliation by the supervisor or management). Although this 'external' variable had a positive relationship with the behavioral belief set

regarding expectations that certain benefits would follow as a result of blowing the whistle on observed organizational wrongdoing, that effect was not statistically significant. This latter finding, again, supports arguments that whistle-blowing is an act of "principled dissent" (Graham, 1986) whereby observers of organizational wrongdoing report it because of their belief that it is 'wrong' and that there will be corrective action following their report. Furthermore, on the basis of the present study's results, both of these beliefs appear to be independent of individuals' expectations regarding organizational actions that may follow and factors affecting such expectations.

Perceptions of organizational ethical values and fairness also had a positive effect on the behavioral control belief sets. However, that relationship was significant only with regard to control beliefs related to organization factors that are perceived as facilitating or impeding blowing-the-whistle on observed organizational wrongdoing. The fact that perceived organizational ethical values and fairness did not have a significant effect on control beliefs associated with personal factors that facilitate or impede the performance of the target behavior, in retrospect, is not surprising. It would be reasonable to expect that participants' perceptions of (1) the available resources to cope with possible adverse consequences of whistle-blowing and (2) the seriousness of the observed violation would not be affected by organizational ethical philosophies and policies or perceptions of organizational fairness in its dealings with its employees.

Finally, and contrary to the originally hypothesized relationship, organizational ethical values and fairness showed a negative relationship with the normative belief sets held by participants regarding personal, work-related, and 'other' referents, although that

relationship was significant only for normative beliefs regarding personal referents.

These negative relationships may be indicative of the participants' attempt to eliminate or reduce cognitive dissonance by adjusting their own evaluation of acceptability of whistleblowing behavior which in turn affected their expectations regarding approval or disapproval of that same behavior by referents.

According to Festinger (1957; cited in Petty & Cacioppo, 1981), two cognitive elements are dissonant when knowledge of one suggests the opposite of the other. In the case of the present study, participants may have experienced cognitive dissonance when they were confronted with an organization they believed to be ethical and fair in its operations and dealings while at the same time were asked to imagine observing evidence to the contrary (i.e., an organizational violation which they found personally objectionable).

Limitations of the Present Research and Suggested Future Research

From a methodological perspective, the most obvious shortcoming of the present research is the use of self-report data coupled with the fact that participants were asked to respond to a hypothetical situation. Both of these issues raise some serious concerns about the validity and generalizability of the findings. However,

"... although self-report data may be flawed, it is not known how better data can be obtained practically. Although organizations may encourage or discourage wrongdoing through observable or measurable activities, such sensitive data would be difficult to collect. Further, a program to increase awareness of

channels, for example, may not have the desired impact; one would need to measure awareness through self-reports to know. Therefore, although the potential for percept-percept biases resulting from a common method of data collection cannot be ignored, it is considered to be a minor problem with regard to some of the variables and the 'lesser of evils' with regard to other methodological problems." (Miceli and Near, 1984; p. 703)

Ultimately, it appears that decisions to report or not report observed organizational violations is a highly personal experience that can only be captured by asking individuals to reflect and report on their 'reality.'

Significant error variances and error covariances were detected in some of the measures used to capture the theoretical constructs comprising the model of planned behavior (e.g., expected organizational actions regarding whistle-blowing and benefits/outcomes that result from whistle-blowing). This was probably the result of common method variance in the measurement of the study variables or of "missing" variables that are closely related conceptually to and influence the constructs in this study.

Another shortcoming of the present research, which became apparent after reviewing the results of the study, was the 'missing' variable of participants' prior exposure to or experience with whistle-blowing behavior. Such a variable would have been helpful in aiding the understanding of the differential impact of the immediate antecedents of overall attitude, subjective norm and behavioral control on whistle-blowing formation intentions in the present study.

In addition, the distribution of the sample size used in the present research on the basis of background characteristics did not provide the researcher with sample size sufficient to perform multi-group comparisons of the model. In the future, it would be worthwhile to focus on a few critical background variables, such as tenure or educational level, and target participants selection to meet sample size requirements that would allow exploration of whether the model of planned behavior holds unchanged for different groups. It is likely that different antecedents contribute in different ways to the formation of whistle-blowing intentions depending on a person's tenure within an organization, one's educational level, or even the type of organization. In addition, it may be reasonable to expect that the relative influence antecedents exert on whistle blowing intention may also differ as a function of certain personality variables. For example, one may postulate that for individuals with an external locus of control (Rotter, 1966) subjective norm would play a greater role in the formation of whistle-blowing intentions than it would for individuals with an internal locus of control.

Although the present research attempted to evaluate patterns of causal relationships, the study was cross-sectional and participants were asked by a single survey to imagine a situation and report on their perceptions and intentions. Thus, participants may have engaged in some form of justification in order to be congruent in their responses of intentions and its underlying antecedents. Furthermore, due to the cross-sectional nature of the sample, significant relationships may have been diluted and gone undetected. Thus, cause-effect relationships need to be investigated further and ultimately replicated by future research. At the same time, one needs to acknowledge the

difficulty and the limited opportunities for conducting controlled longitudinal studies or manipulating relevant variables in field settings because of the sensitive nature of the phenomenon under investigation. (Miceli and Near, 1984).

In the present study, the structural equation model (SEM) as specified on the basis of the propositions of the theory of planned behavior was shown to be a viable representation of the underlying process leading to whistle-blowing intention formation. The data, according to established standards, fit the theoretically based model well after two modifications, neither of which compromised the theoretical underpinnings of Ajzen's model. Although the SEM findings can not be viewed as confirmation that the model based on the theory of planned behavior is the only model that represents the true relationship among variables, they are suggesting that such a model is a viable representation of "reality." Future research will not only have to cross-validate the modified final model with independent data but will also have to explore the data fit across several models representing the different theoretical perspectives used in the literature to understand whistle-blowing behavior before any conclusions can be drawn.

Finally, the focus of the present research was confined to assessing a model for and exploring the antecedents of internal whistle blowing. Participants in this study were asked about their willingness to engage in internal whistle blowing, reformist dissent (Parker, 1993) or voice (Hirschman, 1970; Withey & Cooper, 1989). The model as well as the nature and relative influence of the antecedent variables may or may not apply or suffice to explain the formation of intentions to report observed organizational wrongdoing to someone or some group outside the organization (i.e., external whistle-

blowing). In addition, although the model of planned behavior has proven to be a viable one in capturing the antecedents of whistle-blowing intention formation in this study, it must be made clear that the central concern was with the prediction of behavioral intentions from attitudinal, normative and behavioral control factors. In the present study, the validity of the model of planned behavior was assessed relative only to its ability to predict and explain the formation of intentions to report observed organizational wrongdoing to someone or some group within the organization and not its ability to predict whistle-blowing behavior. Future research needs to expand on our understanding of whistle-blowing acts by exploring the relationship between behavioral intentions to blow the whistle on organizational wrongdoing and actual whistle-blowing behavior, the factors that influence this relationship as well as the consequences that follow engaging in such a behavior.

Conclusion

Findings of the present research, examining the whistle-blowing intention formation process within the framework of the Theory of Planned Behavior (Ajzen, 1988), showed that participants' intention to report an observed organizational wrongdoing to someone or some group within their organization that could take action was directly influenced by their sense of control over performing the target behavior. In turn, participants' sense of control over performing the target behavior was directly influenced by their assessment of whether (a) they felt they had the personal resources necessary to go through with the reporting and (b) they perceived their workgroup as

supportive over their blowing-the-whistle internally. However, support should be viewed as tenuous because of reliabilities of the measures used.

Although such initial findings regarding the process by which internal whistle-blowing intentions are formed by employees may present organizations with some interesting challenges, companies would stand to suffer by ignoring or not trying to understand internal whistle-blowing or what has been referred to in the literature as acts of reformist dissent (i.e., dissent that occurs within the confines of an organization's rules and norms) (Parker, 1993). Organizations, by understanding and finding ways to influence or promote such behavior, may create valuable opportunities for organizational learning, improvement and operating with a sense of social responsibility. Organizations may not be able to remain complacent by failing to encourage their members to voice their objections to potentially unethical or illegal organizational practices, as they may stand to lose a highly valuable source of constructive feedback in their efforts to adapt and maintain viability. If current and past findings continue to be supported by organizational research, organizations will be faced with the challenge of finding ways to influence factors that may not be directly under their control (e.g., perceptions of available social and financial support, levels of moral judgment of individual employees). Organizations may also be called upon to find ways to promote this behavior using a grass roots approach. For example, how does an organization most effectively impact work group norms through its corporate value statements about ethics, fairness and social responsibility? As the U.S. Merit Systems Protection Board's Director Monograph (1984) states:

"... whistle blowing, regardless of how it is defined, is a complex phenomenon which involves some basic and difficult to influence aspects of human nature and organizational dynamics. This definitely does not mean, however, that it is in any way futile to attempt to bring about change. It does mean that any changes which do occur will most likely come about slowly and as the result of many interrelated events" (p. 8).

Appendix AIntroductory Script

My name is Domniki Demetriadou-Eiseman and I am a doctoral student in Industrial and Organizational Psychology. I am conducting a research project investigating people's reactions to certain work-related situations and I am here to ask you to complete a survey.

The questionnaire asks you about your thoughts, feelings and expectations regarding a decision to report violations occurring within your organization to someone or some group inside the organization that can take action. The survey takes about 20 to 30 minutes to complete and your participation is of course totally voluntary and anonymous.

The cover page explains the research and your participation; please take a moment to read it before beginning the survey.

Thank you for your help.

Informed Consent Cover Letter

BARUCH COLLEGE
DEPARTMENT OF PSYCHOLOGY
SPRING 1998

The following research study is part of a doctoral dissertation being conducted at the Baruch College Department of Psychology by Domniki Demetriadou-Eiseman, under the supervision of Prof. Sheldon S. Zalkind.

As a participant you will be asked to complete a survey about a work-related situation. The questions ask you about your a decision to whether report wrongdoing that occurred and was observed within your organization, to someone inside the organization who can take action. (Wrongdoing is defined as any policies or practices that are unethical or illegal.) There are also a few questions about your background such as whether you are employed full- or part-time, and your education. The results of this study will add to our knowledge about how decisions to report organizational wrongdoing are formed. In addition, the results may be useful in guiding organizations in effectively promoting valid internal reports of potential organizational wrongdoing with the hope of improving the quality of business policies and practices, in general.

All of your answers are anonymous and none of the information you provide will be released or made available to anyone. Your participation is completely voluntary and you may choose to stop your participation at any point in the process. The survey takes approximately 20 to 30 minutes to complete.

I am very appreciative of your help and will be very happy to answer any questions you may have. In addition, upon your request, I will be very happy to share the final research findings with you. If you have any questions or would like to receive a copy of the research findings, please feel free to contact me in writing at:

Domniki D. Eiseman
475 Riverside Drive
New York, NY 10115-0089

or by phone at: 212-367-4245 or via e-mail at: domniki@yahoo.com.

THANK YOU VERY MUCH FOR YOU COOPERATION AND HELP.

Domniki J. Demetriadou-Eiseman

Appendix BHypothetical Situation Stimulus

HYPOTHETICAL SITUATION:

Imagine that while working for your current employer, you are assigned to work on a project. While working on this project, you become aware of certain organizational practices which you find personally objectionable because you feel they violate certain ethical principles.

Given the hypothetical situation above, please respond to each of the questions that follow by placing a check mark in the space that comes closest to describing your opinion or feelings on each of the scales. Please be sure to answer *all* items - please do not omit any.

Appendix C

Sample Survey

BARUCH COLLEGE DEPARTMENT OF PSYCHOLOGY SPRING 1998

The following research study is part of a doctoral dissertation being conducted at the Baruch College Department of Psychology by Domniki Demetriadou-Eiseman, under the supervision of Prof. Sheldon S. Zalkind.

As a participant you will be asked to complete a survey about a work-related situation. The questions ask you about your a decision to whether report wrongdoing that occurred and was observed within your organization, to someone inside the organization who can take action. (Wrongdoing is defined as any policies or practices that are unethical or illegal.) There are also a few questions about your background such as whether you are employed full- or part-time, and your education. The results of this study will add to our knowledge about how decisions to report organizational wrongdoing are formed. In addition, the results may be useful in guiding organizations in effectively promoting valid internal reports of potential organizational wrongdoing with the hope of improving the quality of business policies and practices, in general.

All of your answers are anonymous and none of the information you provide will be released or be made available to anyone. Your participation is completely voluntary and you may choose to stop your participation at any point in the process. The survey takes approximately 20 to 30 minutes to complete.

I am very appreciative of your help and will be very happy to answer any questions you may have. In addition, upon your request, I will be very happy to share the final research findings with you. If you have any questions or would like to receive a copy of the research findings, please feel free to contact me in writing at:

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THANK YOU VERY MUCH FOR YOU COOPERATION AND HELP.

Domniki J. Demetriadou-Eiseman

1. **I would report the observed violations to an individual or group inside my organization that can take action.**
likely _____:_____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

2. **As far as I'm concerned, I feel that my reporting the observed violations to an individual or group inside my organization that can take action would be:**
Extremely Neither Extremely
Harmful _____:_____:_____:_____:_____:_____:_____ beneficial
good _____:_____:_____:_____:_____:_____:_____ bad
punishing _____:_____:_____:_____:_____:_____:_____ rewarding
pleasant _____:_____:_____:_____:_____:_____:_____ unpleasant
foolish _____:_____:_____:_____:_____:_____:_____ wise
useful _____:_____:_____:_____:_____:_____:_____ useless

3. **How would most people who are important to you feel about your reporting the observed violations to an individual or group inside your organization?**
They would _____:_____:_____:_____:_____:_____:_____ They would
approve _____:_____:_____:_____:_____:_____:_____ disapprove
strongly quite slightly neither slightly quite strongly

4. **In general, how much do you want to do what the people who are important to you think you should do?**
Very much _____:_____:_____:_____:_____:_____:_____ Not at all

5. **All factors considered, if I wanted to, I could easily report the observed violation to an individual or group inside my organization.**
Agree _____:_____:_____:_____:_____:_____:_____ Disagree
strongly quite slightly neither slightly quite strongly

6. **Programs and policies in my organization are fair.**
Disagree _____:_____:_____:_____:_____:_____:_____ Agree
strongly quite slightly neither slightly quite strongly

7. **I feel it would be morally wrong for me not to report the observed violation.**
Agree _____:_____:_____:_____:_____:_____:_____ Disagree
strongly quite slightly neither slightly quite strongly

8. **If a manager in my company is discovered to have engaged in unethical behavior that results primarily in *personal gain* (rather than organizational gain), he or she will be promptly reprimanded.**

Disagree _____:_____:_____:_____:_____:_____:_____ Agree
 strongly quite slightly neither slightly quite strongly

PART I: Given the hypothetical situation described previously, please check the space on each scale below that best describes your opinion about the **LIKELIHOOD** that your reporting of the observed violation to someone or some group inside your organization would lead to each of the listed outcomes.

1. **If I reported the observed violations to an individual or group inside my organization that can take action:**

my coworkers would retaliate against me in some way

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

employees of my organization would benefit in some way

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization would conduct a thorough investigation

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my supervisor would retaliate against me in some way

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization would correct the reported violations

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

top management would retaliate against me in some way

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization would cover-up the reported violations

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization's legal/ethical practices would improve

likely _____:_____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

my organization would ignore the reported violations

likely _____:_____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

my organization would benefit

likely _____:_____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

the way organizational decisions are made would improve

likely _____:_____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

the public would benefit in some way

likely _____:_____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

it would improve my work life

likely _____:_____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

it would have positive effects on my job/career

likely _____:_____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

2. **How much control would you have over whether you would follow through with reporting the observed violations to an individual or group inside your organization that can take action?**

Complete control _____:_____:_____:_____:_____:_____:_____ Very little control

3. **Reporting the observed violation goes against my principles.**

Agree _____:_____:_____:_____:_____:_____:_____ Disagree
strongly quite slightly neither slightly quite strongly

4. **I would feel compelled to report the observed violations to an individual or group inside my organization that can take action.**

Agree _____ : _____ : _____ : _____ : _____ : _____ : _____ Disagree
 strongly quite slightly neither slightly quite strongly

PART II: In this section we are asking about **YOUR FEELINGS** regarding the **occurrence of certain events**. Please check the space on each scale below that best describes your feelings about the occurrence of each event.

1. **If my coworkers retaliated against me in some way, it would**
 bother me _____ : _____ : _____ : _____ : _____ : _____ : _____ not bother me
 extremely quite slightly neither slightly quite extremely

2. **As far as I am concerned, benefiting the employees of my organization in some way would be**
 wise _____ : _____ : _____ : _____ : _____ : _____ : _____ foolish
 extremely quite slightly neither slightly quite extremely

3. **All things considered, a thorough investigation of the violation by my organization would be**
 useless _____ : _____ : _____ : _____ : _____ : _____ : _____ useful
 extremely quite slightly neither slightly quite extremely

4. **If my supervisor retaliated against me in some way, it would**
 bother me _____ : _____ : _____ : _____ : _____ : _____ : _____ not bother me
 extremely quite slightly neither slightly quite extremely

5. **All things considered, correction of the reported violation in my organization would be**
 beneficial _____ : _____ : _____ : _____ : _____ : _____ : _____ harmful
 extremely quite slightly neither slightly quite extremely

6. **If top management retaliated against me in some way, it would**
 bother me _____ : _____ : _____ : _____ : _____ : _____ : _____ not bother me
 extremely quite slightly neither slightly quite extremely

7. **The cover-up of the reported violation by my organization would be**
 smart _____ : _____ : _____ : _____ : _____ : _____ : _____ dumb
 extremely quite slightly neither slightly quite extremely

8. **Improvement of legal/ethical practices made by my organization would be**
 desirable _____:_____:_____:_____:_____:_____undesirable
 extremely quite slightly neither slightly quite extremely
9. **My organization's choice to ignore the reported violation would be**
 foolish _____:_____:_____:_____:_____:_____wise
 extremely quite slightly neither slightly quite extremely
10. **Benefiting my organization for me would be**
 foolish _____:_____:_____:_____:_____:_____wise
 extremely quite slightly neither slightly quite extremely
11. **Improving the way decisions are made in my organization would make me**
 feel
 good _____:_____:_____:_____:_____:_____bad
 extremely quite slightly neither slightly quite extremely
12. **Trying to benefit the public in some way would be**
 dumb of me _____:_____:_____:_____:_____:_____good of me
 extremely quite slightly neither slightly quite extremely
13. **Improving my work life would be**
 important _____:_____:_____:_____:_____:_____not important
 to me _____:_____:_____:_____:_____:_____to me
 extremely quite slightly neither slightly quite extremely
14. **Improving my job/career would be**
 important _____:_____:_____:_____:_____:_____not important
 to me _____:_____:_____:_____:_____:_____to me
 extremely quite slightly neither slightly quite extremely
15. **The likelihood that I would report the observed violations to an individual or group inside my organization that can take action is:**
 Small _____:_____:_____:_____:_____:_____Large
 extremely quite slightly neither slightly quite extremely
16. **I would feel guilty if I did not report the observed violation.**
 Likely _____:_____:_____:_____:_____:_____Unlikely
 extremely quite slightly neither slightly quite extremely

PART III: In this section we are asking you about **your perceptions about what other people would think** about your reporting the observed violations to an individual or group **INSIDE** your organization that can take action. Please check the space on each scale that best describes your expectation of what each of the following individuals/groups would think you should do regarding the reporting of the observed violations.

1. **My spouse or "significant other" thinks I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
2. **My coworkers in this organization think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
3. **Most members of my family think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
4. **My immediate supervisor in this organization thinks I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
5. **My close friends think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
6. **Management in this organization thinks I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
7. **People in my line of work think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
8. **The head of this organization thinks I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
9. **Agencies outside this organization think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**

PART IV: In this section we are asking you about **your feelings about other people's opinions** regarding whether you should/should not report the observed violation to an individual or group inside your organization that can take action.

In general, how much do you want to do what each of the following individuals/ groups think you should do?

1. **Your spouse or "significant other"**
Not at all _____:_____:_____:_____:_____:_____:_____ Very much
2. **Your coworkers in this organization**
Not at all _____:_____:_____:_____:_____:_____:_____ Very much
3. **Your family members**
Not at all _____:_____:_____:_____:_____:_____:_____ Very much
4. **Your immediate supervisor in this organization**
Not at all _____:_____:_____:_____:_____:_____:_____ Very much
5. **Your close friends**
Not at all _____:_____:_____:_____:_____:_____:_____ Very much
6. **Management in this organization**
Not at all _____:_____:_____:_____:_____:_____:_____ Very much
7. **People in your line of work**
Not at all _____:_____:_____:_____:_____:_____:_____ Very much
8. **The head of this organization**
Not at all _____:_____:_____:_____:_____:_____:_____ Very much
9. **Agencies outside this organization**
Not at all _____:_____:_____:_____:_____:_____:_____ Very much
10. **Taking into consideration all organizational and personal factors, reporting the observed violation for me would be:**

Easy _____:_____:_____:_____:_____:_____:_____ Difficult
extremely quite slightly neither slightly quite extremely

PART V: In this section we are asking you to tell us whether you believe that each of the following factors exists or not, either in your current organization or your personal life situation. We are also asking for your opinion about whether each of these same factors would influence **the ease or difficulty for you to actually report** the observed violations to an individual or group inside this organization that can take action.

I believe that:

1. **my organization has clear and open communication channels**
 Agree _____:____:____:____:____:____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
2. **my organization has clear policies regarding the report of observed violations**
 Agree _____:____:____:____:____:____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
3. **I can trust my organization to deal fairly with the people who report violations**
 Agree _____:____:____:____:____:____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
4. **I can trust my organization to deal fairly with the violation report itself**
 Agree _____:____:____:____:____:____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
5. **the observed violation is serious**
 Agree _____:____:____:____:____:____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
6. **the observed violation is minor**
 Agree _____:____:____:____:____:____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
7. **I have the financial resources to deal with potential unfavorable outcomes of reporting**
 Agree _____:____:____:____:____:____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
8. **I have the social support to deal with potential unfavorable outcomes of reporting**
 Agree _____:____:____:____:____:____:_____ Disagree
 strongly quite slightly neither slightly quite strongly

How easy or difficult would each of these factors make it for you to follow through with reporting the observed wrongdoing?

extremely

extremely quite slightly neither slightly quite

1. **Your organization's current communication channels**
 Difficult _____:_____:_____:_____:_____:_____:_____ Easy
 extremely quite slightly neither slightly quite extremely
2. **Your organization's current policies regarding reports of observed violations**
 Difficult _____:_____:_____:_____:_____:_____:_____ Easy
 extremely quite slightly neither slightly quite extremely
3. **The organization's expected fairness in dealing with people who report violations**
 Difficult _____:_____:_____:_____:_____:_____:_____ Easy
 extremely quite slightly neither slightly quite extremely
4. **The organization's expected fairness in dealing with the violation report itself**
 Difficult _____:_____:_____:_____:_____:_____:_____ Easy
 extremely quite slightly neither slightly quite extremely
5. **Believing that the observed violation is serious**
 Difficult _____:_____:_____:_____:_____:_____:_____ Easy
 extremely quite slightly neither slightly quite extremely
6. **Believing that the observed violation is minor**
 Difficult _____:_____:_____:_____:_____:_____:_____ Easy
 extremely quite slightly neither slightly quite extremely
7. **Your current financial resources to deal with potential unfavorable outcomes of reporting**
 Difficult _____:_____:_____:_____:_____:_____:_____ Easy
 extremely quite slightly neither slightly quite extremely
8. **Your current social support to deal with potential unfavorable outcomes of reporting**
 Difficult _____:_____:_____:_____:_____:_____:_____ Easy
 extremely quite slightly neither slightly quite extremely

PART VI: In this section we are asking you to indicate your beliefs about several statements relating to your job and organization.

1. **Managers in my company often engage in behaviors that I consider to be unethical.**

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

2. **I can bring about changes in my organization by voicing my opinions.**

Agree _____ : _____ : _____ : _____ : _____ : _____ : _____ Disagree
 strongly quite slightly neither slightly quite strongly

3. **Management in my organization treats me honestly and ethically.**

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

4. **If I told my coworkers of my intention to voice objections to someone or some group inside my organization regarding organizational practices, they would try to discourage me.**

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

5. **In order to succeed in my company, it is often necessary to compromise one's ethics.**

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

6. **If a manager in my company is discovered to have engaged in unethical behavior that results primarily in *organizational gain* (rather than personal gain), he or she will be promptly reprimanded.**

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

7. On the whole, how satisfied would you say you are with your current job?

Satisfied _____ : _____ : _____ : _____ : _____ : _____ : _____ Dissatisfied
 very quite slightly neither slightly quite very

8. Overall my organization is fair.

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

9. I have confidence and trust in my coworkers to support me in my intent to voice objections to someone or some group inside my organization regarding organizational practices.

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

10. Top management in my company has let it be known in no uncertain terms that unethical behaviors will not be tolerated.

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

11. My coworkers would distance themselves from me if I told them of my intention to voice objections to someone or some group inside my organization regarding organizational practices.

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

PART VII: Please indicate the extent to which you agree or disagree with each of the following statements by circling the corresponding number on the scale provided below.

- 1 = Not at all true
 2 = Barely True
 3 = Moderately True
 4 = Exactly True

1. I can always manage to solve difficult problems if I try hard enough
 1 2 3 4
2. If someone opposes me, I can find means and ways to get what I want.
 1 2 3 4
3. It is easy for me to stick to my aims and accomplish my goals.
 1 2 3 4
4. I m confident that I could deal efficiently with unexpected events.
 1 2 3 4
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
 1 2 3 4
6. I can solve most problems if I invest the necessary effort.
 1 2 3 4
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
 1 2 3 4
8. When I am confronted with a problem, I can usually find several solutions.
 1 2 3 4
9. If I am in a bind, I can usually think of something to do.
 1 2 3 4
10. No matter what comes my way, I'm usually able to handle it.
 1 2 3 4

BACKGROUND SURVEY

For each of the following items, please circle the response that best applies to you. Please circle only **one** response for each item. Your responses will be used for statistical tabulation purposes ONLY.

A. I am:

- (1) Male (2) Female

B. My present marital status is:

- (1) Single
 (2) Have "Significant Other" (living separate)
 (3) Have "Significant Other" (living together)
 (4) Married
 (5) Separated or divorced
 (6) Widowed

C. I have one or more children.

- (1) Yes (2) No

D. My age is:

- (1) 16-20 (6) 41-45
 (2) 21-25 (7) 46-50
 (3) 26-30 (8) 51-55
 (4) 31-35 (9) 56 or over
 (5) 36-40

E. With which one group do you identify most?

- (1) Asian (4) White
 (2) Black (5) Other (Please specify:
 (3) Hispanic _____)

F. How far have you gone in school?

- (1) Grammar school
 (2) High school (did not graduate)
 (3) High school graduate
 (4) Some college
 (5) 2-year college graduate
 (6) 4-year college graduate
 (7) Graduate school training (did not graduate)
 (8) Graduate school degree

G. My job chiefly involves:

- (1) Clerical work
 (2) Professional work
 (3) Administrative work
 (4) Managerial work
 (5) Technical work
 (6) Sales
 (7) Unskilled/semi-skilled work
 (8) Skilled work
 (9) Other (Please specify: _____)

H. I work:

- (1) Full-time
 (2) Part-time
 (3) Not currently working

I. How many years have you been employed by your present employer?

- (1) less than 2 years (3) 5-9 years
 (2) 2-4 years (4) 10 years or more

J. I work for a:

- (1) Business organization (for-profit)
 (2) Business organization (non-profit)
 (3) Educational Institution or Hospital
 (4) Charitable or similar organization
 (5) Government or regulatory organization, department or other agency

K. About how many levels of supervision/management are there in your organization?

- (1) 1 level (3) 3 levels
 (2) 2 levels (4) 4 levels or more

L. Officially, my job is considered to have:

- (1) No supervisory responsibilities
 (2) Supervisory responsibilities
 (3) Managerial responsibilities
 (4) Executive responsibilities

M. Does your job require you to conduct or assist in audits, investigations, program evaluations, or inspections for your organization?

- (1) No (2) Yes

N. In relation to the rest of the employees in your organization, what is your seniority level?

- (1) Very low (4) High
(2) Low (5) Very high
(3) Middle

O. My current income level is about:

- (1) \$ 5,000 or less
(2) \$ 5,001-\$10,000
(3) \$10,001-\$15,000
(4) \$15,001-\$20,000
(5) \$20,001-\$30,000
(6) \$30,001-\$40,000
(7) \$40,001-\$50,000
(8) \$50,001-\$60,000
(9) \$60,001 or more

Appendix D

Intention Items

1. **I would report the observed violations to an individual or group inside my organization that can take action.**

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

2. **I would feel compelled to report the observed violation to an individual or group inside my organization that can take action.**

Agree _____:_____:_____:_____:_____:_____:_____ Disagree
 strongly quite slightly neither slightly quite strongly

3. **The likelihood that I would report the observed violations to an individual or group inside my organization that can take action is:**

Small _____:_____:_____:_____:_____:_____:_____ Large
 extremely quite slightly neither slightly quite extremely

Appendix E

Overall Attitude Items

As far as I'm concerned, I feel that my reporting the observed violations to an individual or group inside my organization that can take action would be:

	Extremely	Quite	Slightly	Neither	Slightly	Quite	Extremely	
Harmful	_____	_____	_____	_____	_____	_____	_____	beneficial
good	_____	_____	_____	_____	_____	_____	_____	bad
punishing	_____	_____	_____	_____	_____	_____	_____	rewarding
pleasant	_____	_____	_____	_____	_____	_____	_____	unpleasant
foolish	_____	_____	_____	_____	_____	_____	_____	wise
useful	_____	_____	_____	_____	_____	_____	_____	useless

Subjective Norm Items

1. **How would most people who are important to you feel about your reporting the observed violations to an individual or group inside your organization?**

They would								They would
approve	_____	_____	_____	_____	_____	_____	_____	disapprove
	strongly	quite	slightly	neither	slightly	quite	strongly	

2. **In general, how much do you want to do what the people who are important to you think you should do?**

Very much								Not at all
	_____	_____	_____	_____	_____	_____	_____	

Appendix F

Direct Control Items

1. **All factors considered, if I wanted to, I could easily report the observed violation to an individual or group inside my organization.**

Agree _____ : _____ : _____ : _____ : _____ : _____ : _____ Disagree
 strongly quite slightly neither slightly quite strongly

2. **How much control would you have over whether you would follow through with reporting the observed violations to an individual or group inside the organization that can take action?**

Complete control _____ : _____ : _____ : _____ : _____ : _____ : _____ Very little control

3. **Taking into consideration all organizational and personal factors, reporting the observed violation for me would be:**

Easy _____ : _____ : _____ : _____ : _____ : _____ : _____ Difficult
 extremely quite slightly neither slightly quite extremely

Moral Obligation Items

1. **I feel it would be morally wrong for me not to report the observed violation.**

Agree _____ : _____ : _____ : _____ : _____ : _____ : _____ Disagree
 strongly quite slightly neither slightly quite strongly

2. **Reporting the observed violation goes against my principles.**

Agree _____ : _____ : _____ : _____ : _____ : _____ : _____ Disagree
 strongly quite slightly neither slightly quite strongly

3. **I would feel guilty if I did not report the observed violation.**

Likely _____ : _____ : _____ : _____ : _____ : _____ : _____ Unlikely

Appendix G

Behavioral Belief Set Items

If I reported the observed violations to an individual or group inside my organization that can take action:

my coworkers would retaliate against me in some way

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

employees of my organization would benefit in some way

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization would conduct a thorough investigation

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my supervisor would retaliate against me in some way

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization would correct the reported violations

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

top management would retaliate against me in some way

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization would cover-up the reported violations

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization's legal/ethical practices would improve

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization would ignore the reported violations

likely _____:_____:_____:_____:_____:_____:_____ unlikely
 extremely quite slightly neither slightly quite extremely

my organization would benefit

likely _____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

the way organizational decisions are made would improve

likely _____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

the public would benefit in some way

likely _____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

it would improve my work life

likely _____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

it would have positive effects on my job/career

likely _____:_____:_____:_____:_____:_____ unlikely
extremely quite slightly neither slightly quite extremely

Outcome Evaluation Items

1. **If my coworkers retaliated against me in some way, it would**
bother me _____:_____:_____:_____:_____:_____ not bother me
extremely quite slightly neither slightly quite extremely
2. **As far as I am concerned, benefiting the employees of my organization in some way would be**
wise _____:_____:_____:_____:_____:_____ foolish
extremely quite slightly neither slightly quite extremely
3. **All things considered, a thorough investigation of the violation by my organization would be**
useless _____:_____:_____:_____:_____:_____ useful
extremely quite slightly neither slightly quite extremely
4. **If my supervisor retaliated against me in some way, it would**
bother me _____:_____:_____:_____:_____:_____ not bother me
extremely quite slightly neither slightly quite extremely

5. **All things considered, correction of the reported violation in my organization would be**
 beneficial _____ : _____ : _____ : _____ : _____ : _____ : _____ harmful
 extremely quite slightly neither slightly quite extremely
6. **If top management retaliated against me in some way, it would**
 bother me _____ : _____ : _____ : _____ : _____ : _____ : _____ not bother me
 extremely quite slightly neither slightly quite extremely
7. **The cover-up of the reported violation by my organization would be**
 smart _____ : _____ : _____ : _____ : _____ : _____ : _____ dumb
 extremely quite slightly neither slightly quite extremely
8. **Improvement of legal/ethical practices made by my organization would be**
 desirable _____ : _____ : _____ : _____ : _____ : _____ : _____ undesirable
 extremely quite slightly neither slightly quite extremely
9. **My organization's choice to ignore the reported violation would be**
 foolish _____ : _____ : _____ : _____ : _____ : _____ : _____ wise
 extremely quite slightly neither slightly quite extremely
10. **Benefiting my organization for me would be**
 foolish _____ : _____ : _____ : _____ : _____ : _____ : _____ wise
 extremely quite slightly neither slightly quite extremely
11. **Improving the way decisions are made in my organization would make me**
 feel
 good _____ : _____ : _____ : _____ : _____ : _____ : _____ bad
 extremely quite slightly neither slightly quite extremely
12. **Trying to benefit the public in some way would be**
 dumb of me _____ : _____ : _____ : _____ : _____ : _____ : _____ good of me
 extremely quite slightly neither slightly quite extremely
13. **Improving my work life would be**
 Important _____ : _____ : _____ : _____ : _____ : _____ : _____ Not important
 to me _____ : _____ : _____ : _____ : _____ : _____ : _____ to me
 extremely quite slightly neither slightly quite extremely
14. **Improving my job/career would be**
 Important _____ : _____ : _____ : _____ : _____ : _____ : _____ Not important
 to me _____ : _____ : _____ : _____ : _____ : _____ : _____ to me
 extremely quite slightly neither slightly quite extremely

Appendix H

Normative Belief Set Items

1. **My spouse or "significant other" thinks I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
2. **My coworkers in this organization think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
3. **Most members of my family think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
4. **My immediate supervisor in this organization thinks I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
5. **My close friends think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
6. **Management in this organization thinks I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
7. **People in my line of work think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
8. **The head of this organization thinks I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**
9. **Agencies outside this organization think I**
Should ____:____:____:____:____:____:____ Should Not **report the violations.**

Motivation to Comply Items

In general, how much do you want to do what each of the following individuals/groups think you should do?

1. **Your spouse or "significant other"**
Not at all ____:____:____:____:____:____:____ Very much

2. Your coworkers in this organization

Not at all ____:____:____:____:____:____:____ Very much

3. Your family members

Not at all ____:____:____:____:____:____:____ Very much

4. Your immediate supervisor in this organization

Not at all ____:____:____:____:____:____:____ Very much

5. Your close friends

Not at all ____:____:____:____:____:____:____ Very much

6. Management in this organization

Not at all ____:____:____:____:____:____:____ Very much

7. People in your line of work

Not at all ____:____:____:____:____:____:____ Very much

8. The head of this organization

Not at all ____:____:____:____:____:____:____ Very much

9. Agencies outside this organization

Not at all ____:____:____:____:____:____:____ Very much

Appendix I

Behavioral Control Belief Set Items

I believe that:

1. **my organization has clear and open communication channels**
 Agree _____:_____:_____:_____:_____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
2. **my organization has clear policies regarding the report of observed violations**
 Agree _____:_____:_____:_____:_____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
3. **I can trust my organization to deal fairly with the people who report violations**
 Agree _____:_____:_____:_____:_____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
4. **I can trust my organization to deal fairly with the violation report itself**
 Agree _____:_____:_____:_____:_____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
5. **the observed violation is serious**
 Agree _____:_____:_____:_____:_____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
6. **the observed violation is minor**
 Agree _____:_____:_____:_____:_____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
7. **I have the financial resources to deal with potential unfavorable outcomes of reporting**
 Agree _____:_____:_____:_____:_____:_____ Disagree
 strongly quite slightly neither slightly quite strongly
8. **I have the social support to deal with potential unfavorable outcomes of reporting**
 Agree _____:_____:_____:_____:_____:_____ Disagree
 strongly quite slightly neither slightly quite strongly

extremely quite slightly

1. Your organization's current communication channels

2. Your organization's current policies regarding reports of observed violations

3. The organization's expected fairness in dealing with people who report violations

4. The organization's expected fairness in dealing with the violation report itself

5. Believing that the observed violation is serious

6. Believing that the observed violation is minor

7. Your current financial resources to deal with potential unfavorable outcomes of reporting

8. Your current social support to deal with potential unfavorable outcomes of reporting

Difficult _____:_____:_____:_____:_____:_____ Easy
extremely quite slightly neither slightly quite extremely

Appendix J

General Self-Efficacy Scale

- 1 = Not at all true
 2 = Barely true
 3 = Moderately true
 4 = Exactly true

1. I can always manage to solve difficult problems if I try hard enough.
 1 2 3 4
2. If someone opposes me, I can find means and ways to get what I want.
 1 2 3 4
3. It is easy for me to stick to my aims and accomplish my goals.
 1 2 3 4
4. I am confident that I could deal efficiently with unexpected events.
 1 2 3 4
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
 1 2 3 4
6. I can solve most problems if I invest the necessary effort.
 1 2 3 4
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
 1 2 3 4
8. When I am confronted with a problem, I can usually find several solutions.
 1 2 3 4
9. If I am in a bind, I can usually think of something to do.
 1 2 3 4
10. No matter what comes my way, I'm usually able to handle it.
 1 2 3 4

Schwarzer, R., Bäßler, J., Kwiatek, P., Schröder, K & Zhang, J.X. (1997). The assessment of optimistic self-beliefs: Comparison of the German, Spanish, and Chinese versions of the General Self-efficacy Scale. Applied Psychology: An International Review, 46(1), 69-88.

Task-Specific Efficacy Item

I can bring about changes in my organization by voicing my opinions.

Agree _____ : _____ : _____ : _____ : _____ : _____ : _____ Disagree
 strongly quite slightly neither slightly quite strongly

Appendix K

Job Satisfaction with Organization

On the whole, how satisfied would you say you are with your current job

Satisfied _____ : _____ : _____ : _____ : _____ : _____ : _____ Dissatisfied
 very quite slightly neither slightly quite very

Corporate Ethical Values Scale

1. Managers in my company often engage in behaviors that I consider to be unethical.

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

2. In order to succeed in my company, it is often necessary to compromise one's ethics.

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

3. Top management in my company has let it be known in no uncertain terms that unethical behaviors will not be tolerated.

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

4. If a manager in my company is discovered to have engaged in unethical behavior that results primarily in *personal gain* (rather than organizational gain), he or she will be promptly reprimanded.

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

5. If a manager in my company is discovered to have engaged in unethical behavior that results primarily in *organizational gain* (rather than personal gain), he or she will be promptly reprimanded.

Disagree _____ : _____ : _____ : _____ : _____ : _____ : _____ Agree
 strongly quite slightly neither slightly quite strongly

Hunt, S.D., Wood, V.R., & Chonko, L.B. (1989). Corporate ethical values and organizational commitment in marketing. Journal of Marketing, 53, 79-90.

Appendix L

Overall Organizational Fairness Scale

1. Management in my organization treats me honestly and ethically.

Disagree _____:_____:_____:_____:_____:_____:_____ Agree
 strongly quite slightly neither slightly quite strongly

2. Overall my organization is fair.

Disagree _____:_____:_____:_____:_____:_____:_____ Agree
 strongly quite slightly neither slightly quite strongly

3. Programs and policies in my organization are fair.

Disagree _____:_____:_____:_____:_____:_____:_____ Agree
 strongly quite slightly neither slightly quite strongly

Tanksy, J.W. (1993). Justice and organizational citizenship behavior: What is the relationship? Employee Responsibilities and Rights Journal, 6(3), 195-207.

Work-Group Support for Voicing Objections Internally Scale

1. If I told my coworkers of my intention to voice objections to someone or some group inside my organization regarding organizational practices, they would try to discourage me.

Disagree _____:_____:_____:_____:_____:_____:_____ Agree
 strongly quite slightly neither slightly quite strongly

2. I have confidence and trust in my coworkers to support me in my intent to voice objections to someone or some group inside my organization regarding organizational practices.

Disagree _____:_____:_____:_____:_____:_____:_____ Agree
 strongly quite slightly neither slightly quite strongly

3. My coworkers would distance themselves from me if I told them of my intention to voice objections to someone or some group inside my organization regarding organizational practices.

Disagree _____:_____:_____:_____:_____:_____:_____ Agree
 strongly quite slightly neither slightly quite strongly

Appendix MReliability Estimates and Variances Used To Fix Measurement Model

Scales	Reliabilities	Variances
Repint_R	.8341	17.783
Gatt_5R	.8144	12.948
Gdircon	.3478	3.648
SN	.8000	.980
Bbs_act	.7914	25.449
Bbs_ben	.8264	28.055
NB_pers	.8238	10.702
NB_job	.8613	10.988
NB_oth	.6281	2.822
Cbs_oi	.9015	12.100
Cbs_pi	.5191	1.910
Cev_fair	.7625	23.123
Avwgrsup	.7338	.995

Table 1. Means, Standard Deviation, and Zero Order Correlations of Study Variables (N = 205)

Variables	Means	SD	1*	2*	3*	4*	5*	6*	7*	8*	9*	10*	11*	12*	13*
1. Repint_r	5.58	1.16	1.00												
2. Gatt_5r	4.38	5.34	.49	1.00											
3. SN	9.17	8.01	.40	.39	1.00										
4. Gdircont	4.80	1.17	.36	.34	.16	1.00									
5. Bbs_act	14.34	20.91	.35	.46	.34	.40	1.00								
6. Bbs_ben	9.80	21.61	.34	.49	.37	.27	.72	1.00							
7. Nb_pers	30.00	27.48	.51	.45	.48	.28	.36	.39	1.00						
8. Nb_job	24.06	30.15	.47	.46	.36	.36	.60	.56	.59	1.00					
9. Nb_oth	16.27	13.05	.41	.36	.36	.18	.36	.33	.48	.48	1.00				
10. Cbs_oi	18.90	29.74	.19	.37	.28	.34	.58	.51	.33	.51	.24	1.00			
11. Cbs_pi	15.47	17.42	.33	.31	.22	.28	.27	.23	.31	.23	.16	.41	1.00		
12. Cev_fair	1.16	17.42	.20	.34	.29	.29	.60	.51	.24	.51	.18	.67	.23	1.00	
13. Avwgrsup	4.46	1.33	.29	.38	.20	.35	.46	.40	.44	.43	.30	.41	.32	.38	1.00

* All correlations are significant at the .01 level (2-tailed)

References

- Ajzen, I. (1988). Attitudes, Personality, and Behavior. Chicago, IL: The Dorsey Press.
- Ajzen, I., & Fishbein, M. (1980). Understanding Attitudes and Predicting Social Behavior. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Ajzen, I. & Madden, T.J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. Journal of Experimental Social Psychology, 22, 453-474.
- Anderson, R.M., Perrucci, R., Schendel, D.E., & Trachtman, L.E. (1980). Divided Loyalties: Whistle-Blowing at BART. West Lafayette: Purdue University Press.
- Axline, L.L. (1990). The bottom line on ethics. Journal of Accountancy, 170(12), 87-91.
- Axline, L.L. (1988). Ethics: Good for business? Communications, 2 (9), 86-89.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.
- Bandura, A., Adams, N.E., & Beyer, J. (1977). Cognitive processes mediating behavioral change. Journal of Personality and Social Psychology, 35, 125-139.
- Barach, J. (1985). The ethics of hardball. California Management Review, 27(2), 132-139.
- Barnett, T. (1992). A preliminary investigation of the relationship between selected organizational characteristics and external whistleblowing by employees. Journal of Business Ethics, 11, 949-959.
- Barnett, T., Cochran, D.S., & Taylor, G.S. (1993). The internal disclosure policies of private-sector employers: An initial look at their relationship to employee whistleblowing. Journal of Business Ethics, 12, 127-136.
- Bateman, T.S., & Organ, D.W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee citizenship. Academy of Management Journal, 36, 587-595.

Beck, L., & Ajzen, I. (1991). Predicting dishonest actions using the theory of planned behavior. Journal of Research in Personality, 25, 285-301.

Becker, H., & Fritzsche, D.J. (1987). A comparison of the ethical behavior of American, French, and German managers. The Columbia Journal of World Business, 22(4), 87-95.

Bentler, P.M. (1990). Comparative fit indices in structural models. Psychological Bulletin, 107(2), 238-246.

Bentler, P.M. & Bonett D.G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. Psychological Bulletin, 88, 588-606.

Bentler, P.M. & Chou, C.P. (1988). Practical issues in structural modeling. In J.S. Long (Ed.), Common Problems/Proper Solutions: Avoiding Error in Quantitative Research, pp. 161-192. Newbury Park, CA: Sage.

Blackburn, M.S. (1988). Employee dissent: The choice of voice versus silence. Unpublished doctoral dissertation, The University of Tennessee, Knoxville.

Bollen, K.A. (1989). Structural Equations with Latent Variables. New York: John Wiley & Sons.

Bowman, J., Elliston, F., & Lockhart, P. (1984). Professional Dissent. New York: Garland.

Brabeck, M.M. (1984). Ethical characteristics of whistle blowers. Journal of Research in Personality, 18, 41-53.

Brief, A.P., & Motowildo, S.J. (1986). Prosocial organizational behavior. Academy of Management Review, 11, 710-725.

Browne, M.W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K.A. Bollen & J.S. Long (Eds.), Testing Structural Equation Models. Beverly Hills, CA: Sage Publications.

Callahan, E.S., & Collins, J.W. (1992). Employee attitudes toward whistleblowing: Management and public policy implications. Journal of Business Ethics, 11, 939-948.

Carroll, A.B. (1975). Managerial ethics: Post-Watergate view. Business Horizons, 28, 75-80.

Casal, J.C., & Zalkind, S.S. (1993). Relationship of employees' corporate social responsibility perceptions with ethics codes and discussion groups. Paper presented at the Annual Conference of the Eastern Psychological Association, Arlington, VA.

Casal, J.C., & Zalkind, S.S. (1992). Correlates of employee responses to organizational wrongdoing: Decisions to report and to leave. Paper presented at the Annual Conference of the Eastern Psychological Association, Boston, MA.

Cherrington, D.J., & Cherrington, T.O. (1985). The climate of honesty in retail stores. In W. Terris (Ed.), Employee Theft: Research, Theory and Applications. Park Ridge, IL: London House Press.

Clinard, M.B. (1990). Corporate Corruption. New York: Praeger.

Clinard, M.B. (1983). Corporate Ethics and Crime: The Role of Middle Management. Beverly Hills: Sage Publications.

Cohen, J., & Cohen P. (1983). Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Cressey, D.R., & Moore, C.A. (1983). Managerial values and corporate codes of ethics. California Management Review, 25(4), 53-77.

Dozier, J.B., & Miceli, M.P. (1985). Potential predictors of whistleblowing: A prosocial behavior perspective. Academy of Management Review, 10, 823-836.

Elliston, F.A. (1982a). Anonymity and whistleblowing. Journal of Business Ethics, 1, 167-177.

Elliston, F.A. (1982b). Civil disobedience and whistle-blowing: A comparative appraisal of two forms of dissent. Journal of Business Ethics, 1, 23-28.

Elliston, F.A., Keenan, J.P., Lockhart, P., & Van Schaick, J. (1985).

Whistleblowing: Managing Dissent in the Workplace. New York: Praeger Press.

Emerson, R.E. (1962). Power-dependence relations. American Sociological Review, 27, 31-41.

Ewing, D.W. (1983a). Do It My Way - Or You're Fired! New York: Wiley.

Ewing, D.W. (1983b). How to negotiate with employee objectors. Harvard Business Review, 61, 103-110.

Ewing, D.W. (1980). How bureaucrats deal with dissidents. In W. Clay Hammer (Ed.), Organizational Shock (pp. 328-331). New York: Wiley.

Farrell, D. (1983). Exit, voice, loyalty, and neglect as responses to job dissatisfaction: A multidimensional scaling study. Academy of Management Journal, 26, 596-606.

Farrell, D., & Petersen, J.C. (1982). Patterns of political behavior in organizations. Academy of Management Review, 7, 403-412.

Fazio, R.H., & Zanna, M.P. (1981). Direct experience and attitude-behavior consistency. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology (pp. 161-202). New York: Academic Press.

Feldman, D.C. (1984). The development and enforcement of group norms. Academy of Management Review, 9, 47-53.

Fishbein M., & Ajzen, I. (1976). Misconceptions about the Fishbein model: Reflections on a study by Songer-Nocks. Journal of Experimental Social Psychology, 12, 579-584.

Fishbein, M., & Ajzen, I. (1975). Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research. Reading, MA: Addison-Wesley.

Flynn, G. (1995). Make employee ethics your business. Personnel Journal, June, 30-41.

Fritzsche, D.J. (1988). An examination of marketing ethics: Role of the decision maker, consequences of the decision, management position, and sex of the respondent. Journal of Macroeconomics, 8(2), 29-39.

Fritzsche, D.J., & Becker, H. (1984). Linking management behavior to

ethical philosophy: An empirical investigation. Academy of Management Journal, 27, 166-175.

Gelfand, D.M., Hartmann, D.P., Walder, P., & Page, B. (1973). Who reports shoplifters? A field-experimental study. Journal of Personality and Social Psychology, 25, 276-285.

Glazer, M.P., & Glazer, P.M. (1989). The Whistleblowers: Exposing Corruption in Government and Industry. New York: Basic Books.

Glazer, M.P., & Glazer, P.M. (1987). Pathways to resistance: An ethical odyssey in government and industry. In M. Lewis & J.L. Miller (Eds.), Research in Social Problems and Public Policy (Vol. 4, pp. 193-219). Greenwich, CT: JAI Press.

Glazer, M.P., & Glazer, P.M. (1986). Whistleblowing. Psychology Today, 20, 36-43.

Gorden, W.I., Infante, D.A., & Graham, E.E. (1988). Corporate condition conducive to employee voice: A subordinate perspective. Employee Responsibilities and Rights Journal, 1, 101-112.

Gorsuch, R.L. (1983). Factor Analysis. Hillsdale, NJ: Lawrence Erlbaum Associates.

Gorsuch, R.L., & Ortberg, J. (1983). Moral obligation and attitudes: Their relation to behavioral intentions. Journal of Personality and Social Psychology, 44, 1025-1028.

Graham, J.W. (1986). Principled organizational dissent: A theoretical essay. In B.M. Staw & L.L. Cummings (Eds.), Research in Organizational Behavior (Vol 8, pp. 1-52). Greenwich, CT: JAI Press.

Greenberger, D.B., Miceli, M.P., & Cohen, D.J. (1987). Oppositionists and group norms: The reciprocal influence of whistle-blowers and co-workers. Journal of Business Ethics, 6, 527-542.

Griffin, R.W. (1983). Objective and social sources of information in task redesign: A Field Experiment. Administrative Science Quarterly, 28, 184-200.

Grossman, B. (1988). Corporate Loyalty: A Trust Betrayed. Markham:

Penguin.

Hacker, A. (1978). Loyalty - and the whistleblower. Across the Board, 15, 4-9, 67.

Hackman, J.R. (1976). Group influences on individuals. In M. Dunnette (Ed.), Handbook of Industrial and Organizational Psychology (pp. 1455-1526). Chicago, IL: Rand-McNally.

Hamilton, V.L., & Sanders, J. (1981). Effects of roles and deeds on responsibility judgments: The normative structure of wrongdoing. Social Psychology Quarterly, 44, 237-254.

Harrington, S.J. (1991). What corporate America is teaching about ethics. Academy of Management Executive, 5, 21-30.

Harshbarger, D. (1973). The individual and the social order: Notes on the management of heresy and deviance in complex organizations. Human Relations, 26, 251-269.

Hayduk, L.A. (1987). Structural Equation Modeling With LISREL Essentials and Advances. Baltimore, MD: The Johns Hopkins Press.

Hegarty, W.H., & Sims, Jr., H.P. (1979). Organizational philosophy, policies, and objectives related to unethical decision behavior: A laboratory experiment. Journal of Applied Psychology, 64(3), 331-338.

Hegarty, W.H., & Sims, Jr., H.P. (1978). Some determinants of unethical decision behavior. Journal of Applied Psychology, 63, 451-457.

Hirschman, A.O. (1970). Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations, and States. Cambridge, MA: Harvard University Press.

Hollinger, R.C., & Clark, J.P. (1982). Formal and informal social controls of employee deviance. Sociological Quarterly, 23, 333-343.

Hunt, S.D., Wood, V.R., & Chonko, L.B. (1989). Corporate ethical values and organizational commitment in marketing. Journal of Marketing, 53, 79-90.

Jackall, R. (1988). Moral Mazes: The World of the Corporate Manager. New York: Oxford University Press.

Jansen, E. and Von Glinow, M. A. (1985). Ethical ambience and organizational reward systems. Academy of Management Review, 10(4), 814-822.

Jones, T. (1991). Ethical decision making by individuals in organizations: An issue-contingency model. Academy of Management Review, 16, 366-395.

Jöreskog, K. and Sörbom, D. (1988). LISREL VII: Analysis of linear structural relationships by the method of maximum likelihood. Uppsala, Sweden: University of Uppsala.

Jöreskog, K. and Sörbom, D. (1993). LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language. Chicago, IL: Scientific Software International.

Jos, P.H., Tompkins, M.E., & Hayes, S.W. (1989). In praise of difficult people: A portrait of the committed whistleblower. Public Administration Review, Nov/Dec, 552-561.

Joyce, W.F., & Slocum, Jr., J.W. (1990). Strategic context and organizational climate. In B. Schneider (Ed.), Organizational Climate and Culture (pp. 130-150). San Francisco: Jossey-Bass Publishers.

Keenan, J.P., (1990). Upper-level managers and whistleblowing: Determinants of perceptions of company encouragement and information about where to blow the whistle. Journal of Business and Psychology, 5(2), 223-235.

King III, G. (1999). The implications of an organisation's structure on whistle blowing. Journal of Business Ethics, 20(4), 315-326.

King III, G. (1997). The effects of interpersonal closeness and issue seriousness on blowing the whistle. The Journal of Business Communication, 34(4), 419-37.

Kolarska, L., & Aldrich, H. (1980). Exit, voice, and silence: Consumers' and managers' responses to organizational decline. Organizational Studies, 1, 41-58.

Latané, B. (1981). The psychology of social impact. American Psychologist, 36, 343-356.

Lauderdale, P. (1976). Deviance and moral boundaries. American Sociological Review, 41, 660-676.

Loehlin, J.C. (1992). Latent Variable Models: An Introduction to Factor Path, and Structural Analysis (2nd Ed.). Hillsdale, NJ: Lawrence Erlbaum Associates Publishers.

Louis, M.R. (1990). Acculturation in the workplace: Newcomers as lay ethnographers. In B. Schneider (Ed.), Organizational Climate and Culture (pp. 85-129). San Francisco: Jossey-Bass Publishers.

Malin, M.H. (1983). Protecting the whistle-blower from retaliatory discharge. University of Michigan Journal of Law Reform, 16, 277-318.

Massengill, D., & Petersen, D.J. (1989). Whistleblowing: Protected activity or not? Employee Relations Law Journal, 15, 49-56.

Mathews, M.C. (1987). Codes of ethics: Organizational behavior and misbehavior. In W.C. Frederick (Ed.), Research in Corporate Social Performance and Social Policy (Vol. 9, pp. 107-130). Greenwich, CT: JAI Press.

Meier, R.F., & Short, J.F. (1982). The consequences of white-collar crime. In H. Edelhertz & T. Overcast (Eds.), White-Collar Crime: An Agenda For Research (pp. 23-49). Lexington, MA: Lexington Books.

Meyer, J.P., & Allen, N.J. (1984). Testing the Aside-bets theory of organizational commitment: Some methodological considerations. Journal of Applied Psychology, 69, 372-378.

Miceli, M.P., Dozier, J.B., & Near, J.P. (1991). Blowing the whistle on data fudging: A controlled field experiment. Journal of Applied Social Psychology, 21(4), 271-195.

Miceli, M.P., & Near, J.P., (1994). Whistle blowing: Reaping the benefits. The Academy of Management Executive, 8(3), 65-73.

Miceli, M.P., & Near, J.P. (1992). Blowing the Whistle: The Organizational and Legal Implications for Companies and Employees. New York: Lexington Books.

Miceli, M.P., & Near, J.P. (1991). Whistleblowing as an organizational

process. In S. Bacharach and R. Magjuka (Eds.), Research in the Sociology of Organizations (Vol. 9, pp. 139-200). Greenwich, CT: JAI Press.

Miceli, M.P., & Near, J.P. (1988). Individual and situational correlates of whistle-blowing. Personnel Psychology, 41, 267-281.

Miceli, M.P., & Near, J.P. (1985). Characteristics of organizational climate and perceived wrongdoing associated with whistle-blowing decisions. Personnel Psychology, 38, 525-544.

Miceli, M.P., & Near, J.P. (1984). The relationship among beliefs, organizational position, and whistle-blowing status: A discriminant analysis. Academy of Management Journal, 27(4), 687-705.

Miceli, M.P., Near, J.P., & Schwenk, C.R. (1991). Who blows the whistle and why? Industrial and Labor Relations Review, 45, 113-130.

Miceli, M.P., Van Scotter, R., Near, J.P., & Rehg, M.T. (2001). Responses to perceived organizational wrongdoing: Do perceiver characteristics matter? In J.M. Darley, D.M. Messick, and T.R. Tyler (Eds.), Social Influences on Ethical Behavior in Organizations (pp. 119-135). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Miethe, T.D. (1999). Whistleblowing at Work: Tough Choices in Exposing Fraud, Waste, and Abuse on the Job. Boulder, CO: Westview Press

Motowidlo, S. (1984). Does job satisfaction lead to consideration and personal sensitivity? Academy of Management Journal, 27, 910-915.

Mueller, R.O. (1996). Basic Principles of Structural Equation Modeling: An Introduction to LISREL and EQS. New York: Springer Texts in Statistics.

Murphy, K.R. (1993). Honesty in the Workplace. Pacific Grove, CA: Brooks/ Cole Publishing Company.

Murphy, P.E. (1989). Creating ethical corporate structures. Sloan Management Review, 30(2), 81-87.

Nader, R., Petkas, P.J., & Blackwell, K. (Eds.) (1972). Whistle-Blowing: The Report on the Conference on Professional Responsibility. New York: Grossman.

Near, J.P. (1989). Whistle-blowing: Encourage it! Business Horizons, 32(1), 2-6.

Near, J.P., Baucus, M.S., & Miceli, M.P. (1993). The relationship between values and practices: Organizational climates for wrongdoing. Administration and Society, 25(2), 204-226.

Near, J.P., & Jensen, T.C. (1983). The whistle-blowing process: Retaliation and perceived effectiveness. Work and Occupations, 10, 3-28.

Near, J.P., & Miceli, M.P. (1995). Effective whistle-blowing. Academy of Management Review, 20(3), 679-708.

Near, J.P., & Miceli, M.P. (1987). Whistleblowers in organizations: Dissidents or reformers? In B. Staw and L.L. Cummings (Eds.), Research in Organizational Behavior (Vol. 9, pp. 321-368). Greenwich, CT: JAI Press.

Near, J.P., & Miceli, M.P. (1986). Retaliation against whistle-blowers: Predictors and effects. Journal of Applied Psychology, 71, 137-145.

Near, J.P., & Miceli, M.P. (1985). Organizational dissidence: The case of whistle-blowing. Journal of Business Ethics, 4, 1-16.

O'Day, R. (1972). Intimidation rituals: Reactions to reform. Journal of Applied Behavioral Science, 10, 373-386.

Osgood, C.E., Suci, G.I., & Tannenbaum, R.H. (1957). The Measurement of Meaning. Urbana, IL: University of Illinois Press.

Oskamp, S. (1991). Attitudes and Opinions. 2nd Ed. Englewood Cliffs, NJ: Prentice Hall.

Pagel, M.D., & Davidson, A.R. (1984). A comparison of three social-psychological models of attitude and behavioral plan: Prediction of contraceptive behavior. Journal of Personality and Social Psychology, 47, 517-533.

Parker, L.E. (1993). When to fix it and when to leave: Relationships among perceived control, self-efficacy, dissent and exit. Journal of Applied Psychology, 78, 949-959.

Parlman, G.C. (1987). Protecting the whistleblower. Personnel Administrator, 32, 26-32.

Parmerlee, M.A., Near, J.P., & Jensen, T.C. (1982). Correlates of whistleblowers' perceptions of organizational retaliation. Administrative Science Quarterly, 27, 17-34.

Pennings, J.M. (1970). Work-value systems of white collar workers. Administrative Science Quarterly, 15, 69-79.

Perrucci, R., Anderson, R.M., Schendel, D.E., & Trachtman, L.E. (1980). Whistle-blowing: Professionals' resistance to organizational authority. Social Problems, 28, 149-164.

Peters, C., & Branch, T. (1972). Blowing the Whistle: Dissent in the Public Interest. New York: Praeger Publishers.

Podsakoff, P.M., & Organ, D.W. (1986). Self-reports in organizational research: Problems and prospects. Journal of Management, 12(4), 531-544.

Posner, B.Z., & Schmidt, W.H. (1987). Ethics in American Companies: A managerial perspective. Journal of Business Ethics, 6, 383-391.

Powell, G.N., & Butterfield, D.A. (1978). The case for subsystem climates in organizations. Academy of Management Review, 3, 151-157.

Raelin, J.A. (1987). The professional as the executive's ethical aide-de-camp. Academy of Management Executive, 1, 171-182.

Riley, P. (1983). A structurationist account of political culture. Administrative Science Quarterly, 28, 414-437.

Rongine, N.M. (1985). Toward a coherent legal response to the public policy dilemma posed by whistleblowing. American Business Law Journal, 23, 281-297.

Roth, L.P. (1992). Organizational commitment: A construct validation of two measures and an examination of antecedents and consequences. Unpublished Doctoral Dissertation, The Graduate School and University Center of the City University of New York.

Rotter, J.B. (1966). Generalized expectancies for internal versus external

control of reinforcement. Psychological Monographs, 80(1), No. 609.

Rowe, M.P., & Baker, M. (1984). Are you hearing enough employee concerns? Harvard Business Review, May-June, 27-35.

Rusbult, C., & Lowery, D. (1985). When bureaucrats get the blues: Responses to dissatisfaction among federal employees. Journal of Applied Social Psychology, 15, 80-103.

Rutkowski, G.K., Gruder, C.L., & Romer, D. (1983). Group cohesiveness, social norms, and bystander intervention. Journal of Personality and Social Psychology, 45, 545-552.

Santee, R.T., & Maslach, C. (1982). To agree or not to agree: Perceived dissent amid social pressure to conform. Journal of Personality and Social Psychology, 42, 690-701.

Schifter, D.E., & Ajzen, I. (1985). Intention, perceived control, and weight loss: An application of the theory of planned behavior. Journal of Personality and Social Psychology, 49, 843-851.

Schmidt, M.J. & Ryan, A.M. (1993). The Big Five in personnel selection: Factor structure in applicant and nonapplicant populations. Journal of Applied Psychology, 78, 966-974.

Schneider, B., & Reichers, A. (1983). On the etiology of climates. Personnel Psychology, 36, 19-39.

Schwartz, S.H., & Tessler, R.C. (1972). A test of a model for reducing measured attitude-behavior discrepancies. Journal of Personality and Social Psychology, 24, 225-236.

Schwarzer, R., Bäßler, J., Kwiatek, P., Schröder, K., & Zhang, J.X. (1997). The assessment of optimistic self-beliefs: Comparison of the German, Spanish, and Chinese versions of the General Self-efficacy Scale. Applied Psychology: An International Review, 46(1), 69-88.

Sculnick, M.W. (1986). Disciplining whistle-blowers. Employment Relations Today, 13, 189-194.

Senger, J. (1971). Managers' perceptions of subordinates' competence as a function of personal value orientations. Academy of Management Journal, 14,

415-423.

Senneker, P., & Hendrick, C. (1983). Androgyny and helping behavior. Journal of Personality and Social Psychology, 45, 916-925.

Sherer, M., & Adams, C.H. (1983). Construct validation of the Self-efficacy Scale. Psychological Reports, 53, 899-902.

Sherer, M., Maddux, J.E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., Rogers, R.W. (1982). The self-efficacy scale: Construction and validation. Psychological Reports, 51, 663-671.

Singhapakdi, A., Kraft, K.L., Vitell, S.J., & Rallapalli, K.C. (1995). The perceived importance of ethics and social responsibility on organizational effectiveness: A survey of marketers. Journal of the Academy of Marketing Science, 23(1), 49-56.

Smith, C.A., Organ, D., Near, J.P. (1983). Organizational citizenship behavior: Its nature and antecedents. Journal of Applied Psychology, 68, 653-663.

Soeken, K.L., & Soeken, D.R. (1987). A survey of whistleblowers: Their stressors and coping strategies. Proceedings of the Hearing on H. R. 25 (pp. 156-166). Washington, C.C.: U.S. Government Printing Office.

Spector, P.E. (1982). Behavior in organizations as a function of employee's locus of control. Psychological Bulletin, 91, 482-487.

Staub, E. (1978). Positive Social Behavior and Morality: Social and Personal Influences (Vol. 1). New York: Academic Press.

Swazey, J., & Scher, S. (1981). The whistle-blower as a deviant professional: Professional norms and responses to fraud in clinical research. In J. Swazey and S. Scher (Eds.), Whistle-Blowing in Biomedical Research: Proceedings of a Workshop (pp. 171-192). Washington, DC.

Tanford, S., & Penrod, S. (1984). Social influence model: A formal integration of research on majority and minority influence processes. Psychological Bulletin, 95, 189-225.

Tanksy, J.W. (1993). Justice and organizational citizenship behavior: What

is the relationship? Employee Responsibilities and Rights Journal, 6(3), 195-207.

Tittle, C.R. (1980). Sanctions and Social Deviance: The Question of Deterrence. New York: Praeger.

Trevino, L.K. (1986). Ethical decision making in organizations: A person-situation interactionist model. Academy of Management Review, 11, 601-607.

Trevino, L.K., & Victor, B. (1992). Peer reporting of unethical behavior: A social context perspective. Academy of Management Journal, 35(1), 38-64.

Trevino, L.K., & Youngblood, S.A. (1990). Bad apples in bad barrels: A causal analysis of ethical decision-making behavior. Journal of Applied Psychology, 75, 378-385.

U.S. Merit Systems Protection Board (1984). Blowing the Whistle in the Federal Government: A Comparative Analysis of 1980 and 1983 Survey Findings: A Director's Monograph, October. Washington, DC: US Government Printing Office.

U.S. Merit Systems Protection Board (1981). Whistle-Blowing and the Federal Employee. Washington, DC: U.S. Government Printing Office.

Valois, P., Desharnais, R., Godin, G., Perron, J., & Lecomte, C. (1993). Psychometric properties of a perceived behavioral control multiplicative scale developed according to Ajzen's theory of planned behavior. Psychological Reports, 72, 1079-1083.

Wahn, J. (1993). Organizational dependence and the likelihood of complying with organizational pressures to behave unethically. Journal of Business Ethics, 12, 245-251.

Walters, K.D. (1975). Your employees' right to blow the whistle. Harvard Business Review, 53, 26-30, 161-162.

Waters, J.A. (1980). Catch 20.5: Corporate morality as an organizational phenomenon. In W. Clay Hamner (Ed.), Organizational Shock (pp. 372-386). New York: Wiley

Weinstein, D. (1979). Bureaucratic Opposition. New York: Pergamon Press.

Westin, A.F. (1981). Whistle-Blowing: Loyalty and Dissent in the Corporation. New York: McGraw-Hill.

Withey, M.J., & Cooper, W.H. (1989). Predicting exit, voice, loyalty, and neglect. Administrative Science Quarterly, 34, 521-539.

Woodruff, S.L., & Cashman, J.F. (1993). Task, domain, and general efficacy: A reexamination of the self-efficacy scale. Psychological Reports, 72, 423-432.

Zalkind, S. S. (1987). Is whistle-blowing related to job satisfaction and other variables? Paper presented at the annual convention of the American Psychological Association, New York City, New York.

Zalkind, S.S., Demetriadou, D., and Schreier, H. (1990). Should Managers Punish Whistleblowers? Paper presented at the International Congress of Applied Psychology, Kyoto, Japan.

Zalkind, S.S., Demetriadou, D. and Schreier, H. (1990). Do Managerial Responses to Reports of Wrongdoing Influence Perceptions of "Whistleblowers?" Paper presented at the Annual Convention of the International Council of Psychologists, Tokyo, Japan.