Evaluation of IT Ethical Scenarios: A Multidimensional Analysis

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It is our pleasure to present the Proceedings of the 4th Annual Appalachian Research in Business Symposium from the 2017 conference held March 30-31 hosted by the Walker College of Business at Appalachian State University. The Appalachian Research in Business Symposium provides a venue for presenting new research, discovering contemporary ideas, and building connections among scholars at Appalachian State University, Eastern Kentucky University, East Tennessee State University, and Western Carolina University.

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EVALUATION OF IT ETHICAL SCENARIOS:
A MULTIDIMENSIONAL ANALYSIS

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Introduction

Computer use is ubiquitous in today’s society. Many users work with computers in their personal and professional lives every day. As this usage continues to increase, misuse of computing resources causes harm to more and more individuals, businesses and society. This misuse and computer crimes have been problems for organizations for at least 20 years now (Panettieri, 1995; Straub and Nance, 1990). Ethical dilemmas have been used as a research technique to study business ethics for years and more recently, this research method has been extended to the field of Information Technology (Kreie and Cronan, 1998; Straub and Nance, 1990). While previous work has been done to determine ethical judgments and behaviors in IT, most of this research is done on a single “ethical” measure. This research builds upon previous research done by Ellis and Griffith (2001) by using a multidimensional construct made up of moral equity, relativism and contractualism measures. This paper extends the knowledge base of computer ethics with this measure.

Literature Overview

Organizations have become more reliant on technologies, namely computers, to perform day-to-day tasks, manage customer databases, and organize/retrieve information and knowledge—one could argue that technologies that organizations once viewed as a competitive advantages are now simply a cost of doing business. Moreover, the utilization of technology and computers in workplace situations raises unique concerns regarding problem areas and ethical quandaries of
usage. Several ethical frameworks have been developed to help understand and systematically study the relationships between IT practice, IT research, and ethics. Early research by Oz (1992) and Harrington (1996) suggested that ethical behavior could be encouraged through the development of ethical codes. Hirschheim and Klein (1994) examined a neohumanistic philosophical base and the implementation of emancipatory principles to foster ethical environments in the workplace. Additionally, prior research has emphasized the importance of problem formulation as a basis to understand and identify individual and group level norms that can aid in the development of ethical behavior guidelines (Conger, 2000). Later research proposed alternative frameworks of morality by examining situational ethics (Banerjee et al., 1998) and the varying perceptions of shareholders, stakeholders, and social contract theories of information technology (IT) ethics (Smith and Hasnas, 1999). The consideration of multiple stakeholders in the ethical decision-making process continues to be examined in more recent literature as well (Brewer et al., 2009). Spawning from these numerous frameworks, at least one meta-framework proposed by Smith (2002) has attempted to find convergence between approaches and assumptions of the decision-making process and ethical behavior. Moral intensity has also been examined in the ethics literature as a critical factor regarding its influence on individuals’ decision-making process with respect to IS-related situations (Goles et al., 2006).

One of the most widely influential articles in helping to build the foundation for IT ethics highlights the vulnerabilities of individuals and organizations in the wake of the technological era (Mason, 1986). The culmination of Mason’s work, the PAPA framework—privacy, accuracy, property, and accessibility—is helpful in identifying several emergent areas related to ethics and IT. Table 1 summarizes the four areas of Mason’s topology and emerging issues related to IT and ethics.

<table>
<thead>
<tr>
<th>Concerned with:</th>
<th>Ethical Issues in IT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy</td>
<td>Protecting personal or proprietary information</td>
</tr>
<tr>
<td></td>
<td>What types of information should be kept confidential?</td>
</tr>
<tr>
<td></td>
<td>What laws (if any) must organizations consider regarding confidentiality?</td>
</tr>
<tr>
<td></td>
<td>Moral obligations to protect employees/customers/etc.?</td>
</tr>
<tr>
<td></td>
<td>Safeguards to protect databases?</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Legitimacy, precision, and authenticity of information</td>
</tr>
<tr>
<td></td>
<td>How do we safeguard against information errors?</td>
</tr>
<tr>
<td></td>
<td>Who should be held responsible for errors?</td>
</tr>
<tr>
<td>Property</td>
<td>Ownership of information</td>
</tr>
<tr>
<td></td>
<td>Should there be limits on the use of information by third parties?</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Right/privilege to obtain outside information</td>
</tr>
<tr>
<td></td>
<td>What data/information is actually owned by an organization?</td>
</tr>
</tbody>
</table>

Table 1: PAPA Framework and Emergent IT Ethics Issues

Although there has been much rigor dedicated to the conceptualization and theory development of ethics and information systems (IS), concerns regarding how to properly operationalize and measure the ethics of information systems have also emerged. Several researchers have adopted the scenario method to examine computer usage and ethics (see Guthrie 1997, 2003; Harrington, 1996; Hanchey and Kingsbury, 1994; Kreie and Cronan, 1998; and Thong and Yap, 1998). A delineation from the ethics case approach, the scenario method describes briefly an ethical situation and asks respondents to rate the ethics of the scenario, usually using a single-item, Likert
type scale. Overall, the scenario method has been used to study a menagerie of topics in information systems research ethics, from gender differences in the ethicality of situations to perceptions of ethical judgments and norms surrounding software copyrights. However, the exposed, and often unexplained, differences in ethics across groups, situations, and contexts as uncovered in the prior research using single-item scenario methods suggests that a multidimensional measure of ethics may help researchers better understand the true underlying relationships.

Later research conducted by Reidenbach and Robin (1990) and Reidenbach et al., (1991) further brought to light the inadequacies of a single-dimensional construct of ethics. They propose that because ethicality is such a complex construct, a multi-item, multi-trait approach utilizing these three dimensions is more effective in capturing the true nature of the relationship. As such, their research suggests that the ethics construct is multifaceted, being comprised of three dimensions—moral equity (fairness and justice), relativism (cultural and traditional acceptability), and contractualism (legality; unspoken promises; unwritten contracts). Although the original scales developed by Reidenbach and colleagues to assess the three dimensions of ethicality as many as 33 items of measurement, a reduced set of measures was later developed by Reidenbach et al., (1991). Table 2 identifies these measurement constructs, as will be operationalized in this research, and their related dimensions.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Measurement Items</th>
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<tr>
<td>Moral Equity</td>
<td>Fair/Unfair</td>
</tr>
<tr>
<td></td>
<td>Just/Unjust</td>
</tr>
<tr>
<td></td>
<td>Morally Right/Not Morally Right</td>
</tr>
<tr>
<td></td>
<td>Acceptable to My Family/Unacceptable to My Family</td>
</tr>
<tr>
<td>Relativism</td>
<td>Culturally Acceptable/Unacceptable</td>
</tr>
<tr>
<td></td>
<td>Traditionally Acceptable/Unacceptable</td>
</tr>
<tr>
<td>Contractualism</td>
<td>Violates/Does Not Violate and Unwritten Contract</td>
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<tr>
<td></td>
<td>Violates/Does Not Violate an Unspoken Promise</td>
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</tbody>
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Table 2: Measurement Dimensions and Corresponding Items

In this replication of Ellis & Griffith’s original (2001) study, the researchers reapply scales developed by Reidenbach et al. (1991) to a new set of IT related scenarios developed and pre-tested by the authors. The emergence of network and Internet capabilities, coupled with increased technology and computer usage within organizations, prompts the need to reexamine Mason’s PAPA issues and brings with it a new set of ethical quandaries. The purpose of this study is to ascertain if the multi-item ethics measure remains valid in spite of the technological advances and progression of communication made possible through technology. Furthermore, can we still use these multidimensional scales to better predict ethical behaviors than that of a single measure?
Research Hypotheses

Through the literature review, the authors have found perceptions of various dimensions of ethical behavior in Information Technology are related to the situation of the ethical scenario. These ethical scenarios show the explicitness of the contract, law or binding agreement, how much personal privacy is involved in the scenario, the usage of technology and the perceived seriousness of the scenario’s outcome.

The explicitness of the contract, law or binding agreement is the first situation relating to the ethical dimensions of the scenario. When a strong indication of legal obligation is given in the scenario, the authors expect to find the contractualism construct to be significantly related to the overall ethicality of the scenario. “Inherent in the ethical evaluation of an exchange process appears to be the idea of implicit contract and promise.” (Reidenbach et al, 1991) The more clearly the contract is stated, the greater the ethical implication. This information leads to our first two hypotheses:

Hypothesis 1: Ethical perceptions are positively related to moral equity in those circumstances in which explicit legal agreements are stated.

Hypothesis 2: Ethical perceptions are positively related to contractualism in those circumstances in which explicit legal agreements are stated.

In some cases, a law or a contract might be violated without any moral objection. Reidenbach et al. (1991) indicate a strong interaction between the current culture and traditions to the notion of right and wrong. For example, while speed limits are clearly posted and driving even 1 mile and hour over the posted speed limit is considered a violation of the law, most drivers find driving a few miles over the speed limit to be acceptable. The authors hope that the construct of relativism will mitigate the effect of contractualism or moral equity in situations when a practice is technically illegal, but culturally accepted or harmless. This leads the hypotheses 3a and 3b:

Hypothesis 3a: Ethical perceptions are positively related to relativism in those circumstances in which a practice is widespread or accepted.

Hypothesis 3b: Ethical perceptions are positively related to relativism in those circumstances in which a practice is considered harmless.

Lastly, privacy is a construct related to relativism in ethical perceptions. The term “personal information privacy”, created by Smith et al. (1996), is used to show the relativistic nature of privacy, as it is being viewed to be more important when an individual’s privacy is violated more so than the privacy of distant, impersonal or corporate entities. This leads to Hypothesis 3c:

Hypothesis 3c: Ethical perceptions are positively related to relativism when violations of personal privacy are involved.

Methodology

A survey was generated, outlining scenarios where respondents had to make choices regarding the ethicality of the situation. The survey was administered as a pretest to undergraduate and graduate students in management, MIS, and marketing classes. While Hanchey and Kingsbury (1994) and Athey (1993) found professionals’ views on ethical decisions are different than student views, the authors felt that students would be adequate subjects as students are a large group of computer/internet users. Generalizing from the student population to the population at large would be inappropriate, however students are suitable subjects to examine the reactions of users to
various technology related ethical situations. The items were all measured on a seven-point Likert scale, 1 indicating moral/just/ethical decisions and 7 indicating immoral/unjust/unethical decisions. The instrument was administered to subjects and given class time to complete.

The pretest version of the instrument had nine scenarios. Based upon the feedback from the pretest subjects, and the identified ambiguity of certain wording, the number of scenarios was limited to the six found to meet the needed criteria.

**Future Research**

Following the survey revision to include only six ethical scenarios, formal distribution of the survey commenced. Data is currently being collected from three southern university setting, and following the completion of that stage, descriptive analysis, factor analysis, and path analysis will be conducted appropriately.

Future research looks to report the findings of the study and confirming if the multi-item ethics measure remains valid in spite of the technological advances and progression of communication made possible through technology.

**References**


