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Review of Instruments to Measure Ethical Decision-making and Implications for Decision Support

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ABSTRACT

This paper reviews various ethical belief measurements that dominate ethical decision-making research. It discusses these instruments within the context of Jones' ethical decision-making model and explore possible gaps in research that need to be addressed. Possible implications are discussed for decision support systems research.

Keywords

Ethics, Decision-making, Decision support

INTRODUCTION

In an effort to support ethical decision-making using information systems, it is paramount that researchers 1) accurately determine what ethical perspectives individuals hold, 2) how those perspectives affect decision-making within particular ethical issues, and 3) how decision support systems (DSS) can improve decision-making for these issues. But problems abound with all three of these goals. The purpose of this paper is to address the first and second issues in terms of instruments designed to identify ethical perspectives in the ethical decision-making process to provide guidance for the third issue of supporting the decision-making process.

The problem with trying to accurately determine what ethical perspectives individuals hold is that individuals often do not adopt a straight forward ethical belief system (e.g. altruism, utilitarianism, etc.). Four major obstacles to overcome when researching ethical decision-making are:

1. Individuals may adopt a wide variety of sometimes contradictory ethical beliefs.
2. Individuals often compartmentalize ethical beliefs, with different beliefs used in different contexts.
3. Individuals sometimes act contrary than their professed beliefs.
4. Individuals often demand different standards of ethical behavior for different groups of people.

Research has confirmed various personal observations about the lack of a consistent ethical belief system (McDonald, 1996). That is not surprising given how different ethical messages bombard individuals daily. This is not only true with individuals, but with organizations as well. In an examination of code of ethics for Association for Computing Machinery (ACM), Wheeler (2003) identified numerous ethical guidelines, but no one fundamental standard. It was, rather, an amalgamation of ethical perspectives.

Individuals may also compartmentalize their ethical beliefs, such that they use different beliefs systems in different contexts (Grover, 1994). They may be altruists at church, egoists with friends, and utilitarians at work. Individuals may believe it is immoral to steal from friends, family, and their community, but not immoral to steal from large companies, rich musicians, or people they do not know.

Sometimes individuals may profess to believe one thing, yet act contrary to that belief. The existence of discrepancies between ideal behavior and actual behavior is well noted in psychological research (Higgins, 1997). The difference may be attributed to unconscious influences or conscious deviations. Regardless, this discrepancy makes predicting an individual's actions based on their ethical beliefs problematic in that a researcher can not just ask individuals what they believe and be able to accurately predict their behavior.

Lastly, individuals often demand different standards of ethical behavior from different groups of people, making it difficult to judge ethical beliefs from third person perspectives. Individuals often believe they are more ethical than other people (O'Clock, 1993, Morgan, 1993).

Ethics researchers have explored various means of analyzing ethical perspectives and the decision-making process. In the following sections, the paper explores some of the instruments used in ethics research in terms of Jones's issue-contingent model of ethical decision-making in organizations. First, a brief summary of Jones' issue-contingency model is provided. Next, a review of instruments designed to measure each concept in the model is analyzed. From this analysis, implications for decision support research are explored.

ETHICAL DECISION-MAKING PROCESS

Jones' (1991) issue-contingent model of ethical decision-making in organizations (Figure 1) largely builds upon Rest's four component decision-making model (1979). This model is a simplified view of single-event moral decision-making and eliminates how morality is developed over time and many of the complexities that arise in cognitive decisions.

According to Jones (1991), recognition of moral issues is the first step in ethical decision-making. Although Jones adopts a particular moral standard for defining what is an issue and what is not a moral issue, he recognizes that a person must recognize an issue is moral and that some choice can be made by the person. Such a person is called a moral agent, a person who makes a moral decision, even if they do not recognize it as an issue.

Once a person recognizes an issue as moral, he or she must make a moral judgment. Kohlberg's (1976) model of moral development suggests that individuals use different levels or stages of reasoning when making judgments about a moral issue. This judgment establishes the "correct" behavior the individual deems appropriate for that specific moral issue.

Closely following this judgment is the establishment of intent to behave morally. Intentions, in terms of social psychology, represent a cognitive evaluation about what an individual intends to do in a particular context. A decision that a behavior is "correct" is not the same as a decision to act upon that correct behavior. Because individuals are volitional creatures, they can follow their own judgment or not. Sometimes, organizational factors such as group dynamics, authority factors, and socialization processes influence individuals to change their intentions such that they do not follow their own judgment.

Even with intentions established, an individual still must engage in the particular moral behavior. Any number of things can limit intentions from being actualized, including fatigue, frustration, distractions, unexpected difficulties, etc. (Rest, 1986).

Each of these four components, Jones argues, is influenced by the moral intensity of the issue. According to Jones, moral intensity represents "a construct that captures the extent of issue-related moral imperative in a situation." (1991, p. 372) Essentially, this construct captures the hierarchical relationship of moral issues in their importance and relevancy to each individual. The goal of this concept is to capture proportionality in moral responsibility. Jones identifies six potential components of this construct: magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect.

Other factors include organizational, individual, and environmental. Jones (1991) identified several organizational factors that often complicate individual ethical behavior by putting up structural barriers or creating hierarchy relationships that influence individuals away from their intentions. It may also instill a groupthink mentality which directly effects judgment on particular moral issues. Trevino (1986) proposed a number of individual factors (e.g. ego strength, field dependence, local of control, etc.) that may influence the relationship between moral judgment and moral action. Other environmental factors may include difficulty to complete a behavior or emergency situations that complicate a decision (Rest, 1986).

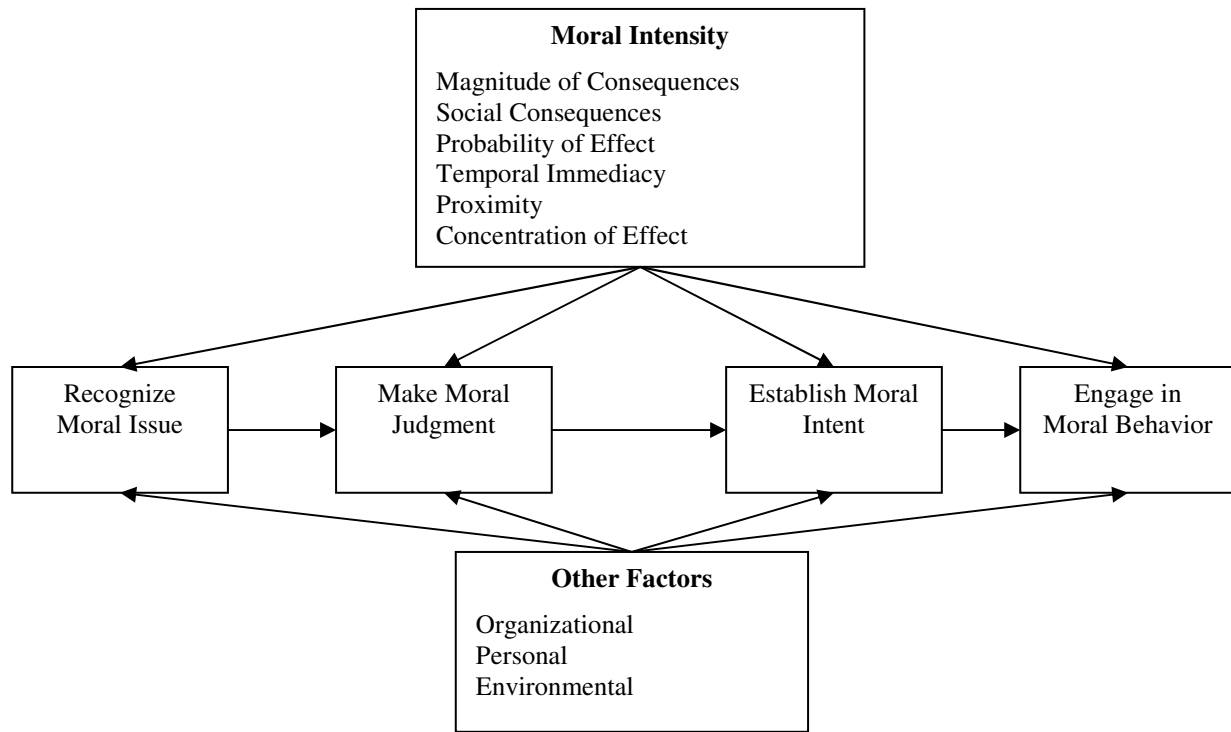


Figure 1

Adapted from Jones' Issue-Contingent Model of Ethical Decision Making in Organizations (1991)

MEASURING ETHICAL DECISION-MAKING COMPONENTS

For each of the ethical decision-making components identified above, we review various instruments designed to capture the construct and examine if any holes exist in that domain. In identifying instruments, we focus on those that are more than a single question and those that have been validated in more than one study.

Recognize moral issue

To measure the recognition of a moral issue entails more than just a simple yes/no question. Because individuals believe any number of ethical beliefs systems (Forsyth, 1980), a single question for recognition may inadvertently introduce the researcher's ethical beliefs into the study where none was intended. Study participants that answer "no" to recognizing a particular issue as moral, does not necessarily suggest that the participant lacks a sophisticated moral system. Rather, that individual may have a different *standard* for ethical issues. If this is the case, an individual with different ethical beliefs may genuinely believe they are acting morally and yet appear amoral or even immoral in the eyes of the research project.

To overcome this problem, it is necessary to establish the ethical beliefs of the individual within the context of the issue before establishing recognition of an issue as moral. A variety of instruments have attempted to capture ethical belief systems. In 1980, Forsyth designed and tested the ethics position questionnaire to assess the degree of idealism and relativism individuals adopt. Four distinct ethical perspectives were related to the degree that an individual was idealistic and/or relativistic in their ethical beliefs. These four ethical ideologies were 1) situationalism, 2) absolutism, 3) subjectivism, and 4) exceptionism. The instrument showed strong reliability and validity. However, it proved poor at predicting ethical judgments of various scenarios, showing at times, large differences in male and female participants with the same ethical ideology. This supports Jones' (1991) contention that ethical decision-making is issue contingent and that broad based ethical ideologies may be inappropriate for recognizing moral issues.

Reidenbach and Robin (1988, 1990) develop and refine a normative ethical beliefs scale based on a variety of ethical theories. In their studies, a search of ethics literature suggests five ethical philosophies; deontology, utilitarianism, relativism, justice, and egoism. Performing a factor analysis on the item stems in the first study yielded vastly different factor structures for each scenario. The factor structure bore little resemblance to the “a priori” judgment of normative ethical beliefs. In the second study, factor analysis reduced the five ethical philosophies to three dimensions – justice, relativism, and contractualism - with a greatly reduced number of item stems for each dimension. These dimensions serve as a starting point for further investigation, but may not fully capture the complexities of normative ethical beliefs that pertain to recognizing an issue as moral.

A more recent study attempts to empirically identify moral awareness of moral issues (Jordan, 2009). In this study, business professionals are asked to indicate issues involved in a vignette that were important to discuss. Furthermore, participants were asked to identify strategic and a moral related issues contained in the vignettes. From these results, the Moral Awareness in Business Instrument (MABI) provided a two factor solution, suggesting a strategic versus moral related division in awareness of moral issues. Jordan recognizes that her label of moral in this investigation may not be what the participants in the study consider moral or what other researchers may consider moral.

Make moral judgment

In Jones’ model, moral judgment consists of the identification of what the correct response to a moral issue should be. One of the more popular measures of moral judgment comes from the Kohlberg’s theory cognitive moral development (1981). According to Kohlberg (1986), judgment consists of two parts, 1) the structure of the moral reasoning, and 2) the content of the reasoning. Cognitive moral theory focuses on the former of these two. This theory postulated that moral judgment evolves over time through six stages. In stage 1, individuals focus on pain and punishment as the primary means of decisions. In Stage 2, individuals obey rules to further their self interests. At stage 3, individuals adopt the norms of his or her peers. In stage 4, the individuals adopt moral standards of society. At stage 5, individuals become aware of that some values are optional and that we conform to social norms through an implied contract. At stage 6, individuals choose universal principles and follow them. Kohlberg developed an interview technique to determine which of the six stages an individual uses when making a moral judgment. Because of the time intensive nature of Kohlberg’s data gathering techniques, Rest developed the Defining Issues Test (DIT), which attempts to classify moral judgment into Kohlberg’s six stages with short vignettes and follow-up questionnaire (Rest, 1979).

Although the DIT is a well documented instrument, it explicitly attempts to identify reasoning patterns, not conclusions. Moral judgment, as Jones describes it, evaluates moral issues at a specific instant in time and is not necessarily interested in what developmental stage an individual uses in their reasoning. Various research efforts suggest that moral reasoning is related to moral behavior, but is not the only factor (Elm, 1994). Referring back to Kohlberg’s theory, we see that *content* is also an important factor in judgment. The process of evaluating a moral issue depends on the ethical belief system of the participant. Ethical evaluations based on ethical beliefs systems (e.g. utilitarian, justice, etc.) have been shown to mediate the influence of moral intensity on moral evaluations (May, 2002). This suggests that ethical belief systems are an important factor in moral judgments. Just as identifying an issue as moral depends on the ethical beliefs system and individual holds, so does the content of a moral judgment. Individuals may agree that an issue has moral relevance to it, but come to completely different moral judgments. For example, an altruist may believe sacrificing themselves for the sake of society is morally good, whereas an egoist may consider it morally repugnant. Both could see the decision as a moral issue and be operating on principles (Kohlberg’s stage 6), but come to completely different judgments.

Establish moral intent

In Jones’ ethical decision-making model, moral intent is equivalent to the concept of intentions found in the theory of reasoned action and the theory of planned behavior (Jones, 1991). Because intent is issue specific, a simple 1 or 2 questions with regard to the intended behavior towards a specific behavior is sufficient and consistent with prior research (Ajzen, 1991).

Engage in moral behavior

The final outcome of the ethical decision-making process is notoriously difficult to measure because individuals are generally not forthcoming about engaging in immoral behavior. While single statement questions exist for this construct, no multi-statement instruments could be found.

Moral intensity

Since Jones proposed the concept of moral intensity, various researchers have included this construct in their research efforts. In various studies, a single statement was developed to reflect each of the six components of moral intensity (Singhapakdi, 1996). In other studies, two statements were developed to reflect each of the six components (Frey, 2000, May, 2002). In another, a vignette was used (Chia, 2000). Throughout these studies moral intensity was shown to be closely related awareness, but no reliable multi-dimensional structure was found for moral intensity.

Other factors

Other instruments for measuring ethics include organization ethical climate, such as the ethical positions questionnaire, which captures the work climate in which someone operates (Victor, 1998) and the Corporate Ethical Values (Hunt, 1989). Instruments designed to capture single values include the love of money scale (Tang, 2003). This scale captures how much individuals are motivated by money. Tang's research has shown that motivation by money leads to unethical behavior.

IMPLICATIONS

Jones' model of issue-contingent ethical decision-making provides researchers with an invaluable starting point for understanding the ethical decision process. Understanding this process will allow researchers to design better ethics-based decision support systems that support multiple perspectives while avoiding toxic decision processes resulting in unethical behavior.

New instruments needed

One major hole identified above is with the inadequate means of measuring individual ethical perspectives. Business ethics researchers have an opportunity to develop instruments that better capture an individual's ethical perspective in a given context. In particular, there is a need for an instrument that can capture normative ethical perspectives within descriptive categories for enhanced prediction of behavior in various issue contingent contexts. Such an instrument should be predictive of values, issue recognition, judgment, intention, and behavior regardless of age, gender, education, and cultural background.

Decision support considerations

Decision support for multiple perspectives should lead to better decisions (Hine and Goul, 1998). It has been found that value focused thinking can be mitigated through DSS components designed to introduce alternative perspectives when making decisions (Hall, 2007). To expand on Hall's work, researchers could consider various ethical perspectives and its effect on decision support systems as suggested by Courtney (2001). By highlighting alternative ethical perspectives, DSS components can increase issue awareness and recognition, leading to better organizational decisions with fewer unethical behaviors. To that end, understanding which ethical perspectives and which stages of moral development are employed most often and which ethical perspectives lead to various outcomes could greatly improve the design of a DSS.

While multiple perspectives may improve decision-making, it is important not to succumb to pure relativism. Not all ethical perspectives are created equal. As an extreme example, the Nazis may have very well believed they were moral when they committed the atrocities that they did. Yet most individuals today reject such a value system and condemn it as immoral. A well designed DSS should marginalize undesired ethical perspectives. Implementation of such a DSS, however, requires a better understanding of undesired ethical perspectives and their role in the ethical decision-making process. Is it possible to use decision support to avert fraud in companies like Enron? Would individuals with undesired ethical perspectives avoid the use of DSS that contradicts their ethical perspective?

CONCLUSIONS

This paper discussed the need for measuring ethical decision-making process in order to better understand how to design decision support systems that supports ethical decisions. Jones' issue-contingent decision-making model provided a framework for discussing the status of various instruments designed to assess various factors in the decision-making process. From this review, it is apparent that a number of opportunities for further research that would add to our understanding of ethical decision making with respect to decision support.

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