A NEW LOOK AT ETHICAL DECISION MAKING: ESTABLISHING THE

NOMOLOGICAL NETWORK OF DESIRED MORAL APPROBATION

by

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(Under the Direction of KARL KUHNERT)

ABSTRACT

Ethical decision-making is common and frequent in the workplace, thus it is of value to organizations and society for psychology to further explicate how a person makes ethical decisions. The study argued that the a person's behavioral intention to act when faced with moral dilemma is influenced by individual characteristics, both directly and indirectly through the desire for moral approval from one's self and others. An empirical examination was conducted to establish the nomological network of desired moral approbation (DMA) and its role in ethical decision-making behavior. A model was derived from the theory of planned behavior, the person-situation interactionist model, the theory of cognitive moral development, moral approbation theory, and locus of control. Results of a path analysis showed only DMA-O significantly predicted behavioral intention. Suggestions for improvements in ethical-decision making theory, methodology, and measurement are offered

INDEX WORDS: Cognitive moral development, moral approbation, ethical decision-making, organizational behavior, locus of control

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DEDICATION

I am dedicating this work to the loving memory of my mother, Marcia A. Passell (1946-2000), whose love will never be forgotten..

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I would like to acknowledge my major professor, Karl Kuhnert, for the support he has given to me throughout my time in the applied psychology program. Also, I thank Karl for his comradeship, encouragement, and for always championing my endeavors. I would like to acknowledge my committee members, Gary Luatenschlager and Kecia Thomas, for the time and effort they put into creating a positive learning experience. Both Gary and Kecia added greatly to my professional development and the quality of my dissertation. I want to thank Dr. Dianne Leader at Georgia Tech University whose help was essential to this project and whose friendship is invaluable. Finally, I would like to acknowledge my father, Mark, whose advice, love, and support has helped me to achieve so much. I hope to always make him proud.

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SECTION 1

INTRODUCTION

Awareness of ethical behavior in organizations has risen because of publicized

*un*ethical behaviors, such as acts of fraud, waste, abuse, and other corrupt practices. The

salience of ethical behavior has brought organizational leaders to increase individual and

corporate accountability, to engage in corporate-wide ethics programs, and to rewrite

vision and mission statements to include ethical principles (Burke, 1999). The goals of

these changes is to create a culture that values ethical behavior and increases such

behavior among organizational members. Some have gone to the extent of implementing

ethical codes of conduct, serving as organizational control systems for producing good

employee behavior (Weaver, Trevino, & Cochran, 1999). The importance and concern for

ethical behavior in the workplace has also reached business schools where, in hope of

producing managers better prepared to handle moral issues, ethics courses in the

academic curriculum are being encouraged (Adler, 2002; Smith & Oakley,1996).

Despite efforts to improve ethical behavior in organizations, there will always be

public officials who exploit public power for private gain and banks that buckle under the

questionable ethical practices of directors (Terry, 1993). As seen in the past three years

alone, leaders across organizations have been brought to justice for monopolizing and

unfair practices in the software industry (i.e. Microsoft); deliberate neglect of known

product defects leading to hundreds of deaths and injuries of automobile tire customers

(i.e. Ford Motor Co. and Firestone); deceitful and illegal accounting practices of large

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organizations that led to the loss of thousands of jobs and billions of investors' dollars (e.g., Enron and WorldCom), and the intentional cover-up of child-sex abuse by religious leaders (i.e., the Catholic Church).

These examples demonstrate the pervasiveness and detrimental effects of unscrupulous behavior in organizations and are cases of illegal behavior, however what makes these unethical is that each situation challenged the moral standards that apply to business policies, institutions, and behavior (Velasquez, 1998). Although colossal in scale, each was an amalgamation of individuals' decisions that led to the questionable behaviors. Individual organizational members are faced with making decisions on a daily basis (Kahneman & Tversky, 1983) that appear to be run-of-the-mill, but actually challenge their morality. An example, that will be expanded on below, is a manager having to decide whether to discharge a single parent employee whose performance relative to others has declined. In light of the commonness and ubiquity of ethical decision-making it is of value to organizations and society for psychology to further explicate how a person makes ethical decisions when faced with a moral dilemma.

The purpose of this study was to build a nomological network of constructs and theories that could further the understanding of how a person decides what is right. The term "nomological" is derived from Greek and means "lawful", so the nomological network can be thought of as the "lawful network". A nomological network makes clear what something is or means, so that laws can be set forth in which that something occurs. The laws in a nomological network may relate observable properties or quantities to each other, different theoretical constructs to each other, or theoretical constructs to observables (Cronbach & Meehl, 1955).

A model of ethical decision-making behavior was built on both past decision-making theories and incorporates the new theory of moral approbation. The study argued that the intention to act when faced with moral dilemma is influenced by individual characteristics, both directly and indirectly through the desire for moral approval from one's self and others. The first section of this paper provides central definitions, expresses the need for industrial-organizational psychology research of ethical behavior, describes relevant theory and constructs, and proposes a model of ethical decision-making.

Definitions

Several definitions are essential to this study. First, morality is defined as the "standards that an individual or a group has about what is right and wrong" (Velasquez, 1998, p. 8). Moral standards are the norms one has about the kinds of actions believed to be morally good and morally bad. A dilemma is considered to be a moral one when the issues involved require a decision that leads to actions which may harm or benefit others (Velasqeuz & Rostankowski, 1985).

Second, morality is not the same as ethics. Ethics is defined as the process of examining one's moral standards or the moral standards of a society in order to determine whether these standards are reasonable and applicable to a situation (Velasquez, 1998). When thinking about what to do when faced with a moral dilemma a person is engaged in *ethical* decision-making. In the workplace managers often face dilemmas that require ethical decision-making, but these are different than the "right and wrong" issues learned about in childhood. These dilemmas are issues of right-versus-right, which "typically involve choices between two or more courses of action, each of which is a complicated

bundle of ethical responsibilities, personal commitments, moral hazards, and practical pressures and constraints" (Badaracco, 1996, p. 6).

Right-versus-right can be seen in the example of a senior manager who was faced with having to decide whether to fire an employee after a request from a junior manager to do so. The employee, a devoted single-mother, was a good and hard working employee. Recently the company had received a large account, and everybody in the department had been and would continue to work 80 hours per week, but she had been working significantly less hours and appeared to not be pulling her own weight. At the same time, the company's leaders had been pushing for a more family-friendly workplace. On the one hand the employee's lower performance was affecting the ability of the company to fulfill obligations made to its clients, thus the senior manager would be justified to replace her. However, the manager believed in the family-friendly concept and above all, respected a hard working and dedicated single parent, so he could also fairly keep her on board. The senior manager's choice was not between right and wrong, but between right and right.

Right-versus-right are of a higher order than the more simplistic right-versus-wrong dilemmas. Right-versus-wrong are choices between at least two courses of action, one of which is clearly wrong or unethical. For example, accountants for corporations such as Enron and Tyco deliberately manipulated financial reports to create the illusion of higher profitability that would be appealing to investors (Fortune, 2002). This is seen as right-versus-wrong because these were obviously improper and illegal accounting practices.

Research in psychology. Ethical behavior has been studied and debated for millennia among philosophers, religious scholars and within legal systems, whereas fields such as psychology, business ethics, and marketing have only begun to investigate ethical behavior (Kahn, 1990). There has been recent improvement in the quantity of published ethical decision-making research in psychology publications; however it is still underrepresented (Carlson, 2002). More specifically, there is a dearth of ethical decision-making research and theory in industrial-organizational psychology literature and it is worthy of greater attention because of its significance in management and organizational behavior (Jones, 1991). The present study intended to enhance the current industrial-organizational psychology literature by empirically examining ethical decision-making behavior with an approach that draws on both established theories and the new decision-making theory.

Ethical Decision-Making Theory

Perspectives of ethical decision-making in organizations come from a diverse set of disciplines, as mentioned above, ranging from business philosophy to marketing research. Multiple theoretical frameworks that explain ethical decision-making in organizations, which have found favor in the social sciences and behavioral research, will be used here to explain ethical decision-making behavior. Each theory considers both individual and organizational influences, although the focus of the current study is on individual level variables.

Person-situation interactionist model. The person-situation interactionist model developed by Trevino (1986) emphasizes the interaction of individual and situation components, and is commonly accepted in organizational psychology (e.g., Bailey &

Alexander, 1993; Flannery & May, 2000; Weber, 1996). The interactionist model shows

that an individual's ethical decision -making is determined by how he or she reacts to an

ethical dilemma with cognitions determined by his or her cognitive moral development

(CMD) stage. Although CMD is how an individual thinks about ethical dilemmas, that is,

the process of deciding what is right in a situation (Kohlberg, 1969, 1979), it cannot

sufficiently explain or predict how an individual is likely to behave in response to an

ethical dilemma (Trevino). In the person-situation interactionist model predictability is

achieved through an interaction of the cognitive component with additional individual

(e.g. locus of control, field dependence, ego strength) and situational variables (e.g.

organizational culture, job context; Trevino, 1986; Trevino & Youngblood, 1990).

Trevino (1986) proposes that a person's perception of how much control he or she

exerts over life events, that is their locus of control (Rotter, 1966), could predict an

individual's ethical decision -making behavior. She also proposes that CMD level would

have an effect on an individual's ethical decision -making behavior. Later Trevino and

Youngblood (1990) empirically tested these propositions and found that individuals with

internal locus of control exhibited more ethical behavior than subjects with external locus

of control and that this relationship was as mediated by outcome expectancy when

subjects perceived that the organization rewarded ethical behavior. CMD was also found

to be significantly related to ethical behavior such that subjects at higher stages of

development tended to behave more ethically. Similarly other research found support for

the ability of interactionist model to predict ethical behavior (e.g. Bailey & Alexander,

1993; Jones, 1991; Morris & McDonald, 1995).

Theory of planned behavior. In addition to Trevino's (1986) model, ethical decision making behavior can also be framed by Fishbein and Ajzen's theory of planned behavior and is an extension of an earlier framework, the theory of reasoned action (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980; Ajzen, 1988). Ajzen and Fishbein explain that in general the theory of reasoned action is:

> …based on the assumption that human beings are usually quite rational and make systematic use of the information available to them. We do not subscribe to the view that human social behavior is controlled by unconscious motives or overpowering desires, nor do we believe that it can be characterized as capricious or thoughtless. Rather, we argue that people consider the implications of their actions before they decide to engage or not engage in a given behavior. (p. 5)

The main purpose of the theory is to understand and predict an individual's behavior (Gibson & Frakes, 1997). Thus, following from this theory, it is argued that people are rational in that they process information systematically; the behaviors that follow from this rational and systematic processing of information are not necessarily ethical or morally defensible (Dubinsky & Loken, 1989).

Although the purpose of both Ajzen and Fishbeins' theories (i.e., planned behavior and reasoned action) is the same, the two are different because 'the theory of planned behavior has added perceived behavioral control as the determinant of behavioral intention, as well as control beliefs which affect the perceived behavioral control" (Chang, 1998, p. 1826). The only difference between the theories of reasoned action and planned behavior is control, the rest of the components are identical. For the sake of clarity, from this point forward only the theory of planned behavior will be discussed.

The theory of planned behavior infers that intention is at the core of explaining behavior (Dubinsky & Loken, 1989; Randall & Gibson, 1991). The intention to perform (or not to perform) is the immediate determinant of a behavior (Ajzen & Fishbein, 1980). Fishbein and Ajzen (1975) define behavioral intention as the individual's subjective probability that he or she will engage in that behavior. Thus, the stronger one's intent, the more likely he or she is to perform the behavior.

Behavioral intention is a function of two components, one is a personal factor and the other reflects social influence: (a) a person's attitude toward the behavior of interest and (b) the subjective norm (Fishbein & Ajzen, 1975). Attitude towards behavior is the individual's positive or negative evaluation of performing the particular behavior of interest (Ajzen, 1988). A person's attitude is in part determined by his or her general feeling of favorableness or unfavorableness about engaging in a particular behavior (Randall & Gibson, 1991). In turn, one's feeling of favorableness is a function of an assessment of whether the behavior is good or bad (Dubinsky & Loken, 1989) and the beliefs that performing the behavior will lead to certain consequences (Ajzen & Fishbein, 1980).

The second function, subjective norm, is an individual's perception of social pressure to perform or not to perform the behavior under consideration (Ajzen, 1988). In particular, a person's intention to perform or not to perform a behavior is affected by the perception of whether a behavior is important to others who are significant to herself or himself (e.g. parent, friend, teacher, spouse, manager; Fishbein & Ajzen, 1975). In general, behavioral intention is the assumption that "people tend to perform a behavior

when they evaluate it positively and when they believe that important others think they should perform it" (Ajzen, 1988, p. 117).

This framework is applicable to understanding ethical decision-making behavior because it is equipped to capture both the individual and situational factors that impact individual's ethical decision intentions (Flannery & May, 2000; Randall & Gibson, 1991). Theory of planned behavior is considered parsimonious relative to other theories, which is advantageous to understanding ethical decision-making behavior (Dubinsky & Loken, 1989). Gibson and Frakes (1997) applied Azjen and Fishbein's theory to the examination of unethical decision-making in realistic situations encountered by certified public accountants (CPAs). Chang (1998) conducted a validation study of the theory of planned behavior showed that the theory is valid and explains the intention to perform unethical behavior.

In a recent study, Flannery and May (2000) synthesized Trevino's interactional model and Fishbein and Ajzen's theory of planned behavior to study the decision intentions of managers in the metal-finishing industry who were faced with environmental ethical decisions (i.e., wastewater treatment decisions). Results indicated that managers' ethical decision intentions could be predicted using the theories together. In general, people are limited in their capacity to process information and therefore rely heavily on decision-making heuristics to simplify the process, which includes cognitive and psychophysical determinants of choice (Kahneman & Tversky,1983), most often in complex situations such as ethical decision-making (Jones & Ryan, 1997).

A new theory: Moral approbation. Moral approbation, a recently introduced construct, can be useful in developing our understanding of ethical decision-making

behaviors (Jones & Ryan,1997). Moral approbation is defined as the desire for moral approval from oneself or others (Jones & Ryan, 1997; Ryan & Riordan, 2000). Jones and Ryan's model of moral approbation helps explain why people do not always act in accordance with their moral judgments. Moral approbation begins to fill the theoretical gap between moral judgment and moral action by providing a link between moral cognition (e.g., CMD) and moral behavior because it explains why and under what circumstances individuals act on their moral judgments (Jones & Ryan, 1997).

The moral referent group from which one draws approbation (i.e. approval) is composed of oneself, others, or most likely some combination of both (Jones & Ryan, 1997; Ryan & Riordan, 2000). Although the group may include only oneself, it may extend to contain an entire society, depending on the individual's moral development (Jones & Ryan, 1997) and in an organizational setting other members and the organization (i.e., organizational culture). This is buttressed by Kohlberg's (1969) cognitive moral development theory, which states that as people develop they take moral cues from different sources, starting most locally with parents and moving to family, peers, to social norms, and eventually some individuals become autonomous in making moral judgments. Kohlberg's theory of cognitive moral development will be explicated in the next section, after moral approbation is further explained.

To better understand moral approbation it is useful to look at parallel psychological theories (Jones & Ryan, 1997) that have been previously explored and are more developed. For example, self-discrepancy theory, as presented by Higgins (1987; 1989), differentiates between three domains of the self. The first is the *actual*-self, which is a representation of the attributes that someone (self or other) believes you actually

possess. The *ideal* self represents the attributes that someone (self or other) would ideally like you to possess. Last, is the *ought*-self, which is a representation of the attributes that someone (self or other) believes you should or ought to possess. According to self-discrepancy theory, "people are motivated to reach a condition where their self-concept matches their personally relevant self-guides" (Higgins, 1989, p. 409). In other words, sometimes a person will behave in a way that reduces the condition of discrepancy.

Self-regulation, another theory analogous to moral approbation, addresses how individuals control and direct their own actions (Markus & Wurf, 1987). Self-regulation theory explains how the person rather than the environment controls behavior without focusing specifically on representations of the self as regulators. This involves several processes; goal setting, cognitive preparation for action, and a cybernetic cycle. Controlling of one's behavior may be done in order to serve some goal. Preparation for action involves cognitive processes that draw on one's procedural knowledge deemed useful to attaining goals in a given situation. Next, one performs the behavior, which occurs in a cycle of self-regulation. This involves monitoring behavior, making a judgment about how well the behavior is being executed, and then evaluating or reinforcing the self and adjusting the behavior.

In moral approbation theory, once an individual in a moral dilemma has made a decision, she or he determines the anticipated moral approbation associated with the projected course of action and compares it to her or his own unique psychological threshold. This is known as desired moral approbation (DMA), which is the differences in amount of moral approbation that individuals require from ones self (DMA-S) or from others (DMA-O) in order to proceed with moral actions without discomfort (Jones &

Ryan, 1997; Ryan & Riordan, 2000). If the threshold is met, the individuals are likely to establish formal moral behavior intentions. In other words, if the "amount meets or exceeds their minimum requirement for moral approval, they are more likely to perform the actions" (Ryan & Riordan, 2001, p. 449).

An example is offered here to demonstrate DMA. An employee has accidentally found a competitor's product price changes for next month and handed it over to a manager who must now decide whether to use this information. The manager may decide to use the information and feels he owes it to the company and employees to take advantageous of this opportunity. He knows that other managers have not discarded such data in the past and would approve if they knew he used the information. In this case the level of moral approbation from others would be high and the manager's behavioral intention would also be high. However, if the other managers normally discarded such information and would disapprove, then his intentions to act may be lower because the approval does not meet his minimum requirement

Cognitive moral development. In moral judgment research the fundamental assumption is that a person's judgments reflect an underlying organization of thinking and that these organizations develop through a definite succession of transformations (Rest, 1979). Cognitive moral development (CMD) is based on the assumption that an individual's mental structure develops from an interaction with particular organismic structuring tendencies and from the structure of the world around themselves (Kohlberg, 1969). The individual's CMD stage, a core component of the person-situation interactionist model and moral approbation discussed earlier, is a way to understand how

individual's think about ethical dilemmas and how they determine what is right in a particular situation (Trevino, 1986).

The CMD theoretical framework contains a hierarchical six-stage continuum. The continuum is composed of three broad levels of CMD and within each are two stages (six total). The stage concept is appropriate because stages are essentially the "ideal-typological constructs designed to represent different psychological organizations at varying points in development" (Kohlberg, 1969, p. 372). CMD involves an individual moving from one stage to the next. This progression in stages is invariant and irreversible. In other words, a person's progress through stages is always in ascending order, such that he or she must go from stage one and through stage two before getting to stage three and will not move back to stage one. An individual's profile represents the dominate CMD stage he or she is in, a stage that person is leaving but still uses, and a stage that person is moving into, but which has not yet crystallized (Kohlberg, 1969). The three levels and two stages within each level will be explicated below.

First is the *preconventional level*, at which a person's "moral value resides in external, quasi-physical happenings, in bad acts, or in quasi-physical needs rather than in persons and standards" (Kohlberg, 1969, p. 376). Young children are typically at this level; however; underdeveloped adults may be as well. At this level, one tends to be responsive to cultural rules, and to what is labeled "good" or "bad" and "right" or "wrong", bu t interprets these in terms of either the physical or the hedonistic consequences of action (Kohlberg, 1981). As mentioned above, within each level there are two stages. At the *preconventional* level is stage one, which is labeled as an *obedience and punishment* orientation in which a person's decision of what is right or wrong is

motivated by avoidance of punishment and/or external consequences (i.e. physical). Kohlberg refers to stage two as an *instrumental relational* orientation. At this stage, a person has a naively egoistic perspective and is motivated by the possibility of satisfying his or her own needs. In simple terms, such a person is driven by "desires for reward or benefit" (Kohlberg, 1969, p. 381). Right actions are those that can serve as a means for satisfying one's needs and at most the needs of the people he or she cares about (Velasquez, 1998).

At the *conventional level*, what is considered right is "that which conforms to the expectations of good behavior of the larger society or some segment like a family or peer group" (Trevino, 1986, p. 604). In addition to conforming to expectations, a conventional person demonstrates strong loyalty to the group and its norms (Velasquez, 1998). Velasquez offers the example of an adolescent, typical of this level, who if asked whether something is wrong would give a response in terms such as "what my friends think", "what my family has taught me", or even "what we Americans believe". Kohlberg categorizes most adults in the conventional level, at either stage three of four.

At stage three, which Kohlberg (1969; 1981) refers to as the "good boy -nice girl orientation", such a person acts for the approval of other people as well as to please and help them. Thus, one's action is motivated by "anticipation of disapproval of others, actual or imagined-hypothetical (e.g., guilt)" (Kohlberg, 1969, p. 381) and to fulfill the expectations of significant others (Trevino, 1986). At stage four a person has an *authority and social-order maintaining* orientation. Such a person will make the "right" decision out of respect for authority and for the sake of maintaining the social order; in other words, to uphold the law. An important element of this more advanced stage is that a

person can distinguish the norms generated by the societal system from his or her own interpersonal relationships and motives (Velasquez, 1998).

At the third level are the final stages (five and six) and is labeled the *postconventional, autonomous, or principled* stages. A person at this level has come to a point at which he or she does not simply accept the values and norms of the groups to which he or she belongs (Velasquez, 1998). Rather, a person at this level looks beyond norms, laws, or the authority that a group or society has adopted by redefining them in terms of self-chosen moral principles that can be justified in rational terms (Trevino, 1986; Velasquez, 1998). Additionally, such a person is concerned with self-condemnation from violating his or her own principles (Kohlberg, 1969). At this level one's guiding principles are universal and will decide right from wrong in terms of "what is fair for everyone", "justice", or "human rights". What is considered as right "tends to be defined in terms of general individual rights and in terms of standards that have been critically examined and agreed on by the whole society" (Kohlberg, 1981, p. 18). Here, one has become aware that there is a variety of personal views and opinions, as well as different ways to gain agreement and to carry out due process. He or she believes that the multitude of perspectives should be tolerated (Velasquez, 1998).

The sixth and final stage is the most advanced; few people can be found who have developed to this level. A person at this level has a *universal ethical principle orientation* and defines what is right "by the decision of conscience in accord with self-chosen ethical principles appealing to logical comprehensiveness, universality, and consistency" (Kohlberg, 1981, p. 19). These principles are not concrete, rather these are abstract general principles pertaining to justice, welfare of society, equality of human rights,

respect and dignity of human beings, and that people are the ends rather than the means

and must be treated as such (Kohlberg, 1981; Velasquez, 1998). At this level "motives

don't make an act right (or not wrong); but if an act follows from a decision to follow

general self-chosen principles, it can't be wrong" (Kohlberg, 1969, p. 380).

To summarize, the person-situation interactionist model begins with the existence

of an ethical dilemma and proceeds to a cognitive stage, wherein cognitive moral

development (CMD) is activated (Trevino, 1986). CMD is an individual's mental

structure, developed over time, that represents how one thinks about what is right and

wrong (Kohlberg, 1969). In Trevino's model, moral judgments made in the CMD stage

are then moderated by individual and situational factors. Theory of planned behavior

proposes that people process information in a systematic and rational manner, with

attitude and subjective norm preceding behavioral intention (Ajzen & Fishbein, 1980).

The various models represent the complexity of ethical decision-making and if taken

together could provide a multifaceted explication of ethical decision-making.

Hypothesized Model

The model tested in this study (see Figure 1) will now be explained. As stated

earlier, according to the moral approbation theory, one's referent group consists of others

and his or herself. Depending on the individual, the referent group could expand to

include the entire society or be as narrow as to include only the self. Kohlberg's CMD

theory states that as individuals advance in their stage of moral development they become

more autonomous in making moral judgments and ultimately do so independently. Thus,

it is likely that individuals who demonstrate higher stages of CMD will have a stronger

need for moral approval from themselves. Ryan and Riordan (2000) suggest that CMD is

a predictor of DMA, however this hypothesis has not been tested until now. As presented in the model CMD level was expected to positively influence on DMA-S and negatively influence DMA-O.

Hypothesis 1a: Cognitive moral development stage will have a positive relationship with the level of desired moral approbation from self (DMA-S).

Hypothesis 1b: Cognitive moral development stage will have a negative relationship with the level of desired moral approbation from others (DMA-O).

Figure 1

Hypothesized Model
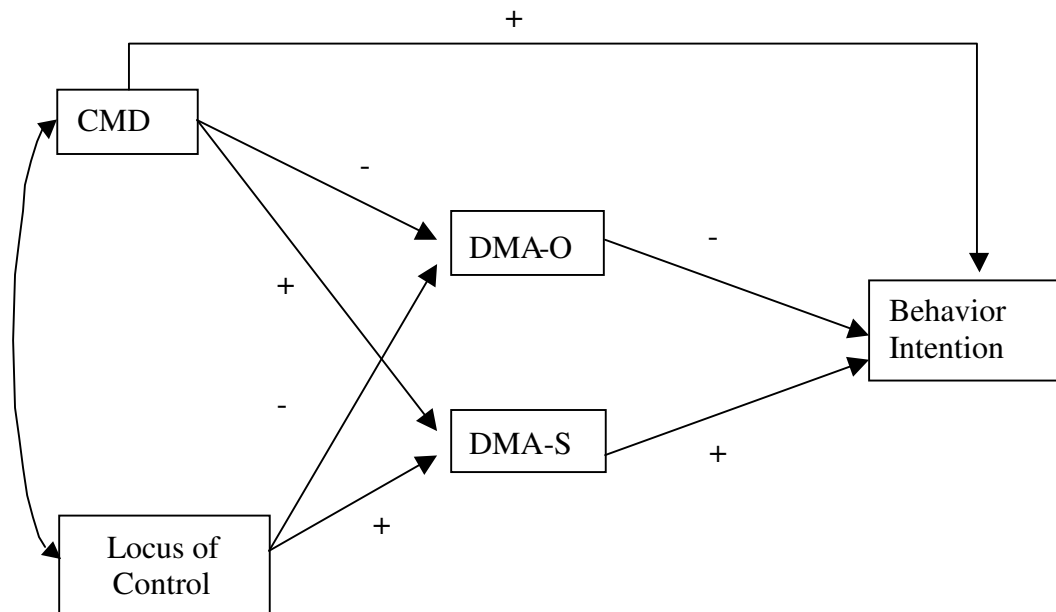
The way individuals think about ethical dilemmas (i.e., their CMD stage) influences what they decide is the right thing to do when faced with an ethical dilemma. Thus CMD was expected to directly influence behavioral intentions. Also, as proposed by Jones and Ryan (1997), DMA may be the link between moral judgment and moral action.

DMA from others and self were therefore expected to affect behavioral intention and that

some of the influence of CMD on behavioral intention would be mediated through DMA.

Hypothesis 2a: CMD will have a direct positive influence on behavioral intention, such

that the higher the CMD stage the greater the intention to act in a moral dilemma.

Hypothesis2b: CMD will have mediated influence on behavioral intention through

DMA-S and DMA-O, such that DMA-S will be positively and DMA-O will be negatively

related to behavioral intention.

Ryan and Riordan (2000) propose that locus of control precedes DMA. People

differ in how they view the causes of their success and failures (Ralston, 1985). Locus of

control, one dimension of Weiner's attribution model (Weiner, 1992; Weiner, Frieze,

Kukla, Reed, Rest, & Rosenbaum, 1987), explains where causes are perceived on an

internal-external continuum. Internal or external locus of control is a person's perception

of how much control he or she exerts over life events (Rotter, 1966), whether the causes

of outcomes are seen as coming from within or outside themselves (Weiner, et al.).

The negative end (external) of the causal locus continuum (Weiner, 1986; 1992)

represents individuals' beliefs that outcomes of events around her or himself are due to

chance or fate and are not contingent upon their efforts or actions (Rotter, 1966).

Similarly, DMA-O is the desired moral approval from an external source, that is, from

other people or society. At the positive (internal) end of the causal continuum is the

perception that outcomes of events are caused by ones own efforts and actions. Internal

causality likely precedes DMA-S, the desired approval from one's self. Individuals who

perceive an internal causality of events are more likely to do what they think is right and

will tolerate discomfort for doing so (Trevino & Youngblood, 1990) and therefore are

more likely to have lower DMA-O and greater DMA-S, which in turn influences the willingness to act in a moral dilemma. It was expected that the effect of locus of control on behavioral intention is mediated through DMA.

Hypothesis 3a: Locus of control will have a direct positive influence on DMA-S, such that the more perceived external causality the greater the moral approval expected from oneself.

Hypothesis 3b: Locus of control will have a direct negative relationship with DMA-O, such that the less external causality the greater the moral approval expected from others.

Hypothesis 3c: Locus of control will positively influence behavioral intention, mediated through DMA-S and DMA-O, such that the greater the perceived external causality the greater the intention to act in a moral dilemma.

In conclusion, the present study aimed to advance decision-making research and theory in psychology by attempting to establish the nomological network around DMA. In addition, the study incorporated the person-situation interactionist theory (Trevino, 1986), theory of planned behavior (Ajzen & Fishbein, 1980), and CMD theory (Kohlberg, 1969). Although Jones and Ryan (1997) and Ryan and Riordan (2000) introduced DMA and a validated measure of DMA, the present study was the first to empirically examine DMA in ethical decision-making. The proposal that DMA could fill the theoretical gap between moral judgment and moral action by serving as a link between CMD and moral behavior was tested.

Investigating the determinants of ethical behavior is important as it increases understanding of the factors associated with business ethics and ethical decision-making (Koh & Boo, 2001). Such research has implications for application because it provides

the next step in understanding how individuals think about ethical dilemmas, which in turn can be used to develop tools such as training and ethics programs that can improve how moral dilemmas are handled (Weaver, Trevino, & Cochran, 1999). Actions following from ethical decision-making can affect coworkers, shareholders, as well as the overall welfare of the organization. Benefits to organizations would come from managers who are better equipped to tackle moral dilemmas. For example, a manager's choice in how to handle layoffs has been shown to prevent wrongful termination suits (Brockner, Wiesenfeld, & Martin, 1995) and improve morale among layoff survivors (Lind, Greenberg, Scott, & Welchans, 2000).

SECTION 2

METHOD

Participants and Procedure

Participants were enrolled in an introductory psychology class at a major public

southeastern university. Students were informed that participation would be voluntary,

confidential, and compensated with credit toward their course grade. Participants were

given a two-part survey over the course of two class sessions. During the first session,

participants received a consent form, instructions about completing the study, and the

survey containing the predictor variable measures (i.e. CMD, LC, and DMA). Two days

later the second part of the survey was administered, which included the criterion variable

measure (behavior intention) and biographical items. Two different measurement times

were used to account for proper chronology of predictor and outcome variables. Due to

absence and optional participation, of the 185 distributed, 161 completed surveys were

returned (response rate = 87%). Of the 161 participants 89 (55.3%) were female, 67

(41.6%) were male, and 5 (3.1%) did not report gender. The average age was 20.9 years

(s.d. = 3.1) with a mode of 20.0 years. Of the participants 108 (67.1%) were Caucasian,

28 (17.4%) were Asian, 9 (5.6%) African American, and 5 (3.1%) were Hispanic.

Measures

Cognitive moral development. Participants' CMD was assessed using the adapted

Moral Judgment Interview (MJI), which is the operationlization of Kohlberg's theory and

stages of moral development (Weber, 1991). The MJI is designed to elicit one's own

construction of moral reasoning, moral frame of reference or assumption about wrong or right, and the way that these beliefs are used to make and justify moral decisions (Weber, 1991). In the interview, participants were presented with a situation involving a moral conflict. For the present study Kohlberg's Heinz dilemma was used (Should Heinz steal a drug to save his dying wife if the only druggist able to provide the drug insists on a high price that Heinz cannot afford to pay?). The MJI is in written form and consists of seven open-ended questions that refer to a previously read scenario (see Appendix A). Answers were assessed using Weber's abbreviated scoring guide (see Appendix B), which allows for the assessment of an individual's moral development and the identification of his or her CMD stage. The Abbreviated Scoring Guide is a validated adaptation of Kohlberg's (1979) lengthier Standard Issues Scoring method.

In the present study the written interviews were scored by the researcher and two graduate students of industrial/organizational psychology. While scoring, the raters had for reference the Abbreviated Scoring Guide and descriptions of each CMD stage. Each MJI was scored by two raters who were doctoral students in industrial-organizational psychology and familiar with CMD theory and the MJI measure. There was an initial 69.6% agreement rate. Agreement was based on Weber's (1991) criterion, that is both raters scoring an interview as the same CMD stage. For this study where there was disagreement the interview was reevaluated and discussed with a third trained rater and scored by consensus. Where agreement could not be reached, the lower score was assigned. Most scoring disagreements were due to difficulty in discerning between two consecutive stages because some of the subjects' answers showed signs of the next higher

stage. This is a common problem in measuring moral development and it is appropriate to assign the lower stage (J. Weber, personal communication, April, 11, 2002)

Locus of control. The scale used to measure locus of control was the three-item locus of causality subscale from Russell's (1982) causal dimension scale (see Appendix C). This scale is designed to assess how participants perceive the locus of cause that they have stated for their performance on a recent course exam. More specifically, the locus of causality scale determines whether the cause is perceived as something about the attributer (internal locus) or outside the attributer (external locus). Items were responded to on 5-point Likert-type scales with higher values indicating greater internal attribution of causality. The scale exhibited an $\alpha = .75$, which is slightly lower than in past research (e.g. Thomas & Mathieu, 1994) yet is at an acceptable level.

Desired moral approbation. Individuals desired moral approbation (DMA) from themselves and others was measured with Ryan and Riordan's (2000) Desired Moral Approbation (DMA) scale (see Appendix D), which consists of two subscales; self (DMA-S) and others (DMA-O). The DMA-S contains five items and the DMA-O is composed of 15 items. Examples are "I want others to view me as a moral person" and "I do what I think is right, no matter what anyone else thinks". All items were responded on a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The DMA scale exhibited $\alpha = .74$, and the DMA-S and DMA-O subscales had $\alpha = .74$ and $\alpha = .82$, respectively, which are consistent with past research (i.e., Ryan and Riordan, 2000).

Behavioral intent. The participant's behavioral intention was measured using a method similar to Chang (1998). Participants read a short scenario that depicts a moral situation (see Appendix E). The scenario presented a situation in which a university

graduate teaching assistant (TA) is faced with a dilemma (a student has asked Joey, the

TA, to change a borderline grade in order to retain his scholarship). After reading the

scenario, participants were asked to imagine being in the assistant's situation and to

respond to three items on 5-point Likert-type scales. An example of an item is "How

much would you want to change the student's grade?". The behavior intention scale

exhibited $\alpha = .77$.

SECTION 3

RESULTS

Descriptive statistics, which include correlations, means, and standard deviations, for all study variables are presented in Table 1. Path analysis performed with LISREL 8.2 statistical software package (Jöreskog & Sörbom, 1998) was used, following the guidelines of Pedhazur (1997), to test whether the hypothesized model is consistent with the pattern of relations among the variables (for LISREL syntax and output see Appendix F). The model tested is overidentified because the number of equations is greater than the number of parameters to be estimated, in other words, there are more known elements (correlations among variables) than unknowns (path coefficients). Therefore, overall fit indices can be calculated to test whether this model differs significantly from one that fits the data perfectly, which is the just-identified model with the number of equations equal to the number of paths. LISREL provides over 30 different fit indices. The most appropriate indices for the present study and analysis were chosen based on the suggestions of Hu and Bentler (1998); Marsh, Balla, & McDonald (1988); and Mulaik, et al. (1989).

Analysis of a just-identified model would result in a χ^2 equal to zero and a p equal 1.00, indicating a perfect fit. Thus, testing the χ^2 of an overidentified model addresses how different it is from the one that perfectly fits the data and therefore one does not want to reject the null hypothesis. For the present model χ^2 (2, N = 161) = 4.70, p = .10.

Table 1

Correlations, Means, Standard Deviations, and Reliabilities

Variables	Mean	S.D.	1	2	3	4	5	6	7
1. Age	20.92	3.05							
2. Sex	.58	.50	.16*						
3. CMD	3.41	0.86	.09	.02					
4. Locus of Control	3.83	0.80	.06	.02	.19**	(.75)			
5. DMA-O	2.62	0.51	.00	.19**	.02	-.02	(.82)		
6. DMA-S	2.18	0.67	.04	.07	-.07	.00	-.17*	(.74)	
7. Behavioral Intent	2.58	0.95	-.10	-.16*	.04	-.03	-.15*	.10	(.77)

$N = 161$, $* p < .05$ $** p < .01$

Hu and Bentler (1998) highly recommend the use of the Standardized Root Mean Square

Residual (SRMR), an average of standardized fitted residuals, with a smaller value ($\leq$

.08) indicating a better fit because it is sensitive to simple model misspecifications and

less sensitive to distribution and sample size. The analysis of the present data provided a

SRMR = .04. The Root Mean Square Error of Approximation (RMSEA) is an index that

compensates for the effect of model complexity with a smaller value indicating a better

fit, and a value $\leq$ .06 is considered to be acceptable. The RMSEA for the model in this

study is equal to .09. The Tucker-Lewis Index (TLI) or Non-Normed Fit Index (NNFI) is

independent of sample size and compensates for the effect of model complexity (Bentler

& Bonnett, 1980). NNFI can fall outside of the 0-1 range and acceptable value is $\geq$ .95.

The present model resulted in a NNFI = -1.14. The Comparative Fit Index (CFI) follows

the logic of RMSEA and is defined as the ratio of improvement in noncentrality (moving

from the null to the proposed model) to the noncentrality of the null model. In general,

CFI $\geq$ .95 is associated with models that are plausible approximations of the data. For the

present model CFI = .57 indicating poor fit. Fit indices are summarized in Table 2.

Path Analysis

Path analysis evaluates the direct and indirect effects of variables hypothesized as

causes of the outcome variable. Path coefficients indicate the direct effect of a variable

hypothesized as a cause of a variable taken as an effect and the amount of expected

change in the outcome variable as a result of a unit change in the predictor variables. The

unstandardized path coefficients (*b*), standardized path coefficients (β), and one-tailed t-

scores for each path are presented in Table2. The model with the corresponding β's and

residuals (*e*) are presented in Figure 2.

Table 2

Path Coefficients, T-scores, Alphas, and Fit Indices

Path	*b*	β	*T*	α
1. CMD → DMAO	.013	.023	.283	.389
2. CMD → DMAS	-.054	-.070	-.864	.194
3. CMD → Behav. Int.	.058	.052	.664	.254
4. Locus → DMAO	-.017	-.026	-.324	.373
5. Locus → DMAS	.013	.015	.185	.426
6. DMAO → Behav. Int.	-.254	-.135*	-1.721	.044
7. DMAS → Behav. Int.	.121	.085	1.084	.140

* $p < .05$, $df = 159$

Model Fit Indices

$\chi^2 = 4.70$, $df = 2$, $p > .05$

TLI (NNFI) = -1.14

CFI = 0.57

RMSEA = 0.09

SRMR = 0.04

Figure 2

Path Model
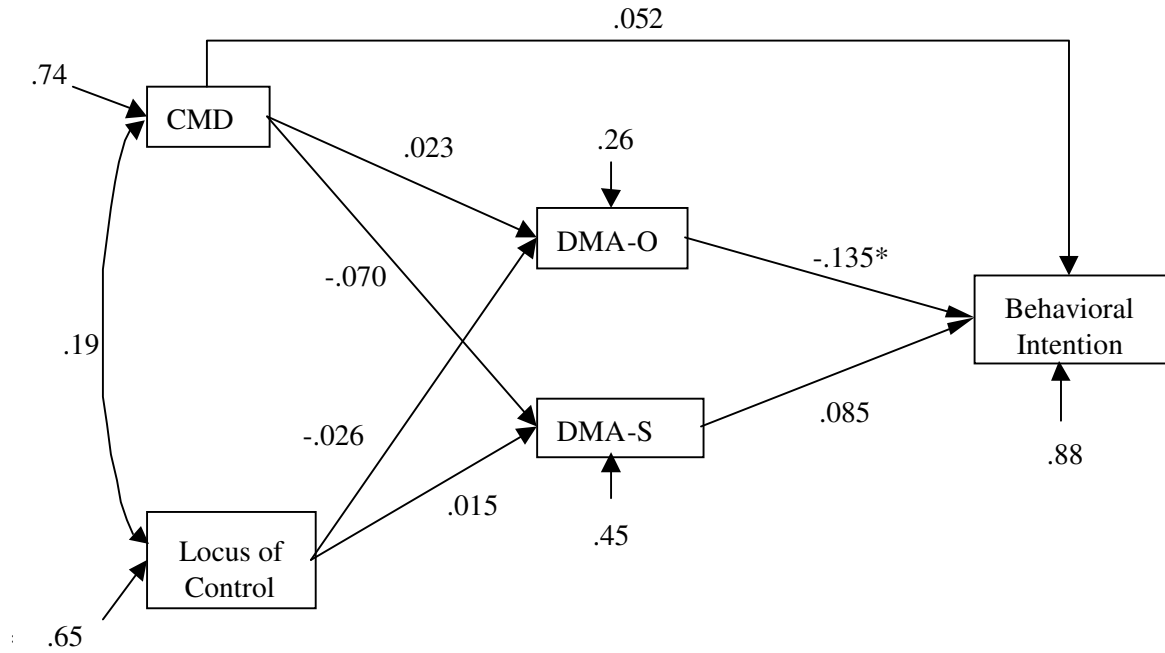
The first hypotheses proposed that CMD would predict DMA, specifically, that the paths from CMD to DMA-S and to DMA-O would be positive and negative, respectively. The path coefficient for Hypotheses 1a, CMD predicting DMA-S, was not significant (β= -.070), thus the hypothesis is not supported. Hypothesis 1b, predicting the affect of CMD on DMA-O, was also not supported with a non significant β= .023.

The second set of hypotheses proposed the influence of CMD on behavioral intention. Specifically, Hypotheses 2a predicted that CMD has a direct positive influence on behavioral intention. The path analysis results show that the effect is in the expected direction, however the test of the coefficient (β = .052) did not meet significance and the hypotheses was not supported. Hypothesis 2b predicted that CMD would also have a mediated influence on behavioral intention, through DMA-S and DMA-O. The mediation

hypotheses was partially supported. Path analysis results reported earlier verified that in this model CMD did not have a direct effect on either DMA-S or DMA-O, which would need to be significant for mediation. DMA-O did, however, have a significant path leading to behavioral intention as predicted ($\beta = -.135$, $p < .01$) whereas the path from DMA-S was not significant ($\beta = .085$).

Path analysis revealed that locus of control did not have significant influence on DMA-S ($\beta = .015$), thus Hypothesis 3a proposing that the perceived external causality the greater the moral approval will be expected from oneself was not supported. Hypotheses 3b predicted that locus of control and DMA-O would be negatively correlated such that the less external causality the greater the moral approval expected from others. This was not supported with a non significant $\beta = -.026$. Finally, results did not support Hypothesis 3 that locus of control positively influences behavioral intention, through DMA-S and DMA-O.

SECTION 4

DISCUSSION

Summary of Results

The purpose of this study was to advance current ethical decision-making behavior theory by testing a model of the relationships between individual characteristics and behavior intention. The aim was to establish the nomological network of DMA through empirical examination of its role in ethical decision-making behavior. Specifically, relationships among DMA and behavior intentions, locus of causality, and cognitive moral development were hypothesized and tested using path analysis. Results of the path analysis showed that all paths were non-significant other than DMA-O predicting behavioral intention.

Results via Statistics, Measurement, and Method

The fit indices used to assess the model, except for χ^2 and SRMR, indicate that the model does not fit the data. The χ^2 statistic was acceptable, however, with smaller sample sizes a model may be presumed consistent with the data even when it is not (Pedhazur, 1997). The good SRMR value may be because this index is less sensitive to sample size and distribution than the others. The other indices may not have supported the model because when the sample size is small (i.e. N < 250) TLI and RMSEA tend to over-reject models (Hu & Bentler, 1998). However, CFI performs virtually without bias and is considered to outperform other indices such as TLI.

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The null results of this study may be due to weakness in the measurement of CMD. The scoring of the written MJI used to assess CMD, like other subjectively scored interviews, is susceptible to the biases of the interview raters (Nunnally & Burnstein, 1994). Although each rater was familiarized with CMD theory, practiced scoring on a set of pilot interviews, and had definitions of the CMD stages and a scoring guide at hand while scoring [similar to the method suggested by Weber (1991)], the inherent deficiency in subjective scoring methods may not have been overcome.

Results of the study were beset by low standard deviations among the predictor variables. This is likely due to range restriction in the sample, most notably because of the only undergraduate students being selected from only one college. This resulted in low variability of age as shown by standard deviation of only 3.05 years (Mean = 20.9, Mode = 20.0). Restriction in age is a threat, for example, because CMD like other types of development is dependent on age and life experiences which form one's organized structures of thinking (Kohlberg, 1979).

The second outcome of collecting data in one geographical area is the restriction of religious beliefs. The present study was conducted in the southern U.S., often referred to as the Bible Belt because of the a strong Christian-oriented religious contingency within the population. This was evident in the Moral Judgment interview responses, of which 15.5% specifically referenced Christian sources and ideology. This is a concern for ethical theory research in general because a person's group (cultural, racial, gender, etc.) and individual experiences also influence how he or she make sense of, and responds to moral events (Davidson & Friedman, 1998).

Results Via Theories

The present study made little headway on establishing the DMA nomological network. Results show that only DMA-O significantly affects behavioral intentions, partially supporting Jones and Ryan's (1997) claim that DMA precedes moral actions. This indicates that the amount of approbation an individual requires from others precedes the establishment of formal moral behavior intentions. More specifically, the lower the need for moral approval from their referent group the greater the behavioral intention. In an organizational setting this would mean that the lower an employee's need for moral approbation from their referent group the more likely he or she is to respond to coworkers' encouragement or discouragement when deciding whether to act on their moral judgments (Ryan & Riordan, 2000). Moral approbation theory also postulates that DMA is a link between moral judgment and action, which was not confirmed because CMD was not shown to significantly predict DMA-O or DMA-S.

The results reflect positively on Ajzen and Fishbein's (1975) theory of planned behavior. According to the theory behavior intention is a function of two components: (a) the subjective norm and (b) a person's attitude toward the behavior of interest. Subjective norm, is an individual's perception of social pressure to perform or not to perform the behavior under consideration (Ajzen, 1988). In particular, a person's intention to perform a behavior is affected in part by the perception of whether a behavior is important to others who are significant to herself or himself (e.g., parent, friend, teacher, spouse, manager; Fishbein & Ajzen, 1975). This perception underpins DMA-O, the desired moral

approval from an external source, other people, and society. Results of this study support

that the perception of what others expect influences behavioral intention.

The second function, attitude towards behavior, is 'the individual's positive or

negative evaluation of performing the particular behavior of interest" (Ajzen, 1988, p.

117), which is in part determined by his or her general feeling of favorableness or

unfavorableness about engaging in a particular behavior (Randall & Gibson, 1991).

Similar to attitude towards behavior, DMA-S is the desired moral approval from one's

self which is determined in association with a projected course of action and compared to

her or his own unique psychological threshold. If the threshold is not met then he or she

will not intend to act. Although in the theory of planned behavior the evaluation of

behavior (i.e., attitude) precedes the likelihood of action, DMA-S was not predictive of

behavioral intention.

The study does not support Trevino's (1986) person-situation interactionist theory

which illustrates that individual and situational components interrelate to determine a

person's ethical behavior. Accordingly, a person is first presented with an ethical

dilemma and then moral judgments (i.e., CMD) are activated. Moral judgments are then

mediated (or moderated) by individual factors before coming to fruition as an observable

behavior. In the present study DMA was tested as a mediating individual factor, however

it was not shown to be affected by CMD (the predictor variable), and thus does not meet

the criteria for mediation that the predictor variable significantly influences the mediating

variable (Baron & Kenny, 1986). This is disappointing because with each successive

CMD stage an individual's moral judgment is expected to grow less dependent on outside

influence and to move from self-centered conception of what is right to a broader

understanding of the importance of social contracts/principles of justice (Kohlberg, 1979; Trevino & Youngblood, 1990).

Future Research

    Methodological improvements. To eliminate rater biases, a possible alternative method for measuring CMD, would be similar to the method implemented by Brady and Wheeler (1996) to measure ethical predisposition. Shorter vignettes (instead of the Heinz dilemma) would be presented to participants followed by a set of multiple statements to rate rather than open-ended response questions used in the MJI. This is because participants, when responding to open-ended items, sometimes provide strategic responses rather than ones that reflect their actual feelings. Following Brady and Wheeler's method, respondents would rate each statement in a set of statements that represent different ways of thinking (i.e., the six CMD stages) about the moral dilemma presented in a vignette. Responses can be on Likert-type scales that indicate the extent to which the statement would fit or not fit one's level of thinking about a dilemma. Another alternative is to use a oral interview, but this is suggested with caution. Oral interviews are challenging to implement because of the interviewing skills needed and the time commitment required for both conducting the interviews and scoring response (Weber, 1996), which was the criticism of Kohlberg's original oral version of the Moral Judgment Interview.

    The measurement of a behavioral intention also requires closer attention. Fishbein and Ajzen (1975) addressed a measurement problem that makes the prediction of intentions problematic. They noted that researchers spend great effort to develop scales that are reliable, valid, and satisfy certain measurement criteria. Behaviors are often

chosen haphazardly. Other than the researcher's intuition, there is no way to scale how positive or negative a particular behavior might be. Fishbein and Ajzen found that scaling behaviors and predictors on the same scale (e. g., Likert, Guttman, etc.) result in dramatic improvements in the attitude/intention (behavior) correlation. In addition, the predictive power of measures, in particular Likert scales, improved when a number of behaviors were presented and subjects were asked how many behaviors they had performed or intended to perform.

Although the use path analysis was justifiably applied in this study an alternative approach, structural equation modeling (SEM), could be used. Path analysis is limited because only observed variables are contained in the analysis, and it has a more restrictive set of assumptions than SEM (Bollen, 1998). The main difference between the two types of models is that path analysis assumes that all variables are measured without error whereas SEM uses latent variables to account for measurement error. SEM could be a valuable approach in a study involving a newly identified construct such as desired moral approbation.

Theoretical improvements. Null results of this study signal the possible existence of additional untapped dimensions. For example, the relationship between CMD and DMA could be moderated by religious affiliation and identity. Weaver and Agle (2000) report that religions incorporate role expectations for holding to particular beliefs and assenting to specific intellectual claims and religious role identity can influence ethical behavior by affecting the basis on which moral judgments are formed. In turn, religious beliefs also affect the formation of behavioral in intentions. Anecdotal evidence of this can be seen participants' responses to the MJI. For example, one participant explained

that although she believes that Heinz is justified in stealing the drug to save his wife, she "would not steal if in the same situation because it is a violation of [her] religious beliefs". Future research should take into consideration and investigate the effects of religiosity on ethical decision-making behavior.

Another potentially untapped dimension of ethical decision-making behavior is collectivism-individualism, a societal-cultural level characteristic that produces measurable effects at the individual level. Collectivism and individualism are distinguishable on self-orientation and a focus on social systems. In a collectivist society individuals will subordinate their personal interest to the goals of the collective (Earley, 1989; Wagner, 1995). Levels of approval needed from oneself or others may vary across collectivistic and individualistic cultures. Future cross-cultural research should sample from both collectivist and individualistic countries to determine the effect that these discernible social-systems have on DMA and ethical decision-making behavior.

Jones (1991) criticizes the person-situation interactionist model because it does not consider that the decision making process begins only when a person is able to recognize the dilemma as a moral issue and recognizes his or her self as a moral agent. Jones adds a component to Trevino's (1986) model, moral intensity, that focuses on the moral issue rather than the moral agent (decision-maker). Moral intensity has multiple parts, including magnitude of consequences, social consensus, and proximity of effect and may affect recognition of issues via impact on individual's recognition of consequences of decisions. This raises the research question of whether moral intensity precedes or moderates ethical decision-making behavior.

Future of desired moral approbation. Although results of this study were disappointing, future research focusing on the source of DMA should continue. The knowledge base for DMA at this time is very limited and little is known about the source of DMA. The next step is to answer the question, what are the origins of DMA? Jones and Ryan (1997) make the assumption that just as people vary in individual differences such as being biologically different and socialized differently, and differ in cognitive development and religious affiliation, then desired moral approbation should also vary. Perhaps the source of DMA can be found in the very individual differences that Jones and Ryan analogize and in other biographical factors such as gender, ethnicity, and socio-economic status.

With a better understanding of DMA's roots, the development of its nomological network could continue with greater success. One direction for investigation is to examine the role of DMA in theories and behaviors that are significant to organizational settings, such as leadership. Specifically, transformation leadership, in which the thresholds for desired moral approbation of one's self and others may play a role because such leaders operate out of deeply held personal value systems that include justice and integrity and they recognize the needs of followers (Bass, 1990; Bass & Avolio, 1990). DMA would provide a new framework for examining leadership.

Implications for Practice

Advanced understanding of DMA, and its nomological network, can be applied in improving the behavior of organizational members. DMA-O was found in the present study to be predictive of behavioral intention, such that a lower threshold for approval from others preceded a higher intent to act. Employees who rely less on the approbation

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from others are more likely to follow through on their moral judgments (e.g., whistle blowing).

A means for organizational leaders to influence their employees DMA is by creating an ethical climate in the workplace. Ethical climate is an outgrowth of the personal values and motives of organizational founders and leaders and has been shown to have a positive impact on organizational outcomes (Dickson, Smith, Grohean, & Erhart, 2001). Organizations that lack ethical climates can implement ethics programs that serve as organizational control systems for producing good employee behavior, particularly in regards to legal issues and ethics (Weaver, Trevino, & Cochran, 1999). Value oriented ethics programs place emphasis on the development and articulation of shared values through formal (e.g., policy) and informal means (e.g., culture). By promoting a climate that encourages ethical behavior, and informs employees of what behavior will be approved of, organizations may in turn lower DMA thresholds and improve how often employees act on their moral judgments.

Conclusion. In conclusion, this study is the first to empirically examine the role of DMA theory in ethical decision-making behavior. DMA-O was shown to precede the intention to act in a moral dilemma, buttressing DMA theory (Jones & Ryan, 1997; Ryan & Riordan, 2000), according to which DMA is an individual difference variable that helps distinguish who is more likely to follow through on their moral decision. Although the hypothesized path model did not perform well the existence of the proposed relationships are still anticipated. The shortcoming is likely due to current underdeveloped psychology research methods and other untapped dimensions of ethical decision-making behavior. Future organizational psychology research is warranted for the

advancement of ethical decision-making theory and for application to improve

organizations.

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APPENDIX A

MORAL JUDGMENT INTERVIEW

The Moral Judgment Interview consists of a story that we believe presents some challenging issues. Some of you might choose one solution to the story, others of you may choose another. We are primarily interested in the explanations or reasons you give for your decisions. Try to justify and explain your statements as fully as possible. Very short answers are of no help to us so be sure to elaborate fully. Use the backside of the paper provided to complete your answers if necessary. Keep in mind that we are more interested in you answers to the *why* questions than to the *what* questions. Even if you give a long description of what you think is right or what you think should be done, it is of no help if you do not explain *why* you think it is right or *why* you think it should be done. Answer each question the best you can. Please do not compare an answer to prior answers.

HEINZ

In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered.

The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid $400 for the radium and charged $4,000 for a small dose of the drug.

The sick woman's husband, Heinz, went to everyone he knew to borrow the money and tried every legal means, but he could only get together about $2,000, which was half of what it cost.

He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So having tried every legal means, Heinz gets desperate and considers breaking into the man's store to steal the drug for his wife.

1. Should Heinz steal the drug?_____ (Yes or No)   Why, or why not?
2. Does it make a difference whether or not he loves his wife?
3. Suppose the person dying is not his wife but a stranger. Should Heinz steal the drug for the stranger?
4. Suppose the only chance Heinz had to acquire the money is to steal fund from his employer. Should Heinz steal his employer's money to purchase the drug?
5. Is it important for people to do everything they can to save another's life? Explain.
6. It is against the law for Heinz to steal. Does that make it morally wrong?
7. In general, should people try to do everything they can to obey the law?

APPENDIX B

ABBREVIATED SCORING GUIDE

Stage Orientation-Moral Reasoning Explanation

Stage 1: Concern over consequences of personal harm.

Stage 2: Concern over the consequences of personal reward
        Concern for personal satisfaction
        A sense of duty to oneself

Stage 3: Concern over the consequences to an immediate group
        Concern over personal relationships with others
        A sense of duty due to how others will perceive me and my actions
        Concern over personal integrity and how I will look to others
        A sense of duty to the consequences it may have for others

Stage 4: A sense of duty to a professional responsibility or group
        A sense of duty to a commitment to a code, oath, or principle
        A sense of duty to a larger societal group
        Concern for social order, harmony
        Concern for society's laws
        Concern over the consequences to the larger societal group

Stage 5: Personally held values or beliefs of justice, fairness, rights
        Personally held belief in a moral good for the greatest number of people affected

Stage 6: Universal principles of justice and fairness
        Universal laws governing behavior that supersede society's laws

Adapted from Weber (1991), p. 318.

APPENDIX C

LOCUS OF CAUSALITY SCALE

1.   What was your grade (0-100) on the last exam that you took? _____%

Describe, in your own words, why you received the grade that you did on the exam. That is, list what factors influenced why you did well, poorly, or somewhere in between.

Think about the reason, or reasons, you have written above. The items below concern your impressions or opinions of this cause or causes for your exam score. Circle the one number on each of the following scales which best represents how you feel.

2. Is the causes(s) something that:
    Reflects an aspect   1 2 3 4 5   Reflects an aspect
    of the situation   of yourself

3. Is the cause(s) something:
    Outside of you   1 2 3 4 5   Inside of you

4. Is the cause(s):
    Something about   1 2 3 4 5   Something about you
    others

APPENDIX D

DMA SCALE

The statements below refer to how you feel about making ethical decisions. Please indicate the degree of your agreement or disagreement with each statement by writing your response in the space to the left of each item. Please be open and honest in your answers and provide only one response for each item. Answer with a value from 1 to 5 based on the scale below.

1	2	3	4	5
Strongly agree	Agree	Neutral	Disagree	Strongly disagree

_____ 1. I want others to think that my decisions are ethical

_____ 2. I want others to view me as a moral person

_____ 3. I hope others view my behavior as ethical

_____ 4. I want others to support my decisions on moral issues

_____ 5. I want others to praise my choices in ethical situations

_____ 6. I feel bad when other people condemn me for my choices in moral situations

_____ 7. I dislike it when others think that I have done something wrong

_____ 8. I worry about whether others view my decisions and actions as moral

_____ 9. It is important to me to get praise for doing the right thing

_____ 10. I do not want to be criticized when I do not do the right thing

_____ 11. I do not like others to blame me even when I am in the wrong

_____ 12. I do not like to be criticized for doing something wrong

_____ 13. I tend to get upset when others criticize my choices in ethical situations

_____ 14. I feel upset when others think that I have done the wrong thing

_____ 15. I do not like to be faulted for the choices that I make in ethical situations

_____ 16. I do not care what other people think as long as I know that I have done the right thing

_____ 17. I do what I think is right, no matter what anyone else thinks

_____ 18. I do not worry about what other people think when I do something that I know is right

_____ 19. I do not worry about having others' opinions as long as I feel confident about the
         ethical decisions that I make

_____ 20. I worry more about having a clear conscience than getting approval from other people

APPENDIX E

BEHAVIORAL INTENTION MEASURE

Below we present a short passage, followed with a set of questions. Please read the passage carefully, answer the questions openly, and honestly in the order presented.

Joey is a teaching assistant (TA) for the introduction to psychological research methods course at the university and tries to be consistent in grading all of his students' work. At the end of the last semester Joey received an e-mail from a student explaining that he is two points away from an A. This B will result in his GPA dropping below 3.0, thus losing the HOPE scholarship.

The student asked Joey to move the grade up to an A since it is so close. He had been sick several times, which prevented completion of assignments on time or attending class. On these occasions Joey accepted assignments late without penalty and offered to meet with him to discuss any information that was missed. Several other students are 1 or 2 points away from the next grade.

For the following items please circle the answer that represents how you feel.

1. Imagine being in Joey's situation. As the TA, would you change the student's grade to save his HOPE scholarship? Yes **/** No

2. How much would you want to change the student's grade?

1	2	3	4	5
not at All	a little	moderately	quite a bit	extremely

3. How likely is it that you would give the student an A?

1	2	3	4	5
not at all	a little	moderately	quite a bit	extremely

4. How strongly would you intend to leave the student's grade as a B?

1	2	3	4	5
not at All	a little	moderately	quite a bit	extremely

5. There is a ___% chance that I would change the grade to an A. (Please fill in the blank with a value from 0 to 100%)

6. Refer to the first question and explain your answer. Justify why you would or would not change the student's grade.

APPENDIX F

LISREL OUTPUT

Path Analysis 5-variabl model
/*
OBSERVED VARIABLES: CMD LC DMAO DMAS BI
CORRELATION MATRIX:
1.000
.186 1.000
.018 -.022 1.00
-.067 .002 -.166 1.000
.044 -.028 -.148 .104 1.000
STANDARD DEVIATIONS:
.86221 .80373 .50560 .67291 .95417
SAMPLE SIZE 161
EQUATIONS
DMAO DMAS = CMD LC
BI = DMAO DMAS CMD
NUMBER OF DECIMALS = 3
PATH DIAGRAM
LISREL OUTPUT: SC EF
END OF PROBLEM

Path Analysis 5-variabl model

Covariance Matrix to be Analyzed

	DMAO	DMAS	BI	CMD	LC
DMAO	0.256				
DMAS	-0.056	0.453			
BI	-0.071	0.067	0.910		
CMD	0.008	-0.039	0.036	0.743	
LC	-0.009	0.001	-0.021	0.129	0.646

Path Analysis 5-variabl model
Parameter Specifications

     BETA

	DMAO	DMAS	BI
DMAO	0	0	0
DMAS	0	0	0
BI	1	2	0

     GAMMA

	CMD	LC
DMAO	3	4
DMAS	5	6
BI	7	0

     PHI

	CMD	LC
CMD	8	
LC	9	10

     PSI
     Note: This matrix is diagonal.

DMAO	DMAS	BI
11	12	13

Path Analysis 5-variabl model

Number of Iterations = 0

LISREL Estimates (Maximum Likelihood)

     BETA

	DMAO	DMAS	BI

```
         --------  --------  --------
DMAO       - -       - -       - -

DMAS       - -       - -       - -

 BI     -0.254    0.121       - -
        (0.148)   (0.111)
        -1.721    1.084


   GAMMA

       CMD       LC
       --------  --------
DMAO    0.013   -0.017
       (0.047)   (0.051)
        0.283    -0.324

DMAS   -0.054    0.013
       (0.063)   (0.068)
       -0.864    0.185

 BI     0.058      - -
       (0.087)
        0.664

  Covariance Matrix of Y and X

       DMAO     DMAS      BI      CMD      LC
      --------  --------  --------  --------  --------
DMAO    0.256
DMAS   -0.001    0.453
  BI   -0.065    0.053    0.907
 CMD    0.008   -0.039    0.036    0.743
  LC   -0.009    0.001    0.010    0.129    0.646

   PHI

       CMD       LC
      --------  --------
CMD    0.743
      (0.084)
        8.888

 LC    0.129    0.646
```

(0.056)   (0.073)
2.299   8.888

PSI
Note: This matrix is diagonal.

    DMAO   DMAS   BI
  --------   --------   --------
   0.255   0.451   0.882
  (0.029)   (0.051)   (0.099)
   8.888   8.888   8.888

Squared Multiple Correlations for Structural Equations

    DMAO   DMAS   BI
  --------   --------   --------
   0.001   0.005   0.027

Goodness of Fit Statistics

Degrees of Freedom = 2
Minimum Fit Function Chi-Square = 4.696 (P = 0.0956)
Normal Theory Weighted Least Squares Chi-Square = 4.635 (P = 0.0985)
Estimated Non-centrality Parameter (NCP) = 2.635
90 Percent Confidence Interval for NCP = (0.0 ; 13.078)

Minimum Fit Function Value = 0.0293
Population Discrepancy Function Value (F0) = 0.0167
90 Percent Confidence Interval for F0 = (0.0 ; 0.0828)
Root Mean Square Error of Approximation (RMSEA) = 0.0913
90 Percent Confidence Interval for RMSEA = (0.0 ; 0.203)
P-Value for Test of Close Fit (RMSEA < 0.05) = 0.191

Expected Cross-Validation Index (ECVI) = 0.194
90 Percent Confidence Interval for ECVI = (0.177 ; 0.260)
ECVI for saturated Model = 0.190
ECVI for Independence Model = 0.166

Chi-Square for Independence Model with 10 Degrees of Freedom = 16.297
Independence AIC = 26.297
Model AIC = 30.635
Saturated AIC = 30.000
Independence CAIC = 46.704
Model CAIC = 83.694
Saturated CAIC = 91.221

Root Mean Square Residual (RMR) = 0.0171
Standardized RMR = 0.0443
Goodness of Fit Index (GFI) = 0.989
Adjusted Goodness of Fit Index (AGFI) = 0.914
Parsimony Goodness of Fit Index (PGFI) = 0.132

Normed Fit Index (NFI) = 0.712
Non-Normed Fit Index (NNFI) = -1.141
Parsimony Normed Fit Index (PNFI) = 0.142
Comparative Fit Index (CFI) = 0.572
Incremental Fit Index (IFI) = 0.811
Relative Fit Index (RFI) = -0.441

Critical N (CN) = 314.854

Path Analysis 5-variabl model

Summary Statistics for Fitted Residuals

Smallest Fitted Residual =   -0.056
 Median Fitted Residual =   0.000
 Largest Fitted Residual =   0.014

Stemleaf Plot

- 4|6
- 2|1
- 0|70000000000
  0|34

Summary Statistics for Standardized Residuals

Smallest Standardized Residual =   -2.073
 Median Standardized Residual =   0.000
 Largest Standardized Residual =   2.073

Stemleaf Plot

- 2|11
- 1|
- 0|500000000000

```
0|
1|
2|1
```

Path Analysis 5-variabl model

Standardized Solution

    BETA

	DMAO	DMAS	BI
DMAO	- -	- -	- -
DMAS	- -	- -	- -
BI	-0.135	0.085	- -

    GAMMA

	CMD	LC
DMAO	0.023	-0.026
DMAS	-0.070	0.015
BI	0.052	- -

    Correlation Matrix of Y and X

	DMAO	DMAS	BI	CMD	LC
DMAO	1.000				
DMAS	-0.002	1.000			
BI	-0.134	0.082	1.000		
CMD	0.018	-0.067	0.044	1.000	
LC	-0.022	0.002	0.013	0.186	1.000

    PSI
    Note: This matrix is diagonal.

	DMAO	DMAS	BI
	0.999	0.995	0.973

    Regression Matrix Y on X (Standardized)

	CMD	LC

DMAO   0.023   -0.026
DMAS   -0.070   0.015
 BI   0.043   0.005

Path Analysis 5-variabl model

Total and Indirect Effects

    Total Effects of X on Y

          CMD   LC
       -------- --------
DMAO   0.013   -0.017
        (0.047)   (0.051)
         0.283   -0.324

DMAS   -0.054   0.013
        (0.063)   (0.068)
        -0.864   0.185

 BI   0.048   0.006
        (0.088)   (0.016)
         0.543   0.367

    Indirect Effects of X on Y

          CMD   LC
       -------- --------
DMAO   - -   - -

DMAS   - -   - -

 BI   -0.010   0.006
        (0.016)   (0.016)
        -0.639   0.367

    Total Effects of Y on Y

          DMAO   DMAS   BI
       -------- -------- --------
DMAO   - -   - -   - -

DMAS   - -   - -   - -

```
BI    -0.254    0.121      - -
     (0.148)   (0.111)
      -1.721    1.084
```

Largest Eigenvalue of B*B'   (Stability Index) is   0.079

Path Analysis 5-variabl model

Standardized Total and Indirect Effects

Standardized Total Effects of X on Y

```
          CMD       LC
        --------  --------
 DMAO    0.023    -0.026
 DMAS   -0.070     0.015
  BI     0.043     0.005
```

Standardized Indirect Effects of X on Y

```
          CMD       LC
        --------  --------
 DMAO     - -       - -
 DMAS     - -       - -
  BI    -0.009     0.005
```

Standardized Total Effects of Y on Y

```
         DMAO      DMAS       BI
        -------- -------- --------
 DMAO     - -       - -       - -
 DMAS     - -       - -       - -
  BI    -0.135     0.085      - -
```