

IT Influences on Moral Intensity in Ethical Decision-Making

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Abstract

Moral intensity is a judgment, usually implicit, as to the degree to which a decision is ethically charged. The novelty and fast pace of information technology (IT) developments has created ethical ambiguity in many of the decisions involving information goods, e.g., in the development of norms surrounding unauthorized copying and sharing of software. This raises the importance of understanding how moral intensity arises in decisions involving information goods, specifically: How do these decisions get recognized as being moral decisions and what influences this recognition? And, how do key factors influence this process? To address these questions, we develop the Moral Intensity with Technology Theory (MITT). The theory uses and expands a variety of prior literature to identify important precursors and influences upon moral intensity in decisions involving digital goods, with the following accomplishments: (1) We refine the definition of moral intensity. (2) We identify features of information goods relevant to understanding moral intensity in an IT-rich business environment. (3) We review and apply relational models theory as a socially-grounded, relevant characterization of individual differences in moral intensity. (4) We develop the relationships between moral intensity and neutralization techniques that explain the argumentation used in support of more deliberative judgments of moral intensity. Overall, this synthesis and expansion of views creates a holistic theory for understanding problem recognition in individual ethical decision-making with information technology and provides a foundation for future research in this area.

Keywords: ethical judgment, moral intensity, neutralization theory, relational models theory, software piracy

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INTRODUCTION

The chair at your desk is not working properly. It will take several weeks to replace and will be charged to your division. A co-worker suggests that you switch your chair with one of those in the common conference room without anyone else's knowledge. Do you do so?

You have just purchased data analysis software for your department to analyze the data from a recently completed customer survey. Several of your co-workers would like to evaluate the software and ask to make a copy for their use. Do you allow them to do so?

Are these ethical decisions? There is greater general agreement for the first example that rules governing right and wrong, i.e., ethical principles, are involved. Even if there are differences in response, it is recognized that an ethical principle is at work, one that is either accepted or must be rationalized away. For the second example, the social consensus as to ethical principles being involved is less clear. How do we explain this variety? What influences an individual to judge whether or not a situation involves moral principles and to what extent these principles should be incorporated into the decision?¹ How does the involvement of information technology (IT) influence this determination? What distinguishes one individual from another in their judgment?

¹ In this paper the words ethical and moral are interchangeable.

These are the questions that are the focus of the theory developed in this paper. In this, the theory is focused on the problem formulation phase of decision making. Although the specific terminology varies, researchers recognize several phases in decision making (following Russo & Schoemaker 2002): decision framing (formulation—What is the problem? What kind of decision is this? What are the decision elements?), gathering intelligence (What information is needed to make the decision?), coming to conclusions (evaluation and choice—using the information to make the necessary judgments and the decision), and learning from experience (gathering and applying feedback). Decision research largely has focused on the conclusion stage of decisions, of evaluation and choice. Our focus is on the initial formulation stage. Given the influence of problem framing on decisions (see Kahneman & Tversky 2000 for an entry into the extensive relevant literature), a better understanding of how and why decisions are framed as they are is critical to decision theory. This phase is particularly essential to ethical decisions involving information goods, a point we turn to next.

With the rapid development of technology, social norms have not been able to keep pace. For example, the unauthorized duplication of digital products occupies a gray area in terms of social consensus regarding ethical norms. Both the legal and research literature reflect this ambiguity. “While the law in most countries is confusing and out of date...the legal position in the United States, for example, has been confused further by the widely varying judgments handed down by U.S. courts” (Forester and Morrison 1994). And, the legal debate surrounding protection of software continues (e.g., Cady, 2003; Gomulkiewicz, 2002; 2003). The importance of the legal ambiguity is particularly acute as the revamping of copyright law may be on the horizon (Litman, 2008). A better understanding of whether and how individuals perceive the issue as involving ethical standards could be informative to this activity.

The academic literature on digital goods' duplication is also ambiguous. Some researchers have implicitly adopted the corporate view (e.g., as argued by the Business Software Alliance 2006b) treating all such duplication as immoral. In line with this view, they construe unauthorized duplication to be a problem (Vitell and Davis, 1990), e.g., leading to proposed technical solutions to remedy its occurrences (Herzberg and Pinter, 1987; Naumovich and Memon, 2003; Potlapally, 2002). Other research has adopted a different view, e.g., studying disparities in copyright enforcement between groups and individuals (Harbaugh and Khemka, 2001), and the potential benefits to software manufacturers (Conner and Rumelt, 1991; Jiang and Sarkar, 2003). Even further, Logsdon, Thompson and Reid (1994), and Strikwerda and Ross (1992) suggest that unauthorized duplication is not even viewed as an ethical issue by some. Individuals may approach duplication as a preference choice, with no principles, norms, or values being brought to bear on the decision (Glass and Wood, 1996). The ambiguity arising from this lack of social consensus is the primary motivation for our theoretical account.

The importance is further highlighted by studies involving decisions with clear ethical content. When decisions are judged to be strongly ethical in nature (affecting others and requiring consideration of ethical norms, principles, and values), the application of principles can trump other concerns. Where sacred values are involved, standard compensatory procedures may not be applied at all (e.g., Baron & Leshner, 2000; Tetlock 2003; Tetlock et al. 2000). The degree to which ethical principles are in force is a judgment that guides the subsequent evaluation and choice processes by which a moral intention is formed.

To concretely frame the issue, consider the general ethical decision framework illustrated by Figure 1. *Ethical decision-making*, as opposed to decision making more generally, “involves moral justification of the decision” (Miner and Petocz 2003, p. 12). Although a crisp definition may not be available, from a theoretical perspective there are two generally agreed conditions that identify a decision as having an ethical component. First is that in ethical decision-making an individual brings forth norms and principles to assess the degree of right or wrong as a guide to action (e.g., Kohlberg, 1969). These norms are socially constructed (e.g., Berger and Luckmann 1967), leading to the second feature of ethical decision-making: Ethical decisions are interpersonal, having a social aspect. “Morality is not constructed in the mind of any one individual—as individual cognitive operation—but negotiated among individuals, deliberated, and arrived at through agreement” (Rest, Narvaez, Bebeau and Thoma 1999, p. 301).

Beginning at the left side of the figure, in addressing influences on ethical decision making, both reviews (e.g., Loe, Ferrell & Mansfield 2000) and theoretical frameworks (e.g., Hunt and Vitell 1986; 1993) highlight the dual components of the individual decision-maker (who brings principles to bear on the decision situation and understands the implication of the decision on others) and the problem situation (that contains cues that trigger the decision-maker to recognize an ethical issue).

Ethical decision-making will not be activated unless an individual recognizes the moral component of the situation. This judgment that a decision is an ethical one may be made implicitly or explicitly. This judgment governs whether and to what extent ethical principles will be incorporated into the decision process. In Figure 1 and in the business ethics literature, the categorization of a situation as requiring ethical reasoning or not is captured by the construct of

moral intensity. Moral intensity is a measure of severity for a given situation that directs an individual how to approach the decision process (Jones 1991). When moral intensity is high enough, an individual activates ethical decision-making processes and brings ethical principles to bear on the situation. The higher is the moral intensity, the higher the influence of these principles upon the decision. When moral intensity is low, an individual will not activate ethical decision-making processes (i.e., the entire framework in Figure 1 is inapplicable), instead deciding based upon other means, e.g., economic rationality processes. In this way, moral intensity is characterized in the figure as a key moderator of whether and to what extent ethical principles are brought to bear.

Note that this does not imply that a decision maker must first be highlighted to the fact that this may be a moral decision and consequently judge that it is or is not. The assessment often happens implicitly—no significant moral intensity is triggered, and so the decision maker is not alerted that the decision is an ethical one. Both situational and individual difference factors are expected to apply to this implicit judgment, as well as to when the judgment is explicit. For ethical decisions, moral intensity is the key component of the problem formulation process, distinguishing whether this is an ethical type of decision or not. If an ethical decision, then ethical principles are sought as part of the second, intelligence-gathering phase of decision making. As such, moral intensity provides a central construct for the purposes of this review; its discussion will be detailed in the next section.

The third phase of decision making is coming to conclusions. Consistent with the theory of reasoned action (Fishbein and Ajzen 1975), the theory of planned behavior (Ajzen 1991), and related theories, behavior is framed in Figure 1 as preceded by an intention that arises as part of a

decision process. For an ethical decision, this intention is characterized as a moral intention by virtue of incorporating information about ethical principles into the decision process. This moral intention is then an input into engaging in the decided action (behavior), and the resultant outcomes. The final phase of the decision, of learning from experience, is captured by the feedback loop resulting from that action.

*** Figure 1 about here. ***

Consistently with decision research in general, researchers have focused on the conclusions phase of ethical decision making whereby a moral intention is formed (e.g., Peace, Galletta and Thong, 2003). Our goal is to develop a theoretical framework for the earlier, critical stage of problem formulation, specifically the judgment that ethical principles are available and relevant, as highlighted in Figure 1 and captured in the construct of moral intensity. Returning to the examples at the start of the paper, it is clear in each case that a decision is involved. But, is it an ethical decision? And, how does IT influence the judgment of whether a decision is ethically charged?

As noted, the question of how one determines if a decision is an ethical one or not is captured via a judgment of moral intensity. This allows us to describe the primary research questions as:

1. What is moral intensity? Understanding moral intensity is understanding the judgment of a decision as having an ethical component. We provide a review of the existent literature on moral intensity and use it to develop the best current understanding of this construct.
2. What are important aspects of information goods as situational factors that influence moral intensity? It is understood that the recognition of a problem as having an ethical component depends upon both situational factors and characteristics of the decision

maker. The features of information goods relevant to understanding moral intensity in an IT-rich business environment are analyzed.

3. What individual differences can be usefully identified? In addition to IT as a situational influence on the judgment of ethical relevance, individuals differ in their judgments. For some, the software example at the start of the paper raises ethical considerations, for others it does not. We incorporate relational models theory into our account as a socially-grounded theory capturing important individual differences that we argue as relevant to the judgment of moral intensity. These are seen as playing a particularly strong role in the implicit assessment of moral intensity: Our social view of the world influences whether ethical considerations even arise as possibilities.
4. What rationales support the judgment of moral intensity? Although implicit judgments of moral intensity can apply, judgments also often involve deliberation, applying reasoning from which the judgment derives. Following Smith, Curley and Benson (1991), judgment and reasoning are acknowledged as two different methods by which humans arrive at conclusions. Reasoning uses arguments, grounded in our knowledge and beliefs, to derive conclusions from data. (Brockriede and Ehninger, 1960; Toulmin, 1958). Judgment is a scaling activity involving comparisons, weighing, and/or consolidation, measuring along some dimension. Whereas reasoning is an explicit process, one can explain one's reasoning, judgment is relatively mute. Because of their complementary uses, they can work in concert as deliberative judgment. Reasoning applies our knowledge and beliefs to draw conclusions and judgment assesses these conclusions, e.g., in a determination of moral intensity. To better understand deliberative judgments of moral intensity, an understanding of the supportive reasoning is necessary. In this light, we expand the theory of moral intensity by connecting it to the theory of

neutralizations, a socially-grounded theory of rationalizations applied in ethical situations.

Together, the elements brought to bear in addressing these questions come together in a novel theory, Moral Intensity with Technology Theory (MITT).

Having defined the scope of the paper, we outline its organization. The next section provides a review of the theoretical and empirical research concerning moral intensity, the paper's central construct. It also elaborates the features of information goods that are instrumental to the judgment of moral intensity. The review provides the background from which we identify the theory's limitations in the present context, of judging whether a decision is ethically charged in situations involving digital goods. We then successively develop the theory to address these limitations in the subsequent sections, expanding on the problem formulation component of the framework in Figure 1. First, we connect the features of digital goods to moral intensity, making explicit what has been at most implicit before. Relational models theory is then described as a theory of the individual in a social setting, and connected to the theory of moral intensity as a grounded account of individual differences. Then, the deliberative aspects of moral intensity are developed, using neutralization theory as a basis. The theory is described, expanded, and connected to moral intensity. We conclude with a discussion of the implications of the theory and provide suggestions for future research.

BACKGROUND: MORAL INTENSITY AND IT

Our first research question of this paper asks: What is moral intensity? Before an individual will activate ethical decision-making, he/she must acknowledge that the situation calls for an ethical decision, involving ethical principles and social norms (Miner and Petocz 2003), otherwise the

decision-making process may be governed by other principles (for example economic principles). Further along the same scale, the decision maker will assess the weight of these principles in the decision, if applied. The judgment of the degree of moral imperative within a situation is termed its moral intensity. Moral intensity is an outcome of the problem formulation phase, as highlighted in Figure 1 and our focus here. The opening situations of the paper point to potential differences in this judgment.. For example: the chair situation generally calls to mind social norms that prohibit taking others' property without permission. Reactions to the situation involving software are less consistent. Social norms are not as definite when it comes to information goods, and it may not even come to mind that any ethical principle is relevant. In particular, this leads to our question: How does IT influence whether an individual judges a situation as having an ethical component, as captured by the individual's judgment, implicit or explicit, of the moral intensity of the situation? The background for this question draws upon the literature on moral intensity and on features of digital goods that are afforded by IT and can potentially influence the judgment.

In this section we begin by defining, and critically reviewing the theory of, moral intensity. Due to the lack of social consensus in many decisions involving digital goods, and the resultant ambiguity as to whether ethical principles apply, moral intensity is an important construct for understanding ethical decisions with respect to information goods. Following this, we identify features of information goods as developed in the literature that likely bear upon the judgment of moral intensity. With these two components in place, we identify what is needed to develop a theory surrounding the question of how IT influences moral intensity, and then begin to develop such a theory.

Dimensions of Moral Intensity

The most influential theory of moral intensity is that of Jones (1991) which provides a useful starting point. He defined moral intensity with respect to a potential action within a situation and as a multidimensional construct comprised of six dimensions, each affording degrees. The six dimensions posited by Jones were:

1. *Proximity*: the nearness (social, cultural, psychological, or physical) that the decision maker has to those receiving the consequences;
2. *Concentration of effect*: the inverse of the number of people affected by an action of a given magnitude;
3. *Magnitude of consequences*: the overall total consequences borne by those impacted by the action;
4. *Probability of effect*: the joint probability that the action will take place and that the action will cause the predicted consequences;
5. *Temporal immediacy*: the length of time between the action and the realization of the consequences;
6. *Social consensus*: the degree of social agreement as to whether the action is right or wrong.

Moral intensity informs an individual of how to approach the situation and takes outcomes of the situation into account through its dimensions. When moral intensity is high, a situation is classified as one requiring ethical decision-making. Returning to our opening examples: the chair situation has a higher moral intensity (social consensus, temporal immediacy, and proximity are arguably higher than in the software situation). We now review the research on moral intensity; in so doing, the definition of moral intensity is brought into sharper focus.

In the Appendix, we have summarized the existing research by article. Overall, the research has shown that moral intensity, as conceptualized by Jones, significantly affects ethical decision-making with the following clarifications:

- 1) Jones's conceptualization of moral intensity has rarely been empirically validated on all six dimensions (e.g., Kelley and Elm 2003; Marshall and Dewe 1997; Paolillo and Vitell

2002). In fact, some researchers have suggested that six dimensions may create interference when trying to measure the construct of moral intensity because what affects one dimension positively may affect another negatively (Sama and Shoaf 2002). It also makes intuitive sense that six dimensions would be cognitively cumbersome to track when assessing a situation, because human beings use shortcuts and use decision inputs sparingly (Simon 1996). This leads to the second point.

- 2) Jones did not articulate how the various dimensions of moral intensity were interrelated, nor did he specify how to measure the construct. In that vein, Valentine and Silver (2001) have noted that there is no single measure for all dimensions.

Turning to this point, following Jones and consistent with the research, we can identify two complementary steps that are relevant to the measurement of moral intensity. The first is developed and related to moral intention within Hunt and Vitell's (1986, 1993; Thong and Yap 1998) theory of business ethics that preceded Jones's development. They distinguished between teleological and deontological approaches to ethical decisions, a distinction that has a long history in the philosophy of ethics. Using a teleological approach to ethical decisions, morality is judged based on consequences; from a deontological approach, morality is judged based on actions. This can be viewed as an ends (teleology) versus means (deontology) distinction. If one is assessing whether a decision involves ethical principles, it is useful to consider the approach or approaches to morality that the individual is considering. We develop this further within our discussion of the next major development toward measuring moral intensity.

To address the ambiguous multidimensionality of Jones's framework as noted above, McMahon and Harvey (2006) executed a factor analysis of measures of the 6 posited dimensions. Based on

their analysis, Jones's original moral intensity construct was found to be reducible to a smaller number of distinct constructs. Beginning with the most questionable, *social impact* incorporates proximity and perhaps concentration of effect. McMahon and Harvey did not find the items designed to measure concentration of effect to be helpful. And, generally, these two dimensions have been the least studied (Appendix); consequently, the influence of either has not been clearly validated in any study. They are grouped together here for discussion purposes as a tentative construct capturing judged social impact.

The next three dimensions (magnitude, probability, and immediacy) were found by McMahon and Harvey to connect into a single construct of the *acuteness or severity* of the moral question. It is this factor that is usefully refined as having teleological (outcome-based) and deontological (action/cause-based) aspects. Jones's factors of Magnitude of consequences and of Probability of effect most clearly convey the outcome-based, teleological aspect. If the situation is not significant in its result, then its moral intensity is zero. For example, using a company stapler to connect personal documents is a situation that may involve ethical principles, because the use of company resources for personal business can be construed as stealing. However, it is not likely to be characterized as having any moral intensity, because the outcome of using the stapler is not considered significant.

Although it is missing from Jones's account, the action-based, deontological approach provides a potentially separable aspect of severity. The deontological view of morality connects to the judged causality linking behavior to effects, i.e., the means by which the effects obtain.

Intentionality, the judged causality used where human action is present, captures this aspect.

Immediacy, which is also a causal cue (cf. Einhorn and Hogarth 1986), could be framed to cover

deontological concerns, as well, but as operationalized has not done so. The item measures for immediacy used by McMahon and Harvey (2006), taken from others, were: (a) The decision will not cause any harm in the immediate future; and (b) the negative effects (if any) of the decision will be felt very quickly. Each of these highlights the consequences, as prescribed by the teleological approach. Consequently, the deontological aspect of severity is one area in which Jones's framework needs to be enriched.

The last dimension of moral intensity is *social consensus*. Although the most studied, it is somewhat problematic compared to the others. There is a definitional circularity to social consensus as a factor: Social consensus arises from individuals deciding that moral intensity is high and also it is proposed as a contributor to assessing moral intensity. However, from an individual's standpoint, we use others as a guide in assessing morality ourselves. If the situation does not involve any ethical principle recognized by consensus, then its moral intensity will be zero. For example, the decision to buy enterprise resource planning system software to integrate all areas of operations is a serious situation, but does not involve ethical principles. As such, the situation is not characterized as having any moral intensity.

Thus, four aspects are identified as potentially comprising an individual's judgment of moral intensity. The dimensional definitions are summarized in the first two columns of Table 1: Moral intensity captures the sum total of (a) the social impact of potential actions (possibly), (b) the severity of outcomes (teleological), (c) the severity of actions (deontological), and (d) the degree of social consensus surrounding the ethical principles that are potentially involved.

Having defined moral intensity and the four aspects that moral intensity captures, we move on to the next research question: How does IT influence the judgment of whether a decision is ethically charged? In the next section, we discuss features of digital goods that are afforded by IT and can potentially influence the judgment of moral intensity.

Features of Information Goods

Studying IT falls within a standing tradition of studying environmental factors as influencing ethical decisions, including social (e.g., Bommer, Gratto, and Tuttle 1987; Husted, Dozier, McMahon, and Kattan 1996), cultural (e.g., Clark and Dawson 1996; Davison, Martinsons, Lo and Kam, 2006), economic (e.g., Harrington 1989), legal (e.g., Bommer, Gratto, and Tuttle 1987), professional (e.g., Bommer, Gratto, and Tuttle 1987; Hunt and Vitell 1993), and industrial factors (e.g., Hunt and Vitell 1986; 1993). Information technology applies a set of digital goods, i.e., products and services that centrally utilize information encodable as a stream of bits (Shapiro and Varian 1999) that make use of organized data to help a business achieve its goals.

Five characteristics of information goods that have been identified in the literature stand out as potential influences on the recognition of a situation as having a moral component. The features are identified in this section. They are expressed here as fully operative, though we recognize that there is variability across goods and/or situations on these features. To the degree that the feature holds in the situation, its effect will be greater or less.

- 1) **Cost Structure.** The costs of producing information goods are largely or fully associated with the sunk costs of developing the master copy (Shapiro and Varian 1999); later reproductions can be made at little or zero cost (e.g., the minimal cost of a blank CD). In addition to lower production costs, the Internet affords negligible storage and distribution costs in the dissemination of information products and services.

2) Reproduction. Information goods are easily reproduced, with no degradation in the quality of the product or service. Information goods can exist and be fully operational in two or more places at one time (Thong and Yap 1998). There is no perceived loss to the original owner and there is no perceived difference between the copier's good and the original.

3) Distance. The distribution mechanism may distance information users from the producers (e.g., Moor 1995; Sama and Shoaf 2002; Sproull and Kiesler 1991). Where information technology is the medium for communication in the distribution process, there is a disassociation between the parties involved due to the limited social cues (facial expressions, voice, and tone) exchanged (e.g., Denis and Kenny 1998). This dissociation creates a gulf between causal actions and their effects (Bandura 1990), as well as makes the parties more abstract to each other, reducing the perceived social impacts of actions (Allen 1999).

4) Intangibility. Digital information goods need not have any physical form. The medium of transferring the information might be tangible (e.g., a disk); but need not be (e.g., a software download over the Internet).

5) Protection. Although not synonymous, there is generally a degree of correspondence between ethical and legal standards. For example, laws can be adopted as ethical principles and/or reflect the accepted social norms of a community. However, the legal perspective is unclear with respect to information goods (Forester and Morrison 1994; Horovitz 1985). Despite being classified as a criminal act by the *No Internet Theft (NET) Act* in 1997, the *Digital Millennium Copyright Act* in 1998, and the *Digital Theft Deterrence and Copyright Damages Improvement Act* in 1999 (e.g., Moores and Chang 2006), the unauthorized duplication of information goods does not carry a clear criminal stigma and the legal status surrounding software protection remains unsettled (e.g., Cady 2003; Gomulkiewicz 2002; 2003).

Furthermore, detection of cases is problematic, translating into low expectations of detection for

reproduction violation and lack of vigorous prosecution. These realities lead to a perception of limited protection associated with digital goods.

In this section we have defined the central construct of moral intensity and reviewed the literature, delineating the four dimensions of moral intensity that arise from the existing literature. We have also summarized the features of information goods that have been identified in the literature and that are identified as potentially influencing moral intensity. The resulting dimensions and features are summarized in the rows and columns, respectively, of Table 1. However, to date there is no literature linking these features of information goods to the four dimensions of moral intensity, filling out the body of Table 1. This is one of several needs for further developing the theory describing the role of IT in moral intensity, as outlined in the next section. Following this, we develop a theory that addresses the identified needs.

*** Table 1 about here. ***

Theoretical Needs

How does IT influence whether an individual judges a situation as having an ethical component?

There are three primary limitations to our understanding of this question that our theory will address. First is the connection between the two theoretical backgrounds just discussed. The construct of moral intensity provides precision to the question by identifying what it means to recognize a problem as ethically charged. The descriptive representation of digital goods provides an understanding of IT as a situational input to the judgment of moral intensity. However, since these two literatures have developed independently, there is no account exploring their connection, theorizing how the technology factors might influence the dimensions of moral intensity.

Second is the role of individual differences. Reconsider the scenarios at the start of the paper. In the chair scenario, even if people may differ as to the final course of action, there is likely to be general agreement that there is an ethical component to the decision. In contrast, with the software scenario there is less consensus regarding the ethical standing of the decision. The theory of moral intensity developed as a situational and decisional account. It does not incorporate individual differences into the theory; but, clearly they exist, particularly where IT is involved. One common approach to the study of individual differences is to use common demographic variables as potential factors, e.g., gender, age, and income. Such investigations are relatively easy to do and can be useful; however, they have been long criticized as generally lacking a theoretical base (e.g., with respect to gender: Belle, 1985; Deaux, 1984). Here, we incorporate a theory-driven approach to individual differences—relational models theory—motivated by the definition of ethical decision making as incorporating a social perspective.

The third limitation arises from a recognition that ethical judgment can arise implicitly or with accompanying reasoning in a more deliberative process (Krebs 2008). This view is consistent with a distinction that has been made in the decision literature generally (cf. Chaiken and Trope 1999; Kahneman and Frederick 2002; Stanovich and West 2000). An implicit judgment of moral intensity can arise effortlessly from automatic processes; alternatively, the judgment can arise from accompanying reasoning processes carried out in an effortful and conscious manner (Kahneman 2003). For our theory to accommodate the deliberative judgment of moral intensity, an account of the relevant reasoning is needed. Such reasoning definitely has a context-specific aspect; the particular arguments that are brought to bear are bound to have situational content. However, a general approach to characterizing the nature of the arguments is suggested by

neutralization theory, a theory of rationalizations as employed in ethical situations. In order to apply the theory when IT is involved, an expansion of the theory will be required; however, as a socially grounded theory of reasoning, it provides a strong basis for incorporation into our theoretical account. To integrate and account for all of these interrelated theories and to meet all of these theoretical needs, we propose Moral Intensity with Technology Theory (MITT).

MORAL INTENSITY WITH TECHNOLOGY THEORY (MITT)

In this section, we construct the Moral Intensity with Technology Theory (MITT), as illustrated by Figure 2. The goal of the theory is to explain the judgment as to whether and to what degree a decision has an ethical component directed at situations involving IT and digital goods. Central to the theory is the multidimensional construct of moral intensity (represented by the baseball mitt in Figure 2). Situational and individual difference elements are shown as the inputs to the judgment. The features of information goods are shown as the baseballs—cost structure, reproduction, distance, intangibility, and protection—are situational inputs to the judgment. To these are added a socially-grounded theory of individual differences (relational models represented as the players), and an expanded version of a theory of social justifications (neutralization theory as the backstop) to accommodate deliberative judgment, the backing of judgment with reasoning. This section builds each of these into the theory, in turn. We use software duplication as a concrete test example while discussing the theory since this action varies in severity, and the social consensus (i.e., accepted norms/principles) regarding the practice is open to debate. Unauthorized duplication is viewed as having advantages (e.g., Harbaugh and Khemka 2001; Jiang and Sarkar 2003; Slive and Bernhardt 1998) as well as disadvantages (e.g., Herzberg and Pinter 1987; Naumovich and Memon 2003; Vitell and Davis 1990). The existing academic literature in its present form is a set of useful but fragmented

theories, which do not accurately describe the entire process whereby the recognition of the moral component in a decision is formed. MITT brings the different perspectives together and expands them to construct a unified theory.

*** Figure 2 about here. ***

Moral Intensity for Information Goods

Features of information goods comprise situational inputs into the judgment of moral intensity.

The special features of information goods as they affect the dimensions of moral intensity are summarized in Table 1. (The moderating relationships in brackets [] are discussed in a later section.) They are discussed here organized by the dimensions of moral intensity as identified in the last section.

Social Consensus

Information goods often have minimal or no marginal cost. Once produced, a piece of software can be copied, even without a disc, with no cost beyond the brief amount of time taken to make the copy. As many people may not have a clear understanding of the resources that go into the development of the first copy, they may not agree that it is wrong to obtain unauthorized copies, influencing social consensus. Information goods also show no degradation in reproduction for either party, owner or copier. Information goods can exist in two (or more) places with no apparent decrease in the value. Ethical principles involving theft are less clear where costs and losses are hidden.

In addition, the distribution of information goods is such that social cues between transactors can be reduced. Software can be obtained over the Internet or from a third party, distancing the user

from the producer and developer. The use of information technology can separate people, and make their interactions seem less real. Computer-mediated communications provide an example. Computer technologies such as email and text messaging suppress social cues, context cues, and feedback (Dennis and Kenny 1998; Walther 1995). The resulting interaction between individuals who use these technologies may contain language and communication patterns that would be unacceptable in face-to-face dialogue (e.g., flaming—Chenault 1998; Riva 2002). The distance feature of a lack of social cues masks the social consideration of consensus.

In conjunction, the intangibility of information goods reduces the perception of the applicability of ethical principles surrounding theft. Users can disassociate themselves from their actions mediated by technology. Downloading software from the Internet, with no physical commodity involved, may not be seen as “real,” in its physicality or consequences, as stealing a car or money.

Finally, there are no fortified or consistent protection strategies in place. This reduces social consensus. After all, if the act was “wrong,” then clear preventative mechanisms would be in place to ensure compliance, as is the case for physical goods. Differences across cultures/contexts exacerbate the application of preventative strategies, with cultures operating with different principles.

Put together, the features of information goods consistently tend to minimize the social consensus concerning ethical behavior with information goods.

Severity of Outcomes and Actions

Recall that severity has both teleological and deontological aspects. The teleological component concerns the severity of the outcomes; deontology captures the severity of the actions, i.e., the intentionality and causal directness of the actions leading to the consequences. Information technology can influence either of these aspects of severity: The judged consequences may be lessened and/or an individual may not be aware of the consequences of her/his action or the effects on others due to the presence of information technology.

The negligible marginal cost structure of information goods clearly diminishes the severity of outcomes in terms of the magnitude of loss and the probability of effect (Logsdon, Thompson, and Reid 1994). People may tend to believe that as long as the software is developed, the time and cost investment has already been made and the developers have already been paid in full for their work, making harm minimal and/or unlikely.

The lack of degradation when reproduced, particularly of the original user's product, also minimizes the severity of outcomes. If the original owner has not lost anything, this gives the impression that no others are affected by the unauthorized duplication. Both legitimate and illegitimate users have functional copies, the legitimate user is oblivious to the illegitimate use and no one is deprived. As such, the magnitude of consequences and probability of effect dimensions of moral intensity are lower.

The distance feature of information goods would more likely influence severity of actions, severity in the deontological sense. The absence of social cues weakens the causal chain

between producer and user. The user may have no sense of the producer or creator of software; the lack of social cues promotes non-intentionality and a lack of temporal immediacy.

The intangibility feature would reduce severity both through the teleology and deontology. The consequences are less visible, reducing the perceived magnitude and judged probability of effects. Also, intangibility weakens the ability to track the causal chain. As noted by Logsdon, Thompson, and Reid (1994), “the length of time between the act of [unauthorized duplication] and the onset of consequences, if indeed there are any consequences, is quite long” (p. 855).

The limited protection for information goods is expected to operate similarly to its influence on social consensus. A lack of strong, consistent legal and technical protections signals a lower magnitude of severity and also affords more unintentional behaviors. Thus, these aspects of information goods tend to reduce moral intensity in terms of severity in terms of outcomes and actions.

So, overall the features of information goods generally tend to lower the moral intensity of a situation in terms of the severity of the moral question, as well, although not as consistently across all features for both teleological and deontological severity.

Social Impact

Although less verified as a dimension of moral intensity, we complete the discussion of IT influences on moral intensity by considering how the features of information goods would be expected to influence social impact in terms of proximity (how psychologically close to me are those affected?) and concentration of effect (fewer people affected at a given magnitude).

Social impact is expected primarily to be affected by the distance feature of information goods, the absence of social cues. As Logsdon, Thompson, and Reid (1994) recognized: “‘Victims’ of the act [of unauthorized duplication], i.e., individual software developers or companies, are perceived as far removed and impersonal to the copier” (p. 855). Also, because most information technology producers are large and anonymous, the perception of the concentration of effect can be reduced. The loss of a single information technology will be dispersed across a large number of non-identifiable people reducing the concentration of any loss.

From the literature and as background to our theory, we were able to identify four dimensions of moral intensity (i.e., social consensus, severity of outcomes, severity of actions, and possibly social impact) and five relevant features of information goods (i.e., the cost structure, reproduction, distance, intangibility, and protection). The involvement of IT with information goods is a situational factor influencing the judgment of moral intensity. This section has delineated the specific impacts of the information goods’ features upon the different dimensions of moral intensity, as summarized in Table 1. Now we turn to the second main category of input to the moral intensity judgment, that of individual differences. What individual differences can be usefully identified that influence the ethical decision-making process, and how do they operate?

Relational Models Theory

A variety of decision-maker characteristics can influence the decision process, including factors of age, education, gender (e.g., Harrington 1989; Jones and Hildebeitel 1995), and personality (e.g., Hegarty and Sims 1978; Reiss and Mitra 1998). One shortcoming of these individual difference factors is that they are generally investigated in a theory-free manner, using a more

exploratory empirical approach. In this section we apply a theory-grounded view of the individual decision maker and connect it to the interaction of the characteristics of information goods and dimensions of moral intensity as just detailed.

As noted earlier, ethical decisions by definition imply that the individual is operating within a social environment. Consequently, we outline and employ Fiske's (1990; 1991; 2004) relational models theory, a socially-grounded theory of individual differences, as informative of ethical reasoning. The theory has been widely studied and supported in various cultures and contexts (e.g., Fiske, Haslam and Fiske 1991; Haslam and Fiske 1999; Lickel, Hamilton and Sherman 2001; Realo, Kastik and Allik 2004). A relational model captures the decision-maker's worldview from which norms are generated and prioritized (i.e., the principles and values used for reasoning in ethical decision-making) within a situation. The relational models may prescribe different actions; so for individuals who use conflicting models, their respective definitions of "right" and "wrong" will clash. Similarly, the models will influence whether and to what extent the situation involves such principles at all, i.e., one's judgment of moral intensity.

The theory posits four basic models of social interaction by which individuals motivate and coordinate their activities, and understand and respond to each others' actions. These models are understood to represent our world-view of a situation. As such, they are expected to operate both implicitly in influencing a person's judgment, as well as explicitly to influence the arguments that are generated. We first describe the four relational models: Communal Sharing, Authority Ranking, Equity Matching, and Market Pricing. Following this, we connect the models to the features of information goods and the dimensions of moral intensity. In so doing, we focus upon the influence that one's social world-view has upon the implicit judgment of moral intensity.

Communal Sharing is a model in which no one participant is distinguished from another in the group. Membership is duty-based having a sense of altruism and consensus. Group members take on work based upon their individual abilities, and benefits are distributed among members based upon need or interest. Actions that intend to distinguish a person from others in the group are considered wrong.

Authority Ranking is a hierarchical model of interaction that values obedience to the law. Privilege is used to distribute benefits according to a chain of command. Higher ranking members are responsible for protecting lower ranking members, and lower ranking members are to obey higher ranking members. In Authority Ranking, it is wrong to defy the hierarchy.

Equity Matching is characterized by distinct peer members that contribute and take turns in interactions. Reciprocity is valued and failure to equally reciprocate the benefits and harms is considered wrong.

Market Pricing is characterized by a rational system of exchange to coordinate interactions within a market system. Values are determined by price/utility and the idea of proportional exchange. Agreement within the system is considered important, while taking advantage through violating proportional equality is wrong.

Fiske (2004) also conceived the four models of social interaction as falling along a continuum. The models vary as to the degree of flexibility (precision of coordination) and the information costs required of the model. The Communal Sharing model has the most flexibility and fewest

information needs. Decreasing in flexibility and increasing in information needs are, in order, Authority Ranking, Equity Matching, and, the model with the least flexibility and most precision, Market Pricing.

For individuals within Western organizations participating in a capitalistic economic system, social interactions involving ownership of physical goods are presumably dominated by the Market Pricing model. However this dominance does not necessarily extend to information goods; and the models used vary across individuals and situations (Fiske, 1990). Although largely untested, the IT features identified in the previous section are expected to capture differences between physical and information goods that can influence the use of alternative relational models. This influence is shown by the vertical arrow at the left of Figure 2; the details of the predicted influences are summarized by Table 2.

*** Table 2 about here. ***

To be specific, the cost structure feature (low marginal cost) should weaken the use of Market Pricing models in particular. The model hinges on proportional exchange, matching costs and benefits. Where costs are non-existent, exchange is irrelevant. The reproduction feature (no degradation in quality) would serve to make sharing a more feasible option, and thereby bolster the use of Communal Sharing models. The distance feature (weakened social cues) offers no implications for any of the particular social models, instead it should tend to weaken social perspectives generally. Thus, less application of all social models would be indicated, with the individual taking a more individualistic, egoistic view of the situation. The intangibility feature (no loss in value with duplication) lends a sense of abstraction to the process. An exchange for something "less real" than a physical good is not intuitive to people who have (until now) dealt

primarily in the physical. This is expected to lessen the use of Market Pricing models by making the proportional exchange aspect less certain. Finally, the limited protection associated with information goods should particularly influence the applicability of the Authority Ranking model. If hierarchical authority can not be or is not enforced, its use is less likely in social interaction.

Since all of these features may be operable simultaneously for individuals in an organizational IT setting, the different influences may come together in different ways. At the very least, we should expect to see more variety in the relational models employed with information goods as opposed to physical goods. This observation heightens our interest in the influence that each model is expected to have upon the relationship between IT and moral intensity. We now discuss the relational models (i.e., Communal Sharing, Authority Ranking, Equity Matching, and Market Pricing) as moderators of the IT relationships upon moral intensity. The expected moderating relationships are shown by the arrow in Figure 2 from the Social View node at the upper left, and the predicted moderating influences are summarized within Table 1 in square brackets [].

Relational models theory is a theory of individual differences, characterizing the social view that an individual brings to a particular situation. As such, it is presumed that, for a given individual at a specific time, at most one model will be applied. We expect the influence of IT upon moral intensity to differ systematically for individuals carrying certain worldviews within the decision situation. This is expected to manifest itself in analyses stratified by the decision makers' worldviews: For individuals characterized as operating from within a particular relational model, the influence of IT upon moral intensity is lesser or greater relative to those using other

models. These hypothesized moderating effects can also be observed at a more aggregate level: In situations for which a particular relational model is more prevalent, the proposed influence of IT upon moral intensity is lesser or greater relative to situations for which other models predominate. We describe the expected moderating relationships as would be observed using the latter analysis, with the understanding that comparable expectations can be formulated for the former analysis.

When those with a Communal Sharing view are more prevalent, more individuals have a non-individualistic attitude and see people as more connected. In this situation, the influence of the distance feature of IT weakens the causal link between producer and user. This, in turn, heightens the social impact of the decision. When there are more individuals having a communal view of the world that are sensitive to social impact, this effect of IT is expected to be greater.

When Authority Ranking is high, more individuals are sensitive to protection strategies, since these strategies match the hierarchical worldview associated with this social model. Thus we expect greater sensitivity in these settings to the limited protection aspect of IT. This should affect all of the hypothesized influences of protection--upon social consensus, severity of outcomes, and severity of actions—relative to situations when Authority Ranking is lower.

When Equity Matching is high, more individuals are sensitive to reciprocity. However, reciprocity does not have a clear bearing on any of the features of IT. Thus, we have no clear expectation for individuals holding this worldview in terms of its influence on any of the dimensions of moral intensity.

Finally, when Market Pricing is high, more individuals are sensitive to proportional equity relative to an exchange system. We expect individuals subscribing to this worldview to be more cognizant of the hidden fixed production costs associated with information goods. That is, when Market Pricing is high, the IT cost structure will be less ignored, lowering the effect of this feature upon moral intensity, both in terms of its proposed influence upon social consensus and upon outcome severity.

To this point, we have defined and refined moral intensity as a key construct in the problem formulation phase of ethical decision making that forms the domain of the theory MITT. Moral intensity is framed as a construct comprising several dimensions: social consensus, severity of outcomes, severity of actions, and possibly social impact. Two general inputs into ethical decision making are considered as part of the theory: situational and individual difference factors. In contrast to prior work, we have taken a theory-grounded approach to these inputs. Situationally, we have focused on aspects of information goods as afforded by IT as key concerns in the present context. Five features of information goods have been extracted from the literature (cost structure, reproduction, distance, intangibility, and protection); and, in this section their influences upon the dimensions of moral intensity have been developed. Finally, relational models theory has been used as a theory of individual differences that is consistent with the social aspect of ethical decision making. The four models and their associated worldviews were described and connected as moderators to the posited influences of IT upon moral intensity. To this point, the theory applies to the determination of moral intensity both implicitly (as an intuitive process) and explicitly (as part of a deliberative process). In the latter case, when moral intensity is considered deliberately, reasoning is employed to argue whether and to what extent moral reasoning applies in the situation. In the next section, MITT is now expanded to

encompass the reasoning that can be employed in support of the judgment of moral intensity, addressing the final research question: What rationales support the judgment of moral intensity?

Again, we take an approach grounded in existing, relevant, validated theory.

Neutralization Theory

As discussed, moral intensity is a judgment whereby the decision maker assesses the degree of moral imperative present in the situation. Features of information goods as a situational factor and relational models as an individual factor have been developed as influencing judged moral intensity. The formulation of moral intensity as a judgment can also involve reasoning, the use of arguments for and against the moral content of the situation, from which the judgment derives (cf. Smith, Benson and Curley 1991). We apply and expand a theory of neutralizations to usefully capture this aspect of moral intensity.

Sykes and Matza (1957) developed neutralization theory as a modification of the theory of differential association² (Sutherland 1955). Neutralization techniques are argument(s) or rationalizations used to explain circumstances for the temporary removal of an otherwise accepted norm, and/or qualify its suspension, to legitimize one's actions in order to rebut accusations of wrongdoing. When an individual acts in a manner that violates agreed-upon norms of interaction, s/he can use neutralization techniques to explain why the norm does not apply to her/ him, thereby reducing or escaping sanction for the violation and negative feelings (Ashforth and Kreiner 1999; Copes 2003; Orbuch 1997; Strutton, Vitell, and Pelton 1994).

In the software scenario that opens this paper, alleviating responsibility by appealing to a higher loyalty to others or denying that the software company will be harmed are examples of

² The theory of differential association posits that an individual needs to learn criminal methods as well as attitudes favorable to law violation, which include rationalizations.

neutralization techniques. Such neutralization rationales work to lower the moral intensity, reducing the individual's activation of ethical decision-making processes, and reducing the weight and/or use of ethical principles in the decision.

In deliberative judgment where ethical ambiguity is present, neutralization rationales are expected to be particularly pronounced. Robinson and Kraatz (1998) suggest that there are three conditions that enable neutralization: 1) when norms around an issue are not rigid, or ambiguous, 2) when there is no effective method of fully monitoring norm violations, and 3) when actions can be interpreted in two or more ways (i.e., unauthorized duplication of software is inappropriate, keeping company expenditures low is appropriate). Thus, in general, a situation is ambiguous in its values when there are two (or more) ethical stances that potentially have social acceptance as recognized by the decision-maker, leading to contradictory courses of action. This further corroborates the applicability of neutralization theory as part of the MITT model. Where information technology leads to more ambiguity in ethical problem formulation, the reasoning in deliberative judgment can be characterized by neutralization theory.

Sykes and Matza identified five types of neutralizations: Denial of Responsibility, Denial of Injury, Denial of Victim, Condemnation of the Condemners, and Appeal to Higher Loyalty.

In ***Denial of Responsibility*** the individual exploits society's distinction between intentional and unintentional outcomes. The individual may say things like "*I didn't mean it. I had no other choice. They forced my hand. It's not my fault.*"

In ***Denial of Injury*** the individual proclaims no harm no foul; if there is no injury, no consequences should be exacted. The individual may say things like “*I didn’t really hurt anybody. No harm done. I was just borrowing it (as opposed to stealing it).*”

In ***Denial of Victim*** the individual describes negative action(s) as a deserved punishment. The individual may say things like “*They had it coming to them. They deserve worse than that. It’s their own fault.*”

In ***Condemnation of Condemners*** the individual diverts attention from delinquency to the behaviors and motives of those who disapprove by giving the impression that the rules are being unfairly applied. The individual may say things like “*Everybody is picking on me. Everybody else is doing it. You all do it too.*”

In ***Appeal to Higher Loyalty*** the individual states that s/he subscribes to a different set of norms that outweigh society’s agreed-upon norms. Here, the individual values another norm higher than the one s/he is being accused of violating. The individual may say things like “*I didn’t do it for myself. There is a higher purpose.*”

Not all research has been restricted to Sykes and Matza’s original five neutralization techniques, though they have been most consistently studied (see Zamoon 2006 for a more detailed review of neutralization studies). Some studies have included a portion of the techniques (e.g., Agnew 1994; Harrington 2000; Hollinger 1991), or developed alternate techniques (e.g., Copes 2003; Cromwell and Thurman 2003). However, arguably the alternative techniques are only variations of the original five. For example, Metaphor of the Ledger (e.g., Hollinger 1991; Lim 2002) is a

technique where the individual claims that s/he has done enough good in the past to allow for this single bad action. This is a different form of Denial of Injury because the individual is claiming the “net” effect of his/ her action is still benefiting the other person. Denial of Humanity (Alvarez 1997) is a technique used to exclude certain people from the human race. This technique is akin to Denial of Victim; because, if there is no person being harmed, then there is no victim and less of a reason to scrutinize the action. In Defense of Necessity (Copes 2003), the individual claims, although the action could be wrong, it should not be judged as such because it was necessary. As such Defense of Necessity echoes sentiments of Denial of Responsibility, where there is a sense of compulsion rather than intentional behavior.

Before applying neutralization theory within MITT, we expand the theory to more fully capture the reasoning that will be employed in deliberative judgment of moral intensity. The next section does so by pairing counter-arguments to each of the neutralization argument types.

Counter-Neutralization Techniques

Neutralization theory was developed around actions where there was a clear definition of acceptable behavior according to the social environment in which the individual interacts (e.g., physical theft, assault, or vandalism). In such cases, the offenders who apply neutralizations continue to subscribe to the dominant values (cf. Minor 1981), even though it is a qualified version of those values. They respect those who abide by the law, and are careful when selecting victims, so as not to offend those who would judge the action. However, where information goods are involved as detailed earlier, norms are more ambiguous. In these situations, deliberative reasoning is not as one-sided as in the situations for which neutralization theory has been traditionally applied. If neutralization theory was the only force operating, then individuals

would tend to contradict ethical principles. Since this is not the case, there must exist a counter force. To apply the theory to the more general case, we expand neutralization theory to include the counterarguments, as well. For each neutralization technique, we posit a corresponding counter-neutralization technique as described below. The neutralization and counter-neutralization techniques are represented in Figure 2 as the backstop, providing support or backing for the judgment of moral intensity.

In ***Accepted Accountability*** (counter-neutralization for Denial of Responsibility), the individual challenges the claim of unintentional negative action on the basis of his/ her choice and the existence of alternatives. The individual may say things like “*I did mean it. There were other options I didn’t pursue. I am responsible. It is my fault.*”

In ***Expectation of Injury*** (counter-neutralization for Denial of Injury), the individual supports the logical expectation of injury. That is, following the natural progression of the action leads to consequences where injury is foreseeable. The individual may say things like “*I did hurt someone. Harm was done.*”

In ***Fairness of System*** (counter-neutralization for Denial of Victim), the individual challenges on the basis of the appropriateness of the existing system, so that the retributive action is unwarranted. The individual may say things like “*The system in place is fair. Law – not vigilantism—is fair.*”

In *Equality of Condemnation* (counter-neutralization for Condemnation of the Condemner), the individual challenges based upon equal application of the system. The individual may say things like “*Everybody is treated equally. Not everybody else does it.*”

In *Reduction to Self Interest* (counter-neutralization for Appeal to Higher Loyalty), the individual challenges based on the counter-claim that the individual acts are selfish, making others worse-off. The individual may say things like “*I did this for myself. There is no higher purpose recognized. People are worse-off because of the action.*”

Thus, there are five argument/counterargument pairs that are predicted to influence the moral intensity in deliberative judgment. The next section connects these arguments to their effects on moral intensity.

Neutralization and Counter-Neutralization in Deliberative Judgment

We have explained that the judgment of moral intensity could be supported by deliberative reasoning processes. The theory of neutralizations provides a grounded basis for analyzing the arguments used. Neutralizations are arguments that counter or reduce the urge to invoke ethical decision processes; and, counter-neutralizations support the adoption of an ethical position. Different aspects of moral intensity (i.e., social consensus, severity of outcomes, severity of actions, and social impact) are influenced depending on the neutralization involved. For each neutralization/counter-neutralization pair, we identify the expected primary influence on moral intensity, as summarized in Table 3.

Denial of Responsibility/ Accepted Accountability are expected to primarily influence the severity dimension, particularly through its deontological (severity of action) aspect. These

rationales question or support whether any choice was made or harm was intended. They are directed at the causal nature of the assessed action and its intentionality.

Similarly Denial of Injury/ Expectation of Injury influence severity, however via the teleological aspects (severity of outcomes). These rationales question or support whether any harm has really been done. They are directed at the potential consequences.

Denial of Victim/ Fairness of System focus on the victims of the action and their fair treatment. Consequently, these arguments are expected to primarily influence the social impact dimension, the proximity and number of victims playing a role in the assessment of their fair treatment.

In contrast, the other two neutralization/counter-neutralization pairs address the norms being applied and so most closely relate to the social consensus dimension of moral intensity.

Condemnation of Condemners/ Equality of Condemnation derive from a justice-oriented norm for which there is social consensus. Equal application of sanctions is expected. When not present, the neutralization arises; if present (the counter-neutralization), the norm is in force.

Finally, Appeal to Higher Loyalty/ Reduction to Self Interest apply to other, alternative, social-consensual norms, replacing the current norm with a different principle showing a higher purpose. The counter is a questioning of the alternate norm or its applicability. In either case, it is the social consensus of the alternative principle that the argument is directed toward.

Thus, MITT incorporates the influence of neutralizations and counter-neutralizations as arguments used in the deliberative judgment of moral intensity. Left out of the theory are the

situational and individual difference influences upon the use of neutralizations and counter-neutralizations, specifically: What leads an individual to predominantly employ neutralizations versus counter-neutralizations or visa versa? The answer can comprise individual factors, situational factors, or a mix of both. There is no research addressing this issue; so this aspect of the model is left outside the scope of our model and for future study.

A related question is the relative use of different neutralization/counter-neutralization strategies. There is evidence that neutralizations are offense specific (Agnew 1994; Copes 2003; McCarthy and Stewart 1998): Different types of offenses will favor different neutralization techniques. For example, defrauding an insurance company out of funds might invoke Denial of Injury neutralizations, whereas violent behavior might invoke Denial of Responsibility neutralizations. With information goods, any of the neutralizations is potentially applicable, though some may be more prevalent. Zmoon and Curley (2008) provide a starting point for situational differences in applying neutralizations and counter-neutralizations in the context of information goods.

They investigated neutralizations using newspaper reports on software piracy as data. Newspaper articles were used as a reflection of public opinion, appropriate for the consideration of ethical reasoning. Articles from 1989-2004 reporting on software piracy in the five highest circulation U.S. newspapers were analyzed for rationales cited for and against unauthorized software duplication, as reflecting the principled reasoning employed toward unauthorized software duplication as an ethical decision. These rationales were specifically coded with respect to neutralizations and counter-neutralizations. The results showed that the arguments for and against unauthorized copying argued from non-corresponding neutralization and counter-neutralization strategies, making communication problematic. Specifically, anti-copying

rationales in the articles largely used the Expectation of Injury counter-neutralizations (61% of the counter-neutralizations used). Pro-copying rationales were more varied with a much flatter distribution across the different neutralizations. Although interesting, note that this study is limited by its use of articles as the unit of analysis, not individual software users. How and whether these results exactly translate to individuals' behavior is another area for future study.

CONCLUSIONS AND FUTURE RESEARCH

Technology has developed too quickly for social norms to keep pace. The result is a context which is a powerful and important instantiation of a general case in which there is ambiguity as to whether or not decisions involve ethical considerations. Sama and Shoaf (2002) have shown that ethical rationales (based on normative philosophies) in "new media" (for example the web) are largely non-existent when compared with more traditional settings which do not involve information technologies. Many decisions involving digital goods have (thus far) not developed usage norms. Still, there are decisions involving digital goods that are identified by at least some individuals as ethical in nature. What then are the main influences on whether a decision involving IT is identified as having a moral component?

Moral intensity is a judgment as to the degree to which a situation has an ethical component. As moral intensity increases, the relevance of moral principles to the decision rises, affecting the approach taken to the problem. At one extreme, moral intensity is zero and moral principles are not considered, the problem is handled using standard approaches, e.g., compensatory or economic approaches. At the other extreme, moral intensity is high and ethical principles are paramount; we are in the realm of taboo tradeoffs where the principles cannot be influenced by any other factors.

Using this construct, we develop a theory focusing on the role of IT in the recognition phase of ethical decision making and the judgment of moral intensity. The Moral Intensity with Technology Theory (MITT) is summarized in Figure 2, showing the main constructs and their relationships. The relationships are keyed to Tables 1-3 that detail the nature of each. MITT deals with the ethical problem formulation phase of decision making (highlighted in Figure 1) and focuses on the influence of IT on moral intensity, the judgment of the degree to which a decision is an ethical one.

As a first step to developing MITT, the construct of moral intensity is expanded, reviewing and tying together the literature surrounding this construct. One major general contribution of our theory is to clarify this central construct of moral intensity. Jones (1991) provided a sound framework, recognizing the multidimensionality of moral intensity and providing the basis for a program of research that is summarized above and in the Appendix. McMahon and Harvey (2006) recently helped to refine the multidimensionality of the construct, identifying connections among the original dimensions of moral intensity and reducing the dimensionality of the construct. However, a still notable absence was a distinction between teleological and deontological approaches to ethical reasoning, a differentiation that a number of researchers have found useful and to which adult decision makers are sensitive. Although further research to refine the construct is still needed, the evidence supports the following dimensions of moral intensity: social consensus, severity of outcomes, severity of actions, and possibly social impact.

Relevant features of information goods are then identified and related to moral intensity. MITT provides insights both directly into the factors influencing the determination of moral intensity

where information goods are concerned; and, more broadly, it enhances our understanding of related theories and issues. The connections between features of information goods and moral intensity are summarized in Table 1. At best, these relationships have been implicit in the literature to date. By bringing the construct of moral intensity into the discussion, MITT makes explicit the connections between aspects of digital goods and the application of ethical reasoning, opening them to a more structured investigation.

The model also builds in a theory of individual differences, relational models theory, as dependent on the features of information goods and serving as a moderating influence on the role of IT upon moral intensity. Many studies looking at individual differences use easy-to-gather demographic variables, e.g., gender and age, with little or no theoretical rationale. Relational models provide a theoretical basis grounded in social relations. Since ethical decisions by definition have a social aspect, relational models theory is integrated as a relevant theory-grounded explanation of individual differences. The models provide social worldviews from which the nature of relationships is understood by an individual. Consequently, they are theorized to influence the implicit judgment of moral intensity, as a socially grounded judgment.

Whereas sometimes the ethical nature of a decision is judged implicitly without conscious deliberation, at other times reasoning is employed to more consciously consider the moral intensity of a situation. To accommodate deliberative judgment of moral intensity, the construct is connected to neutralization theory as a theory of argument. Neutralization theory itself is expanded to incorporate counter-neutralizations. These are counterarguments that provide a fuller account of the reasoning used in to situations like those involving IT that are potentially ambiguous in their ethical implications. Applications of neutralization theory to business in the

presence of information technology are scarce. In fact, the only directly relevant study on workplace deviance in the presence of technology was done by Lim (2002), where she stated:

Our results provide encouraging evidence which suggests that neutralization theory may be useful in shedding light on why workplace deviance continues to be a pervasive problem in organizations. To date, however, only a few studies have attempted to utilize neutralization theory as a framework for understanding employees' behavior at the workplace (e.g. Hollinger 1991, Dabney 1995). (p. 688)

Thus, MITT pulls together and expands a number of theories and models to create a novel, detailed theory of ethical problem formulation in IT-rich situations. Earlier works dealing with the subject of ethics and morality have been challenged on several fronts. Criticism included mixing descriptive and normative types of investigations, not explaining underlying assumptions, and failing to realize the inherent complexity in making and implementing decisions of an ethical character (Thong and Yap 1998; Miner and Petocz 2003). Laudon's (1995) dissatisfaction with the then existing IS ethical literature was that it was not well grounded in theory, and disorganized. We believe we have addressed all these deficiencies in this work: 1) This paper takes a purely descriptive approach to the investigation. 2) This paper is specific about its scope and limitations (recognized ethical decisions, adult choice, business context, use of information technology). 3) This paper centers its investigation at issue characteristics (i.e., moral intensity as opposed to individual characteristics). 4) This paper makes use of various sources of literature to position and buttress the work. 5) This paper provides a theoretical framework, bridging and expanding theories of moral intensity, neutralization, and relational models.

As noted in the discussion of Figure 1, problem formulation—the focus of this paper—is part of a general ethical decision process. Following problem formulation and the judgment of moral intensity, a moral intention is formed after gathering information and evaluating the information. As the decision literature has widely shown, the framing of the problem in the initial phase is critical to how decisions are made (e.g., see Kahneman and Tversky 2000). If moral intensity is judged to be zero, then ethical principles are not brought to bear, and the decision intention is amoral in nature, based on other concerns, e.g., cost-benefit analyses. Where moral intensity is positive, moral principles are brought to bear as part of the information gathering leading to the formation of a moral intent. The degree of moral intensity will determine the extent to which these principles influence the decision intent. In the extreme, high moral intensity can lead to “taboo tradeoffs,” decision making made entirely on ethical principles, with no tradeoffs along other dimensions being possible (e.g., Tetlock et al. 2000). Understanding moral intensity, as the key output of the problem formulation phase in ethical decision making, is an important step for furthering our understanding of ethical decisions involving IT and beyond. In this paper, we have highlighted theory-grounded throughout the paper concerning moral intensity and its influencing factors. Empirical validation can now follow in a structured manner.

As just one case of the applicability of the theory, we have used software duplication as an exemplar throughout the paper. Scholars and practitioners alike have noted that despite costing the software, music, and film industries billions of dollars a year, piracy still enjoys a high degree of tolerance and is not necessarily perceived as an “ethical” issue (Glass and Wood 1996; Logsdon, Thompson and Reid 1994; Strikwerda and Ross 1992). Sykes and Matza’s neutralization techniques have not previously been explored in digital duplication. In fact, the closest behaviors to which neutralization theory has been applied are to shoplifting and theft. By

describing what rationales people use to justify their behavior and understanding how the moral intensity of an issue can be influenced, we can determine why certain products are categorized as having lower moral intensity and how those perceptions could be altered. These perceptions are also expected to interact with the relational models employed and IT characteristics, as described. Empirical investigations also can aid academic understanding of the issues. Practical implications may include adjustments to legal and business strategies as well as affecting the population's and/or industry's ethical stances on unauthorized copying. We see the theory elaborated in this paper as an important step toward understanding questions like these, and as offering a positive direction forward.

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Appendix: Summary of Research on Moral Intensity

Authors and Year	Moral Intensity Dimensions	Population and Method	Findings
Morris and McDonald (1995)	Social consensus Magnitude of consequences Probability of effect Temporal immediacy Proximity Concentration of effect	Undergraduate students Scenarios and questionnaire, (manipulate two dimensions per scenario)	Studies examined the relationship of moral intensity to moral judgment; found that variations in moral judgments across situation were explained by magnitude of consequences and social consensus in addition to a third (scenario dependent) dimension. Perceived dimensions varied from scenario to scenario. Moral intensity was found to influence judgment and magnitude of consequences; social consensus outweighed the other four dimensions.
Singer (1996)	Social consensus Magnitude of consequences Probability of effect	Managers of commercial firms vs. public (non business) Scenarios and questionnaire	Managers' evaluation processes emphasize: social consensus (prevailing business practices), magnitude of consequences, and likelihood of action. Public evaluation processes emphasize: magnitude of consequences.
Marshall and Dewe (1997)	Social consensus Magnitude of consequences Probability of effect Temporal immediacy Proximity Concentration of effect	Executive MBA students Questionnaire with scenarios	All people do not consistently use moral intensity's six dimensions when describing an ethical situation.
Singer and Singer (1997)	Social consensus Magnitude of consequences Probability of	Undergraduate students Scenarios and questionnaire	Overall ethicality ratings of a situation were best predicted by the social consensus and magnitude of consequences.

	effect Temporal immediacy		
Singer, Mitchell, and Turner (1998)	Social consensus Magnitude of consequences Probability of effect Temporal immediacy	Employees Scenarios and questionnaire	Overall ethicality of a situation was influenced by magnitude of consequences closely followed by social consensus. Furthermore, people use different issue characteristics when outcomes will be beneficial (social consensus, magnitude of consequences, temporal immediacy) vs. harmful (social consensus, likelihood of action).
Chia and Mee (2000)	Social consensus Magnitude of consequences Probability of effect Temporal immediacy Proximity Concentration of effect	Business individuals in Singapore Questionnaire and open ended questions	Recognition of a moral issue is only affected by social consensus and magnitude of consequences.
Dukerich, Waller, George, and Huber (2000)	Social consensus Magnitude of consequences Temporal immediacy Proximity Concentration of effect	Managers Interview	"Jones (1991) model of moral intensity may not portray a unitary construct...constructed a new variable ... adding the values of magnitude of consensus, social consensus, proximity, and concentration of effect [Organizational Moral Intensity]" (p. 33). Proposed moral intensity is multidimensional, not unitary construct.
Frey (2000 a)	Social consensus Magnitude of consequences Probability of effect Temporal	New Zealand business managers Scenarios and questionnaire (via snail mail)	Found social consensus, magnitude of consequences, likelihood of effect influence on decision-making. Moral intensity best described by a one factor solution, because Jones' six dimensions do not fall into reliably orthogonal dimensions, but rather one dimension with components.

	<p>immediacy</p> <p>Proximity</p> <p>Concentration of effect</p>		
Frey (2000b)	<p>Social consensus</p> <p>Magnitude of consequences</p> <p>Probability of effect</p> <p>Temporal immediacy</p> <p>Proximity</p> <p>Concentration of effect</p>	<p>New Zealand Universities and UK mail base</p> <p>Web based email of qualitative (optional) responses and scenarios and questionnaire (via web random email)</p>	<p>Found social consensus, magnitude of consequences, likelihood of effect influence on decision-making.</p>
Barnett (2001)	<p>Social consensus</p> <p>Magnitude of consequences</p> <p>Temporal immediacy</p> <p>Proximity</p>	<p>Undergraduates</p> <p>Scenarios and questionnaire</p>	<p>Social consensus alone affects recognition of issue. Seriousness of consequences and social consensus effect moral judgment, and social consensus influences behavior intentions.</p>
Bennet and Blaney (2002)	<p>Social consensus</p>	<p>Undergraduates</p> <p>Questionnaire</p>	<p>Higher social consensus leads to higher willingness to pay to address an issue.</p>
McDevitt and Van Hise (2002)	<p>Magnitude of consequences</p>	<p>Employees enrolled at graduate class</p> <p>Scenario and questionnaire</p>	<p>Measured moral intensity in terms of the dollar value of the ethical breach, where larger amounts indicated more serious offenses. Dilemmas involving less money perceived as less important.</p>
Paolillo and Vitell (2002)	<p>Social consensus</p> <p>Magnitude of consequences</p> <p>Probability of</p>	<p>Business managers</p> <p>Questionnaire (snail mail)</p>	<p>Moral intensity explains variation in ethical decision-making.</p>

	<p>effect</p> <p>Temporal immediacy</p> <p>Proximity</p> <p>Concentration of effect</p>		
Sama and Shoaf (2002)	<p>Social consensus</p> <p>Magnitude of consequences</p> <p>Probability of effect</p> <p>Temporal immediacy</p> <p>Proximity</p> <p>Concentration of effect</p>	N/A	Theoretical article stating there are no clear normative standards of behavior for the Web. "MI elements are only weakly evident in business conducted over the Internet, particularly with reference to social consensus, temporal immediacy and proximity" (p. 99).
Kelley and Elm (2003)	<p>Social consensus</p> <p>Magnitude of consequences</p> <p>Probability of effect</p> <p>Temporal immediacy</p> <p>Proximity</p> <p>Concentration of effect</p>	<p>Social service administrators</p> <p>Interview</p>	Organizational context effects moral intensity and there is interaction among its dimensions.
Shaw (2003)	<p>Social consensus</p> <p>Magnitude of consequences</p> <p>Proximity</p>	<p>Webmasters</p> <p>Questionnaire (web-based)</p>	When deciding issues of privacy, webmasters do consider social norms and outcomes.
McMahon and Harvey (2006)	<p>Social consensus</p> <p>Magnitude of</p>	<p>Undergraduate students</p> <p>Surveys and questionnaire (Study 2 online)</p>	Measures of concentration of effect not reliable. Exploratory and confirmatory factor analyses suggested three factors: social consensus, proximity, and probable magnitude of consequences (combining the other 3 dimensions).

	consequences Probability of effect Temporal immediacy Proximity Concentration of effect		
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Table 1: Influences of Features of Information Goods on Dimensions of Moral Intensity [as Moderated by Relational Models]

Dimension of Moral Intensity	Definition of Dimension (connections to dimensions posited by Jones, 1991)	Features of Information Goods				
		Cost Structure (Lower costs)	Reproduction (No quality degradation)	Distance (disassociation among parties involved)	Intangibility (non-physical)	Protection (minimal legal consequences)
Social Consensus	The existence of developed relevant ethical principles along with the degree of social agreement upon them (Social Consensus)	Lower [less with Market Pricing]	Lower	Lower	Lower	Lower [greater sensitivity with Authority Ranking]
Severity of Outcomes	Teleological (Ends) – magnitude, likelihood and promptness of the consequences involved (Magnitude of Consequences, Probability of Effect, Temporal Immediacy)	Lower [less with Market Pricing]	Lower		Lower	Lower [greater sensitivity with Authority Ranking]
Severity of Actions	Deontological (Means) – intentionality of harm and strength of causal link between action and consequences (Temporal Immediacy)			Lower	Lower	Lower [greater sensitivity with Authority Ranking]
(Social Impact)*	Nearness to those affected and their fewness in number (Proximity, Concentration of Effect)			Lower [more with Communal Sharing]		

* The dimension of Social Impact is more tentative and may not obtain upon further study.

Table 2: Primary Influences of Features of Information Goods on Relational Models

Feature of Information Good	Influence on Relational Model
Cost Structure (zero marginal cost)	Market Pricing lessened
Reproduction (no degradation)	Communal Sharing bolstered
Distance (no social cues)	All social models lessened
Intangibility (non-physical)	Market Pricing lessened
Protection (limited)	Authority Ranking lessened

Table 3: Primary Influences of Neutralizations and Counter-Neutralizations on Dimensions of Moral Intensity

Dimension of Moral Intensity	Influences of Neutralization and Counter-Neutralization on Dimension of Moral Intensity
Social Consensus	Condemnation of Condemners/ Equality of Condemnation Appeal to Higher Loyalty/ Reduction to Self Interest
Severity of Outcomes (teleological)	Denial of Injury/ Expectation of Injury
Severity of Actions (deontological)	Denial of Responsibility/ Accepted Accountability
Social Impact	Denial of Victim/ Fairness of System

Figure 1: Ethical Decision-Making Model

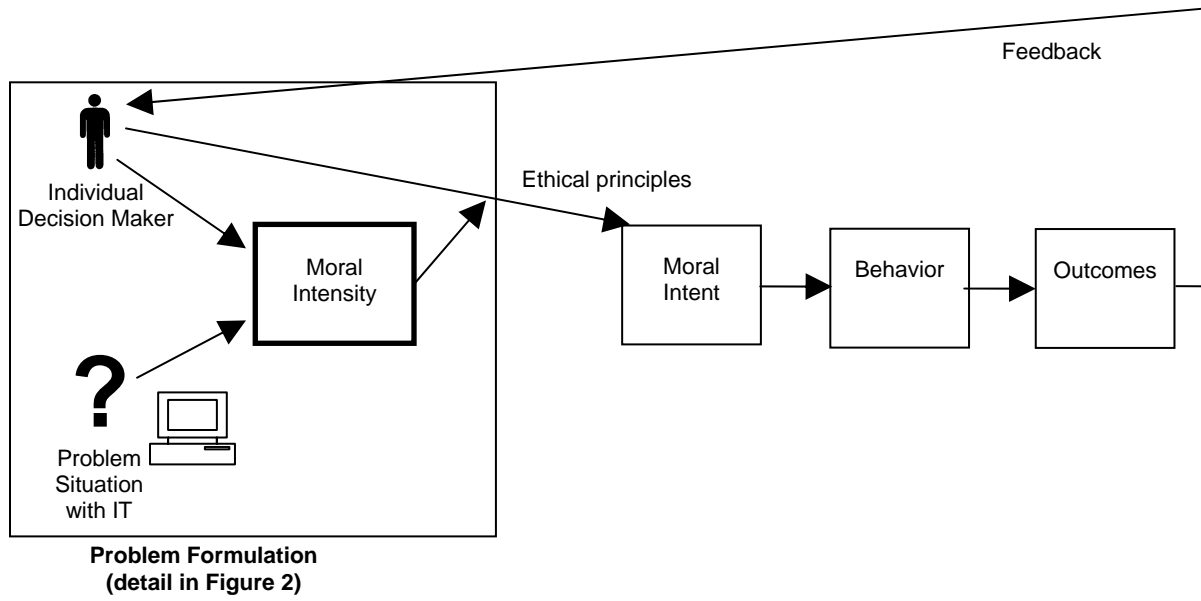


Figure 2: Moral Intensity with Technology Theory (MITT)

