

The Effect of Moral Intensity on Ethical Judgment

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ABSTRACT. Following an extensive review of the moral intensity literature, this article reports the findings of two studies (one between-subjects, the other within-subject) that examined the effect of manipulated and perceived moral intensity on ethical judgment. In the between-subjects study participants judged actions taken in manipulated high moral intensity scenarios to be more unethical than the same actions taken in manipulated low moral intensity scenarios. Findings were mixed for the effect of perceived moral intensity. Both probable magnitude of consequences (a factor consisting of magnitude of consequences, probability of effect, and temporal immediacy) and social consensus had a significant effect; proximity did not. In the within-subject study manipulated moral intensity had a significant effect on ethical judgment, but perceived moral intensity did not. Regression of ethical judgment on age, gender, major, and the three perceived moral intensity factors was significant between-subjects, but not within-subject. Ethical judgment was found to be a more robust predictor of intention than perceived moral intensity using a within-subject design.

KEY WORDS: ethical decision making, ethical judgment, moral intensity

The costs associated with unethical behavior in a business context are great. For example, the loss of credibility in the Olympic movement due to the 2002 Salt Lake City bribery scandal put millions of dollars in corporate sponsorships of the games at risk, with Johnson & Johnson backing away from an estimated \$30 million sponsorship (Wolfson, 1999). In 1997 alone a conservative estimate puts the loss of intellectual property stolen from U.S. corporations in acts of corporate espionage at \$25 billion (Eisenberg, 1999). MCI's bankruptcy following the accusation that it falsified balance sheets to inflate earnings and hide expenses resulted in a loss of close to \$200 billion in shareholder wealth (Ho, 2003). Enron's bankruptcy following its credit collapse after the exposure of accounting practices that used off-balance-sheet partnerships to take on the company's debt cost many employees their life savings (Gullo, 2002). Even more tragically, the Ford Explorer/Firestone Tire debacle demonstrated that unethical behavior is not only costly in terms of lost dollars, but can be devastating in terms of shattered and lost lives.

So, how can business, and society, prevent the costly consequences of unethical behavior? In order to prevent the negative consequences we must, necessarily, prevent the unethical behavior. In order to prevent unethical behavior, we must first understand how it is caused.

The "Bad Apples" versus "Bad Barrel" debate

That precise question, "what are the determinants of ethical/unethical behavior?", is at the heart of a continuing debate among researchers who study

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business ethics. A major focus of the debate has centered on the “bad apples versus bad barrel” (Treviño and Youngblood, 1990) issue. That is, is ethical/unethical behavior a direct result of personal characteristics of the individual decision maker, an “undersocialized perspective of individuals acting in isolation” (Brass et al., 1998, p. 14)? Or, rather, is ethical/unethical behavior more heavily dependent upon organizational and societal variables, an “oversocialized view of individuals obedient to norms and culture” (p. 14)?

Many ethical decision making models have been developed over the years to illustrate the ethical decision making process and the personal and situational characteristics involved (Dubinsky and Loken, 1989; Ferrell and Gresham, 1985; Hunt and Vitell, 1986; Rest, 1986; Treviño, 1986). It is important to note that these ethical decision making models are not normative models of what one *ought to do* when faced with an ethical dilemma but are, rather, models of what the authors believe one *does* when faced with an ethical dilemma. As such they are *descriptive* rather than *prescriptive* (Treviño and Nelson, 2004).

Characteristics of the individual that have been posited as influences in the ethical decision making process in both models and past research include: cognitive moral development (Ferrell et al., 1989; Treviño, 1986; Treviño and Youngblood, 1990), economic, political, and religious value orientation (Hegarty and Sims, 1978, 1979), ego strength (Stead et al., 1990; Treviño), ethical philosophy (Stead et al., 1990), gender (Hegarty and Sims, 1978), locus of control (Hegarty and Sims, 1978, 1979; Jones and Kavanagh, 1996; Stead et al., 1990; Treviño, 1986; Treviño and Youngblood, 1990), Machiavellianism (Hegarty and Sims, 1978, 1979; Jones and Kavanagh, 1996; Stead et al.), nationality (Hegarty and Sims, 1978, 1979), and sex role orientation (Stead et al., 1990).

Proposed organizational, cultural, or situational influences include: competition (Hegarty and Sims, 1978), economic conditions (Stead et al., 1990), managerial influences (Jones and Kavanagh, 1996; Stead et al., 1990), organizational philosophy and policy (Hegarty and Sims, 1979), peer influences (Jones and Kavanagh, 1996), quality of the work experience (Jones and Kavanagh, 1996), referent others (Treviño, 1986), reinforcement contingencies (Hegarty and Sims, 1978; Jansen and Von Glinow,

1985; Stead et al., 1990; Treviño, 1986), relationships among actors (Brass et al., 1998), responsibility for consequences (Treviño, 1986), scarcity of resources (Stead et al., 1990), and stakeholders (Hunt and Vitell, 1986; Stead et al., 1990).

Characteristics of the ethical issue

In 1991, Thomas Jones noted that many of the ethical decision making models to date (Dubinsky and Loken, 1989; Ferrell and Gresham, 1985; Hunt and Vitell, 1986; Rest, 1986; Treviño, 1986) included a variety of the individual and situational characteristics noted earlier, but none included characteristics of the actual ethical issue itself. Without considering the influence of the characteristics of the ethical issue on the ethical decision making process, Jones noted, the models suggest that the process follows the same course for a dilemma involving the theft of a few supplies from the organization as it does for a dilemma involving the release of a dangerous product to market. Using Rest’s (1986) parsimonious four component model as a foundation, Jones developed a model of ethical decision making that went beyond the models that focused on personal and situational characteristics by including a new construct that he labeled *moral intensity*, which consists of six characteristics of the moral issue.

According to Rest (1986), the ethical decision making process is initiated with the first component, *awareness*. In this stage the agent recognizes that a situation presents a dilemma that is ethical in nature. That is, harm is a potential consequence of the behavior of the moral agent. In this stage “a person realizes that she/he could do something that would affect the interests, welfare, or expectations of other people” (p. 5). In the second, *judgment*, stage, the agent evaluates various courses of action to determine which are morally right and which are morally wrong. In the third stage, *intention*, the agent selects a course of action to take. And in the final *behavior* stage, the agent engages in ethical or unethical action.

Jones’ (1991) model suggests that moral intensity has a direct effect on each of the four components found in Rest’s model (awareness, judgment, intention, and behavior), while organizational factors have a direct effect on intention and behavior. Jones’

synthesis model attempts to integrate his issue-contingent model with the decision making models of Ferrell and Gresham (1985), Hunt and Vitell (1986), Rest (1986), Treviño (1986), and Dubinsky and Loken (1989).

Moral intensity

Moral intensity refers to characteristics of the ethical issue that compel the decision maker to employ ethical reasoning (Jones, 1991). Jones posits that the construct consists of six components: magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect.

Magnitude of consequences refers to the total amount of harm (benefit) that results from the proposed act, such that moral intensity increases as the amount of harm increases. *Social consensus* refers to the extent of social agreement regarding the ethicality of the act in question, such that the greater the agreement that an act is wrong, the greater the moral intensity. *Probability of effect* refers to both the likelihood that the act will actually take place, and the likelihood that the act will, in fact, cause harm (benefit), such that the greater the likelihood of the act taking place and causing harm, the greater the moral intensity. *Temporal immediacy* refers to the time differential between the act and the onset of consequences, such that the shorter the length of time between the act and the resultant consequences, the greater the moral intensity. *Proximity* refers to the cultural, physical, psychological, and/or social closeness of the moral agent to the victim (beneficiary), such that moral intensity increases as closeness increases. *Concentration of effect* is a twofold concept that refers to the impact of a given amount of harm (benefit) relative to the number of people affected. For example, an act that causes \$100,000 in harm that affects 100 people, so that each incurs \$1,000 of damage, is of greater moral intensity than an act that causes the same \$100,000 in harm, but instead affects 100,000 people, so that each incurs \$1 of damage. In addition, an act that causes harm to an individual is of greater moral intensity than an act that causes harm to a corporation (Jones, 1991).

The purpose of the current research was to examine the effect of Jones' (1991) six moral

intensity characteristics on ethical judgment, the second stage in Rest's (1986) ethical decision making model.

Past research

Most of the past research on the effect of moral intensity on ethical judgment uses the scenario-based approach in which participants read a scenario and indicate their judgment of the ethicality of the action taken in the scenario. However, the designs of these studies differ in a variety of aspects: the number of moral intensity characteristics examined, the number of scenarios employed, whether or not moral intensity was manipulated in the scenario, whether or not perceived moral intensity was measured (and if so, how), the number of items used to measure ethical judgment, and the use of a between-subject or within-subject design.

Jones and Huber (1992) conducted the first empirical study of the effect of moral intensity characteristics on ethical judgment. One scenario was used in which five of the six characteristics were manipulated (magnitude of consequences, social consensus, temporal immediacy, proximity, and concentration of effect). Ethical judgment of the action taken in the scenario was measured with four items. The study found social consensus to be the only significant predictor.

In 1994, Decker used one scenario to manipulate concentration of effect, which was found to have a significant effect on ethical judgment, as measured by seven items.

Morris and McDonald (1995) used three scenarios, all six moral intensity characteristics were manipulated (two per scenario), and one item was used to measure ethical judgment. Perceived moral intensity, measured by one item for each characteristic, was the predictor variable. An important contribution of this study to the literature was the finding that manipulated moral intensity often differed from perceived moral intensity. Although perceived moral intensity was a significant predictor of ethical judgment when the six characteristics were entered together in hierarchical regression, only social consensus was significant as an individual predictor in all three scenarios. In this study, the authors subdivided magnitude of consequences into

magnitude of benefits and magnitude of costs. Magnitude of benefits was significant in two of the three scenarios, while magnitude of costs was significant in only one. Probability of effect, temporal immediacy, and proximity were significant in only one of the three scenarios. Concentration of effect was not significant in any of the three.

Singer (1996, 1998) and colleagues (Singer et al., 1998; Singer and Singer, 1997) conducted a series of studies examining moral intensity and ethical judgment. Except where noted, in all of the studies three scenarios were used, judgment was measured using two items, and perceived moral intensity was measured by two items each for magnitude of consequences, social consensus, and temporal immediacy, and four items for probability of effect (two for probability of action, two for probability of harm). All of the studies were conducted in New Zealand. In 1996 two samples were used, one a group of managers, the other from the general public. Magnitude of consequences, social consensus, and probability of effect all predicted ethical judgment (temporal immediacy was not measured). Social consensus was found to be the most impactful characteristic for managers, while the most impactful characteristic for the general public was magnitude of consequences. The 1997 study used a sample of undergraduates, and found that magnitude of consequences and social consensus predicted ethical judgment, and probability of effect predicted ethical judgment in the two scenarios in which the consequences were beneficial to the decision maker. Temporal immediacy was not significant. Using a sample from the general public, Singer's 1998 study found that only social consensus had a significant effect on ethical judgment (temporal immediacy was not measured). Singer et al. (1998) conducted two studies. The first used a sample of employees at a baking firm, and found significant effects for magnitude of consequences, social consensus, and probability of effect, but not for temporal immediacy. The second used four scenarios and a sample of undergraduates, and also found significant effects for magnitude of consequences, social consensus, and probability of effect, but not for temporal immediacy. In addition, "need-for-cognition" was measured, and it was found that individuals who were more highly motivated to use effortful cognitive processing exhibited greater utilization of issue-rel-

evant information than those who were less motivated.

Davis et al. (1998) used four scenarios that manipulated magnitude of consequences, social consensus, and proximity. One item was used to measure ethical judgment. Participants were MBA students from Austria, Indonesia, and the United States. Social consensus had a significant effect on ethical judgment while magnitude of consequences and proximity did not. Judgment was also affected by participants' socio-cultural region of origin and by ethical ideology.

Rather than using scenarios, Barnett (2001) used two statements regarding work-related actions, "An employee uses company property and services for personal use" and "A salesperson sells a more expensive product to a customer when a less expensive one would be better for the customer" (p. 1043). Perceptions of four moral intensity characteristics (magnitude of consequences, social consensus, temporal immediacy, and proximity) were assessed for each of the statements using a 9-point semantic differential scale that included three items for each characteristic. The 8-item Multidimensional Ethics Scale (MES) (Reidenbach and Robin, 1988, 1990) was used to measure ethical judgment. Using hierarchical multiple regression, a single score for ethical judgment was regressed on awareness in the first step, and perception of the moral intensity characteristics was entered in the second step. Perceived moral intensity resulted in a significant change in R^2 for both work-place action statements. Magnitude of consequences, social consensus, and proximity were significant predictors of ethical judgment for the first statement, while only magnitude of consequences and social consensus were significant predictors of ethical judgment for the second statement. Temporal immediacy was not a significant predictor of ethical judgment for either statement.

Tsalikis et al. (2001) used two scenarios to measure the effect of magnitude of consequences on ethical judgment, as measured by one item. Magnitude of consequences was found to have a significant effect on ethical judgment.

Frey (2000a, b) used one scenario that manipulated all six moral intensity characteristics. These studies differ from all of the previous studies in that Frey used a within-subject design (the others used a

between-subject design). Participants were first presented with a version of the scenario in which all six characteristics were low in moral intensity. Ethical judgment of the scenario was measured with one item. Participants then read a second version of the scenario in which one or more of the characteristics were changed to high moral intensity. Ethical judgment of this scenario was measured. The dependent variable was the difference score for the ethical judgment item. In the first study, magnitude of consequences, social consensus, and probability of effect accounted for 63% of the variance in the difference score. In the second study (conducted on the worldwide web), magnitude of consequences, social consensus, and probability of effect, accounted for 54% of the variance in the difference score. However, in neither study did any of the six individual moral intensity characteristics have a significant effect on the difference score.

An overview of the studies just discussed shows that social consensus seems to be the most robust of the six moral intensity characteristics, having a significant effect in nine out of the 11 studies in which it was examined (Barnett, 2001; Davis et al., 1998; Jones and Huber, 1992; Morris and McDonald, 1995; Singer, 1996, 1998; Singer et al., 1998, Experiments 1 and 2; Singer and Singer, 1997). In 12 studies magnitude of consequences had a significant effect in six (Barnett, 2001; Singer, 1996; Singer et al., 1998; Singer and Singer, 1997; Tsalikis et al., 2001) and showed some significance in one (significance varied by scenario) (Morris and McDonald, 1995). In eight studies probability of effect had a significant effect in three (Singer, 1996; Singer et al., 1998) and showed some significance in two (significance varied by scenario) (Morris and McDonald, 1995; Singer and Singer, 1997). Temporal immediacy was not significant in seven studies, but did show some significance in one study (significance varied by scenario) (Morris and McDonald). Proximity was not significant in four studies, but did show some significance in two studies (significance varied by scenario) (Barnett, Morris and McDonald). Concentration of effect was significant in one out of five studies (Decker, 1994). Examining these studies in summary, however, fails to account for methodological differences in the studies which themselves might account for some of the discrepant findings.

Concerns associated with methodology of past research

As noted earlier, several methodological differences existed in the cited studies that examined the effect of moral intensity on ethical judgment, and it is these differences that may have contributed to the mixed findings. One of the goals of the current research was to identify troublesome methodological issues and improve upon them.

The first issue has to do with the number of moral intensity characteristics studied. Only three of the 13 cited studies (Singer et al., 1998 includes two studies) included all six (Frey, 2000a, b; Morris and McDonald, 1995), providing a richer analysis of the construct than the studies that did not. The current research examined all six moral intensity characteristics.

A second issue has to do with the number of scenarios utilized to elicit ethical judgment. In four of the cited studies only one scenario was used (Decker, 1994; Frey, 2000a, b; Jones and Huber, 1992), in two studies two were used (Barnett, 2001; Tsalikis et al., 2001), in five studies three were used (Morris and McDonald, 1995; Singer, 1996, 1998; Singer et al., 1998, Experiment 1; Singer and Singer, 1997) and in two studies four were used (Davis et al., 1998; Singer et al., 1998, Experiment 2). The multiple scenario studies demonstrated that the effect of a moral intensity characteristic on ethical judgment may vary depending upon the scenario used. The current research used 18 different scenarios, with three scenarios manipulating each of the six moral intensity characteristics.

A third issue has to do with operationalizing the moral intensity construct. Most of the studies cited manipulated moral intensity, the independent variable, by changing the wording of a scenario to create a high or low moral intensity version. However, as noted, Morris and McDonald (1995) found that perceived moral intensity, measured by items designed to tap the six moral intensity characteristics posited by Jones (1991), often differed from manipulated moral intensity. The current research operationalized moral intensity by both manipulating the intensity of a scenario and by measuring participants' perception of moral intensity in the scenario, using two items to measure each moral intensity characteristic.

A fourth issue has to do with measuring ethical judgment, the dependent variable. Of the studies cited, five used a single item (Davis et al., 1998; Frey, 2000a, b; Morris and McDonald, 1995; Tsalikis et al., 2001), five used two items (Singer, 1996, 1998; Singer et al., 1998, Experiments 1 and 2; Singer and Singer, 1997), one used four items (Jones and Huber, 1992), and one used seven items (Decker, 1994), although the face validity of those seven items was questionable (e.g., one question asked how attractive the decision maker's personality was to the participant). Single item measures are suspect due to reliability issues, and the multiple items that were used above were not subjected to the rigors of test development. Only Barnett (2001) used a tested multi-item measure of ethical judgment, the 8-item MES developed by Reidenbach and Robin (1988, 1990). In order to avoid the one-item issue, the current research also used the Multi-dimensional Ethics Scale.

A final concern has to do with the design used to test the effect of moral intensity on ethical judgment; in particular, we were interested in whether moral intensity has the same impact on ethical judgment in a between-subjects design as it does in a within-subject design. A closer look at this issue is warranted.

Within-subject versus between-subjects design

To date, the large majority of studies that examine the effect of moral intensity on ethical judgment used a between-subjects design (e.g., Barnett, 2001; Davis et al., 1998; Decker, 1994; Jones and Huber, 1992; Morris and McDonald, 1995; Singer, 1996, 1998; Singer et al., 1998; Singer and Singer, 1997; Tsalikis et al., 2001), whereas only two studies (Frey, 2000a, b) used a within-subject design.

A recent focus in the marketing literature has been on the effects of elicitation procedures on judgment, and the preference shifts that have been found to occur between *joint evaluation* and *separate evaluation* (Bazerman et al., 1992, 1999; Hsee et al., 1999; Nowlis and Simonson, 1997; Ritov, 2000). Joint evaluation is a within-subject phenomenon that occurs when two options are evaluated simultaneously, whereas separate evaluation occurs

when options are presented and evaluated at different times, as in a between-subjects design. Bazerman et al. (1999) suggest that preference shifts are due to differences in cognitive processing that occur in separate versus joint evaluation (p. 56). Two psychological concepts that have been shown to effect cognitive processing are *contextual effects* and *salience*.

Birnbaum (1982) emphasized the importance of contextual effects in judgment research by observing that "there are two kinds of contexts: the context the subject brings to the laboratory and the context provided in the laboratory. ... when a subject is given a single stimulus to judge, the subject brings extralaboratory contexts to the task" (p. 441). To illustrate this point, Birnbaum cited a study by Jones and Aronson (1973) in which participants were asked to judge the fault of rape victims (a virgin, a housewife, and a divorcee). Using a between-subjects design, participants were presented with only one case history. Counter-intuitively, findings showed that the divorcee was judged *least* at fault, whereas the virgin and housewife were judged *more* at fault. However, when Birnbaum (1980, unpublished manuscript) replicated this study using a within-subject design in which participants were presented with the case history of all three rape victims (virgin, housewife, and divorcee), judged fault decreased as victim respectability increased.

Birnbaum (1982) suggests that in between-subjects designs, the researcher is unable to control for the referent a participant uses in making a judgment:

One can understand the finding that results change for between-vs. within-subject designs... by realizing that *in the between-subjects design, the stimulus and the context are completely confounded*. It is like the old stand-up joke: Person 1. "How's your wife?" Person 2. "Compared to what?" (p. 444)

In the Jones and Aronson (1973) between-subjects study, it is likely that virgins were compared to virgins, housewives to housewives, and divorcees to divorcees. Therefore, Birnbaum claims, a raped virgin was "rated *less* innocent (more at fault) because *relative to the distribution of virgins*, a raped virgin is less innocent than a divorcee is *relative to the distribution of divorcees*" (p. 444).

Birnbaum's (1982) observations are supported by *norm theory* (Kahneman and Miller, 1986). Norm theory suggests that when individuals are faced with the task of evaluating a single item, they evoke internal referents and evaluate the item based on those referents. However, when individuals are faced with the task of evaluating more than one item, the alternative becomes the referent for comparison (Bazerman et al., 1999, p. 48). "The presence of a second alternative frames and anchors the entire decision process; the decision maker simply enacts it. 'Which do I like better—A or B?'" (p. 54). Hsee (1998) concurs, by observing that:

Preferences are neither consistent nor stable; they are constructed ad hoc and depend heavily on whatever comparison information is available at the time of the evaluation. Specifically, people use different information as their reference points in the joint evaluation mode than in the separate evaluation mode. (p. 118)

If we take a look at one of the scenarios used in the current research, it is easy to see how norm theory may play an important role in influencing participants' ethical judgment. The *Used Car* scenario was written to measure the effect of proximity (the nearness of the moral agent to the victim/beneficiary) on ethical judgment. The control (neutral intensity) version of the scenario is:

Hannah Rollins recently purchased a new car. While she originally desired to trade in her old car at the dealership where she bought her new car, a serious engine problem was detected when the car was being appraised, so the price the dealership offered was quite low. Hannah decided that she could get a higher price if she sold it on her own, so she placed an ad in the paper. When a buyer came to look at the car, Hannah decided not to mention the engine problem.

In the low intensity version of the scenario the potential buyer was from out of town, whereas in the high intensity version the potential buyer was Hannah's friend. The action taken in all three versions of this scenario is "decided not to mention the engine problem". Norm theory would suggest that participants in a between-subject design, who read only one version of the scenario, evoke a referent for this action, and judge the ethicality of the action

based on that referent. It is reasonable to believe that participants use "decided to mention the engine problem" as the referent action, and therefore, their ethical judgment would reflect their judgment of "decided not to mention the engine problem" as opposed to "decided to mention the engine problem". This is problematic since the goal of this research is to measure the effect of moral intensity on ethical judgment by comparing participants' judgment of not mentioning the engine problem to a *potential buyer from out of town* (in the low intensity condition) to participants' judgment of not mentioning the problem to a *friend* (in the high intensity condition). In light of what we know about norm theory and contextual effects, then, a between-subjects design may not be the most appropriate way in which to examine this research question.

The effect of *saliency* on the cognitive process further supports this debate. "*Saliency* refers to the phenomenon that when one's attention is differentially directed to one portion of the environment rather than to others, the information contained in that portion will receive disproportionate weighting in subsequent judgments" (Taylor and Thompson, 1982, p. 175). The *Used Car* scenario is again useful in illustrating this concept. Using a between-subjects design, in which a participant reads only one version of the scenario, it can be argued that the salient feature of the scenario is the fact that Hannah has chosen not to mention the engine problem. However, using a within-subject design in which participants are asked to read both the low intensity and high intensity version of the scenario, it can be argued that the salient element changes. Since the action taken (i.e., has chosen not to mention the engine problem) remains the same in both versions of the scenario, the salient element becomes the potential buyer (i.e., someone from out of town, or Hannah's friend). It is only in this within-subject design that the researcher is able to truly test the effect of moral intensity on ethical judgment.

So, considering contextual effects, norm theory, and saliency, the answer to the "which of these designs (between-subjects or within-subject) is most appropriate when examining the effect of moral intensity on ethical judgment?" question appears to be: the within-subject design. However, in order to both provide a means of comparison to past studies, and to improve on past studies, the current research

uses *both* a between-subjects (Study 1) and within-subject (Study 2) design.

Hypotheses

The primary purpose of this research was to examine the effect of moral intensity (Jones, 1991) on ethical judgment, the second stage in Rest's (1986) ethical decision making model. Jones posited that moral intensity represents the degree of moral imperative associated with an issue. As moral intensity increases, the imperative, or urgency, of the issue motivates the decision maker to engage in *systematic* decision making. The first two hypotheses were derived from Jones' theory, and were based on the proposition that how ethical/unethical a decision is judged to be will vary proportionately with the degree of moral intensity associated with the situation in which the decision was made:

H1: Actions taken in scenarios in which moral intensity has been manipulated to be high will be judged as more unethical than actions taken in scenarios in which moral intensity has been manipulated to be low.

Although researchers may attempt to manipulate a single moral intensity characteristic within a scenario, it is virtually impossible to control for participants' perceptions in relation to other characteristics that are not explicit within the scenario. Indeed, Morris and McDonald (1995) found that manipulated moral intensity often differed from perceived moral intensity. Measuring perceived moral intensity for each of the six characteristics, regardless of which characteristic is being manipulated, allows for a direct evaluation of the moral intensity construct (in the eyes of the rater), and the ability to determine the degree to which these perceptions are predictive of subsequent ethical judgments. This led to the second hypothesis:

H2: Perceived moral intensity will have an effect on ethical judgment such that when perceived moral intensity increases, actions will be judged as being more unethical.

An additional purpose of this research was to compare the impact of moral intensity on ethical

judgment in a within-subject versus between-subjects design. The final hypothesis is based on the premise that a within-subject design allows for greater control of contextual effects and salience than a between-subjects design, both of which have been found to effect cognitive processing:

H3: Perceived moral intensity will have a greater impact on ethical judgment, as measured by the variance accounted for (R^2), in a within-subject design than in a between-subjects design.

Study 1

Method

Participants

A total of 345 undergraduate students at a large university in the southeast United States participated in at least part of the study. Extra credit toward psychology classes was given for participation. Participants were eliminated from the study if they were missing more than four data points. In total, 15 participants were thus eliminated. Two additional participants were eliminated because they were less than 18 years of age. This left 328 active participants. Age range was 18–26 years old, with 90% of the participants between 18 and 21 years old. In total, 61% of the participants were female. In total, 16% were business majors.

Procedure

Participants were randomly assigned to one of three conditions (control, low moral intensity, or high moral intensity). In order to prevent the possibility of order effects, the study used three different orders for the presentation of scenarios, and participants were randomly assigned to one of the three orders within their assigned condition. Participants answered three demographic questions (age, gender, and major), and then read 18 different scenarios describing business situations of an arguably ethical nature (see McMahon and Harvey, 2006). After reading each of the 18 scenarios, participants answered the eight questions from Reidenbach and Robin's (1988, 1990) MES, used to assess participants' judgment of the decision made by the agent in

each scenario. Participants then answered 12 questions adapted from Singhapakdi et al. (1996) and Frey (2000a, b) (see McMahan and Harvey, 2006), designed to assess participants' perception of the moral intensity of the vignette in terms of Jones' (1991) six moral intensity characteristics (magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect).

Scenario construction

The scenarios used in this research were either adapted from scenarios found in past research, or written specifically for this study (see McMahan and Harvey, 2006). Three scenarios were developed for each of the six moral intensity characteristics (magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect), resulting in 18 different scenarios. Three versions of those 18 scenarios were written, one for each condition (control, low moral intensity, and high moral intensity), bringing the total to 54 scenarios. In the control condition, an attempt was made to keep moral intensity neutral by omitting explicit information regarding the specific moral intensity characteristic the scenario was designed to manipulate. In the low moral intensity condition the moral intensity characteristic that was being manipulated was described as being less intense than in the high moral intensity condition. For example, one of the magnitude of consequences scenarios involved the theft of office supplies. In the control condition the item that was taken was not specified. In the low moral intensity condition the item was a box of staples. In the high moral intensity condition the item was a laptop computer.

All scenarios were kept to between 50 and 100 words in order to reduce the potential of response bias based on the length of the scenario. Rather than writing the scenarios so that the participant was the decision maker, which could potentially result in social desirability response bias, actors were used, as suggested by Butterfield et al. (2000). To reduce the potential for gender bias, the gender of the actor was varied within each trio of scenarios such that one scenario used a male actor, the second used a female actor, and in the third the gender of the actor remained unknown by using an initial instead of a first name.

In order to verify that the moral intensity characteristics were manipulated as intended, 27 college graduates were asked to categorize each scenario according to the moral intensity characteristic they thought was manipulated, and to categorize each version of the scenario by condition (control, low moral intensity, high moral intensity). Inter-rater reliability was assessed by means of an intraclass correlation coefficient. The keyed intended response and responses from the 27 participants were analyzed, generating an intraclass correlation of 0.9961 ($F = 258.13$, $df = 70, 1890$, $p = 0.00$). Therefore, the manipulation was judged to be successful as intended.

Independent variables

Age, gender, and major were predictor variables. Moral intensity was manipulated in each scenario by varying the information, and generated three conditions: control, low moral intensity, and high moral intensity.

Perceived moral intensity was measured using a 12-item Perceived Moral Intensity Scale (PMIS) adapted from Singhapakdi et al. (1996) and Frey (2000a, b) (see McMahan and Harvey, 2006) in order to measure the extent to which participants perceived the existence of moral intensity characteristics in each scenario. Perceptions of each of the six moral intensity characteristics were measured with two items for each characteristic using a 7-point Likert-type scale (1 = Strongly Agree, 7 = Strongly Disagree), with higher numbers reflecting higher degrees of perceived moral intensity. Six items were reverse scored. Twelve participants had missing data for two or fewer of these perceived moral intensity items. A missing item was given that participants' rating for the second item that measured the particular moral intensity characteristic that the missed item was intended to measure for the scenario that was being judged.

Exploratory factor analysis of the PMIS using this data, and confirmatory factor analysis of the emergent model using the data set from Study 2, supported a three-factor model rather than the six-factor model posited by Jones (1991), with the magnitude of consequences, probability of effect, and temporal immediacy items loading on the first factor (which will be referred to as the *Probable Magnitude of Consequences* factor), the proximity items loading on the second factor, and the social consensus items loading

on the third factor (see McMahon and Harvey, 2006). The concentration of effect items were dropped from all analyses due to their failure to effectively measure the construct posited by Jones. Therefore, perceived moral intensity of the scenarios was measured in three ways:

1. Probable magnitude of consequence (the mean of six items: two items each for magnitude of consequences, probability of effect, and temporal immediacy).
2. Proximity (the mean of the two proximity items).
3. Social consensus (the mean of the two social consensus items).

Dependent variable

Participants' ethical judgment of decisions made in the scenarios was measured via Reidenbach and Robin's (1988, 1990) 8-item MES, using a 7-point scale with "1" indicating that the action was judged as ethical and "7" indicating that the action was judged as unethical. In total, 13 participants had missing data for three or fewer MES items. A missing item was given that participants' mean rating of the other seven MES items for the scenario that was being judged. (None of the participants missed more than one MES item for a single scenario.)

Results

Analysis of variance of ethical judgment by condition is found in Table I. The ethical judgment mean was significantly lower (indicating that participants felt actions taken in the scenarios were more ethical) in the low moral intensity condition than in the control condition and significantly higher (indicating that participants felt actions taken in the scenarios were more unethical) in the high moral intensity condition than in the low condition. The mean for the control condition was not significantly different from that of the high condition. It is important to note that the ethical judgment mean was lowest in the low condition, and highest in the high condition, with the mean in the control condition falling between those of the low and high condition. The first hypothesis, which stated "actions taken in scenarios in which moral intensity has been manipulated to be high will

TABLE I
Analysis of variance of ethical judgment by condition, Study 1

Condition	<i>N</i>	<i>M</i>	<i>SD</i>
Control	113	5.32	0.58
Low moral intensity	110	5.05	0.66
High moral intensity	105	5.48	0.62
Total	328	5.28	0.64
Source of variance	<i>df</i>	<i>MS</i>	<i>F</i>
Between groups	2	4.95	12.83**
Within groups	325	0.39	
Total	327		
Tukey post-hoc			
Condition	<i>SE</i>	Mean difference	
Control and Low	0.08	0.27**	
Control and High	0.08	- 0.16	
Low and High	0.08	- 0.42**	

Note: * $p < 0.05$, ** $p < 0.01$.

be judged as more unethical than actions taken in scenarios in which moral intensity has been manipulated to be low", was, therefore, supported.

Analysis of variance of the three perceived moral intensity factors by condition are found in Tables II-IV. The probable magnitude of consequences mean was significantly lower in the low condition than in the control condition and significantly higher in the high condition than in the low condition; however, the mean did not vary significantly between the control and high condition. The Tukey post-hoc test indicates that there was no significant difference in means for proximity or social consensus by condition.

Regression analyses of ethical judgment on the study variables (age, gender, major, and perceived moral intensity factors) can be found in Table V. A significant 24% of the variance in ethical judgment was accounted for. Gender, probable magnitude of consequences, and social consensus had a significant effect on ethical judgment. Proximity did not. Therefore, the second hypothesis, which stated "perceived moral intensity will have a significant effect on ethical judgment", was only partially supported.

TABLE II
Analysis of variance of probable magnitude of consequences by condition, Study 1

Condition	N	M	SD
Control	113	4.20	0.44
Low moral intensity	110	3.98	0.49
High moral intensity	105	4.33	0.39
Total	328	4.17	0.46
Source of variance	df	MS	F
Between groups	2	3.45	17.65**
Within groups	325	0.20	
Total	327		
Tukey post-hoc			
Condition	SE	Mean difference	
Control and Low	0.06	0.22*	
Control and High	0.06	- 0.13	
Low and High	0.06	- 0.35*	

Note: * $p < 0.05$, ** $p < 0.01$.

TABLE III
Analysis of variance of proximity by condition, Study 1

Condition	N	M	SD
Control	113	3.56	0.67
Low moral intensity	110	3.44	0.75
High moral intensity	105	3.64	0.68
Total	328	3.54	0.70
Source of variance	df	MS	F
Between groups	2	1.14	2.32
Within groups	325	0.49	
Total	327		
Tukey post-hoc			
Condition	SE	Mean difference	
Control and Low	0.09	0.12	
Control and High	0.10	- 0.08	
Low and High	0.10	- 0.20	

Note: * $p < 0.05$, ** $p < 0.01$.

TABLE IV
Analysis of variance of social consensus by condition, Study 1

Condition	N	M	SD
Control	113	4.52	0.58
Low moral intensity	110	4.39	0.64
High moral intensity	105	4.46	0.83
Total	328	4.46	0.69
Source of variance	df	MS	F
Between groups	2	0.51	1.09
Within groups	325	0.47	
Total	327		
Tukey post-hoc			
Condition	SE	Mean difference	
Control and Low	0.09	0.14	
Control and High	0.09	0.06	
Low and High	0.09	- 0.08	

Note: * $p < 0.05$, ** $p < 0.01$.

Discussion of Study 1

In the past, empirical support for the effect of moral intensity (Jones, 1991) on ethical judgment has been mixed. In general, the effects of both magnitude of consequences and social consensus have been supported. The effect of probability of effect has found some support. The effects of temporal immediacy, proximity, and concentration of effect have found minimal support.

Eighteen scenarios of an arguably ethical nature were developed in order to manipulate moral intensity. In the control condition the 18 scenarios did not mention any of the six moral intensity characteristics. In the low moral intensity condition the 18 scenarios included a description of low moral intensity for the specific characteristic the scenario was designed to manipulate. In the high moral intensity condition the 18 scenarios included a description of high moral intensity for the specific characteristic the scenario was designed to manipulate.

Ethical judgment was measured using Reidenbach and Robin's (1990) 8-item MES. This multi-item measure was used in order to provide a more reliable measure of ethical judgment than the univariate

TABLE V
Regression of ethical judgment on study variables, Study 1

Source	df	Sum of squares	Mean square	F-value	Significance	Adjusted R ²
Regression	6	34.54	5.76	18.33	0.00	0.24
Residual	321	100.80	0.31			
Total	327	135.34				
Variable	<i>B</i>	<i>t</i> -Value	Significance			
Intercept	2.40					
Age	0.02	1.12	0.26			
Gender	- 0.33	- 5.11	0.00			
Major	- 0.06	- 0.74	0.46			
Probable magnitude of consequences	0.56	7.75	0.00			
Proximity	- 0.08	- 1.68	0.09			
Social consensus	0.11	2.45	0.02			

Note: Gender coded female = 0, male = 1. Major coded non-business = 0, business = 1. *N* = 328.

measures used in many of the past empirical studies. Confirmatory factor analysis of the MES supported the three factor (*Moral Equity, Relativism, and Contractualism*) model posited by Reidenbach and Robin.

Based on Jones' (1991) theory, hypothesis one proposed that participants in the high moral intensity condition (that is, the condition in which scenarios were manipulated by the researchers to be of high moral intensity) would be more critical in their ethical judgment of actions taken than participants in the low condition (the condition in which scenarios were manipulated by the researchers to be of low moral intensity). This hypothesis was supported. The mean of the MES was significantly lower in the low condition than in the high condition.

Morris and McDonald (1995) found that perceived moral intensity, measured by items designed to tap the six moral intensity characteristics posited by Jones (1991), often differed from manipulated moral intensity. Therefore, in addition to operationalizing moral intensity by manipulating the intensity of a scenario, this study measured participants' perception of moral intensity in the scenario. Perceived moral intensity was measured by 12 items in the PMIS, adapted from Singhapakdi et al. (1996) and Frey (2000a, b). Exploratory factor analysis using the current data and confirmatory factor analysis using the data set from Study 2 supported a three-factor model rather than the six-factor structure

posited by Jones (see McMahon and Harvey, 2006). The first factor consists of the six magnitude of consequences, probability of effect, and temporal immediacy items, and is labeled *Probable Magnitude of Consequences*. The second factor consists of the two proximity items, and is labeled *Proximity*. The third factor consists of the two social consensus items, and is labeled *Social Consensus*. The concentration of effect items were dropped from the study due to their failure to adequately measure the construct as posited by Jones.

Based on Jones' (1991) theory, hypothesis two proposed that perceived moral intensity would have a significant effect on ethical judgment. This hypothesis was only partially supported. The probable magnitude of consequences factor and the social consensus factor had a significant effect on ethical judgment, as measured by the MES (Reidenbach and Robin, 1988, 1990). The proximity factor did not have a significant effect on ethical judgment.

The strong support for the effect of probable magnitude of consequences and social consensus is in keeping with past empirical findings. (In this study *probable magnitude of consequences* includes three of the six characteristics posited by Jones (1991): magnitude of consequences, probability of effect, and temporal immediacy.)

The lack of support for the effect of proximity on ethical judgment is also in keeping with past

empirical studies, most of which found no support for this variable. One explanation for the lack of effect for proximity could have to do with the fact that this study (and most that preceded it) used a between-subjects design. As such, subjects were only exposed to scenarios written with low moral intensity or high moral intensity (or “neutral” moral intensity in the control condition), depending on the condition to which they were randomly assigned. For example, in the *Housing Development* scenario a housing project was going to be built on land that flooded in the past in either the decision maker’s home town (high intensity) or in an undeveloped country (low intensity). Without being exposed to these two versions of the scenario, the proximity of the victim may not have been a salient factor in the scenario, resulting in attention being directed toward the act itself rather than the identity of the victim.

While a substantial 24% of the variance in ethical judgment was explained by the study variables (age, gender, major, and PMIS factors), it is suggested that an extension of the study be undertaken with the inclusion of additional personality variables. Ethical philosophy, locus of control, Machiavellianism, and cognitive moral development have been included in a number of ethical decision making models. An empirical study of their effect on ethical judgment would provide a valuable contribution to the literature. In addition to testing the effect of these variables on ethical judgment, a better understanding of the ethical decision making process might be gained by testing their effect on perceived moral intensity.

Study 2

Method

Participants

Participants were undergraduates at a large university in the southeast United States. Extra credit in psychology classes was given for participation. The study was administered online. A total of 326 students signed up for the study. Seventeen students who signed up never went to the site to take the survey. Forty-nine students who signed up went to the site but did not complete the survey. Four students completed the survey twice. (Only the data for the first administration of the survey to those par-

ticipants was retained.) Thirty-three participants were dropped because the total time they took to complete the study was under 30 minutes, a potential indicator that these participants were making random responses, given that the survey had 528 items. In total, then, data were retained for 227 participants (70% of the participants who signed up). Age range was 18–25 years old, with 93% of the participants between 18 and 21 years old. In total, 71% of the participants were female. In total 18% were business majors.

Procedure

The low and high moral intensity versions of the scenarios used in Study 1 were used in Study 2 (the control condition versions were not used). Participants read paired versions (low intensity and high intensity) of six different scenarios describing business situations of an arguably ethical nature. In order to ensure that heterogeneity existed across raters in terms of the situations that were being judged, each of the six scenarios that each participant received was randomly selected from one of three possible scenarios designed to embody each of the six moral intensity characteristics (i.e., each rater viewed six of the total of 18 scenarios, selected so that all six moral intensity dimensions were represented). To attempt to reduce the potential influence of presentation-order, the order in which the scenarios from the six moral intensity characteristics were presented to each rater was randomly determined, as was the order of the paired presentation of scenarios within each, based on intensity (low–high, or high–low).

After reading a paired version of a scenario, participants were asked to indicate their judgment of the action taken in each version of the scenario using the 30 original Reidenbach and Robin (1988, 1990) items (although only the 8-item MES was used in data analysis), plus one additional item (“ethical/not ethical”) intended to measure overall ethical judgment. These measures used a 7-point scale with “1” indicating that the action was judged as ethical and “7” indicating that the action was judged as unethical. Using a 7-point Likert-type scale with “totally agree” and “totally disagree” endpoints (the higher the rating, the higher the perceived moral intensity), participants answered 12 questions adapted from Singhapakdi et al. (1996) and Frey (2000a, b) (see McMahon and Harvey, 2006), designed to

assess their perception of the moral intensity of the scenario in terms of the six moral intensity characteristics posited by Jones (1991), and a single item designed to measure behavioral intention (“I would have made the same decision”).

Although the ethical judgment items were grouped together, and the perceived moral intensity and behavioral intention items were grouped together, the presentation of each of these groups of items was randomly determined within each of the six scenario-pairs so that in approximately half of the cases participants answered the perceived moral intensity items before answering the ethical judgment items, and in approximately half of the cases participants answered the ethical judgment items before answering the perceived moral intensity items. This procedure was followed for the paired versions of each of the six scenarios, with the PMIS and MES (Reidenbach and Robin, 1988, 1990) order being randomized for each scenario-pair.

Finally, participants were asked to indicate their age (they indicated their gender during sign-up for the study), whether or not they are a business major, and, in an open-ended question, to briefly state what they believed to be the purpose of the study.

Independent variables

Age, gender, major, and purpose were predictor variables. Moral intensity (Jones, 1991) was manipulated in each scenario by varying the information given, which generated two conditions: low moral intensity and high moral intensity. As in Study 1, perceived moral intensity of the scenarios was measured in three ways:

1. Probable magnitude of consequence (the mean of six items: two items each for magnitude of consequences, probability of effect, and temporal immediacy).
2. Proximity (the mean of the two proximity items).
3. Social consensus (the mean of the two social consensus items).

Each of these measures was based on a 7-point Likert-type scale, with “1” indicating the perception of low intensity and “7” indicating the perception of high intensity.

Dependent variables

Ethical judgment of the actions taken in the scenario was measured by the mean of the eight items in the MES developed by Reidenbach and Robin (1988, 1990) using a 7-point scale with “1” indicating that the action was judged as ethical and “7” indicating that the action was judged as unethical. Intention was measured with one item (“I would have made the same decision”), and used a 7-point Likert-type scale with “1 = totally agree” and “7 = totally disagree” endpoints.

Results

Analysis of variance of ethical judgment by manipulated moral intensity condition is found in Table VI. The ethical judgment mean was significantly lower (indicating that participants felt actions taken in the scenarios were more ethical) in the low moral intensity condition than in the high moral intensity condition (a higher mean indicates that participants felt actions taken were more unethical). Therefore, the first hypothesis, which stated “actions taken in scenarios in which moral intensity has been manipulated to be high will be judged as more unethical than actions taken in scenarios in which moral intensity has been manipulated to be low”, was supported.

Regression of ethical judgment on the study variables (Table VII) produced an $R^2 = 0.002$, which was not significant. Therefore, the second hypothesis, which stated “perceived moral intensity will have an effect on ethical judgment such that when perceived moral intensity increases, actions will be judged as being more unethical”, was not supported. In addition, the variance accounted for ($R^2 = 0.002$) using a within-subject design (Study 2) was lower than that

TABLE VI

Analysis of variance of ethical judgment by manipulated moral intensity, Study 2

Condition	<i>M</i>	<i>SD</i>	Mean	<i>t</i> -Test	Significance
Low	4.42	0.49	-0.47	-18.973	0.00
High	4.89	0.42			

Note: $N = 227$.

TABLE VII
Regression of ethical judgment on study variables, Study 2

Source	df	Sum of squares	Mean square	F-Value	Significance	Adjusted R^2
Regression	6	1.10	0.183	1.06	0.39	0.002
Residual	220	38.16	0.173			
Total	226	39.26				
Variable	B	t-Value	Significance			
Intercept	4.36					
Age	0.00	0.05	0.96			
Gender	- 0.09	- 1.37	0.17			
Major	- 0.01	- 0.20	0.84			
Probable magnitude of consequences	0.20	1.46	0.15			
Proximity	- 0.14	- 1.46	0.15			
Social consensus	0.03	0.36	0.72			

Note: Gender coded female = 0, male = 1. Major coded non-business = 0, business = 1. $N = 227$.

using a between-subject design ($R^2 = 0.24$) (Study 1). Therefore, the third hypothesis, which stated “perceived moral intensity will have a greater impact on ethical judgment, as measured by the variance accounted for (R^2), in a within-subject design than in a between-subjects design” was not supported.

Since there was a significant difference in the ethical judgment means for the low scenarios versus high scenarios (indicating that manipulated moral intensity had an effect on ethical judgment) using a within-subject design, but regression analyses did not find a significant effect of perceived moral intensity on ethical judgment, an analysis of variance

of the perceived moral intensity factor means was conducted (Table VIII). The difference in the means for probable magnitude of consequences and proximity, low intensity versus high intensity, was not significant. Counter-intuitively, perceived moral intensity for these two factors was lower for the high intensity scenarios than for the low intensity scenarios. There was a significant difference in the social consensus means, with the mean for the high scenarios higher than that for the low scenarios. In Study 1, which used a between-subject design, and in which regression of ethical judgment on study variables produced a significant R^2 of 0.24, all of the

TABLE VIII
Comparison of perceived moral intensity factor means, low vs. high manipulation, Studies 1 and 2

	M for Low scenario	M for High scenario	Significance
<i>Within-subject design (Study 2)</i>			
Probable magnitude of consequences	3.91	3.88	0.12
Proximity	3.97	3.92	0.09
Social consensus	3.78	3.96	0.00
<i>Between-subjects design (Study 1)</i>			
Probable magnitude of consequences	3.98	4.33	0.00
Proximity	3.44	3.64	0.04
Social consensus	4.39	4.46	0.45

Note: $N = 227$ for within-subject design (Study 2) and for between-subjects design (Study 1) Low $N = 110$. High $N = 105$.

high scenario means were higher than the low scenario means (although the difference was significant only for the probable magnitude of consequences and proximity factors). It is possible, then, that study design impacted perceived moral intensity. Possible reasons for this will be examined in the discussion.

Rest's (1986) ethical decision making model suggests that there are four steps in the decision making process. The first step is awareness that the issue being considered is an ethical issue. Awareness has a direct effect on the ethical judgment of potential actions that could be taken. Ethical judgment has a direct effect on behavioral intention, and behavioral intention has a direct effect on behavior. So far these studies have concentrated on the second step of the model, ethical judgment. In an effort to advance this research to the third step of the ethical decision making model, participants were asked to indicate, on a 7-point Likert-type scale (1 = totally agree, 7 = totally disagree), the likelihood that "I

would have made the same decision", a measure of intention. In Rest's model, ethical judgment has a direct effect on intention. In Jones' (1991) model, moral intensity also has a direct effect on intention. In order to explore the impact of ethical judgment versus moral intensity on intention, two regression models were run. In the first, intention was regressed on the three factors (moral equity, relativism, and contractualism) of the 8-item MES (Reidenbach and Robin, 1988, 1990); in the second, intention was regressed on the three perceived moral intensity factors (probable magnitude of consequences, proximity, and social consensus (Table IX). The three factors of the MES accounted for a significant 58% of the variance in intention, although only the moral equity factor was a significant predictor. Although the perceived moral intensity factors were a significant predictor of intention, they accounted for only 5% of the variance, and only the probable magnitude of consequences factor was significant.

TABLE IX
Regression of "Intention" on multidimensional ethics scale and perceived moral intensity factors, Study 2

<i>Multidimensional ethics scale factors</i>	Source	df	SS	MS	F-Value	Significance	R ²
Model		3	79.10	26.37	10.75	0.00	0.58
Error		223	58.35	0.26			
Corrected		226	137.45				
Variable		B	F-Value	Significance			
(Intercept)		0.59					
Moral equity		0.85	129.44	0.00			
Relativism		- 0.01	0.05	0.83			
Contractualism		- 0.01	0.04	0.83			
<i>Perceived moral intensity factors</i>							
Source		df	SS	MS	F-Value	Significance	R ²
Model		3	6.52	2.17	3.70	0.01	0.05
Error		223	130.93	0.59			
Corrected		226	137.45				
Variable		B	F-Value	Significance			
(Intercept)		2.21					
Probable magnitude of consequences		0.59	5.93	0.02			
Proximity		- 0.04	0.04	0.84			
Social consensus		0.22	2.84	0.09			

Note: N = 227.

These analyses indicate that ethical judgment is a far more robust predictor of behavior intention than perceived moral intensity.

Discussion of Study 2

This study provided some good news and some bad news. The good news is that, using a within-subject design, the manipulation of the moral intensity of the scenarios appeared to work, as evidenced by the significant difference in the mean in ethical judgment for the low intensity versus high intensity scenarios. Ethical judgment was significantly higher for the high intensity scenarios than for the low intensity scenarios, indicating that manipulated moral intensity had a significant effect on ethical judgment (as moral intensity increased, actions were judged as being more unethical). The bad news is that fewer than 1% of the variance in ethical judgment was accounted for when ethical judgment was regressed on the predictor variables and perceived moral intensity. However, in Study 1, which used a between-subjects design, regression analysis indicated that a significant 24% of the variance in ethical judgment was accounted for by the predictor variables and perceived moral intensity. We were left wondering why perceived moral intensity did not have a significant effect on ethical judgment using a within-subject design.

The answer to this question may have to do with the lack of a significant difference in the means of probable magnitude of consequences and proximity when comparing low intensity scenarios to high intensity scenarios in Study 2. Only social consensus had a significant difference in means. Now we wondered why there was not a significant difference in the means between the low intensity and high intensity scenarios.

There are many potential answers to this question. The first may be that moral intensity did not cross the *threshold* from low to high using the within-subject design. Jones (1991) claimed that "it is expected that threshold levels of all components must be reached before moral intensity begins to vary significantly" and that "measurement of moral intensity and its components is probably possible only in terms of relatively large distinctions" (p. 378). Using a between-subjects design, participants' referents when

judging the intensity of a scenario was not controlled by the researcher. This potentially allowed the individual participants to imagine comparisons in which the threshold was crossed. Using a within-subject design, the referent was explicit (participants read two versions of the same scenario and then indicated their perceptions of the moral intensity in each version), so it is possible that the moral intensity components were not manipulated in a manner that allowed the threshold to be crossed.

Another potential explanation may have to do with the level of cognitive demand that was placed on the participants by the PMIS. For example, it can be argued that answering the item "there is a very small likelihood that the decision will actually cause any harm" (from the PMIS) requires greater cognitive effort than answering, for example, the "fair/unfair" item (from the MES, Reidenbach and Robin, 1988, 1990). This might explain why there was a difference in the means of ethical judgment (measured by the MES), but not in two (probable magnitude of consequences and proximity) of the perceived moral intensity factors, using a within-subject design. In addition, the participants answered the perceived moral intensity items twice for each scenario, once for each version (high and low). This created an even greater cognitive demand, requiring that participants not only answer an already cognitively challenging question, but that they first detect differences between the two scenarios, and then base their answers on the evaluation of these differences. Future research is suggested.

A third possible explanation may lie in the method by which the within-subject study was administered, that is, online. Frey (2000b) found negligible variations between answers obtained from an electronic administration of his survey assessing the effect of moral intensity on ethical judgment and those obtained from a mail administration of the same survey. However, neither of his sample groups was offered compensation for participation. It might be assumed, then, that subjects had an intrinsic interest in participation, which may have generated more thoughtful, truthful, responses. In the current study, however, extra credit was offered for participation. While some participants may have had an intrinsic interest in the study, it might be assumed that since the reason for participating was to get extra credit, getting extra credit in the least effortful manner possible was the

most desirable route. Participation in an online study that can be completed without leaving one's dorm room or apartment is arguably less effortful than coming on campus at night to participate in a study. In addition, no researchers or research assistants are monitoring one's behavior during the actual taking of an online survey, which might further allow for less effortful engagement. And finally, a point-and-click method is a potentially easier way of introducing error variance than a paper-and-pencil method. Further research in this regard is suggested.

Perhaps the most interesting good news provided by Study 2 is the finding that both ethical judgment and perceived moral intensity had a significant effect on behavioral intention. Ethical judgment, as measured by the three factors of Reidenbach and Robin's MES (1988, 1990) had a more robust effect on intention than moral intensity, as measured by the three factors of the PMIS. (However, only the moral equity factor of the MES and the probable magnitude of consequences factor of the PMIS were significant individual predictors.) Future research should look at the necessity of using all three MES and all three PMIS factors in ethical decision making studies.

General discussion

Models of the ethical decision making process developed prior to 1991 include a wide variety of personal and situational variables in a number of different configurations, but none include variables related to the issue itself. In 1991 Jones' developed an Issue-Contingent Model of Ethical Decision Making, positing that six characteristics of an issue (magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect) have a direct effect on the four components (awareness, judgment, intention, and behavior) of the ethical decision making process (Rest, 1986). These six characteristics are part of a construct Jones labeled *moral intensity*.

Magnitude of consequences refers to the sum of the harms (benefits) resulting from the moral act in question. *Social consensus* refers to the degree of social agreement that a proposed act is ethical or unethical. *Probability of effect* refers to both the probability that the act in question will take place, and the probability that the act in question will actually cause harm

(benefit). *Temporal immediacy* refers to the length of time between the act in question and the onset of consequences due to the act. *Proximity* refers to the social, cultural, psychological, or physical closeness that the moral agent feels for victims (beneficiaries) of the act in question. And finally, *concentration of effect* refers to the impact of a given magnitude of harm (benefit) in relation to the number of people affected (Jones, 1991).

Jones (1991) proposed that moral intensity captures the issue-related moral imperative of a situation. As the moral intensity of a situation increases, awareness of the ethical nature of the situation should increase; judgments regarding the appropriate action to be taken in the situation should lean more toward ethical action; behavioral intention should be to act in a more ethical manner; and behavior should be more ethical. The two studies included here examined the effect of moral intensity on ethical judgment.

In both Study 1, which employed a between-subjects design, and Study 2, which employed a within-subject design, there was a significant difference in the means of the MES (Reidenbach and Robin, 1988, 1990), a measure of ethical judgment, for the low versus high scenarios, supporting the effect of manipulated moral intensity on ethical judgment, since actions taken in scenarios manipulated to be of high moral intensity were judged as being more unethical than actions taken in scenarios manipulated to be of low moral intensity. However, when ethical judgment was regressed on age, gender, major, and the three perceived moral intensity factors (probable magnitude of consequences, proximity, and social consensus) (note that factor analysis supported one factor that includes magnitude of consequences, probability of effect, and temporal immediacy; concentration of effect was dropped from both studies due to the failure of the PMIS to capture the characteristic posited by Jones, 1991 – see McMahon and Harvey, 2006) the variance accounted for (R^2) was a significant 24% using a between-subjects design, but was not significant using a within-subject design, thus providing mixed results for the effect of perceived moral intensity on ethical judgment. The reason for the failure of perceived moral intensity to have a significant effect on ethical judgment using a within-subject design appears to be due to the fact that there was not a significant difference in the means for probable magnitude of consequences and proximity

in the low versus high scenarios (in fact, the means for both of these factors were, counter-intuitively, lower for the high scenarios than for the low scenarios). Potential explanations for this include: the possibility that moral intensity did not cross the threshold suggested by Jones (1991) using a within-subject design; the possibility that the cognitive demands of the PMIS are greater using a within-subject versus between-subjects design; and the possibility that the online administration of the within-subject study introduced greater error variance than the paper-and-pencil administration of the between-subjects study.

Study 2 found that both ethical judgment, as measured by the three factors (moral equity, relativism, and contractualism) of the MES (Reidenbach and Robin, 1988, 1990), and perceived moral intensity, as measured by the three factors of the PMIS, are significant predictors of behavioral intention, providing support for Jones' (1991) theory that both ethical judgment and moral intensity have a direct effect on behavioral intention, the third step in his four-step issue-contingent ethical decision making model. (However, ethical judgment was found to be a far more robust predictor of intention than perceived moral intensity.) Additional model testing should be done in the future.

Further work should be done to examine both the factor structure of the PMIS and the effect of perceived moral intensity on the ethical decision making process. Although a three-factor structure (probable magnitude of consequences, proximity, and social consensus) has theoretical and empirical support (see McMahon and Harvey, 2006), the current research did not effectively measure the moral intensity characteristic of concentration of effect.

As with any research using an undergraduate subject pool, findings from these studies may not generalize to other populations. In addition, 71% of the Study 2 participants were female. Therefore, replications of this research using other populations is suggested and welcomed.

What, besides R^2 s and levels of significance, did we learn from these studies? Where do we go from here? In order to answer those questions, it is important to recall why this research was conducted in the first place. In order to develop interventions that may prevent unethical behavior in the future, we must first understand the decision making process that leads to unethical behavior. Many models

have been posited to explain this process. These studies examined just one small aspect (the effect of moral intensity on ethical judgment) of one model (Jones' issue-contingent model, 1991). Basically what we learned is that we need to learn more.

For example, this research raises a question regarding moral intensity itself. Namely, what is the actual nature of the construct? Jones (1991) says that moral intensity is the "extent of issue-related moral imperative in a situation". What does that mean? What is *moral imperative*? Is it something that *aids* us in our assessment of what is truly ethical or unethical, or is it something that psychologically *interferes* with our ability to conduct an accurate assessment? This concern was expressed by W. J. Fitzpatrick (personal communication, July 12, 2001) when he cautioned that researchers must be cognizant of the fact that at least one of the six moral intensity characteristics, magnitude of consequences, may act as either an *informant* to ethical behavior, or as a *deterrent* from ethical behavior. For example, if stealing money is unethical, the amount of money to be stolen ought not to be considered when one is in the process of deciding whether or not to steal. If stealing is unethical (a deontological rather than teleological stance), then stealing \$100 is unethical and stealing \$1000 is unethical. Stealing the lesser amount does not diminish the wrongness of the act of stealing. If the magnitude of consequences (in this case the amount of money to be stolen) does influence the individual in the decision making process, such that the individual decides to steal \$100 but would not steal \$1000, then the magnitude of consequences has deterred the individual from making an ethical behavioral choice. However, Fitzpatrick pointed out that there are situations in which magnitude of consequences *informs* the individual of the ethicality of a behavior. An example he used was that of an individual running through a crowded train station to catch the last train home. It is not unethical for the individual to slightly bump into another person while running to the train. However, it is unethical for the individual to knock another person over while running to the train. It is the magnitude of the consequences in this case (bumping versus knocking over) that determines the ethicality of the behavior.

So, if moral intensity may be either an informant to, or a deterrent from, ethical behavior, has past research of the construct, including these studies,

adequately planned for and accounted for potentially different effects? We do not believe they have. Without knowing how the moral intensity characteristics are actually operating in the decision making process, we are unable to treat them as positive or negative factors when the goal is ethical behavior. In our interventions, in our ethics training programs, should we caution people against being influenced by moral intensity characteristics, or should we encourage them to be aware of moral intensity characteristics? At this point the research does not inform us in this regard.

In addition to the nature of moral intensity, there remains the *threshold* issue. At what point does an issue shift from low intensity to high intensity? Does this vary by person? Does it vary by type of harm? This is an area ripe with interesting research questions that have not been addressed to date. Collins' (1989) research on the typology of harm might prove a helpful resource in research of this kind.

The fact that findings varied depending upon whether a within-subject or between-subjects design was used introduces a number of questions regarding the appropriate method to study the effects of moral intensity. Should Jones' (1991) issue-contingent model of ethical decision making be studied using undergraduates and survey instruments? More importantly, should *any* of the ethical decision making models be studied using undergraduates and survey instruments? In the *real world* does one ever fully engage in the ethical decision making process without being a stakeholder in the outcome? Is not our decision making often dictated by how it will affect our own interests? An observation was made to the researchers (W.J. Fitzpatrick, personal communication, February 2001) in this regard. Fitzpatrick argued that salience of a situation may greatly impact the ethical decision making process, and suggested that the salience of real life situations is far different from the salience of scenarios written for a paper and pencil study. This observation was prompted, we believe, by a doubt that findings from a paper and pencil study can be generalized to the real world of business ethics. Generalizability is always a concern when using a sample of undergraduates (as these studies did). It is a concern in any study in which scenarios and manipulations are simulated rather than real. And the fact that scenarios read from a piece of paper (or a computer monitor) are less salient than

real life scenarios is undisputed. However, it is important to recognize that many decisions in the business world are based on paper versions of a scenario – in the form of memos and e-mail and written reports. Decisions to lay off a certain percentage of the workforce, for example, may be made in a boardroom without the presence of one employee who is at risk of being laid off. The salience of the effect that a layoff will have on individual employees, therefore, may be very minimal.

A dramatic real life example of the effect of salience, or lack of salience, on ethical decision making was described in an article in the *Journal of Business Ethics* by Gioia (1992). Gioia, who was an Associate Professor of Organizational Behavior at Penn State when he wrote the article, was Ford's Field Recall Coordinator in the summer of 1973. In this position he was in charge of coordination of current recall campaigns, and of tracking developing problems. At that time a new file was being compiled on the Ford Pinto, with reports that Pintos were "lighting up" (fuel tanks were rupturing) in rear-end collisions. Potential recall cases were considered a problem based on high frequencies of occurrence or directly-traceable causes. At this early stage the Pinto case did not qualify in either category. Overwhelming complexity, pace of the job, the use of cost-benefit analysis to justify recall decisions, and the fact that Pinto reports were trickling in at a slow rate, all served to mute the salience of the potential dangers. In Gioia's words:

However, I later saw a crumpled, burned car at a Ford depot where alleged problem components and vehicles were delivered for inspection and analysis (a place known as the "Chamber of Horrors" by some of the people who worked there). The revulsion on seeing this incinerated hulk was immediate and profound. Soon afterwards, and despite the fact that the file was very sparse, I recommended the Pinto case for preliminary department-level review concerning possible recall (p. 382).

An understanding that the ethical decision making process may occur in situations in which salience regarding the ethical nature of the situation is low, coupled with an understanding of the effects of moral intensity characteristics on one's judgment of appropriate ethical action when faced with situations of an ethical nature, may help business people to defend themselves against making costly unethical decisions.

If salience is a critical element in the ethical decision making process, then how can we benefit from research done with participants who have no vested interest in the outcomes that are generated by their awareness, or judgment, or intention, or behavior (Rest's four stages of the ethical decision making process, 1986) regarding a contrived ethical scenario? Can true intention or behavior ever be measured using scenario research? For example, although Study 2 asked participants to indicate whether or not they would have made the same decision that was made in the scenario, and the answer to this question was used as an indicator of intention, one could legitimately argue that the measure was an indicator of predictive judgment rather than intention. Therefore, one must question the validity of this type of research.

Although a major goal of research efforts regarding the ethical decision making process is to determine the causes of behavior, and causation can only be determined using the experimental method, in which subjects are randomly assigned to conditions and variables are manipulated, a more meaningful study of the ethical decision making process (than survey research conducted using unengaged undergraduate participants) might be to conduct in-depth interviews with individuals who have engaged in the ethical decision making process, some of whom have behaved ethically, some of whom have behaved unethically. By asking individuals to recount the thought processes in which they engaged, and both the internal and external factors that influenced them at various stages of the process, we might better be able to ascertain which of the many posited models comes closest to representing the true picture of the process one employs when making a decision regarding an ethical issue. In addition, by studying both individuals who behaved ethically and individuals who behaved unethically, we might better be able to determine at what point in the process an individual veers from ethical decision making to unethical decision making, and what factors pushed the individual in a particular direction. Many problems are inherent in this kind of research, however. For example, some individuals are more verbally fluent than others. How would we go about trying to get information from less fluent individuals without contaminating their answers with our questions? It is beyond the scope of this paper to identify all of the

potential problems and remedies. However, we do believe a study of this kind would provide a richness of information that is impossible to obtain in survey research, and would serve us well.

During the time in which this research was being undertaken, a new ethical decision making model was introduced into the literature. The *cognitive elaboration model* (Street et al., 2001) integrates Jones' (1991) framework with attitude change and persuasion research. Specific to the current studies, moral intensity is subsumed within one's motivation to expend cognitive effort when engaging in the ethical decision making process, and is no longer posited to have a direct effect on awareness, judgment, intention, and behavior. The introduction of yet another ethical decision making model at this point in this article is a reminder (as if we needed another) that we still have a long way to go in understanding the intricacies of the ethical decision making process.

Another question that research into the ethical decision making process generates is "what should we do with the knowledge that we gain?" Once we have an understanding of how the process occurs, this understanding will hopefully enable us to develop interventions that can prevent unethical behavior. But what would these interventions *look like*? We would suggest that *ethics* is not a topic that should be exclusive to family and church discussions, but should be integrated into the curriculum in our schools, should be a consideration in our leisure activities, and should be supported in the workplace. For example, developing, implementing, and supporting a code of ethics is one way for a corporation to focus employee attention on what is considered appropriate and ethical behavior. Most of the ethical decision making models cited here include both individual and environmental factors in the process. Therefore, interventions should be implemented at both the individual and corporate level. Whether an ethics intervention should be a formal training program required for all employees, or an online resource, or a casual topic discussed in departmental meetings is a question for those engaged in training and development research. Other questions include that of the appropriate content of an intervention. For example, should the focus be on awareness... or on ethical philosophies... should case studies be used... or group discussions? How will program

effectiveness be evaluated? Again, these are all questions that need to be researched.

Empirical research is imperative in guiding the social sciences. Yet, it can be easy to get caught up in the statistics and lose sight of the fact that we are researching questions that may have profound effects on people's lives. Questions related to the ethical decision making process are profound. Talk to a mother who has lost a child in a Ford Explorer with under-inflated Firestone tires. Talk to an Enron employee whose life savings were lost in that company's bankruptcy. These people, as well as millions of others who suffer the consequences of unethical decision making practices, want to know why others made the decisions they made. We sincerely hope that our science will one day be able to answer their questions with confidence, and, armed with that knowledge, thus lead to the development of effective interventions that will help to discourage unethical decision making in the future.

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