Wrongdoing by Consultants: An Examination of Employees' Reporting Intentions

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ABSTRACT. Organizations are increasingly embedded with consultants and other non-employees who have the opportunity to engage in wrongdoing. However, research exploring the reporting intentions of employees regarding the discovery of wrongdoing by consultants is scant. It is important to examine reporting intentions in this setting given the enhanced presence of consultants in organizations and the fact that wrongdoing by consultants changes a key characteristic of the wrongdoing. Using an experimental approach, the current paper reports the results of a study examining employees' reporting intentions subsequent to their discovery of wrongdoing by a consultant. The results of the study indicate that perceptions about the seriousness of a wrongdoing, personal costs and personal responsibility related to reporting a wrongdoing, and moral-equity judgments are significantly associated

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with reporting intentions for a normal (non-anonymous) reporting channel. Only perceptions of seriousness and personal costs are significantly associated for an anonymous reporting channel. Lastly, while personal costs for the anonymous reporting channel were lower than the normal reporting channel, reporting intentions were similar across the two channels.

KEY WORDS: moral-equity, personal cost, personal responsibility, reporting channels, seriousness, wrong-doing

Introduction

Researchers have shown a long-standing interest in whistleblowing (see Grant, 2002; Gundlach et al., 2003; Near and Miceli, 1995 for reviews). This interest reflects, in part, the fact that wrongdoing occurs within organizational settings, and, organizational members commonly have knowledge of and, thus, the opportunity to report the wrongdoing. Recent whistleblowing research has examined the role of national culture (Chiu, 2003; Tavakoli et al., 2003), the role of laws and corporate culture/structure (Baynes, 2002; Callahan et al., 2002; Dworkin and Near, 1997; King, 1999; Near and Dworkin, 1998), whistleblowers' perceptions that the wrongdoing will be terminated (Miceli and Near, 2002), and the role of wrongdoing type on the whistleblowing process (Near et al., 2004). Relatedly, Robinson and Bennett (1995) developed a typology of deviant workplace behavior. Generally, whistleblowing research and related work in deviant workplace behavior (Robinson and Bennett, 1995) has tended to define and examine wrongdoing (Near and Miceli, 1985) by organizational employees. 1 While limiting consideration of wrongdoing to organizational employees was

appropriate 20 years ago, this may no longer be the case. Increasingly, organizations are embedded with individuals who are employees of other organizations. For example, many functions such as human resources, accounting, and/or information technology can be outsourced. Alliances and partnerships with other organizations are becoming more common. Lastly, and the focus of the current study, organizations frequently rely on consulting firms to facilitate non-routine projects such as the design and installation of information technology.

Like organizational employees, consultants (i.e., "outside employees") have the ability to engage in wrongdoing that can harm the organization that hired them. Consultants, however, are under the primary control of and are directly responsible to their employer, the consulting firm. They may perceive their responsibility to the organization hiring the consulting firm as indirect or secondary to their own employer. This distinction is important largely because it changes important characteristics of the wrongdoing (Near et al., 2004), which in turn are associated with the likelihood of whistleblowing (Near and Miceli, 1995). For example, it is likely to be clearer to an employee of the hiring organization that an outside consultant's wrongdoing that harms the hiring organization is neither implicitly nor explicitly approved by management of the hiring organization. However, the way in which this increased clarity might influence the employee's relative use of different moral philosophies to understand and respond to the wrongdoing is not clear. For example, organizational employees may feel that retaliation issues will be minimal when reporting on consultants, making reporting more likely. Conversely, organizational employees may believe that it is not their responsibility to report the wrongdoing of consultants, making reporting less likely.

How employees decide whether to report the wrongdoing of consultants represents an important, yet unexplored topic. The purpose of this study is to provide initial evidence on this topic by examining individuals' reporting intentions regarding the discovery of wrongdoing by information systems consultants. Specifically, using an experimental approach, participants were placed in a situation in which they privately discovered that consultants planned to use deceptive billing practices during the project. In response to this scenario, participants were asked whether or not they would report the consultants' billing

plans using anonymous and/or non-anonymous reporting channels. While the literature recognizes both reporting channels (Gundlach et al., 2003), experimental research has not simultaneously examined both reporting channels. As discussed below, each reporting channel has unique advantages and disadvantages such that it is not clear which reporting channel will yield stronger reporting intentions.

The current study also examines the relative applicability of two different models of ethical decision-making. One model, by Schultz et al. (1993), is explicitly intended to capture costs, such as employer retaliation, as well as benefits, such as prosocial compliance (Somers and Casal, 1994), that are expected to influence individuals' reporting intentions. Under this model, the reporting of wrongdoing is a function of perceived seriousness, perceived personal responsibility, and perceived personal costs. Second, a multidimensional ethics model, developed by Reidenbach and Robin (1990) is explored. Under this model, reporting intentions are a function of the relationships among three different ethical philosophies: moral equity, contractualism, and relativism.

In contrast to prior whistleblowing research studies that have each examined only one reporting model, our study is able to compare and contrast the efficacy of the two models in explaining reporting intentions under conditions of both anonymity and non-anonymity. This allows us to assess: (1) the extent to which the two models are capturing similar and/or unique constructs, and (2) the ability of the two models to incrementally explain employees' reporting intentions.

In the next section of the paper, we provide background about the information technology setting. This is followed by a discussion of the two reporting models. "Method" and "Results" sections describe the experimental methods and results, respectively. The last section of the paper discusses the limitations and implications of our findings.

Prevalence of information technology projects involving outside consultants

Information technology (IT) is of strategic importance to organizations and, despite difficult economic times, IT spending is expected to increase 4.0% worldwide during 2003, with 5–6% increases per year predicted for the period of 2004–2006

(Aberdeen Group, 2002). In the context of our study, two points are central. First, outside consulting firms are frequently hired to facilitate the design and implementation of IT projects.² Based on recent survey results, 68% of Chief Information Officers (hereafter, CIOs) reported that their use of outside consultants in the IT area increased during 2002 (Overby, 2003). Furthermore, 47% of the surveyed CIOs expected to increase their use of consultants during 2003, and 46% of the executives interviewed for the study saw the use of outside consultants as a permanent strategy (Overby, 2003).

Second, both anecdotal and experimental evidence suggests that IT projects with known problems are implemented, often at huge costs to the acquiring organization. Koch (2002) notes that IT executives have complained of such problems as undertrained consultants billing at high rates, high turnover among the consultants during project implementations, and blown budgets and schedules. Problems involving the use of IT consultants are also reported in the academic literature. In this regard, based on agency theory (Jensen and Meckling, 1976), Tuttle et al. (1997a) contend that consulting firm employees will make decisions on whether to implement an IT project with known problems based on their own organization's self-interest. Thus, when IT projects have known problems, consultants are likely to implement these projects without correcting the problems when the benefits of doing so exceed the costs to the consulting firm.

Of particular interest to this study, Tuttle et al. (1997a) predict and find that among information system professionals, consultants' intentions were significantly influenced by whether organizational employees had knowledge of the problems. As expected, in comparison to a setting in which organizational employees had knowledge of the problems, consultants were much more likely to implement projects with known problems when the problems were known only to the consulting firm employees.

Models of reporting wrongdoing

Schultz et al. (1993) Model of reporting questionable acts

Grounded in the work of Graham (1986), Schultz et al. (1993) proposed and tested a model of

reporting questionable acts. The first stage of the model involves an individual's awareness that a questionable act has been committed, suggesting that individuals can only report on the "questionable" acts of others for which they are aware. This stage is consistent with several models of whistleblowing (Dozier and Miceli, 1985; Miceli et al., 1991; Near and Miceli, 1983), in which the reporting of questionable behavior is characterized as a type of prosocial behavior intended to help others (Brief and Motowidlo, 1986; Somers and Casal, 1994). Once an individual is aware that a questionable act has occurred, the model predicts that the decision to report the act is related to three assessments: the seriousness of the act, the individual's attribution of responsibility, and the perceived costs of reporting.

To test their model, Schultz et al. (1993) used an experimental approach to examine the reporting intentions of managers and professional staff members from three different countries. For each of six hypothetical scenarios describing the occurrence of a questionable act, participants initially provided the three assessments from the model (e.g., the seriousness of the act, responsibility for reporting, and personal costs of reporting) and then indicated a reporting intention.

The first variable in the model involves the individual's assessment of the seriousness of the act. Graham (1986) contends that perceived seriousness is related to both objective characteristics of the situation and the individual's tendency to exaggerate or minimize the severity of the act. Presumably, information about the amount and/or extent of the damages or losses associated with the wrongdoing represent key elements of the objective characteristics of the situation. Social influences such as group norms and the organization's tolerance for wrongdoing also may color individuals' perceptions about the seriousness of questionable acts (Hooks et al., 1994). Previous whistleblowing research has generally found that the perceived seriousness of the wrongdoing is significantly associated with reporting decisions (Miceli and Near, 1985; 1992; Near and Miceli, 1987, 1995; Singer et al., 1998).

Schultz et al.'s results (1993) showed that seriousness was significantly related to reporting intentions in the pooled sample containing participants from all three countries, but not in the sample of subjects from

the United States. More recently, Kaplan and Whitecotton (2001) applied the Schultz et al. (1993) model to examine auditors' reporting intentions regarding their supervisor's receipt of an employment offer from a client.³ Kaplan and Whitecotton (2001) also found that assessment of the seriousness of the act was not significantly associated with auditors' reporting intentions. Despite these mixed findings with respect to the seriousness dimension, our predictions for this study involving outside consultants derive from the Schultz et al. (1993) model, as proposed in the following hypothesis.

Hypothesis One: Increases in perceived seriousness of the outside consultants' wrongdoing will be positively associated with employee participants' intentions to report the wrongdoing.

The second attribute in the reporting model is individuals' assessments of their personal responsibility for reporting. When whistleblowing is viewed as a form of prosocial behavior in organizations (Brief and Motowidlo, 1986; Gundlach et al., 2003), personal responsibility is considered an important component of an individual's decision making. Upon learning that another individual is engaging in wrongdoing, individuals may feel a responsibility to report the act either because it is prescribed by their organizational role, or because of their personal sense of social responsibility. The former responsibility may be further affected by an individual's sense of organizational commitment or loyalty (e.g., Somers and Casal, 1994), while the latter may be influenced by that individual's own moral sense of right and wrong (Graham, 1986).

Miceli and Near (1984) note that whistleblowing is sometimes prescribed as part of an individual's role responsibilities. A survey of internal auditors conducted by Miceli et al. (1991) demonstrated that such individuals were more likely to report questionable behavior when it was judged to be part of their role responsibility, or when they felt morally compelled to do so. Relatedly, the study also found that internal auditors were more likely to blow the whistle on wrongdoing when there were few other observers. This last finding is consistent with previous research (Dozier and Miceli, 1985; Graham, 1986) suggesting that individuals are less likely to

blow the whistle when many organizational members could have observed the wrongdoing.

Regarding personal responsibility, both Schultz et al. (1993) and Kaplan and Whitecotton (2001) found strong, positive relations between this variable and the likelihood of reporting questionable acts. Based on prior research (Dozier and Miceli, 1985; Graham, 1986; Miceli et al., 1991), individuals in the current study were told that no one else was aware of the wrongdoing, which should elevate perceptions of personal responsibility. Applying the Schultz et al. (1993) model in the context of wrongdoing by outside consultants, the second hypothesis is proposed.

Hypothesis Two: Increases in perceived personal responsibility for reporting will be positively associated with employee participants' intentions to report wrongdoing committed by outside consultants.

The third attribute in the model is individuals' assessments of the personal costs of reporting. Graham (1986) contends that the primary personal cost is the risk of reprisal from others in the organization. Similarly, Ponemon (1994, p. 123) notes "the nature and extent of the retaliations or sanctions imposed by management or co-workers against the whistleblower is perhaps the most significant determinant to the prospective whistle-blower's decision in the communication of organizational wrongdoing." Previous research (Dozier and Miceli, 1985; Miceli and Near, 1992) has found that cost perceptions are associated with reporting intentions. Similarly, both Schultz et al. (1993) and Kaplan and Whitecotton (2001) report that the relation between individuals' assessments of the perceived costs of reporting and their reporting intentions is negative and significant.

In this study, perceived costs of reporting may be somewhat minimized by the fact that the reporting is tied to the wrongdoing of a non-employee (i.e., outside consultant) as opposed to a fellow employee or supervisor. However, the negative relationship predicted by the Schultz et al., (1993) model should still apply and, in the context of wrongdoing by outside consultants, our third hypothesis is proposed.

Hypothesis Three: Increases in the perceived personal cost of reporting will be negatively associated with employee participants' intentions to report wrongdoing committed by outside consultants.

A multidimensional ethics model of reporting questionable acts

Reidenbach and Robin (1988) advocate a multidimensional approach to examine individuals' decision making about ethical business issues. Reidenbach and Robin (1990) observe that much of previous research has measured ethical beliefs using a single research item, typically anchored by "very ethical" and "very unethical". In their view this is a problem because individuals may be using any of a number of different ethical philosophies when answering how "ethical" an action is. In particular, they assert (1990, p. 639), "individuals use more than one rationale in making ethical judgments, and that the importance of those rationales is a function of the problem situation faced by the individual." Further, when making a decision about an ethical issue, use of different ethical philosophies could give rise to the same ethical assessment. Because one cannot work backwards from an individuals' ethical evaluation to the ethical philosophy that gave rise to the evaluation, Reidenbach and Robin (1990) contend that individuals' ethical assessments provide little insight into ethical decision making.

In response to this dilemma, Reidenbach and Robin (1990) developed a valid and reliable scale to measure multiple dimensions of ethical philosophies that might be used when making decisions about ethical issues. Their multidimensional ethics scale (MES) contains three dimensions of ethical decision making. These include a moral equity dimension, a relativistic dimension, and a contractualism dimension. As discussed below, previous research has found that these three dimensions are associated with ethical decision making by individuals.

Reidenbach and Robin's (1990) MES scale was recently used in a study investigating the individual and joint influences of ethical judgment of a behavior and locus of control on whistleblowing intentions of Chinese managers and professionals Chiu (2003). Results of that study indicate a strong positive relationship between judgments of the ethicality of whistleblowing and whistleblowing intentions (Chiu, 2003). However, Reidenbach and Robin (1990)'s MES does not explicitly incorporate a utilitarian, or cost/benefit, dimension, which generally is considered a significant predictor of individuals' reporting of wrongdoing (Gundlach et al., 2003).

The first dimension on the MES is a moral equity dimension. This dimension measures individuals' perceptions about whether behavior is fair, just, morally right and acceptable. By moral, the authors refer to a characterization proposed by Beauchamp (1982, p. 5) as "concerned with many forms of belief about right and wrong human conduct. These normative beliefs are expressed through such general terms as 'good,' 'bad,' 'virtuous,' 'praiseworthy,' 'right,' 'ought,' and 'blameworthy'." This dimension is grounded in Aristotle's principle of formal justice that holds that equals ought to be treated equally whereas unequals ought to be treated unequally.

The results from Reidenbach and Robin (1990) indicate that the moral equity dimension was significantly associated with individuals' behavioral intentions in each of the three business scenarios examined. Subsequently, Flory et al. (1992) found that the moral equity dimension was significantly associated with individuals' behavioral intentions in each of the four management accounting scenarios that they examined. Cohen et al. (1996) found that the moral equity dimension was significantly associated with behavioral intentions in seven of the eight business vignettes they tested. Finally, Tuttle et al. (1997a) found that the moral equity dimension was significantly associated with intentions to implement an information system with known problems. Based on this collection of findings, we propose hypothesis four as follows:

Hypothesis Four: Scores on the moral equity dimension of the MES will be positively associated with employee participants' intentions to report wrongdoing committed by outside consultants.

The second dimension of the MES is the relativism dimension. This dimension reflects whether behavior is acceptable in relation to the guidelines and/or requirements inherent in the individual's social or cultural system. The items contained within this dimension go beyond legal structures of society and address traditional and culturally learned understandings. The dimension underscores the importance of social and cultural systems in helping to define our ethical beliefs. This dimension represents both a source of and standard for ethical evaluation. Thus, culture and tradition not only define and

shape our value system but also play an evaluative role in ethical decision making. Chiu's (2003) finding of a relatively low intent to blow the whistle by Chinese managers and professionals (2.35 on a 1–5 Likert scale) suggests that cultural norms indeed play a role in ethical judgments and intentions. As Chiu (2003) notes, "Chinese culture treasures the values of harmony and face-saving, however, whistleblowing is considered to be negative and damaging, . . .".

The results from Reidenbach and Robin (1990) indicate that the relativism dimension was significantly associated with individuals' behavioral intentions in two of the three business scenarios examined in their study. Results from Flory et al. (1992) and Tuttle et al. (1997b) indicate strong support for this association, while Cohen et al. (1996) found support in five of the eight business vignettes examined. This discussion leads to our fifth hypothesis.

Hypothesis Five: Scores on the relativism dimension of the MES will be positively associated with employee participants' intentions to report wrongdoing by outside consultants.

The third dimension of the MES is contractualism. This dimension reflects whether behavior violates implied obligations, contracts, duties, and rules. The dimension is grounded in notions of deontology, which proposes that individuals have an inherent duty to other members of society. Perhaps this perspective is best reflected in the work of Rawls (1971), in which he uses the idea of a social contract. For example, Reidenbach and Robin (1990) observe that implicit promises such as fair play and truth telling may be embedded within most business exchanges. In addition, the idea of organizational commitment or loyalty (e.g., Somers and Casal, 1994) which has been found in prior whistleblowing studies to be a significant predictor of reporting intentions, may be captured within this dimension of the MES model.

The results from Reidenbach and Robin (1990), Flory et al. (1992), and Cohen et al. (1996) indicate strong support for the association between the contractualism dimension and individuals' behavioral intentions. Tuttle et al. (1997b), however, reports that the contractualism dimension was not

associated with intentions to implement an information system with known problems. This discussion leads to our sixth hypothesis.

Hypothesis Six: Scores on the contractualism dimension of the MES will be positively associated with employee participants' intentions to report wrongdoing committed by outside consultants.

Method

Task

Graduate business student subjects were given one of two versions of a case describing an Enterprise Resource Planning (ERP) software implementation. As in our case, consulting firms commonly are hired by organizations to assist in implementing ERP systems. To varying degrees, ERP projects integrate business processes through the use of complex and costly software. Also, as in our case, the results from a Deloitte and Touche (1999) survey suggest that implementation problems may be relatively common when a company installs an ERP system. A more recent survey by the Conference Board indicated that 40% of the internal ERP project manager respondents claimed that they had failed to achieve the promised results of their ERP implementations after the system was up and running for at least one year (Koch, 2002).

In our study, subjects were asked to assume the role of an employee serving as a systems analyst on an ERP implementation team for Garments, Inc., a retailer of discount priced clothing for men, women, and children. In the case, information was presented on the company's background, and the company's current computing environment including specific discussions of the current electronic data interchange (EDI) relationships with suppliers and the current revenue subsystem. A section also described the changes to the company's computing environment. This section indicated that the company had hired an independent, outside consulting firm, M. L. Hughes & Company (Hughes), to take the lead role on a planned ERP implementation.4 Thus, the implementation team consisted of employees and outside consultants.

Following this background material was a section identified as "ERP Implementation Team Details and the Dilemma." This section of the case described an implementation problem that the subject, in his/her role as an internal employee member of the implementation team, learned about while working late one night.

Two different versions of the case were developed. Each version described a unique implementation problem that was encountered which involved intentional wrongdoing on the part of the outside consultants. While the nature of the wrongdoing between the two cases differed, the monetary effect of the wrongdoing was held constant. The two versions were manipulated between subjects, with each subject receiving only one version. Since prior research (Miceli et al., 1991; Near and Miceli, 1995; Near et al., 2004) indicates that the nature or type of wrongdoing can affect observers' reactions to it, our generalizability should be enhanced by using cases with two different forms of wrongdoing.

Under one version, subjects overheard a conversation between the partner and the manager of Hughes, the outside consulting firm. The partner and the manager are the project leaders for the ERP implementation. The partner tells the manager that the implementation was not nearly as sophisticated or as complicated as originally thought. In order to increase the consulting firm's profitability by \$300,000, less experienced (i.e., less costly) outside consultant team members than originally specified in the budget proposal could be used for the remainder of the project, without informing management. The firm would still bill for the \$300,000 difference in hourly charges between less and more experienced consulting personnel. This case is referred to as the inexperienced personnel case.

Under the alternative version, subjects also overheard a conversation between the partner and the manager of the outside consulting firm. The partner tells the manager that about six months of work, costing an additional \$300,000 to the client, would have to be completely redone due to a misunderstanding on the part of the outside consultant project leaders. The two project leaders decided to hide the "bad" time in their future billings to the client so that client management would not suspect that anything had gone wrong on the project. This case is referred to as the overbilling case.

Both cases also indicated that the two outside consulting leaders were not aware that their conversation had been overheard and that no one else had overheard the conversation. Next, subjects responded to a questionnaire that included dependent and independent measures, which are described below. Finally, subjects completed questions about their background.

Dependent variables

The dependent measures focus on the subjects' intentions to report the consultants' plans to charge the company for the questionable \$300,000. For the overbilling case, the first dependent measure asks, "Based on the information presented in the case, how likely is it that you would inform Garments Inc. management that Hughes is planning to bill Garments Inc. for \$300,000 of wasted effort?" For the inexperienced personnel case, the bolded portion of the question reads, "that Hughes is planning to use less experienced consultants to increase profits by \$300,000?" Subjects responded to a seven-point scale anchored at 1 by "extremely unlikely that I would inform management" and at 7 by "extremely likely that I would inform management." This measure and response scale is similar to one used by Kaplan (1995) and Kaplan and Whitecotton (2001) and is referred to as the normal reporting measure.5

The second dependent measure explores subjects' intentions with respect to an anonymous reporting channel. Previous research (e.g., Near and Miceli, 1995; Near et al., 2004) indicate that individuals are likely to distinguish anonymous reporting channels (versus non-anonymous reporting channels) along two dimensions that lead to conflicting predictions. First, reporters are more likely to avoid retaliation. This suggests lower personal costs of reporting under an anonymous reporting channel. Personal costs from an anonymous channel may also be lower because the organization will be unable to contact the reporter. Second, individuals who use an anonymous reporting channel may be taken less seriously, in part, because it is impossible for the organization to assess the credibility of the information provider. Individuals may be less likely to use an

anonymous reporting channel if they do not believe an effective response to the wrongdoing will occur. Overall, it is unclear whether individuals will have stronger intentions to use an anonymous reporting channel than a reporting channel requiring the reporter to reveal one's identity.

For the overbilling case, this question asks, "Assume that Garments Inc. has an anonymous telephone hot-line to inform the company of any wrongdoing. Based on the information presented in the case, how likely is it that you would call the anonymous hot-line about Hughes' plan to bill Garments Inc. for \$300,000 of wasted effort?" For the inexperienced personnel case, the last portion of the question reads, "...about Hughes' plan to use less experienced consultants to increase their profits by \$300,000." Subjects responded to a seven-point scale anchored at 1 by "extremely unlikely that I would call the hot-line" and at 7 by "extremely likely that I would call the hot-line."6 This measure is referred to as the anonymous reporting measure.

Measured independent variables

The measures for perceived seriousness, perceived personal cost, and perceived personal responsibility were adopted from Schultz et al. (1993). For the overbilling case, ⁷ subjects responded to each of the following using a seven point scale anchored at 1 by "very low" and at 7 by "very high":

- (1) "Please assess the seriousness (i.e., the amount of harm done) of Hughes' decision to bill for \$300,000 of wasted effort."
- (2) "Please assess the personal costs (i.e., trouble, risk, discomfort) to you of informing Garments Inc. management of Hughes' decision to bill for \$300,000 of wasted effort."
- (3) "Please assess the personal costs (i.e., trouble, risk, discomfort) to you of using an anonymous hot-line to inform Garments Inc. management of Hughes' plan to bill for \$300,000 of wasted effort."
- (4) "Please assess the personal responsibility of a Garments Inc. employee (i.e., duty or obligation) for informing Garments Inc. management of Hughes' decision to bill for \$300,000 of wasted effort."

Note that two questions were used to assess personal costs. The use of these two questions recognizes that personal costs may be lower when using an anonymous hot-line than when reporting directly to management. Presumably, the reporting channel should not influence perceptions of perceived seriousness or perceptions of personal responsibility.

The measures for the moral equity, relativism, and contractualism dimensions are based on the MES (Reidenbach and Robin, 1990). These items are presented in the appendix to this paper. As in previous work using this scale, subjects were told of an action taken by another individual and were provided with ethical judgments. Specifically, subjects were told to imagine that another systems analyst had overheard the conversation and decided NOT to tell anyone about the conversation. The MES contains eight items. The moral equity dimension is composed of four items. The relativism and contractualism dimensions are each composed of two items. A seven point scale was used to assess each item. The mean response among the items within a dimension was calculated and used as the dimension score for each subject.

Subjects

Subjects in the study were graduate business students enrolled in a course on ERP software at Arizona State University. The course is offered exclusively to full time students emphasizing information systems in their masters program. The study was administered towards the end of the course. Subjects from this course were selected because they are expected to begin an information systems career and may confront dilemmas similar to the ones depicted in this study.

Eighty students attending class on the day the study was administered completed the study. The course instructor, who was not involved in the study, administered the study. The questionnaire included an informed consent statement. The statement indicated that participation was voluntary, students could stop at any time, there was no penalty for not completing the questionnaire, and that completion of the questionnaire would represent their consent. Students were also told that their

responses were anonymous. Questionnaires from six of the 80 participants contained incomplete information, and these were dropped from further analysis. Thus, the analysis is based upon the responses from 74 subjects. Mean age and mean months of formal work experience of subjects was 28 years and 31 months, respectively. Fifty-three percent of the subjects were male. The mean response to the self-assessed knowledge of issues and potential problems related to ERP systems implementations was above the midpoint at 4.2 on a seven point scale with 7 anchored as "very high."

Results

Descriptive statistics

Descriptive statistics for the seven independent variables are displayed in Table I Panel A. Regarding the independent variables from the Schultz et al. model (1993), subjects' mean seriousness assessment of 5.4 indicates that they perceived the implementation

problems to be serious. Subjects' mean personal cost assessments of 4.9 for informing management and 2.6 for anonymous reporting indicate that subjects perceived the costs of the former to be moderate and the latter to be relatively low. The results of a within subjects t-test confirms that these means differed significantly (t = 12.40, p < 0.001). Finally, subjects' mean personal responsibility assessment of 5.8 indicates a relatively high level of personal responsibility for reporting the act. Regarding the independent variables from the Reidenbach and Robin (1990) measure, subjects' mean response on the moral equity, relativism, and contractualism dimensions were 5.3, 4.5, and 3.4, respectively. Thus, on average, subjects judged an action not to report more unethically with respect to the moral equity dimension than the other two dimensions.

Panel B of Table I reports descriptive statistics for subjects' responses to the two reporting judgments across both cases. The mean normal reporting response of 5.3 is above the scale mid-point. The mean anonymous reporting response of 5.4 is also above the scale mid-point. A within-subjects *t*-test

TABLE I Descriptive statistics (N = 74)

	M	SD	Range
Panel A: Independent variables			
Seriousness of Hughes' decision	5.4	1.4	2-7
Personal costs of informing management	4.9	1.8	1-7
Personal costs of using anonymous hot-line	2.6	1.6	1–7
Personal responsibility for informing management	5.8	1.5	1–7
Moral equity dimension	5.3	1.3	1–7
Relativism dimension	4.5	1.8	1–7
Contractualism dimension	3.4	1.9	1–7
Panel B: Dependent variables Normal-reporting measure Based on the information presented in the case, how likely is it that you would inform Garments Inc. management that Hughes is planning to bill Garments Inc. for \$300,000 of wasted effort? (to use less experienced consultants to increase their profits by \$300,000?)	5.3	1.7	1–7
Anonymous measure Assume that Garments Inc. has an anonymous Telephone hot-line to inform the company of any Wrongdoing. Based on the information presented in the case, how likely is it that you would call the anonymous hot-line about Hughes' plan to bill Garments Inc. for \$300,000 of wasted effort? (to use less experienced consultants to increase their profit by \$300,000?)	5.4	1.9	1–7

indicates that subjects' intentions across the two reporting channels were not significantly different (t = -0.90, t < 0.37). However, the standard deviations for these measures suggest that on an individual basis, some subjects had more extreme preferences for reporting and not reporting.

Hypothesis testing

General linear models are used for hypothesis testing. Three models were run for each dependent variable. One model included only variables from the Schultz et al. (1993) model as well as a case variable that captured the effect, if any, of the overbilling versus inexperienced personnel manipulation. A second model included only variables from Reidenbach and Robin (1990) along with the same case variable described above. The third model included variables from both Schultz et al. (1993) and Reidenbach and Robin (1990) plus the case variable. Results related to each of the dependent measures are discussed below.

Normal reporting measure

The results for the normal reporting measure are presented in Table II. As shown, each of the three variables are significant in Model 1. The positive coefficients for seriousness and personal responsibility indicate that increases in seriousness and personal responsibility, respectively, are associated with

higher reporting intentions. The negative coefficient for personal costs indicates that increases in personal costs are associated with lower reporting intentions. Under Model 2, only the moral equity dimension is significant. The positive coefficient indicates that increases in the moral equity dimension are associated with higher reporting judgments. Under Model 3, with the exception of the intercept, each of the variables previously found to be significant in Models 1 and 2 remain significant. In addition, Model 3 accounts for the greatest proportion of the variance in the dependent measure ($r^2 = 0.40$). Jointly, this pattern of results suggests that multicollinearity is not a problem. Below, a correlation matrix among independent variables is presented and described to address this issue further.

Anonymous reporting measure

The results for the anonymous reporting measure are presented in Table III. When comparing the results using the normal reporting measure (Table II) to the results in Table III for model one, the only key difference relates to the lack of significance for the personal responsibility dimension when the anonymous measure is used. When performing a similar comparison on model two, the moral equity dimension loses significance as a predictor of reporting intentions when an anonymous reporting channel is used. As expected from the above results, personal responsibility from model one and moral equity from model two are no longer significant in the combined

TABLE II

General linear models to test Hypotheses using the normal reporting measure estimate (and t-values) (N = 74)

	Model 1: Schultz et al.	Model 2: Reidenbach and Robin	Model 3: Combined
Intercept	2.44 (1.87)*	2.16 (2.04)**	1.68 (1.20)
Case	-0.04 (-0.11)	-0.16 (-0.44)	-0.02 (-0.07)
Seriousness	0.26 (2.08)**	_	0.20 (1.62)*
Personal costs	-0.20 (-2.29)**	_	-0.21 (-2.09)**
Personal responsibility	0.47 (3.64)**	_	0.27 (2.01)**
Moral-equity dimension	_	0.65 (3.74)***	0.37 (2.03)**
Relativism dimension	_	0.04 (0.35)	0.06 (0.53)
Contractualism dimension	_	-0.09 (-0.92)	-0.08 (-0.86)
Model F-Value	8.56***	6.91***	6.34***
Model R-square	0.32	0.29	0.40

^{***}p < 0.01, **p < 0.05, *p < 0.10. (all reported probabilities are two-tailed).

TABLE III

General linear models to test Hypotheses using the anonymous reporting measure estimate (and t-values) (N = 74)

	Model 1: Schultz et al.	Model 2: Reidenbach and Robin	Model 3: Combined
Intercept	1.79 (1.21)	3.42 (2.55)**	1.87 (1.12)
Case	0.78 (1.92)*	0.48 (1.07)	0.81 (1.83)*
Seriousness	0.39 (2.43)***	_	0.38 (2.29)**
Personal costs	-0.25 (-1.82)**	_	-0.25 (-1.72)**
Personal responsibility	0.17 (1.15)	_	0.13 (0.80)
Moral-equity dimension	_	0.34 (1.54)	0.07 (0.29)
Relativism dimension	_	-0.05 (-0.33)	-0.01 (-0.03)
Contractualism dimension	_	-0.07 (-0.58)	-0.05 (-0.44)
Model F value	4.91***	1.12	2.47**
Model R-square	0.20	0.06	0.21

^{***}p < 0.01, **p < 0.05, *p < 0.10. (all reported probabilities are two-tailed).

model. It is also important to note that, in comparison to the normal reporting model, substantially less variance is being explained by each of these models and that Model 2 is not statistically significant.

Table III also shows a marginally significant effect for case. This indicates that anonymous reporting intentions were marginally associated with the case. Means reporting judgments were 5.27 (2.07 SD) and 5.74 (1.69 SD) for the overbilling and inexperienced personnel case, respectively.

Correlation matrix

Table IV presents the pearson product-moment correlations among the seven independent variables. This matrix is useful in evaluating the extent to which the variables within each model are related to

one another as well as the extent to which the variables between each model are overlapping with one another. As shown, several of the correlations are significant. Within the Schultz et al. (1993) model, seriousness is significantly associated with personal costs - anonymous and personal responsibility. Previously, Kaplan and Whitecotton (2001) reported a significant and even stronger association between seriousness and personal responsibility. Within the Reidenbach and Robin (1990) model, the correlation between the moral-equity dimension and the relativism dimension was 0.60 (e.g., shared variance equals 36%), which might account, in part, for the lack of significance for relativism in the two reporting models. Regarding the correlations involving a variable from each of the two models

TABLE IV

Pearson product—moment correlations among independent variables (and significance levels) (N = 74)

	1	2	3	4	5	6	7
Variables							
Seriousness (1)	1.00						
Personal costs – reporting (2)	-0.08(0.46)	1.00					
Personal costs – anonymous (3)	-0.29(0.02)	0.49 (0.01)	1.00				
Personal responsibility (4)	0.23(0.04)	-0.12(0.29)	0.14 (0.22)	1.00			
Moral-equity dimension (5)	0.29(0.02)	-0.20 (0.09)	-0.16 (0.18)	0.50 (0.01)	1.00		
Relativism dimension (6)	0.17(0.14)	-0.07(0.56)	-0.01 (0.98)	0.32 (0.01)	0.60 (0.01)	1.00	
Contractualism dimension (7)	-0.01(0.94)	-0.03(0.80)	0.04 (0.74)	-0.13(0.27)	-0.09 (0.43)	0.17 (0.14)	1.00

(all reported probabilities are two-tailed).

only the correlation between personal responsibility and the moral equity dimension was significant, with the shared variance equal to 25%.

Supplemental analysis

As discussed above, two cases were used in the study. In the above analysis, data for both cases was pooled and case was included as a dummy variable in the models. Additional analysis was conducted to further explore the role of case in the study. First, a series of tests were conducted to determine whether any of the six independent measures used in the hypothesis testing varied across cases. The only significant (p < 0.05) difference found was with respect to seriousness assessments. The overbilling case was judged to be more serious (M = 5.87, S.D. = 1.31) than the inexperienced personnel case (M = 5.18, S.D. = 1.43).

Next, the models were separately run for each case. The results for the normal reporting channel are presented in Table V. The coefficients for the independent variables across the three models are generally qualitatively similar to those shown for the pooled data (see Table II). Further, the explanatory

power of the overall model for the inexperience case was uniformly higher than found with the overbilling case. This finding that the explanatory power of the overall model varies across situations is consistent with previous work examining the multidimensional ethics scale (Cohen et al., 1996; Flory et al., 1992).

The results for the anonymous reporting channel are presented in Table VI. The coefficients for the independent variables across Model 1 are qualitatively similar to those shown for the pooled data (see Table II). However, in Models 2 and 3, the signs for the relativism dimension changed across the cases. While neither coefficient for the relativism dimension was significant in Model 2, the coefficient for relativism was marginally significant under the inexperienced case for Model 3. In comparison, relativism was not significant for the pooled data (see Table II). Also, in Model 3, the coefficient for personal responsibility under the inexperience case has the opposite sign found in the pooled data (see Table II) and is marginally significant. However, in the pooled data, personal responsibility was not significant. Similar to the normal reporting results, the explanatory power of the overall model for the inexperience case was uniformly higher than found with overbilling case.

TABLE V General linear models using the normal reporting measure: results for overbilling (billing) case (N = 40) and inexperienced personnel (inexperience) case (N = 34) estimate (and t-values)

Case	Model 1: Schultz et al.		Model 2: Reidenbach and Robin		Model 3: Combined	
	Billing	Inexperience	Billing	Inexperience	Billing	Inexperience
Intercept	1.83 (1.63)	2.21 (1.58)	3.22 (2.52)**	0.03 (0.03)	2.35 (1.19)	0.56 (0.40)
Seriousness	0.31 (1.58)	0.24 (1.37)	_	_	0.31 (1.56)	0.22 (1.35)
Personal costs	-0.26 (-1.71)*	-0.16 (-1.33)	_	_	-0.35 (-2.08)**	-0.14 (-1.20)
Personal responsibility	0.52 (3.26)***	0.43 (2.21)**	_	_	0.34 (1.88)*	-0.18 (-0.77)
Moral-equity dimension	_	_	0.53 (2.02)	0.85 (4.15)***	0.31 (1.21)	0.76 (2.87)***
Relativism dimension	-	_	-0.06 (-0.30)	0.15 (1.09)	-0.04 (-0.22)	0.24 (1.58)
Contractualism dimension	-	_	-0.11 (-0.81)	-0.01 (-0.05)	-0.15 (-1.08)	0.06 (0.48)
Model F-Value	5.05***	6.40***	2.07	12.72***	2.90**	7.01***
Model R-square	0.29	0.36	0.14	0.56	0.34	0.61

^{***}p < 0.01, **p < 0.05, *p < 0.10.

⁽all reported probabilities are two-tailed).

TABLE VI General linear models using the anonymous reporting measure: results for overbilling (billing) case (N = 40) and inexperienced personnel (inexperience) case (N = 34) estimate (and t-values)

Case	Model 1: Schu	Model 1: Schultz et al.		Model 2: Reidenbach and Robin		Model 3: Combined	
	Billing	Inexperience	Billing	Inexperience	Billing	Inexperience	
Intercept	3.11 (1.57)	2.83 (1.95)*	5.14 (3.30)***	2.85 (2.02)*	3.67 (1.56)	2.87 (1.89)*	
Seriousness	0.29 (1.20)	0.57 (2.81)	_	_	0.32 (1.23)	0.58 (2.99)***	
Personal costs	-0.28 (-1.27)	-0.17 (-1.09)	_	_	-0.32 (-1.33)	-0.29 (-1.77)*	
Personal responsibility	0.19 (0.94)	0.06 (0.35)	-	_	0.18 (0.76)*	-0.46 (-1.72)*	
Moral-equity dimension	_	_	0.31 (0.98)	0.43 (1.53)***	0.21 (0.61)	0.17 (0.59)	
Relativism dimension	_	_	-0.31 (-1.25)	0.21 (1.11)	-0.31 (-1.24)	0.48 (2.63)**	
Contractualism dimension	_	_	-0.04 (-0.21)	-0.07 (-0.46)	-0.07 (-0.41)	0.12 (0.82)	
Model F-Value	1.28	7.21***	0.07	3.34**	0.89	5.51***	
Model R-squar	e 0.09	0.39	0.04	0.25	0.14	0.55	

^{***}p < 0.01, **p < 0.05, *p < 0.10. (all reported probabilities are two-tailed).

Discussion

The purpose of the current study was to provide initial evidence about reporting intentions related to the wrongdoing by outside consultants. Increasingly, outside consultants are performing many of the tasks historically performed by organizational employees. Additionally, organizations frequently rely upon consulting firms to support non-routine projects such as the design and installation of information technology projects. However, perhaps guided by specific, and in light of current business practices, narrow definitions (Near and Miceli, 1985) in terms of organizational personnel, whistleblowing researchers have not explored issues related to the wrongdoing by outside employees who work within an organization such as consultants. To the extent that organizational members learn about the wrongdoing of outside consultants and are willing to report it, organizations will be in a position to respond.

Our focus on wrongdoing by outside employees is consistent with research that recognizes that the type of wrongdoing is likely to play a role in one's perceptions of the wrongdoing (Robinson and Bennett, 1995) and consequently, the whistleblowing process (Near et al., 2004). However, our study may be contrasted with prior research because outside

employees, while often in a position to engage in wrongdoing against a nonemploying organization, do not have a direct employment relationship with the organization being harmed. Our study focused on one kind of outside employee, information system consultants. However, under current business practices other kinds of relationships also exist where outside employees have the ability to harm an organization they are performing services for. We encourage further research to examine these other forms of relationships. For example, in our study, while information consultants may have an association with an organization spanning months or possible a year or two, it is likely to be a non-recurring association. In certain alliances involving outside employees, such as outsourcing employees, the associations are likely to be ongoing. In such settings, whether wrongdoing by such outside employees is treated differently than by an employee is an interesting issue for further research.

The study also contributes to the whistleblowing literature by comparing two models of reporting intentions. While both the Schultz et al. model (1993) and the multidimensional ethics model (Reidenbach and Robin, 1990) have been applied to examine ethical decision making, previous research has not compared the two models. Further, the current study examines two different reporting

channels. Increasingly organizations are creating anonymous reporting channels to supplement normal reporting channels in which the reporter's identity is known. While the intent of creating anonymous channels is to elevate reporting intentions, systematic evidence about the role of reporting channel on reporting intention is scant.

The current study is embedded within a setting where an organization has hired a consulting firm to implement an IT project. We chose this setting based on prior research demonstrating that under certain circumstances (i.e., when organizational members are unaware of implementation problems), outside consultants are likely to implement these problematic IT projects (Tuttle et al., 1997a, b). Thus, we believe our setting is realistic and representative of a host of settings where non-employees have the opportunity to engage in wrongdoing.

Before discussing the implications of the results, several limitations should be kept in mind. First, participants in the study were graduate students enrolled in an ERP course. Thus, it is possible that the responses from IT professionals may differ from graduate students. However, most of the students had substantial work experience. Further research is encouraged to assess the extent to which the reporting judgments of IT professionals vary from systems graduate students.

Second, subjects responded to a hypothetical situation and not an actual incident of wrongdoing. While the experimental approach used in this study has certain shortcomings, Miceli and Near (1984) advocate the use of an experimental approach to complement archival and survey approaches to study the reporting of wrongdoing. Previous research studies by Schultz et al. (1993) and Kaplan and Whitecotton (2001) have used experimental methods to examine reporting intentions. An experimental approach was particularly useful for the current study where more than one model was being examined. Further, an experimental approach allowed for greater control over competing explanations, thus enhancing internal validity.

Related to the second limitation, the sterility of a hypothetical situation causes the whistleblowing setting to become one that is driven primarily by thought. Emotions such as fear, anger, or revenge that may exist in a real setting are muted as consequences do not truly exist for the participants in the

study. As a result, it is important that future research supplement laboratory studies with case studies and survey based research where the full range of reactions, including emotion, may play out and be better captured in the whistleblowing setting.

Turning to a discussion of the results, with regards to the Schultz et al. (1993) model, the current findings indicate that perceptions of seriousness and personal costs are significantly associated with reporting intentions across both reporting channels (e.g., normal and anonymous). These results suggest that individuals consider both the seriousness of the wrongdoing and the personal costs of reporting regardless of the reporting channel. These findings are generally consistent with prior whistleblowing research (Gundlach et al., 2003). However, personal responsibility perceptions were significantly associated with reporting intentions under the normal channel but not with the anonymous channel. These findings suggest that non-anonymous reporting intentions are influenced by a broader set of factors than influencing the formation of anonymous reporting intentions.

Regarding the multidimensional ethics model, neither the relativism nor the contractualism dimension appeared to influence reporting intentions under either reporting channel. The moral equity dimension was found to be significantly associated with the normal reporting channel, but not with the anonymous reporting channel. Generally, these results provide less support for the model with respect to the reporting of wrongdoing of others than has previously been found in the contexts of individuals' intentions to personally engage in questionable behavior (Cohen et al., 1996; Flory et al., 1992; Reidenbach and Robin, 1990; Tuttle et al., 1997b).

A strong, positive correlation (r = 0.50) between personal responsibility in the Schultz et al. (1993) model and the moral equity dimension in the Reidenbach and Robin (1990) model suggests that personal responsibility has a large moral component. This suggestion is indeed implied in Schultz et al.'s (1993) description of this dimension. Interestingly, neither variable (i.e., personal responsibility and moral equity) remains significantly associated when an anonymous reporting channel is used rather than a non-anonymous reporting channel. Overall, these provide further corroboration findings anonymous reporting intentions are primarily based on cost-benefit considerations.

The results from the combined models demonstrate that the significant variables in each of the underlying models continue to be significant in the combined models. Even though substantial correlation exists among independent variables, any related multicollinearity did not result in the loss of significance for any independent variable that had been significant in the underlying model. Further, with respect to the normal reporting channel, the explained variance from the combined model increased by 8% points and 11% points from Models 1 and 2, respectively. This suggests that with respect to normal reporting, the combined model represents a more complete picture of factors influencing judgments.

Finally, it is important to note that the mean reporting intentions across the two reporting channels were roughly equivalent. On the one hand, this might seem unexpected since anonymous reporting channels are intended to lower the potential costs to individuals from reporting the questionable behavior of others. However, it is important to recall that Miceli and Near (1995) and Near et al. (2004) suggest two dimensions along which individuals are likely to distinguish anonymous from non-anonymous reporting channels.

As discussed above, and as shown in Table I, one dimension relates to perceived personal costs. As expected, our study found perceived personal costs to be significantly lower for the anonymous reporting channel. The second dimension relates to the perceived effectiveness of the reporting channel. Miceli and Near (1995) contend that individuals will generally perceive an anonymous reporting channel to be less effective than a normal reporting channel. Our study, guided by the two models under consideration, did not obtain individuals' assessment of the effectiveness of each reporting channel. To the extent the Miceli and Near's (1995) contention is correct regarding individuals' perceptions of the relative effectiveness of each reporting channel, our results appear to reflect that any gains in reporting likelihood due to lower perceived personal costs associated with anonymous channels are offset by losses due to the lower perceived effectiveness of those channels. We encourage further research to explore the role of effectiveness perceptions on reporting intentions more directly.

Finally, in order to further clarify the ways in which reporting intentions might differ when con-

sultants rather than employees are the perpetrators of wrongdoing, it would be helpful to perform research that investigates employees' reporting intentions when the perpetrator is manipulated as either consultant (i.e., outside employee) or employee. Issues such as personal responsibility and personal costs would most likely vary across the two perpetrator groups as might judgments along one or more ethical dimensions. Presumably, differences among these antecedent variables, if found, also would be expected to influence reporting intentions.

Notes

- ¹ For example, the mostly widely used definition, by Near and Miceli (1985, p. 4), defines whistleblowing "to be the disclosure by organization members (former or current) of illegal, immoral, or illegitimate practices under the control of the their employers, to persons or organizations that may be able to effect action." This definition has been adopted by numerous whistleblowing studies (Keenan, 2002; King, 1997; Miceli and Near, 1994, 1997; Miceli et al., 1999; Near et al., 2004).
- ² With respect to IT consulting projects, a variety of services may be offered from the initial development and design of strategic information needs, to the selection and implementation of specific information technologies and associated training and maintenance.
- ³ An offer of employment from a client is believed to create a conflict of interests to an auditor. Consequently, once an auditor receives an offer of employment from a client, professional standards require the auditor to discontinue the audit until the client employment issue has been resolved. In the study, in violation of professional standards, the supervisor who received the employment offer continued to work on the audit.
- ⁴ In most ERP implementations, it is common for the actual implementation work to be performed by a combination of outside consultants working along with internal employees. This approach is assumed in this study as well.
- ⁵ The target of the reporting intention, internal management, was held constant across both case versions. Somers and Casal (1994) found that internal reporting targets maximize the likelihood of reporting intentions.
- ⁶ For each of the two dependent measures that were asked in the first-person, a parallel question in the third person was also asked. The results from each of the third-person measures are qualitatively similar to the first person measures, so are not presented.
- ⁷ The questions were appropriately modified for the inexperienced personnel case.

Appendix A Multi-dimensional Ethics Scale

Moral equity dimension		
Just	-:-:-:-:-:-	Unjust
Fair	-:-:-:-:-	Unfair
Morally right	-:-:-:-:-	Not Morally Right
Acceptable to my family	-:-:-:-:-	Unacceptable to my family
Relativism dimension		
Culturally acceptable	-:-:-:-:-:-	Culturally unacceptable
Traditionally acceptable	-:-:-:-:-:-	Traditionally unacceptable
Contractualism dimension		
Violates an unspoken promise	-:-:-:-:-:-	Does not violate an unspoken promise
Violates an unwritten contract	-:-:-:-:-:-	Does not violate an unwritten contract

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