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Ethical Decision-Making about Intellectual Property Piracy: A Multi-Issue Approach

Russell Haines
hainesrp@appstate.edu
Appalachian State University
Boone, NC, 28608, USA

Lijun Chen
chenl5@appstate.edu
Appalachian State University
Boone, NC, 28608, USA

Paton Haines
patonhaines@yahoo.com
Virginia Commonwealth University
Richmond, VA, 23219, USA

Darin Hodges
hodgesdc@appstate.edu
Appalachian State University
Boone, NC, 28608, USA

Abstract

Intellectual property piracy remains a significant societal problem, and emerging technologies such as generative artificial intelligence have heightened its urgency, underscoring the need for a robust model of ethical decision-making in technology contexts. Drawing on an extension of the four-component model, we argue that the perceived importance of an ethical issue (PIE) shapes the formation of moral judgment, and that moral intention arises from both moral judgment and a personal sense of moral obligation. We further propose that PIE affects how these relationships unfold: high-PIE issues exhibit stronger links between moral judgment and intention, whereas low-PIE issues show weaker links due to the influence of other determinants. We test these arguments using a questionnaire experiment across four intellectual property scenarios that vary in perceived importance. Results show that PIE significantly influences moral judgment, while moral obligation was positively associate with moral judgment and moral intent. In addition, the highest-PIE scenario demonstrates a stronger judgment–intent link and a weaker obligation–intent link than moderate-PIE scenarios, supporting the proposed moderating role of PIE. These findings extend ethical decision-making theory by highlighting the role of perceived importance in shaping both cognitive and motivational pathways to ethical behavior, and offer insights for understanding and mitigating intellectual property piracy.

Keywords: Ethical decision-making, moral judgment, moral obligation, intellectual property piracy, information systems ethics

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1. INTRODUCTION

In a prescient article, Mason (1986) argued that as a result of the advent of the Information Age, society will be called on to provide protection of intellectual property to a degree not seen before. But, as he notes, this is no easy task: "…information has the illusive quality of being easy to reproduce and to share with others. Moreover, this replication can take place without destroying the original. This makes information hard to safeguard…" (Mason, 1986, p. 9). Mason's concerns were well founded: Worldwide, intellectual property piracy continues to cause substantial economic losses. In 2024, piracy-tracking firm MUSO recorded 216.3 billion visits to piracy websites (MUSO, 2025). The U.S. Chamber of Commerce estimates that online piracy costs the U.S. economy at least $29.2 billion in lost revenue each year (U.S. Chamber of Commerce, 2019), while software piracy alone is estimated to result in approximately $46 billion in annual losses worldwide (Business Software Alliance, 2018). The United States remains the largest source of traffic to piracy websites, accounting for more than 12% of global visits in 2024 (MUSO, 2025). Although music and software piracy have declined with the growth of streaming and subscription services, publishing piracy increased by 4.3% in 2024, reaching 66.4 billion visits and becoming the second-largest category of pirated content (MUSO, 2025).

Given the amount of intellectual property piracy, it is not surprising that there has been scholarly research on the ethical use of information technologies (Smith, 2002). Prior studies have examined a variety of behaviors, including software piracy (Belchior-Rocha et al., 2024; D'Arcy et al., 2009; D'Arcy & Hovav, 2007; Siponen & Vance, 2010; Tam et al., 2019), the purchase of pirated music (Kwong et al., 2003), music file sharing (Arslan et al., 2025; Tam et al., 2019), pirating live sports broadcasts (Whitman & Cox, 2025), and sharing copyrighted content online (Tam et al., 2019). Although these activities differ in form, they all involve the unauthorized use, copying, or distribution of intellectual property.

The emergence of generative artificial intelligence has created new ways for individuals to engage in intellectual property piracy. For example, the generation of books under established authors' names, merchandise derived from copyrighted artwork, or content closely imitating a creator's style (Placido, 2025). Some of these behaviors extend beyond traditional copyright, implicating a creator's name, likeness, or artistic style, and in many cases the underlying AI systems have themselves been trained on copyrighted works obtained without authorization (Bartz et al v. Anthropic, 2025; Tobin, 2025).

Though recent research activity is encouraging, studies addressing intellectual property piracy have generally not been integrated within broader, comprehensive ethical decision-making frameworks. Consequently, the results of these various studies may reflect characteristics unique to the specific form of intellectual property piracy being studied as well as reflecting the idiosyncrasies of the various ethical scenarios employed in the research itself (Haines & Leonard, 2007). Without a common ethical framework, it is difficult to understand why individuals choose to engage in intellectual property piracy across different situations. This limitation is especially important today as AI continues to create new opportunities and challenges related to intellectual property rights. These developments make a general, issue-independent model of ethical decision-making more valuable than ever: such a framework should illuminate the reasoning behind emerging piracy behaviors as readily as familiar ones.

The purpose of this paper is to increase our understanding of the mechanisms underlying an individual's intention to engage in intellectual property piracy. In the sections that follow, we describe and test a model of ethical decision-making as a means of providing the IT ethics literature with a framework capable of both guiding future research and increasing our understanding of the processes underlying intellectual property piracy.

2. THEORETICAL FOUNDATION

2.1 Four Component Model

In the business ethics literature, Rest's (1986) four-component model is a generally accepted and validated account of the ethical decision-making process (Jones, 1991; Robin et al., 1996; Street et al., 2001). The four-component model "depicts the ensemble of processes that go into the production of moral behavior in a specific situation" (Rest, 1986, p. 5). The first component, *recognize moral issue*, is a realization in the person that they could do something that affects the interests of other people. The second component, *make moral judgment*, is deciding which among the possible courses of action is morally right. The third component, *establish moral intent*, involves establishing a priority of values, whether moral or not (e.g. economic interest), and choosing a course of action that may compromise the moral ideal. The fourth component, *engage in moral behavior*, involves implementing the plan of action. The four stages can be thought of as a decision-making schema in which each stage is expected to occur sequentially. Specifically, recognition of the moral issue prompts the decision maker to make a moral judgment about what constitutes right or wrong behavior in the given situation. In turn, this guides the individual to decide whether or not to engage in moral behavior.

While the theory of planned behavior has been used as a decision making model to describe ethical decision making involving IT (Belchior-Rocha et al., 2024; Cronan & Al-Rafee, 2008; Leonard et al., 2004; Lin et al., 1999; Peace et al., 2003; Tam et al., 2019), its shortcomings in ethical decision making contexts have been noted (Arslan et al., 2025; Limayem et al., 2004; Loch & Conger, 1996; Moores & Chang, 2006; Randall, 1989). Thus, the four-component model has seen increasing applications in the IT area (Goles et al., 2006; Haines & Leonard, 2007; Moores & Chang, 2006; Tan, 2002; Wagner & Sanders, 2001).

Ethics scholars have suggested "developing and/or moving beyond Rest's framework, conceiving and testing additional individual, situational, and issue-related influences, and considering potential moderators of the ethical decision-making process" (O'Fallon & Butterfield, 2005, p. 399). One such extension of the four-component model was proposed and tested by Robin, Reidenbach, and Forrest (1996). In their study, perceived importance of an ethical issue (PIE) was shown to precede the establishment of moral judgment and to moderate the relationship between moral judgment and moral intent for two advertising scenarios. The purpose of this study is to extend Robin et al.'s model to an intellectual property piracy context and to examine PIE's role as a moderator in the ethical decision-making process.

2.2 Perceived Importance of an Ethical Issue

Perceived importance of an ethical issue (PIE) measures "the perceived personal relevance or importance of an ethical issue to an individual" (Robin et al., 1996, p. 17). PIE refers to the importance of a specific moral act or moral behavior to an individual, and is tied to the notion of consumer involvement. In consumer purchasing behavior, different levels of consumer involvement motivate differences in a consumer's decision-making process, including the extensiveness of the consumer's information search and their willingness to put additional effort into identification and consideration of alternatives to ultimately attain satisfaction (Laurent & Kapferer, 1985). In a low involvement purchase decision situation, a consumer will be more likely to rely on their own internally accessible information and developed judgment, and not expend extra effort searching for additional information or expend additional cognitive effort to identify and consider alternatives (Kotler, 1994). Similar behavior has been proposed when individuals are making ethical decisions, for example: "it is likely that moral agents will economize on efforts devoted to moral reasoning when moral stakes are low" (Jones, 1991, p. 384). Therefore, Robin et al. suggest that, just as there are varying levels of consumer involvement that affect the purchasing decision-making process, there can be varying levels of *moral* involvement; individuals faced with an ethical situation are expected to change their ethical decision-making processes when they feel the issue is more or less important. Ultimately, the notion of moral involvement could help to illuminate mechanisms behind the proposed moderating effect of situation-specific variables on the ethical decision-making process (Jones, 1991; Street et al., 2001).

Robin et al.'s survey of ad managers concerning choices of television commercials suggested that PIE influenced individuals' moral judgment of an action but not their moral intent. Furthermore, by

comparing the results of the two ethical scenarios included in their survey, they suggested that the link between an individual's moral judgment and moral intent would be lower for activities considered less important (low PIE). Robin et al. concluded their paper with two propositions that suggest an unambiguous role for PIE in the ethical decision-making process. They first located PIE in the ethical decision-making process: (1) PIE precedes an individual's moral judgment of an action, but does not directly affect moral intent. The second proposition suggested a moderating effect: (2) at very low levels of PIE, the link between moral judgment and moral intent will be weakened because of an increase in the importance of "other determinants of behavior" (Robin et al., 1996, p. 25). Our goal in this paper is to add to the "relatively modest amount of research" involving the PIE construct (Haines et al., 2008, p. 390) by applying Robin et al.'s propositions to an intellectual property piracy context.

2.3 Intellectual Property Piracy and Ethical Decision-Making

There is an inherent gap between the development of technology and the development of ethical guidelines for its use – as new technologies are introduced, they are socially and geographically diffused throughout society, and cultural systems must adapt to the new conditions imposed by the invention (Marshall, 1999). From the user side, obtaining property via information technology that would otherwise have to be obtained in person, enables individuals to engage in behavior "at a distance" with less risk than they would have engaging in similar behavior "up close." For example, shoplifting a music CD from a store is far more conspicuous, and carries greater personal risk, than downloading the same songs from a file-sharing network; likewise, prompting an image generator to produce artwork "in the style of" a particular artist removes the social and financial accountability that commissioning or purchasing that artist's work would entail. In each case, the technology interposes distance between the individual and the rights holder, lowering both the perceived risk and the sense of personal accountability for the act.

2.4 PIE and Ethical Decision-Making Process

PIE captures the extent to which individuals feel that a virtual behavior is less important than its face-to-face analog. Tam, Feng, and Kwan (2019) note that individuals often justify digital piracy because they perceive ownership of digital goods differently from ownership of physical goods. Because digital products can be copied indefinitely without depriving others of the original item, the act is often seen as causing minimal harm. Thus, virtual intellectual property piracy should be perceived as less important, and absent other mediating variables, individuals' moral intent would vary positively with PIE. However, Robin et al.'s model suggests that moral judgment and "other determinants of behavior" mediate this relationship.

We suggest that PIE, as a measure of moral involvement, affects ethical decision making in two ways. First, PIE will reflect the degree to which individuals feel that desirable or undesirable social effects will occur from the activity (Lamb et al., 2006). When the activity is more virtual, the individual is less likely to believe that undesirable social effects will occur because others are less able to directly observe his/her actions. Second, PIE will reflect the degree to which individuals believe there is a risk to themselves and their own self-image as a result (Laurent & Kapferer, 1985). Thus, we suggest that individuals account for PIE when they determine whether engagement in a particular action is acceptable or unacceptable (i.e., their moral judgment):

H1: Moral judgment will vary positively with PIE.

Robin et al.'s empirical results suggest that moral intent does not vary directly with PIE; rather, the relationship is mediated by moral judgment. Referring again to the consumer involvement literature, involvement affects the degree to which selected aspects of the decision-making processes are followed, and doesn't directly affect the final decision (Kotler, 1994; Laurent & Kapferer, 1985). Thus, we also expect the relationship between PIE and moral intent to be fully mediated by moral judgment in an intellectual property piracy context.

The four-component model of ethical decision-making is unequivocal about the relationship between moral judgment and moral intent, specifically that an individual's perception of whether an action is ethical or unethical influences their intention to engage in that behavior (Jones & Ryan, 1997; Rest, 1986). This has been confirmed in several studies involving intellectual property; specifically, when

individuals were surveyed about their attitudes and behavior toward purchasing counterfeit computer software (Moores & Chang, 2006), and when individuals were judging the behavior of third parties (Haines & Leonard, 2007). Thus:

H2: Moral intent will vary positively with moral judgment.

The Moral Approbation approach suggests that "moral approval from oneself and others" intervenes between the establishment of moral judgment and moral intent (Jones & Ryan, 1997, p. 664). After one makes a judgment of what is right, he/she looks to potential referents when seeking approval, including him/herself, moral/spiritual referent groups (e.g., mother, pastor), and work-related groups (Ryan & Ciavarella, 2002). Robin et al. attribute the low influence of moral judgment on moral intent under low PIE to the increasing impact of "other determinants of behavior," specifically "personal and organizational objectives" (Robin et al., 1996, p. 25). We suggest that the potential referents vary with the perceived distance and importance of the action – more distant, less important actions will rely more on self-approval, while less distant, more important actions will have stronger impacts from approval by others.

We capture self-approval using *moral obligation*, defined as the extent to which an action is perceived to be wrong, violates personal principles, and induces feelings of guilt (Beck & Ajzen, 1991). Because intellectual property piracy is less visible to others, we suggest moral obligation mediates the relationship between moral judgment and moral intent. Moral obligation strongly impacts the formation of moral intent about technology misuse (Haines & Leonard, 2007) and attitudes about intellectual property piracy (Cronan & Al-Rafee, 2008). Thus:

H3: In an intellectual property piracy context, moral obligation will vary positively with moral judgment.
H4: In an intellectual property piracy context, moral intent will vary positively with moral obligation.

We further suggest that moral judgment and moral obligation are weighed differently in influencing moral intent depending on how important the issue is perceived to be. As a reflection of situational involvement, low PIE suggests that people tend to emphasize internal sources of information and have less concern about what others think of their decision (Hawkins et al., 2001; Zaichkowsky, 1985). Weighing whether one would need approval from others relies on recognizing that an issue has a moral component (Rest, 1986), has severe consequences, and/or is "morally unambiguous" (Jones & Ryan, 1997, p. 674). Recent information systems research supports this pattern, showing that higher moral intensity increases moral judgment and the likelihood that individuals will act in line with their judgments (Crossler et al., 2017; Goles et al., 2006).

H5a: Intellectual property piracy scenarios with low PIE will have weaker links from moral judgment to moral intent than scenarios with high PIE.

Moral obligation reflects an internalized sense that certain actions conflict with one's principles or self-standards, consistent with accounts of duty as an inward recognition of what one should or should not do (Siponen & Vance, 2010). Recent IS research on security and misuse behaviors suggests that internal moral norms and self-regulation play an important role in shaping behavior, particularly alongside variations in perceived monitoring and consequences (Herath & Rao, 2009; Vance et al., 2020).

H5b: Intellectual property piracy scenarios with low PIE will have stronger links from moral obligation to moral intent than scenarios with high PIE.

Our research model is summarized graphically in Figure 1. The dotted line in the figure indicates the link from PIE to Moral Intent that is expected to be low or non-significant because the effect will be fully mediated by Moral Judgment and Moral Obligation.

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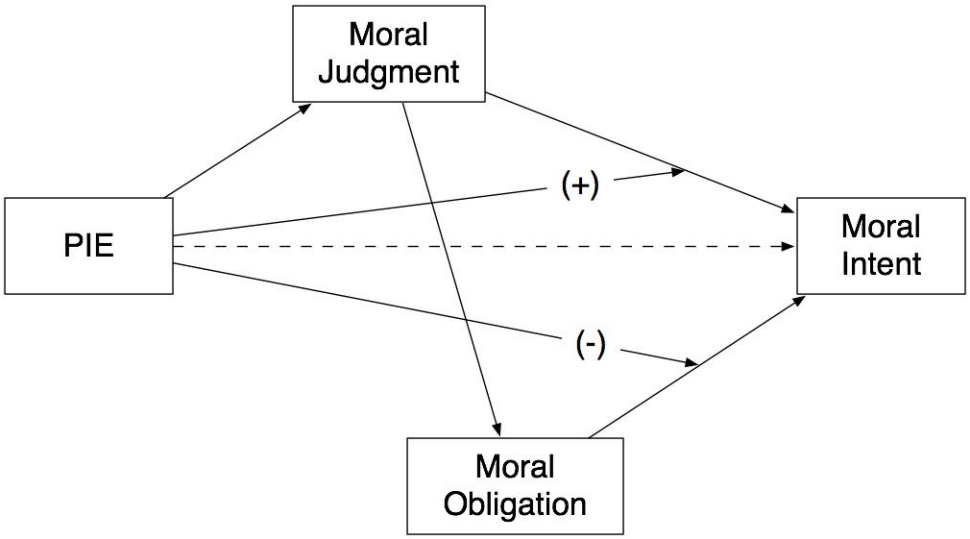

Figure 1. Research Model

3. METHODS

The hypotheses were examined using multiple, first-party scenarios with varying PIE to protect against idiosyncrasies of particular ethical issues and in an attempt to advance the research about PIE by including both issues that would be perceived as low importance and issues perceived as high importance (cf., Cronan & Al-Rafee, 2008; Moores & Chang, 2006). Surveys were completed on-line in a classroom-style computer laboratory during normal class periods by participants in a junior-level information systems course required of all business students (n=353). Participants first completed a demographic questionnaire; then completed the survey items about four scenarios, which were presented in a different, random order to each participant. The demographic variables did not affect the results of our hypotheses, and were left off of the final models. Fifty-four percent of participants indicated that they were male (45.9 percent female). Mean reported age was 23.34 years, and mean reported full time work experience was 3.67 years.

3.1 Variables

The complete text of the questionnaire is given in the Appendix. All items were measured on seven-point scales with the anchors as end points. Perceived importance of an ethical issue (*PIE*) is measured using Robin et al.'s (1996) items, but modified so that the items could be mixed with the moral judgment items. *Moral judgment* is measured using items from the multidimensional ethics scale (Reidenbach et al., 1991), consistent with Robin et al.'s usage of the same items. *Moral obligation* and *moral intent* are measured using the items developed and validated by Beck and Ajzen (1991).

3.2 Scenarios

The scenarios were developed as representative decisions about intellectual property piracy that might be faced by junior-level business students. A variety of scenarios were chosen so that these results would not be idiosyncratic to a particular topic or level of perceived importance. A pre-study sample responded to the PIE items about a larger set of scenarios on a paper and pencil questionnaire and provided feedback about whether they felt they would actually be able to engage in the activity. From this larger set, two were chosen representing the lowest and highest values of PIE, and three others were chosen that had the highest amount of discussion potential (i.e., variance in PIE). A set of pilot participants tested these scenarios in the same setting and using the same application as this study and indicated that the overall length of the questionnaire was too long. One of the middle scenarios was then removed from the study, leaving the four listed below. Again, scenarios were presented in a different, random order to each participant.

Scenario A. The participant considers obtaining music protected as intellectual property, making a digital copy of it, and then reversing the transaction in a way that clearly exploits the provider.

Scenario B. The participant considers using digital video content they legally own for personal purposes that are not explicitly permitted. To do so, the individual must first obtain and use prohibited software that circumvents built-in protections.

Scenario C. The participant considers downloading and using proprietary software without paying, even though the behavior is prohibited. The behavior is widely known to be easy to perform, enforcement is limited, and any harm to the owner is indirect or dispersed.

Scenario D. The participant considers sharing copies of digital music with another person. The behavior is commonly observed in everyday social interactions involving digital content and is perceived as having minimal impact despite violating intellectual property protections.

4. RESULTS

Table 1 summarizes the means of all of the study variables by scenario. Scenarios A (reversing a transaction involving digital music), B (modifying owned digital video content using prohibited tools), C (downloading proprietary software without payment), and D (sharing digital music with another person) were significantly different from each other on all study variables ($p<.0125$, representing a Bonferroni adjustment for four statistical tests). Scenario A was perceived as most important, least just/fair, would make the person feel the most guilt for performing the action, and the person would be least likely to engage in the behavior than the other scenarios. Scenario D was perceived as least important, most just/fair, resulting in least guilt, and the person was most likely to engage in the behavior than all the other scenarios.

Although the scenarios with lower PIE were generally judged to be more ethically acceptable, each of the study variables captures a different aspect of ethical evaluation. As noted earlier, an individual may regard an issue as relatively unimportant while still viewing the behavior as ethically unacceptable. Thus, PLS was used to examine the relationships among the study variables as well as whether the strength of those relationships varied across scenarios.

Item	Scenario			
	A	B	C	D
PIE*	4.76 (1.64)	3.38 (1.70)	3.87 (1.61)	2.69 (1.50)
Judgment*	5.97 (1.25)	3.95 (1.80)	4.74 (1.48)	3.08 (1.55)
Obligation*	5.82 (1.59)	3.33 (2.01)	4.11 (1.85)	2.37 (1.61)
Intent*	6.14 (1.51)	3.37 (2.15)	3.93 (2.10)	2.13 (1.70)

* Means for all scenarios are significantly different from each other ($p<.0125$, representing a Bonferroni adjustment for four statistical tests)

Table 1: Means (Standard Deviations) of Questionnaire Variables by Scenario

The hypotheses were tested using partial least squares (PLS) structural equation modeling based on latent variable scores derived from the scenario-specific models. This approach preserves measurement validity within each scenario while enabling estimation of a unified structural model across contexts. Scenario was modeled using dummy variables, and moderation effects were assessed through interactions between scenario indicators and the paths from moral judgment and moral obligation to moral intent. The PLS analysis indicated that the scales had adequate composite reliability across all four scenarios, and discriminant and convergent validity were supported. Results of tests for common method bias and detailed psychometric information are given in the Appendix.

The results of the PLS analysis are summarized in Table 2. All primary paths in the base model were significant and in the expected direction. Perceived importance of the ethical issue (PIE) was positively associated with moral judgment and moral obligation, and moral judgment was positively associated with moral intent. In addition, moral judgment was strongly related to moral obligation, and moral

obligation was significantly associated with moral intent. The direct path from PIE to moral intent was not significant, consistent with the expectation that its effect is mediated by moral judgment and moral obligation. The interaction effects indicate that the relationships between moral judgment and moral intent and between moral obligation and moral intent vary across scenarios. The model explained substantial variance in the endogenous constructs: moral judgment (R^2 = 43.9%), moral obligation (R^2 = 58.6%), and moral intent (R^2 = 65.4%).

Path	Path Coefficient	Standard deviation	t-statistic	p-value
PIE -> MJ	0.663	0.020	33.472	< 0.001
PIE -> MO	0.179	0.027	6.719	< 0.001
PIE -> MI	-0.038	0.022	1.696	0.09
MJ -> MO	0.635	0.026	24.794	< 0.001
MJ -> MI	0.389	0.061	6.359	< 0.001
MO -> MI	0.517	0.064	8.010	< 0.001
MJxScen2 -> MI	-0.147	0.044	3.331	0.001
MJxScen3 -> MI	-0.125	0.043	2.910	0.004
MJxScen4 -> MI	-0.107	0.045	2.377	0.017
MOxScen2 -> MI	0.138	0.046	2.979	0.003
MOxScen3 -> MI	0.096	0.044	2.199	0.028
MOxScen4 -> MI	0.072	0.049	1.470	0.142

Table 2: PLS Results

Hypothesis One: Hypothesis one suggested that moral judgment would vary positively with PIE. The results indicate a strong positive relationship between PIE and moral judgment ($p < .001$), providing support for H1.

Hypothesis Two: Hypothesis two suggested that moral intent would vary positively with moral judgment. The link between moral judgment and moral intent was positive and significant ($p < .001$), supporting H2.

Hypothesis Three: Hypothesis three suggested that moral obligation would vary positively with moral judgment. The results show a strong and significant relationship ($p < .001$), supporting H3. Although not hypothesized, PIE was also found to have a significant direct effect on moral obligation ($p < .001$).

Hypothesis Four: Hypothesis four suggested that moral intent would vary positively with moral obligation. The link between moral obligation and moral intent was significant and positive ($p<.0001$). Thus, hypothesis four was supported.

Hypothesis Five: Hypothesis five (a) suggested that the link between moral judgment and moral intent would be weaker for scenarios with low PIE. The interaction terms between scenario indicators and moral judgment were negative and significant for all three comparison scenarios ($p < .05$), indicating that the influence of moral judgment on moral intent decreases as perceived importance declines relative to the high-PIE reference scenario. Thus, H5a is supported.

Hypothesis five (b) suggested that the link between moral obligation and moral intent would be higher for scenarios with low PIE. The interaction terms between scenario indicators and moral obligation were positive and significant for two of the three comparison scenarios ($p < .05$), but not significant for the lowest-PIE scenario. These results indicate that the influence of moral obligation on moral intent is strengthened as importance decreases in moderate and lower-importance contexts, although the effect becomes insignificant for the lowest importance scenario. Thus, H5b is partially supported.

5. DISCUSSION AND CONCLUSIONS

Consistent with the results and proposition one of Robin et al. (1996), PIE was positively linked with moral judgment but not moral intent (H1) in the overall model. Although Jones' theory (1991), suggests that individuals are more likely to behave appropriately when an action is perceived to be more important because of increased affect, these results show that the perceived importance of an action is

more closely tied with one's moral judgment, and does not directly influence one's intention to act.

Moral judgment was positively linked with moral obligation (H3), and moral intent was positively linked with moral obligation (H4) in the overall model. This adds convincing evidence that moral obligation has an important role in the ethical decision-making process and in explaining the relationship between moral judgment and moral intent. Additionally, the results provide a framework for integrating the results of TPB-based findings (Cronan & Al-Rafee, 2008) into the four-component model by explicitly adding moral obligation as a mediating mechanism.

Moral intent was significantly linked with moral judgment (H2) in the overall model. However, interaction effects indicate that the link between moral judgment and moral intent is strongest when PIE was high, and weaker when PIE was low because of the influence of other factors (H5a & H5b). The absence of a significant effect in the lowest importance scenario suggests that very low perceived importance may attenuate both moral judgment and moral obligation as influences on moral intent. As noted earlier, both Robin et al. (1996) and Jones & Ryan (1997) suggest that individuals are more likely to translate their moral judgments into moral action when stakes are highest and/or when a dilemma is less morally ambiguous. This contrasts with the results of Haines and Leonard's (2007) study, in which all five of their third-party scenarios had a significant link from moral judgment to moral intent. We suggest that these differences may be due to the use of first- rather than third-party scenarios in our questionnaire. Specifically, when individuals consider behavior engaged in by others, they may weigh the degree to which the behavior is fair, ethical, and acceptable (i.e., moral judgment) more heavily than when considering engaging in behavior themselves (cf., Treviño, 1986).

The interaction results also confirm a complementary influence of moral obligation on moral intent, with stronger relationships for the moderate and lower-importance scenarios when compared with the highest-importance scenario, though this effect is not significant for the lowest-importance scenario. Taken together, these results suggest that moral obligation partially compensates for the declining influence of moral judgment as perceived importance decreases, although this compensatory effect is diminished in the lowest-importance contexts, suggesting a boundary at which ethical engagement itself may become attenuated.

5.1 Limitations

For our study, we chose a mixture of ethical scenarios that vary both in their perceived importance and consequences. These scenarios were developed prior to contemporary concerns surrounding generative AI. However, we note that norms surrounding the use of digital content and intellectual property continue to evolve in ways that could alter individuals' ethical decision-making processes. Free access to ad-supported content, the widespread use of subscription-based services, and the rapid diffusion of generative artificial intelligence mean that individuals face an expanding range of opportunities to engage in potentially unethical or illegal behavior; often through mechanisms quite different from those represented in our scenarios. Although the specific technologies may change over time, we emphasize that our empirical results should be generalized at the level of the underlying psychological processes through which PIE, moral judgment, and moral obligation influence the establishment of moral intent (Greenberg & Eskew, 1993).

A second limitation arises from the repeated-measures design. Each participant evaluated all four scenarios, which reduced between-subject variability and increased comparability across ethical contexts. However, this also means that the observations for each participant are not fully independent, while our pooled model treats each scenario response as separate observations. Consequently, the reported standard errors and associated significance tests may be somewhat optimistic, particularly for the interaction effects. However, the overall pattern of findings is consistent with the scenario-specific analyses. Future research could employ multilevel or repeated measures approaches to determine whether the relationships observed here are stable after accounting for participant-level effects.

5.2 Implications for Future Research

The emergence of AI-supported software means that the legal and ethical implications of its use are only now being considered. The training of the models typically involves the inclusion of copyrighted intellectual property, which creators argue should be illegal, but courts have found to not violate

copyright (Bartz et al v. Anthropic, 2025; Tobin, 2025). Users of social media web sites have also opposed the use of their data for model training, arguing that it is unethical for AI companies to include their data in models that will be used in ways that the users do not approve (Markianos, 2026). The ethical use of natural resources by AI datacenter providers has also come into question (Boudreau, 2026). We anticipate that the legality and ethics of model training and delivery will co-evolve with the PIE and ethical judgment of it.

The use of AI models for illegal and unethical behavior has been at the forefront since their introduction, prompting the imposition of government regulations (Milmo & Bhuiyan, 2023). Such behavior includes enabling the activation of pirated software without a license (Endicott, 2025; Okemwa, 2025), producing content in the style of a named content creator (Placido, 2025), and enabling unauthorized access to computer systems (Orland, 2026). Recent research suggests that the use of LLMs can lead to "cognitive surrender" whereby an AI user rates the importance of their own cognition so low that they essentially outsource all critical thinking to the model (Shaw & Nave, 2026). Our framework offers testable predictions for these cases: when questionable behaviors are perceived as low in PIE, users will have correspondingly weaker links from moral judgment to moral intent and a greater reliance on self-referent moral obligation to act ethically.

Future research could therefore construct AI-specific scenarios that are paired, where possible, with traditional analogs to test whether the attenuation pattern observed here holds, or whether AI's distinctive features (sycophancy, absence of an identifiable original, blurring of "creation" and "copying") alter the decision process in ways our model does not anticipate. More broadly, future research should explore how evolving technological environments reshape perceptions of ethical importance, and whether this shifts the relative influence of moral judgment and moral obligation.

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APPENDIX

Questionnaire

Perceived importance (composite reliability >=.934, AVE >=.781):
To [behavior] is:
PI1. An Unimportant Issue-An Extremely Important Issue
PI2. An Insignificant Issue-A Highly Significant Issue
PI3. An Issue of no Concern-An Issue of Considerable Concern
PI4. A Trivial Issue-A Fundamental Issue

Moral judgment (composite reliability >=.921, AVE >=.746):
To [behavior] is:
MJ1. Fair-Unfair
MJ2. Just-Unjust
MJ3. Morally Right-Not Morally Right
MJ4 Acceptable to My Family-Not Acceptable to My Family

Moral Obligation (composite reliability >=.882, AVE >.715)
MO1. I would *not* feel guilty if I [behavior]. True-False
MO2. To [behavior] goes against my principles. Likely-Unlikely (rev)
MO3. It would be morally wrong for me to [behavior]. Likely-Unlikely (rev)

Moral intent (composite reliability >=.928, AVE >=.811)
BI1. I may [behavior] in the future. True-False
BI2. If I had the opportunity, I would [behavior]. Likely-Unlikely
BI3. I would never [behavior]. True-False (rev)

Tests for Common Method Bias

Using randomly ordered items enhances scale validity by removing item ordering and grouping biases, but relatively high correlations, path scores, and cross-loadings can reveal common method bias to a degree not possible when scales are grouped separately. An exploratory factor analysis of all items across all scenarios to assess whether there was common method bias (a.k.a. "Harman's single-factor test") indicated that at least five unrotated factors (p=.10) were necessary to account for the variance in the variables. The first factor, upon which only the three Behavioral Intention items and Moral Obligation items one and two loaded higher than .7, accounted for 32 percent of the variance, indicating that common method bias was not present to a large extent (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Further exploratory analysis indicated that common method bias was not present to a large extent with respect to the semantic differential items being mixed together as a block – the first factor was only comprised of the PIE items, accounting for 39% of variance. The Likert-type items, also mixed together as a block, showed no common method bias because the first factor was comprised only of the BEH items, and accounted for 40% of the variance.

Psychometric Properties of Measures

PLS enables the assessment of a model's measures by providing an assessment of the reliability of the scales, along with their convergent and discriminant validity (Chin, 1998b). Adequate reliability was demonstrated for all of the measures across all of the scenarios because, as shown in Tables 4, 6, 8, and 10, the loadings for all the constructs are above 0.6, indicating that less than half of any indicator's variance was due to error. In addition, all composite scale reliabilities (similar to Chronbach's alpha) shown in Tables 3, 5, 7, and 9 exceed the recommended cutoff of 0.7. Also shown in Tables 3, 5, 7, and 9, average variances extracted by the scales exceeded the recommended cutoff of 0.5.

Convergent and discriminant reliability is demonstrated in two ways. First, Tables 4, 6, 8, and 10 show that the square root of the average variance extracted (AVE) for each construct exceeds its correlation with any other latent variable. This shows that each construct shares more variance with its indicators

than it shares with the other constructs. Second, Tables 3, 5, 7, and 9 (loadings and cross-loadings) show that each measure loads higher (shares more variance) on its own construct than it loads on any of the other constructs. The relatively high cross loadings for some of the measures may give the impression of conceptual overlap or common method bias. However, as Chin notes, loadings that exceed cross loadings with differences as low as .1 still show discriminant validity and are reasonable because they indicate a strong nomological network where constructs are closely related (Chin, 2010). Chin recommends squaring the loadings and cross loadings before comparison so that they show a percentage of overlap, but we have chosen to use the more traditional approach.

	Composite Reliability	PIE	Judgment	Obligation	Intent
PIE	.934	.884			
Judgment	.931	.598	.879		
Obligation	.892	.525	.712	.857	
Intent	.928	.452	.734	.774	.900

Table 3. Composite Reliability and Correlations of Latent Variables (Square Root of AVE on Diagonals) for Scenario A

	PIE	Judgment	Obligation	Intent
MJ1	0.5257	0.9194	0.6401	0.6647
MJ2	0.5676	0.9225	0.6490	0.6641
MJ3	0.4873	0.8888	0.6311	0.6382
MJ4	0.5194	0.7771	0.5794	0.6115
BI1	0.4430	0.6994	0.6884	0.9231
BI2	0.3668	0.6271	0.7040	0.8921
BI3	0.4111	0.6559	0.6977	0.8853
MO1	0.4711	0.6018	0.8663	0.6704
MO2	0.4870	0.6842	0.9077	0.7384
MO3	0.3857	0.5339	0.7941	0.5676
PI1	0.9142	0.5250	0.4759	0.3734
PI2	0.9213	0.5354	0.5007	0.4376
PI3	0.9193	0.5862	0.5198	0.4720
PI4	0.7700	0.4563	0.3370	0.2915

Table 4. Loadings and Cross Loadings of Items on Latent Variables for Scenario A

	Composite Reliability	PIE	Judgment	Obligation	Intent
PIE	.953	.913			
Judgment	.950	.692	.908		
Obligation	.936	.655	.829	.911	
Intent	.948	.551	.726	.846	.927

Table 5. Composite Reliability and Correlations of Latent Variables (Square Root of AVE on Diagonals) for Scenario B

	PIE	Judgment	Obligation	Intent
MJ1	0.6608	0.9414	0.7623	0.6970
MJ2	0.6386	0.9410	0.7557	0.6385
MJ3	0.5566	0.8776	0.6830	0.5503
MJ4	0.6467	0.8705	0.7981	0.7310
BI1	0.4735	0.6580	0.7460	0.9278
BI2	0.5557	0.7050	0.8100	0.9369
BI3	0.5008	0.6532	0.7942	0.9156
MO1	0.6294	0.7595	0.9233	0.8072
MO2	0.6116	0.7706	0.9366	0.8215
MO3	0.5447	0.7357	0.8719	0.6765
PI1	0.9404	0.6206	0.5995	0.5175

PI2	0.9488	0.6526	0.6024	0.5055
PI3	0.9244	0.6699	0.6177	0.5100
PI4	0.8356	0.5813	0.5706	0.4810

Table 6. Loadings and Cross Loadings of Items on Latent Variables for Scenario B

	Composite Reliability	PIE	Judgment	Obligation	Intent
PIE	.943	.898			
Judgment	.921	.687	.864		
Obligation	.893	.636	.759	.859	
Intent	.950	.551	.653	.792	.929

Table 7. Composite Reliability and Correlations of Latent Variables (Square Root of AVE on Diagonals) for Scenario C

	PIE	Judgment	Obligation	Intent
MJ1	0.6440	0.9244	0.6509	0.5583
MJ2	0.5903	0.9028	0.5673	0.4880
MJ3	0.4740	0.8123	0.5623	0.4342
MJ4	0.6068	0.8274	0.6793	0.6438
BI1	0.4163	0.6099	0.7355	0.9448
BI2	0.3756	0.5721	0.6712	0.9124
BI3	0.4050	0.5363	0.7060	0.9133
MO1	0.4378	0.5205	0.8443	0.6591
MO2	0.5259	0.6273	0.8910	0.7442
MO3	0.5106	0.6634	0.7983	0.5193
PI1	0.8986	0.6185	0.5264	0.3773
PI2	0.9460	0.6388	0.5602	0.4233
PI3	0.9333	0.6328	0.5339	0.4275
PI4	0.7488	0.4718	0.4272	0.2815

Table 8. Loadings and Cross Loadings of Items on Latent Variables for Scenario C

	Composite Reliability	PIE	Judgment	Obligation	Intent
PIE	.934	.883			
Judgment	.924	.673	.868		
Obligation	.882	.582	.714	.845	
Intent	.946	.432	.621	.763	.924

Table 9. Composite Reliability and Correlations of Latent Variables (Square Root of AVE on Diagonals) for Scenario D

	PIE	Judgment	Obligation	Intent
MJ1	0.6143	0.9419	0.7227	0.7619
MJ2	0.6034	0.9559	0.7492	0.7952
MJ3	0.6157	0.9646	0.7787	0.7685
MJ4	0.5837	0.9363	0.7848	0.7757
BI1	0.6158	0.8150	0.7806	0.9536
BI2	0.6540	0.7818	0.7936	0.9653
BI3	0.5818	0.7076	0.7511	0.9068
MO1	0.5837	0.6716	0.8579	0.7073
MO2	0.5602	0.6751	0.9043	0.7074
MO3	0.5885	0.7893	0.9198	0.7877
PI1	0.9713	0.6258	0.6313	0.6476
PI2	0.9741	0.5995	0.6074	0.6236
PI3	0.9712	0.6256	0.6461	0.6535
PI4	0.9315	0.5969	0.5984	0.5969

Table 10. Loadings and Cross Loadings of Items on Latent Variables for Scenario D